The role of metacognition in circumventing unfamiliar situations in spoken interaction

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Abstract

Speaking activities in the Singapore classroom tend to be largely unintentional and left to chance. This has led to a situation whereby competent speakers are mostly the ones contributing in classroom discussions, while the less competent speakers are overshadowed, or may even choose not to contribute. Even if teachers do make a conscious effort to encourage the latter group of learners to speak up, these speakers often end up with less than satisfactory, or unelaborated responses. Competent speakers have also been observed to have the ability to sustain a conversation topic which they might not be familiar with. This study thus hypothesises that competent speakers are able to successfully engage in metacognitive regulatory processes to get around unfamiliar or difficult topics during the spoken interaction component of the GCE Ordinary Level English Language Oral Communication Exam. Such metacognitive regulation also allows them to provide well elaborated and detailed responses. It seeks to find answers to the research question, "What strategies are manifested from competent speakers' metacognitive regulation as they attempt to circumvent unfamiliar situations in spoken interactions?" This is done through the analysis of spoken interaction data gathered from participants of a local secondary school who participated in the study's mock spoken interaction assessment.

Introduction and Context of Study

A commitment towards developing speaking skills is likely to contribute to the eventual success of the learner's language acquisition and development (Goh, 2007). Given the apparent benefits of speaking, one would expect significant emphasis to be placed on the teaching of speaking skills in Singapore classrooms. However, Goh (2014) suggested that teachers still tend to focus on reading and writing skills in the classroom. Such practices are unsurprising given that the weightage of the different language skills in major high-stakes national examinations, such as the GCE Ordinary Level English Examination (SEAB, 2018), is drawn up in a way which places greater emphasis on reading and writing, as compared to listening and speaking.

Oral Communication is one of the areas tested in the GCE Ordinary Level English Language Examination (SEAB, 2018). The oral exam consists of two parts; the first part being the Reading Aloud segment where candidates are required to read aloud a short text with a tone that is appropriate for the text's purpose, audience and context. The second part is the Spoken Interaction segment, where candidates engage in a discussion with the examiners on a topic based on a visual stimulus. Both parts of the examination are thematically linked (SEAB, 2018).

While some teachers may perceive that their students do not face much difficulty in the Reading Aloud segment, the same cannot be said for the Spoken Interaction component. Other teachers

within the fraternity have noticed that spoken interaction is an area which many students find daunting. In essence, a good candidate for the Spoken Interaction component is expected to engage examiners in a sustained discussion, whilst delivering content accurately and fluently. When conducting the Spoken Interaction segment of the exam, a total of three discussion question prompts are posed sequentially to the candidate by the examiners. These prompting questions usually require candidates to share their own personal experiences or allow them opportunities to introduce contemporary issues which are relevant to a given topic. Examiners have the flexibility to engage the candidates further or assist them in elaborating further through additional prompting questions of their own.

One possible reason why weaker students find it hard to excel in the Spoken Interaction component is that challenges faced by these speakers are hardly surfaced in typical classroom settings, where speaking is left to chance and students' voluntary participation. Goh (2007) succinctly summed up the implication of such a setting where speaking is left to chance, as opposed to being intentionally taught: "The apparent ease with which speech is produced by competent speakers often belies the complex cognitive processes involved and the factors which influence them" (p. 4).

The typical classroom setting described above thus leads to a situation where competent speakers are able and willing to contribute in classroom discussions, while the less confident speakers are overshadowed, or may choose not to do so. Even if teachers do make a conscious effort to encourage the latter group of students to speak up, these speakers often end up with less than satisfactory, unelaborated responses.

In view of the challenges seen in the Singapore classroom expounded above, this study aims to answer the research question:

> *What strategies are manifested from competent speakers' metacognitive regulation as they attempt to circumvent unfamiliar situations in spoken interactions?*

Findings from this study may shed light on how speaking lessons may be approached in future to benefit more students, especially those who are of mid- to low proficiency.

Literature Review

Before presenting the findings, I will first review the current literature on speaking and metacognition that is necessary to situate the context of this study.

