Thinking routines and their impact on classroom dialogue

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Abstract

This study investigates how Making Thinking Visible (MTV) questioning sequences based on the MTV pedagogical approach impact the classroom interaction in the English Language classroom. MTV is an approach to classroom learning using various thinking routines which guide students in exploring an idea and then externalizing it through – among other methods – speaking (Ritchhart & Perkins, 2008). Ritchhart, Palmer, Church, and Tishman (2006) argued that classroom interactions became more dialogic (Bakhtin, 1986) as students no longer lacked a voice when they were able to engage more actively in classroom learning and discussions. In addition, they report that students began thinking deeply about the issues discussed in class. Yet, the challenges in developing dialogic talk in classrooms (Galton, Hargreaves, Comber, Pell, & Wall, 1999; Lemke, 1990; Wells, 2006, 2007) have been well documented, especially in Singapore (Vaish, 2008), and attributed to culture. This study examines whether MTV thinking routines truly realise the 'cultural transformation' in schools that Ritchhart and Perkins (2008, p. 57) promise, and finds that there is potential for it to do so, even though there still remains a strong tendency for monologic interaction in class.

Introduction

The nature of interaction in Singapore classrooms has been the subject of criticism due to the overwhelmingly didactic mode of teaching and its effects on the students' intellectual development. As Vaish (2008) observed, teachers in Singapore classrooms tend to dominate the talk in the classroom, with students holding few speaking turns even in lessons that call specifically for whole-class discussion. This suggests that the teacher's authority in terms of meaning-making in the classroom appears dominant with an overwhelmingly prescriptivist approach to learning.

When students are encouraged to play a more significant role in classroom discussions, the focus of talk in the classroom naturally pivots away from the correctness of a student's response. With students encouraged to present their ideas, views, agreements or objections, the focus in the classroom turns towards the creation of newer understandings and the process of critical inquiry. Students' responses are not seen as products to be appraised by a teacher, but rather as enablers in the generation of new ideas.

Given the current state of talk in the classroom, and the benefits of facilitating dialogue in the classroom, it is little wonder that administrators and teachers would like to see students taking

part more actively in classroom discussions in the spirit of guided discovery and intellectual development. Rather than the teacher monologue that we see in didactic classrooms, dialogue between the teacher and students, where both teacher and students take turns to ask questions and respond to each other, is much preferred.

The Making Thinking Visible (MTV) pedagogy as described by Ritchhart and Perkins (2008) aims to combat this monologic interaction in the classroom by suggesting questioning prompts that explicitly guide students in their thinking. In addition, it is argued that 'the development of thinking is a social endeavor' (Ritchhart & Perkins, 2008, p. 58) such that the class stands to benefit from a collectively negotiated and created body of knowledge. The pedagogy manifests itself in the form of 'thinking routines' which represent a 'sequence of actions designed to achieve a specific outcome in an efficient manner' (Ritchhart, 2015, p. 171). These routines help learners 'externalize their thoughts through speaking' (Ritchhart & Perkins, 2008, p. 58) among other modes for the benefit of the teacher and students. They are often accompanied by guiding questions which students need to answer in order to articulate their thought processes. The routines also encourage students to explore conceptual links and contradictions as they discuss various topics. In so doing, opportunities are created interactionally for students to pose questions as they attempt to collaboratively extend their learning beyond the content discussed in the classroom.

Arguably then, the MTV pedagogy shows great promise in helping to create more dialogic discussions in the classroom. Serangoon Garden Secondary School trialled the pedagogy in a Secondary 1 English Language class in a pilot study. The goal was to analyse the thinking routines implemented in the classroom to see if their promise holds true, and they facilitate discussions that honour the voices of the students now able to participate actively and confidently (Ritchhart et al., 2006).

Literature Review

Monologic and Dialogic Interactions

While currently there is a growing impetus to shift towards a more dialogic mode of interaction in the classroom, this notion of dialogue is not new. Dialogue in the classroom traces its roots to Bakhtin's (1986) overarching theory of dialogue. Dialogue occurs when a speaker 'does not expect passive understanding … (but) rather he expects response, agreement, sympathy, objection, execution, and so forth' (Bakhtin, 1986, p. 69). Put another way, meaning is malleable in a dialogic exchange whereas a monologue treats meaning as established and fixed.

Extend Bakhtin's idea of dialogue into classrooms, and it is clear that the monologic classroom is not unlike the banking model of education described by Freire (1970) in which the teacher of the monologic classroom 'fills the students with the contents of his narration' (Freire, 1970, p. 71) and students 'patiently receive, memorise and repeat' (Freire, 1970, p. 72). Consequently, in the monologic classroom, there is an objectification of knowledge and meaning in the class. According to Freire (1970), the students resemble receptacles to be filled with knowledge by the teachers. This means that teachers are inclined to provide a comment in appraising the work of the students, with an emphasis placed on correctness, realized through evaluative words such as 'correct', 'poor' or 'weak'. This process is commonly referred to as feedback (Lillis, 2003), and contrasts with the process of talkback in which teachers treat the students' input as a process with meaning and as text seen as yet incomplete. In talkback, the text is open and its meaning is meant to be negotiated and engaged with. In contrast, the features of the monologic classroom are typically manifested in the Initiation-Response-Feedback or -Evaluation (IRF or IRE) exchange sequence during classroom dialogues. In such exchanges, the teacher initiates a sequence by commonly posing a question to the students, who in turn provide a response which is then evaluated and assessed by the teacher.

Conversely, in the dialogic classroom, meaning is negotiated dynamically and co-produced between the teachers and students. As teachers and, especially, students are encouraged to create

new meanings from the existing body of knowledge available to them, the focus on correctness in the classroom diminishes in favour of the creation of newer understandings and the process of critical enquiry. Here, texts and meaning-making are not seen as products, but enablers in the generation of new ideas. In practical terms, this means that, in the dialogic classroom, there is an emphasis on critical responses towards knowledge presented in class, as opposed to looking out for the correctness of a response in an itemised manner.

Interactionally, this means that not only are the students encouraged to present, elaborate upon and substantiate their views in class, they are also invited and allowed to question and synthesise the ideas discussed rather than passively engage in rote learning. In contrast to the IRE patterns of interaction of the monologic classroom, the dialogic classroom sees both the teachers and students participate in asking questions in a genuine attempt at building upon a growing body of knowledge, with the unidirectional transfer of information from teacher to student conspicuously absent.

Examining Interaction in Schools

In contrast to the suggested adoption of dialogic classrooms, studies (Galton et al., 1990; Lemke, 1990; Tharp & Gallimore, 1988; Wells, 2006, 2007; Vaish, 2008) increasingly find that the method of instruction in the classroom remains overwhelmingly monologic. Wells (1999) cautions that while the monologic method resembles an effective model for the transmission of knowledge, it retains a strong tendency to cultivate risk-averse and conformist identities amongst the successful, while developing self-doubting or rebellious identities in those who do not experience as much success.

We can argue that the MTV pedagogy engenders dialogue in the classroom in treating knowledge and meaning-making as dynamic and malleable, and in viewing the development of thinking as a social endeavour. Separately, because it relies heavily on questioning sequences to help students articulate their thinking, it follows then that we can investigate the impact of the MTV pedagogy on classroom talk by analysing questioning sequences and the extent of dialogic talk it engenders. The successful implementation of the MTV pedagogy should see its prescribed questioning sequences followed by a more dialogic exchange in the classroom. Thus, of specific interest to this study is the extent to which the MTV pedagogy engenders dialogic discourse in the classroom. Given the extensively monologic nature of Singapore classroom discourse that Vaish (2008) observed, this study allows us to examine the claim that MTV thinking routines help realise a cultural transformation (Ritchhart & Perkins, 2008, p. 57) in schools.

Methodology

This research spanned one year and was carried out in three broad phases. First, the experimental and control classes were given instruction in the use of the PEEL routine as a working base common to both classes (described in more detail below). Second, the experimental class was introduced to MTV thinking routines (such as See-Think-Wonder and Chalk Talk). Thirdly, one of the researchers observed both classes and analysed the data collected, corroborating the findings of the transcript analysis with teacher interviews and student focus group discussions.

The study focused on a class of Secondary 1 Express students and their teacher (one of the researchers) who used the MTV pedagogy in their English Language lessons. This class was chosen because the students were assessed to be receptive to trialling new learning approaches, thereby allowing the research team to observe the MTV thinking routines being adopted as much as possible. Another Secondary 1 Express class, the control class, was taught by the same teacher and put through the same syllabus. Both control and experimental classes had similar lessons and unit objectives, and periodic summative assessment tasks for an entire semester of about six months, except that the experimental class's lessons included training in the use of the MTV thinking routines of See-Think-Wonder and Chalk Talk.

The research team observed a total of ten lessons in each class, filming each lesson and subsequently transcribing the interaction in the class, parental permission having been obtained beforehand. A transcript analysis of the classroom talk identified features of dialogic interaction to determine the extent to which MTV thinking routines had succeeded in encouraging students to think more critically. Interviews with the teacher and focus group discussions with the students involved elicited the teacher's and students' perceptions of the extent of dialogic talk in the MTV class. Together with the transcript analysis, these multiple data sources allowed for the triangulation of the findings in order to gain a clearer picture of the nature of the classroom interaction.

Unit background

Over the semester during which the classes were observed, the teacher taught the classes a general unit on 'Media and Technology'. The selected course unit focused on oracy skills and the development of talking points (in this case, the social impacts of technological advancements). Students were taught to raise their own views on a topic, and substantiate their responses with elaborations, examples, counter-arguments and caveats. The researchers believed this unit would more clearly reveal the divergence in interactional patterns between the two observed classes brought about by the use of MTV thinking routines in the experimental class only. This was due to the fact that, because the unit focused on the skill of spoken language, the students naturally paid greater attention to how they were conversing in the classroom. It is important to emphasise that this study was interested in dialogue as part of classroom interaction as opposed to the dialogic interaction found between a mock examiner and an examination candidate.