Speaking and perceived language competency

Foreign learners and second language learners of English tend to perceive their mastery and competency in English by their ability to speak (Richards, 2006). These learners channel much of their efforts into acquiring a proficient level of speaking, in the hope of staying competitive and relevant in the 21st century (Goh, 2014). This is not surprising given that increasingly, employers are expecting prospective employees to not only possess highly sought-after skills such as critical thinking, problem solving, innovation, collaboration and cross-cultural communication; but also be equally adept at demonstrating them through spoken means (Goh, 2014). In light of the positive impacts that a good proficiency in speaking can bring about, Richards (2006) noted the abundance of reference materials related to speaking which are available to educators and learners. While some of these materials advocate direct approaches (focusing on aspects such as turn-taking and questioning strategies) towards developing speaking proficiency, others create authentic scenarios whereby speakers can come together to simulate everyday situations and conversations (Richards & Nunan, 1990). Achieving high levels of speaking competence is very much related to

how learners manage metacognitively their learning progressions, as highlighted by a number of scholars in the field (Wenden, 1998; Zhang, 2010, Zhang & Zhang, 2018).

Metacognition

The term "metacognition" is often associated with one's ability to engage in higher order thinking to achieve enhanced learning outcomes. Metacognitive processes happen all the time in our day-to-day activities (Flavell, 1979). For instance, processes such as thinking about how to tackle a comprehension question or re-reading an essay to find ways to improve the coherence of the paragraphs within it are all metacognitive in nature (Zhang, 2010, 2016; Zhang & Zhang, 2018). Many studies in the literature have suggested that individuals who possess a strong ability in the area of metacognition tend to be more successful in their academic endeavours, spanning across an array of subjects and skills in various disciplines (Azevedo, 2009; Sato & Leowen, 2018; Zhang & Qin, 2018). In Tan and Tan (2010), Chinese language learners were found to have benefitted from classroom interventions that adopt a metacognitive approach; these Chinese language learners levelled up their competency in speaking, and performed better in their speaking tasks after the intervention. In another study by Lee, Chang, and Lee (2001), high achievers of primary school mathematics were observed to execute metacognitive processes more competently than their low achieving counterparts. Nakatani (2005) also introduced metacognitive strategies to participants in a study, which resulted in an improvement in the speaking proficiency of these participants who were learning English as a foreign language. The literature above suggests a positive correlation between metacognition and successful academic endeavours. These studies emphasise the need for researchers to look into learners' metacognition, and for strategies to be taught explicitly to learners in order to help raise their metacognitive awareness of strategies.

In the discussion of metacognition, Flavell's (1979) definition is constantly referred to in the literature. In this definition, metacognition involves an interaction between one's metacognitive knowledge and metacognitive regulation. Metacognitive knowledge may be segmented into three areas, namely "person knowledge", "task knowledge" and "strategic knowledge." While it is recognised that all three aspects of metacognitive knowledge will interact in instances of regulation, this study however, focuses on strategic knowledge and how it is manifested in learners' verbalisations.

- "Person knowledge" refers to an individual's awareness and perception of self. For example, a student may be aware that he or she concentrates better in a certain environment (Livingston, 1997).
- "Task knowledge" refers to one's perception of the difficulty of a particular learning task (Livingston, 1997). An inference-based comprehension question may be perceived by a student as being more time consuming and challenging than a straight-forward literal comprehension question.
- Finally, "strategic knowledge" refers to one's ability to apply taught learner strategies where appropriate (Wenden, 1998; see also Goh & Taib, 2006; Zhang, 2010).

Metacognitive regulation, on the other hand, is a self-regulated process where learners monitor and assess what they are lacking in, and initiate intervention measures accordingly. Metacognitive regulation usually occurs when cognition fails (Roberts & Erdos, 1993). Zhang (2010) noted that successful Chinese EFL readers were able to utilise contextual clues within the text to deduce meanings of unfamiliar words. Such use of a contextual strategy was notably absent among the less successful Chinese EFL readers. Thus, in such instances where a learner fails to comprehend what was just read, metacognitive regulation could be said to be triggered as one starts looking for alternative means to help achieve understanding. Recent work along this line of inquiry has generated significant findings which show that learners' metacognitive regulation plays a significant role in helping them towards successful completion of academic tasks (Tarricone, 2011;

Zhang, 2016; Zhang & Zhang, 2013). Likewise, this study explores how the metacognitive regulation of competent speakers is manifested in the form of strategies when these learners are faced with an unfamiliar spoken scenario. Insights gained from this could better inform actual classroom practices and benefit the wider student body.