For both the experimental and control classes, the teacher taught students the PEEL structure as a scaffold they could use to elaborate and explain the points raised. PEEL is a common acronym used with structured paragraph writing, and standing for 'Point, Explain / Elaborate, Examples and Link'. Students need to introduce a key point to address the question, then explicate the point further and substantiate it by providing examples. To round up their explanation, they link back to the point raised. In this research, however, the PEEL structure was adapted for use in developing speaking in the two classrooms.

Prior to the lesson observations, the teacher modelled how the PEEL structure could be used during the Oral Examination in spoken interaction. The teacher asked herself a sample question, and showed how she could utilise the PEEL structure in order to fully answer the question. This helped students to better understand how the PEEL structure could be used. Students were then put into groups of four to discuss and practise using the PEEL structure to answer a Spoken Interaction question. Each group was given a visual stimulus (a picture of students looking animated in class) and were tasked with dissecting the picture and planning how they would attempt to answer any possible question that an oral examiner might ask.

While the PEEL structure was not a thinking routine in the MTV pedagogy, the fact that the students were taught how to use the structure to elaborate upon their ideas before the observed lessons was significant for two reasons. Firstly, while MTV thinking routines were trialled in subsequent lessons for the experimental class to engender a more lively discussion between the teacher and the students, the PEEL structure, nonetheless, served as a simple guide for students from both the experimental and control classes to scaffolding their responses or contributions in any subsequent discussions. Secondly, notwithstanding the fact that the unit on 'Media and Technology' focused on oral skills, the teaching of the PEEL structure in a prior lesson helped set an expectation that students in both the experimental and control classes should elaborate upon their responses, whenever possible. Put another way, the PEEL structure equipped students from both the experimental and control classes with a common basic set of skills and expectations in order to participate actively in classroom discussions.

Upon this base, the teacher additionally trialled the See-Think-Wonder thinking routine with the experimental class. Following the group discussion, before attempting to guide the students in answering a sample spoken interactive question, the teacher first engaged the class in a discussion of the visual stimulus using the See-Think-Wonder thinking routine. This process routinely involved studying the various elements of a visual stimulus, and questioning the implications of various observations that could be made. For example, students were guided to wonder what the postures or expressions of the people within a given picture meant, or what the presence of certain objects within the environment suggested about the nature of the event. The researchers believed that this routine could help students internalise and then articulate their thoughts and views on a given visual stimulus. It formed part of the suggested strategy for students when generating ideas from a given visual stimulus in an oral examination.

In addition, the teacher also led the experimental class through the MTV Chalk Talk thinking routine. In groups of four or five, the students were invited to collectively construct and develop a concept map on a large piece of paper by writing down their thoughts or questions. The students had to do so by individually providing their inputs to the map without speaking to each other. Students could also draw lines to connect two or more ideas that they felt were related in some way. The activity aimed to encourage students to think more deeply about an issue at hand, and enabled them to appreciate their peers' ideas and perspectives. The concept map also served as a useful visual reference when the students and teacher took part in a whole-class discussion on the topic later.

It is worth noting that, while this study discusses the introduction and use of the MTV thinking routines, See-Think-Wonder and Chalk Talk, with the Secondary 1 students, outside this study, the English Language department employs a range of other thinking routines such as Think-Pair-Share, Circle of Viewpoints, What-Makes-You-Say-That and Connect-Extend-Challenge at other levels as part of a general pedagogical approach to encouraging dialogic talk in class. The use of these routines varies depending on the different lesson outcomes expected or the learning objectives.

Analysis

The following analysis focusses on a series of observed lessons for both classes which centred on answering questions during the oral examination. The divergent patterns of interaction found between the two classes highlighted the potential of the MTV questioning sequences in fostering a dialogic classroom with observable instances of critical thinking made explicit. At the same time, it was also observed that while there was some evidence of dialogic talk in the classroom in the experimental class, the dialogic talk tended not to be sustained consistently. Focus group discussions with the teacher and students of the experimental class (which will be discussed in further detail below) suggest that it is probable that the presence of cultural and social factors ultimately inhibited the dialogic patterns of interaction from being sustained in class. The initial success of establishing dialogic talk in the classroom coupled with the eventual inhibition of dialogic talk due to social and cultural factors suggest that the challenge of establishing and sustaining dialogic talk is not an exclusively linguistic exercise, but also a social and cultural challenge. Put another way, in order to facilitate dialogic talk in class, we not only need to consider the mechanics of turn-taking, but also tackle the social and cultural considerations (such as a student's deference to authority in class) that can potentially inhibit open two-way conversations.

The following sections illustrate, with the use of selected transcripts from the control and experimental classes, the different levels of success in engendering dialogue in the two classes. The transcript analyses are followed by analyses of the focus group discussions of the respective groups.

Specifically, in the control class, it appeared that the teacher encountered difficulty in even establishing a dialogic exchange with the students, despite many clear attempts to do so. Conversely, she experienced greater success in establishing a dialogic discussion with the students in the experimental class. However, this dialogue was not sustained and the interaction turned monologic before long.

Control Class: The lack of dialogue

In the control class (Figure 1), the lack of dialogic interaction between the teacher and students was clear. Despite multiple attempts by the teacher to encourage the students to share their own perspectives and thoughts, or pose their own questions, it appeared that the students found it sufficient to respond to the teacher's attempts with a brief single word or phrase.

The teacher attempted to begin a dialogue with the students. This was done with reference to the visual stimulus as mentioned above (turn 1). She briefly described the picture, continued discussing her personal views on the matter, and then asked open-ended questions to encourage student responses. In this instance, the teacher asked the students how they would interpret the picture (turn 1). In this opening sequence, the teacher adopted a two-pronged approach to eliciting a personal response from the students. Firstly, as she indicated that they were attempting to analyse the picture together, she also began by sharing her personal views with the students. She then invited students to take up the same conversational turn by asking 'how would you guys approach this picture?' (turn 1) thereby encouraging students to air their views just as she had. Secondly, she also asked the open-ended question 'What do you think they're feeling?' (turn 1) to reiterate the nature of the responses she was hoping to elicit from students. Despite these interactional cues to take part in a dialogic discussion, the students' responses were largely single-word answers, for example, 'Bored' (turn 2) and then subsequently 'Constrained' (turn 6), that did not present their interpretation of the visual stimulus.

Undaunted by the lack of sustained responses, the teacher attempted an uptake of the student's response 'Constrained' (turn 6) by inviting the students to follow up on their responses. We see the teacher's numerous attempts to draw students to further explain or provide justifications for the points raised by asking for the reasons behind the students' thinking, for example, 'Why do you say constrained?' (turn 7) and 'Because why?' (turn 11). Despite such prompting, the students continued with single clause responses, answering with 'Because it looks like they are stuck' (turn 8) and 'Because they only face the screen' (turn 12).

The teacher then performed an uptake 'Because they …' (turn 13) and elaborated on why she felt this was an interesting view. She invited comments based on the single clause response of the student to encourage the student to provide more information on the answer provided. Again here, the teacher presented her view of the student's idea – 'an alternative view' (turn 13), which she added was 'a very interesting view' (turn 13) – as a signal to the students that their responses were meaningful and valued. Once again, she ended her turn by offering a reason for the behaviour: 'perhaps because all they need to do is interact with the computer' (turn 13). This meant that the students were free to respond to the teacher's contributions by either agreeing or disagreeing with the teacher's view before providing reasons for their views. Yet, we see Student E provided a simple, single clause comment that is tangential to the topic at hand. The student's response of 'Cher, they are antisocial' (turn 14) appeared to be a closed-ended response to the teacher's earlier question of why the students in the picture did not seem to be socialising, rather than responding to the teacher's suggestion of why the students in the picture appeared to be bored. The exchange ended with an extended period of silence of fifteen seconds before the teacher transited to her next activity of getting the students to answer a given question in class, bringing a close to this sequence of attempted dialogue without much success.

No	Spkr	Utterances	Comments
1	**Tchr**	Let's look at this together. So I think they are really excited. You can tell it's Kahoot right. If it's not Kahoot, but you can tell it's something using the internet right, then you can probably say, 'I think they are engaging on some internet activity, activity over the internet using their laptops.' Because you understand that you can see laptops around right. I think that they feel engaged. Ok if excited is not the word, then you can say engaged. Ok so, how would you guys approach this picture? What do you think they're feeling?	Teacher attempts to begin a dialogue with students by asking open-ended questions and offering her views.
2	**Stdt A**	Bored	Student offers single word response.
3	**Tchr**	Some people say bored ah, even though it's about food.	
4	**Stdt B**	Cher, in exam, the picture will be in colour?	
5	**Tchr**	No, black and white. But don't worry, exam pictures will be clear enough. Ok? Yes anyone else?	
6	**Stdt C**	Constrained.	Student offers single word response.
7	**Tchr**	Stdt A says bored. Why do you say constrained?	Teacher attempts to get students to elaborate (by asking 'why').
8	**Stdt C**	Because it looks like they are stuck in the area.	Student offers partial sentence response.
9	**Tchr**	They are stuck in the area, ok. Anyone else?	
10	**Stdt D**	They feel they cannot socialise?	Student offers single sentence response.
11	**Tchr**	They feel that they cannot socialise, so they feel disengaged? Because why?	Teacher attempts to get students to elaborate (by asking 'why')
12	**Stdt D**	Because they only face the screen.	
13	**Tchr**	Because they only face their laptops, that's a very interesting view you know? Because so far, all that I've gotten from the other classes is oh they feel very excited, very competitive, because they are playing on their laptop or playing game. But this is an alternative view, they feel bored, they feel lonely perhaps, because all they need to do is interact with the computer.	Teacher offers her views and invites comment.
14	**Stdt E**	Cher, they are antisocial.	Student offers single sentence response.
15	**Tchr**	Ok, they are antisocial, they feel lonely, they don't feel like hanging out with people. They just want to interact with their laptops. Anyone else has an alternative answer? (15s silence) Anyone?	