Methodology

Various authors (Pintrich, 2002; Tarricone, 2011; Zhang, 2010, 2016; Zhang & Zhang, 2013) have observed that metacognitive regulation occurs in learners, especially competent ones, when they are faced with academic challenges. These lend support to the hypothesis that unfamiliar or difficult topics raised during spoken interaction scenarios would provide a window which the researcher could use to study a learner's metacognitive regulatory processes. During spoken interactions, individuals may face problems with content generation due to the lack of familiarity or first-hand experience with a given topic. For instance, when a learner is asked to comment about a topic which he or she is completely unfamiliar with, the conversation could potentially stall. Notably, such an unfamiliar context may translate into a conversation dead-end for the less competent speakers, while competent speakers may be observed to be capable of getting around such a tricky situation and still be able to elaborate on something relevant. Such 'competent speakers' could be said to be similar to the learners described in Pintrich (2002). In Pintrich (2002), it was noted that a learner who is self-aware about his or her unfamiliarity with a topic would attempt to "use different strategies to make sure she understands the topic being studied" (p. 222). This phenomenon thus suggests that certain metacognitive regulatory processes occur in the minds of learners when they are caught in a difficult situation. This could possibly also explain why competent speakers are able to manage a conversation skilfully and still elaborate coherently despite their limited knowledge of a specific topic at hand; presumably metacognitive regulation has occurred, which allows them to deploy strategies to circumvent the seemingly unfamiliar task.

The critical processes of metacognitive regulation in higher ability, competent speakers are difficult to underpin largely due to the fact that such processes are neither visible nor tangible; a point that was also raised in Goh (2014). In her article, Goh highlighted the importance of understanding a learner's metacognitive processes since they are easily "hidden from teachers and quite often even from the learner themselves" (p. 5). This study thus attempts to surface these underlying processes, so that researchers and educators alike are able to understand the implications of metacognition on strategy deployment during speaking, more specifically in unfamiliar spoken interaction scenarios. In essence, this study aims to provide insights into the research question detailed above. In order to answer the research question, the study required the acquisition of spoken interaction data from participants.

Acquisition of Spoken Interaction data

The top five highest scoring Secondary 2 candidates for a school-based internal Oral Communication Examination conducted in 2017 at a local secondary school in Singapore form the main participants of the study. Only the scores for the Spoken Interaction component were considered, and these scores were based on the school's internal exam rubric, which was adapted from the official one used in the GCE 'O' Level English Language Oral Communication Examination. This marking rubric stipulates that a candidate is likely to score better for the Spoken Interaction component if he or she is fluent, able to sustain an engaging interaction, and demonstrates initiative by introducing relevant ideas and issues. The selected five students, who were in Secondary 3 in 2018, underwent a mock assessment of the Spoken Interaction component, in which the entire process was documented in the form of an audio recording that was later transcribed.

The mock Spoken Interaction assessment was intentionally designed to feature a topic or theme which was foreign to the participants. This unfamiliar topic or theme was decided on by means of a short pre-study written questionnaire which required participants to rank their confidence level in engaging in a conversation on various topics on a Likert scale. The researcher then prepared questions around the lowest scoring themes or topics for the respective participants. As hypothesised earlier, an unfamiliar situation is necessary to trigger the metacognitive regulatory processes of a participant who is presumably a competent speaker. Zhang (2010) found competent Chinese EFL readers to be more likely to use contextual clues within a text to deduce meanings of unfamiliar words to achieve understanding, and that such use of a contextual strategy was notably absent among the less competent Chinese EFL readers. Zhang's (2010) study thus hinted at metacognitive regulatory processes being executed during reading when a learner faces an obstacle. Findings from this current study will hopefully contribute towards this area of research in response to Goh's (2014) call for more studies in the area. For the purpose of illustration, the topic of 'National Pride,' which was one of the topics the researcher engaged the participants in, will be used to explain how the mock assessment was conducted.