Figure 1: **Lack of dialogue in the control class**

The monologic interaction in the control class persisted despite the teacher's numerous attempts to elicit further explanation or elaboration from the students who provided the teacher with only brief answers. This was especially evident in turn 6, which sees the student respond to the teacher's invitation with a response that was delivered with a questioning intonation (high-rise terminal). Consistent with the monologic classrooms described in Freire's (1970) banking model of

education, students were cautiously attempting to approximate the teacher's knowledge as they made guesses at what a perceived 'acceptable' response was. Despite the teacher's prompts and modelling of the use of the PEEL structure as a scaffold to help students further explain and elaborate, students persisted in providing single word or phrase responses.

Based on the numerous single clause responses from the students despite encouragement by the teacher, it appeared that the students tended to favour closed-ended responses typically observed in monologic interactions. This is an observation that can be generalised to the entire class as we observed the teacher's attempt to involve a range of students (five different students in this exchange) who differed in their linguistic abilities. It was also noteworthy that among the five students who were involved in the exchange, two of them indicated in post-lesson interviews that they were comfortable with public speaking. Nevertheless, they too had provided single-word or single-clause responses, suggesting that a lack of substantiation was not down to any feeling of nervousness.

Focus group discussion

When probed about why they appeared hesitant to give longer and more substantiated answers, one of the students involved responded with 'what for?' while another reported that she was 'not too sure' if her response would be what the teacher was looking for. While these two comments appeared to suggest two different reasons for the lack of sustained responses in class – a lack of a need compared to a hesitation born out of uncertainty – these responses nonetheless indicated that the students interpreted the teacher's questioning as a test of the students' knowledge. In the former student's response, a short response represented a minimally sufficient answer to the teacher's quizzing, while in the latter, the hesitation revealed a belief on the part of the student that there was an ideal response demanded by the teacher – one that she was not confident she had provided.

Despite the teacher's efforts to encourage a more open discussion in class, the students held on to the view that the teacher resembled a gatekeeper of knowledge. Consequently, their role in the class was to try – as best they could – to replicate or approximate the teacher's level of knowledge. It is not surprising that the responses from the students remained short and unsubstantiated despite the teacher's repeated attempts at encouraging the opposite.

Experimental Class: Difficulty sustaining dialogue

In the experimental class, the teacher led the class through the Chalk Talk routine. As stated earlier, the activity saw students working collaboratively in groups (although in silence) creating a concept map on a large piece of paper that was populated with their collective thoughts, questions and clarifications on a topic. In this lesson, the students were tasked to create concept maps discussing the merits and threats of the internet and social media. After the activity, the teacher began a whole-class discussion on the benefits of the internet or social media. On top of Chalk Talk helping the students generate ideas and talking points, the students were also able to refer to their concept maps during the whole-class discussion segment of the lesson as a visual stimulus to guide their discussion with the teacher or their peers.

In the transcript below, the teacher attempted to begin a dialogue with the students with an open-ended question: '[i]n what ways is the internet or social media helpful these days?' (turn 1). A student subsequently attempted to engage the teacher in dialogue. While the response by the student appeared to be hesitant, it seemed that the student attempted to provide his view: 'I like Golden Village' (turn 2) before following up with the start of another possible idea: 'we have the internet...' as seen in turn 2. At this juncture, this student's response already contrasted greatly with the brief responses seen in the control class.

No	Spkr	Utterance	Comments
1	**Tchr**	So, Stdt F, in what ways is the internet or social media helpful these days?	
2	**Stdt F**	… I like Golden Village … but right now … we have internet to help us … (silence)	Student attempts to engage the teacher in dialogue.
3	**Tchr**	Can you give some examples? Like where do you get your information from?	
4	**Stdt F**	\<INAUDIBLE MUMBLE: one word\>	Student offers one word response.
5	**Tchr**	Answer in a sentence.	
6	**Stdt F**	Google	Student offers one word response
7	**Tchr**	Do you have any personal experiences whereby you have used this, uh, website for information?	
8	**Stdt F**	I use google for…	Student offers incomplete sentence in response.
9	**Tchr**	Right. Do you notice something? I had to, just like yesterday … the first time is okay but I had to ask and probe for examples and personal experiences because I know you surely have examples and personal experiences so why don't you say it before someone like the examiner asks you?	Teacher intervenes and reminds students of the need to elaborate sufficiently (by referencing learning points from previous lessons).
10	**Stdt F**	Forget la, cher	

Figure 2: **Students facing difficulty sustaining a dialogue in the experimental class**

That the student responded with a full sentence signalled great promise that the approach encouraged a sustained response commonly seen in dialogic exchanges. However, the student's responses slowly developed into phrases inaudibly mumbled, and, finally, to a single word answer 'Google' (turn 6) despite the teacher's encouragement and prompting for examples to support his initial response (turn 5). It is interesting that despite the promising start, this student's response greatly resembled the students' responses in the control class. The answer 'Google' (turn 6) resembled a minimally sufficient response to the teacher's elicitation of where he obtained his information.

It appeared that, here, there was an abortive attempt at dialogic talk. An exchange between the teacher and the student that started out as a sequence of open-ended questioning from the teacher with a personal response from the student eventually devolved into the student's single word response without any elaboration or justification. In fact, the teacher then moved on to provide explicit feedback on the student's response (turn 9), completing the (d)evolution of the talk from a promisingly dialogic one to a clearly monologic one. In this instance, the breakdown of the dialogic talk likely stemmed from the student's inability to engage in a sustained discussion with the teacher.

Focus group discussion

The student revealed during interviews that he 'just didn't know what to say anymore' when he verbalized his response in turn 8. When it was put to him that the question of what he used the

search engine Google for appeared to be actually a very simple one, he, in fact, agreed before adding that he was 'not sure what the teacher wanted (him) to say' in class. When pressed further as to why he did not respond to the teacher given that the teacher's query was a genuine question, he expressed scepticism that a response to a teacher's question could 'be so easy'.

It is revealing that despite the teacher's rephrasing and reformulating of the same, straightforward question of the usefulness of technology multiple times (turns 1, 3 and 7), which the teacher confessed was meant as a discussion starter, the student nonetheless remained unsure of the teacher's intent. Rather than responding to the question at face value, the student instead appeared to question the teacher's intentions unnecessarily, resulting in him being uncertain about an appropriate response. This suggested that although students appeared to show an ability to grasp the mechanics of a dialogic interaction in class, it still remained instinctive for students to view their teacher's role in class as one of appraising students, and their own role as one of absorbing and showcasing as much knowledge as the teacher could provide when they were called upon.

A further analysis of the classroom discourse of the experimental class is illustrated next to show how a dialogic exchange between the teacher and students turned monologic, which can be ultimately traced back to the teacher's role in the class. This time, rather than the students finding difficulty in sustaining the dialogue in class, it was the teacher who turned the exchange monologic by initiating an extended consolidation segment, despite there being an opportunity to continue the dialogue.

Experimental Class: Teacher consolidation

In this instance, the teacher attempted to initiate dialogic talk with the students. The teacher began with a statement of her belief that one could not believe what one saw on the internet (turn 1). Once again, there appeared to be the potential for dialogic talk as a student responded with his view: 'yes I agree' (turn 2) and then continued to provide justification for his view ('because there are many…' [turn 2]). However, the student could be seen subsequently struggling to provide any further elaboration to his justification, finally ending with a sustained period of silence. In response, the teacher provided encouragement by reminding him not to give up halfway (turn 3).

In this case, the teacher commented on the nature of the student's response rather than engaged with the content of the student's response. The teacher explained in interviews that she was mindful of providing such comments as a means of helping students adapt to the interactional standards that she demanded. She believed that such comments made students aware that they could not simply give unsubstantiated responses.

This approach appeared to help the student as we then see the student attempting again to provide further justification by bringing in an example (turn 4). When the teacher noticed the student hesitating once again, she engaged with the student's response this time. She could be seen helping to scaffold the student's answer by asking if he was able to provide her with an example (turn 5). When the student provided a hypothetical scenario, the teacher then asked if the student had any personal experiences of scams (turn 7). At this juncture, the sequence of talk appeared to be dialogic. The teacher asked open-ended questions for the student to respond freely to, and, in return, the teacher did not evaluate the student's responses.

No	Spkr	Utterance	Comments
1	**Tchr**	Okay, um, okay you cannot simply believe what you see on the internet and social media these days. So ...	Teacher and student both engage in an extended exchange
2	**Stdt G**	Yes I agree, because there are many scams in the, in the internet that could cheat us of... For example, there are scams like um, convincing you to buy something like, um ... (silence)	
3	**Tchr**	Don't give up halfway huh ...	
4	**Stdt G**	For example, there are scams like uh, ah, like ah, they want to convince you to buy like this handphone and they show you like it's free ...	
5	**Tchr**	Can you give me an example?	Teacher identifies and picks up on student's struggle to provide a substantiated answer, and persists in eliciting more details from the student.
6	**Stdt G**	Ah, because um, they want to convince you to buy this handphone, and um, they want to ... don't believe it there are many scammers out there who want to cheat your money.	
7	**Tchr**	Have you personally experienced it or know of someone who has experienced such scams?	
8	**Stdt G**	Ah.	Breakdown of exchange - no substantial student response for the teacher to build upon
9	**Tchr**	At this point, you should not answer no. Because I'm giving you a chance to talk more ... when the examiner asks you a question, they want to give you a better grade, a chance to talk more, do not say no, okay?	Teacher offers evaluative move (comment + summary)
10	**Stdt G**	Yes, ah, recently my friend ... cheated when he went to this website called ah, this website, cheathandphones.com. He ... iPhone 7 for $120.	
11	**Tchr**	Okay, this sounds too good to be true right, obviously it sounds too good to be true but because he had not enough funds he decided to go ahead and try buying it to see whether it was real, then he got scammed. Okay so that's I agree ... anything, just anything that you see on the internet you have to be careful.	
12	**Tchr**	Okay so I help you close the answer so ... Okay obviously he made up the last part because I know him ... you do not say no, make up something, you can make up something but please don't make up something that is unbelievable. ... Do you think that is believable that you didn't know who ... is. It is quite believable. There are really ... websites ... you really thinks it sounds very stupid but you search online, there are possibilities for such ... Ok right now I've given this handout, shh, I've given this handout at the start, uh, at the front, please pass it down, everyone has one. I photocopied this from um a magazine, not the magazine that ... okay it basically gives you the structure of the oral and even suggested answers. I don't have time to go through with you it's not on the same theme but I hope you read through it to see the structure. Be inspired, practise! Speaking to yourself in front of the mirror if you feel that you are someone who need ... confidence. I have no time to go through the class test, meet you on Friday. ... If you have any other questions for oral, please come and meet me personally, Whatsapp me, ...	Teacher offers evaluative move (comment + summary)
13	**Tchr**	Thank you, class.	
14	**Stdt G**	Thank you ...	

Figure 3: **Teacher favouring monologic talk over continuing discussion**

However, the student then appeared to struggle to answer the latest question, with his interjection 'Ah!' (turn 8) taken to be an answer in the negative by the teacher (turn 9). At this point, we can see that the teacher chose to perform an evaluative move, explicitly telling the student that he 'should not answer no' (turn 9). The teacher also re-emphasized this point by repeating it again at the end of her turn. Interestingly here, while so far we have observed how students appeared to limit their responses resulting in a monologue, this time, it appeared that the teacher, in performing an evaluative move and then providing advice to the student, was the one threatening to turn a dialogic conversation monologic. As with students in the control class, the teacher took on the role of an arbiter in the class, ready to comment on the satisfactory nature or otherwise of the students' responses.

Nevertheless, it was encouraging that the student could be seen reattempting to answer the question (turn 10). His response was met with a comment by the teacher, who provided her view of and a brief rationalisation of the incident (turn 11). This sequence of the exchange between the teacher and the student suggested that the teacher was attempting to restart the dialogic talk between herself and the students.

Curiously, however, immediately after her speaking turn, there appeared to be a missed opportunity for the teacher to allow the student to respond to the teacher's advice that it was important to be cautious of deals which appear too good to be true. Instead of allowing the student to comment on the issue of things looking too good to be true, the teacher actually overrode the students' turn (turn 12). In this instance, the teacher continued her speaking turn by declaring that she would 'help (the student) close the answer' (turn 12). Rather than allowing the student to carry on the conversation and having it develop naturally, the teacher evaluated the move, commenting on the feasibility of the student's answer possibly for the benefit of the class. In so doing, it is arguable that the teacher framed the preceding authentic conversation as a performative task to be evaluated by the teacher. The reason for this appears evident toward the end of the transcript, when we see that the talk takes place at the end of the lesson. It is clear that, in the rush to complete the lesson, the teacher valued a substantial teacher-led summative move with little or no contribution from the student rather than a natural closure. Here then, the responsibility for the breakdown of dialogic talk in the classroom was the teacher's, who made a conscious decision to revert to a more monologic mode of interaction.

Focus group discussion

When pressed for their views on the teacher-dominated closure subsequently, neither the student nor the teacher found anything amiss with this substantial evaluative turn towards the end of the lesson. The teacher indicated that it would be remiss of her not to comment on the student's performance, especially with the forthcoming oral examination coming up in a few weeks. The student actually appreciated the teacher's comment, adding that if the teacher had not done so, he would be 'not sure what to make of it.'

These sentiments are again revealing of the roles that teachers and students believe they should assume in class. The fact that the student appeared appreciative of the teacher's extended appraisal and summary – rather than regretting the lack of an opportunity to further engage the teacher and class in a discussion – suggests that the power asymmetry that exists in class between teacher and student is a relationship that is negotiated. Put another way, in equal measure, students expect teachers to be the final judge on the correctness of any task performed in class, and teachers believe it is necessary that they play this role because the students are dependent on it. The result is that both teachers and students gravitate towards roles and interactional patterns that resemble more monologic than dialogic ones.

Discussion

It is evident that there is great promise in using thinking routines as a means of engendering dialogic talk in class. In both transcripts from the experimental class, we see that the teacher and the students engaged in an extended authentic exchange of ideas that do not resemble checks of understanding on the part of the teacher. Yet, we also see that eventually, both the students and the teacher are responsible for the subsequent breakdown of dialogic talk in the classroom. In the case of the former, we have seen that the students may be susceptible to over-analysing the teacher's intent in posing a question, resulting in them being at a loss in formulating an otherwise simple response. In the latter case, the teacher appears to favour an extended evaluation and conclusion to the discussion rather than a shortening of the evaluation in order to allow the students to continue the discussion.

In both these instances, we can trace the inability to sustain the class dialogue to a shared understanding of the role of the teacher in the class. With the teacher and students believing that the role of the teacher in the classroom is an evaluative one, and that the students in turn play the role of young disciples trying their best to approximate the teacher's knowledge, this influences their understanding of talk and turn-taking in class. For students, their responses are always evaluated, and so they tend to second-guess an appropriate response even to simple questions. For the teacher, it is important to provide a substantial closure, even at the expense of a naturally developing discussion.

The essence of dialogic interaction is for the teacher and students to start and maintain a meaningful verbal interaction to generate ideas through thinking, responding, and questioning to negotiate meaning-making in the classroom. However, the fact that we see dialogic interaction as being only promising rather than sustained in the MTV classroom forces us to think about the underlying factors that influence the nature of classroom talk.

One of the main factors to be considered is the various macro- and micro-cultures which tend to influence the dynamics of classroom interaction. As Alexander (2000) argues, the culture of a pedagogy is the basis for its durability. Vaish (2008) echoes this sentiment by arguing that the persistence of monologic interaction is largely due to cultural beliefs that influence the relationship between the teacher and her students. However, culture does not only influence the relationship between the teacher and student, but also their expectations and beliefs, and, ultimately, their actions within an interaction.

Additionally, the lack of questioning and probing on the part of the students could be rooted in the local Asian value systems and the perspective of the young as passive receivers of information without questioning. According to Vaish (2008), questioning could be perceived as challenging a person in authority – in this instance, the teacher in the class. Vaish cites the view of international schools' debate organiser Mark Gabriel, who believes that the teacher-centric learning practices in classrooms in Singapore are rooted in a culture of deference to authority: 'In local schools, it is more about listening to the teacher, and it is considered disrespectful to talk back.' (Gabriel in Wong & Neo, 2007, p. 10).

With this knowledge, it is perhaps worth considering that, though the MTV routines were designed to support the development of dialogic talk in class, it is imperative to take into account a consideration of the cultural context and expectations that students face in taking part in classroom interactions. Put another way, without a good command of mitigating strategies to overcome the power asymmetries that exist between teachers and students in class, it is easy to understand how

students err on the side of politeness and end up not asking questions – lest they offend the teacher by implying that the teacher's instruction was incomplete.

As a practical endeavour, the sequences of dialogic talk in class may not be the most expedient way of transmitting information to the students. It was instructive how the teacher in the control class was eager to help provide an evaluative closure for the discussion, to the extent that it apparently undermined the naturalistic exchange that preceded it. Additionally, the teacher also contributed 'suggested answers' with the perspective of a standard that the students were expected to approximate in class. It is inescapable that the primary role of the teacher defaults to one in which the onus is on the teacher to ensure their students perform well in examinations. While one could argue that a teacher could just as easily have steered the students towards a meta-discussion of their own talk, given the economy of time, it appeared that teachers (and perhaps students) value a teacher-led closing summary rather than a potentially nebulous one that might develop from a preceding discussion. Crucially then, that a teacher favours a more monologic mode of interaction, despite the syllabus aims and stated benefits of dialogic talk, should not be taken as a sign of the teacher's inadequacy or a problem that can be remedied by additional teacher training. Rather, it should be clear that monologic talk in the classroom seems to be a deliberate and conscious decision by the teacher to navigate the various classroom circumstances most expediently.

Limitations

This study recognises the limitations of examining one teacher in two classes as a pilot study on the potential impact of questioning sequences on the nature of subsequent talk. Nonetheless, this study has shown that there is potential for the questioning sequences outlined by Ritchhart and Perkins (2008) in establishing dialogic interaction in the classroom. However, it is important to note that the success was rather limited, and further studies can be undertaken to dive deeper into two further issues not addressed by this study.

Firstly, further studies could examine if the success (albeit limited) seen in this study can be replicated across classes of different subjects, levels and streams, as well as with different teachers. This will allow us to better understand the strengths of the thinking routines in engendering dialogue in class, as well as potentially provide a clearer understanding of the social and cultural impediments to dialogic talk in class.

Secondly, intervention in the form of mitigation strategies – akin to Brown and Levinson's (1987) politeness-based approach to navigating the sociological issue of threatening face (Goffman, 1967) – could be trialled in further studies. Face, understood here to mean the desire to be approved of (positive face) or not intruded upon (negative face), could provide a useful dimension for understanding the social challenges of classroom interaction alluded to in the above section. We propose that politeness, as a consideration for preserving a speaker's and addressee's positive and negative face, can help serve as a starting point in designing mitigation strategies to see if it can help students overcome the said social challenges.

Conclusion

Ultimately, it appears that the MTV thinking routines can provide a means for the teacher to develop dialogic talk in the classroom, given the correct circumstances of time and place (and the associated social pressures that come with them). This study has shown that they can serve as a scaffold or guide for both teacher and students to generate meaningful dialogic discussions.

However, it is also clear that the cultural roots of monologic talk in the classroom are deeply entrenched and pervasive. Therefore, to consider the MTV thinking routines as a panacea for the lack

of dialogic talk in the classroom would be a great overstatement which not only exaggerates Ritchhart and Perkins' (2008) claims for the routines, but would also oversimplify the complexities that teachers have to skilfully (and sometimes intuitively) navigate in the classroom every day.

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