1. The participant, who is familiar with the assessment structure and criteria, first receives a visual stimulus which portrays a photograph of a live National Day Parade. He or she is given approximately five minutes of preparation time.
2. At the end of the five minutes preparation time, the researcher poses a question prompt to the participant which is targeted at triggering the personal feelings and experiences of the participant. (e.g. "How do you feel about this event taking place in the picture?")
3. The participant then proceeds to provide a spoken response that addresses the question prompt.

As a control measure, the researcher refrained from asking additional prompts unless the participant genuinely required support. When a participant attempted to respond to a question prompt based on a topic which he did not have any first-hand experience in, the researcher noted that any verbalisation which occurred was likely to be the direct output of his or her metacognitive regulation. An audio recording of the entire process served as a form of contextualised evidence for the participant's verbalisations. A transcription of each participant's assessment was also documented and will be discussed in greater detail in the next section.

Analysis of results obtained

As mentioned in an earlier section, it is hypothesised that competent speakers are more likely to engage in metacognitive regulatory processes when faced with an unfamiliar spoken interaction topic, which is similar to the observation made in Zhang (2010) where successful Chinese EFL readers were found to be more adept at circumventing obstacles in reading as compared to their less successful counterparts. In order to test this hypothesis, a pre-study questionnaire was conducted with the five participants to determine their level of confidence in engaging in conversations over a range of topics. All five participants were required to provide their responses to the following during the pre-study questionnaire (see Figure 1).

How confident are you (participant) to engage in a conversation on the following topics? Rate them on a scale of 1 to 5 (*1 being totally not confident, and 5 being very confident*).					
Social Media		Addiction		Shopping	
Cooking		Culture and Festivals		Extreme Sports	
Arts / Music		Education		National Pride	
Tourism		Transport		Career	
Youth		Community Service		Environment	
Family		Vegetarianism		Entertainers	

Figure 1. An extract from the pre-study questionnaire.

Based on the consolidated responses given for the above, the two topics which participants reported to be the least confident about were National Pride and Vegetarianism. Consequently, these two unfamiliar topics were selected for the mock assessment to create an ideal environment for metacognitive regulation to be triggered. During the mock assessment, each participant was first given the visual stimulus for National Pride and five minutes of preparation time before the researcher asked the question. Following this, the participant was given the second visual stimulus on Vegetarianism and another five minutes before being prompted to respond to the second question. The following summarises the two topics for the mock assessment, as well as their corresponding visual stimuli and spoken interaction prompts.

Topics	Visual Stimuli	Spoken Interaction Prompts
National Pride	A photograph of the National Day Parade in Singapore	How do you feel about this event taking place in the picture?
Vegetarianism	A photograph of a vegetarian food stall situated in a local food court	Will you consider eating at this place? Why or why not?

Figure 2: Spoken interaction topics and their corresponding visual stimulus and prompts.

In the analysis of the data gathered, schema theory was used as a means to possibly explain the manifestation of metacognitive regulation in competent speakers when they were faced with an unfamiliar spoken interaction situation. The fluid nature of the participants' spoken output allowed the researcher to observe that elaborations would often unfold in a somewhat systematic way; there was strong evidence of participants attempting to form associations with related or similar topics and themes. Such a phenomenon was analogous to that of the content schema as described in Carrell (1984a), where the learners' background knowledge interacts with given texts to achieve understanding and comprehension.

Schema Theory

The notion of the schema or schemata has been widely utilised in understanding language comprehension. According to schema theory, one's background knowledge, also known as one's schemata, is essential in aiding successful comprehension of a text. In other words, meaning making is the result of interaction between one's schemata and the text itself; a reader successfully comprehends a text when he is able to make connections with his own schemata (Carrell, 1984a). The notion of schemata may be further understood in terms of linguistic schema, content schema and formal schema.

- Linguistic schema refers to one's level of proficiency in the language; for instance, in terms of

its morphology, phonology, and syntax (Carrell, 1984b).

- Content schema, on the other hand, refers to the reader's background and content knowledge in various content areas.
- Finally, formal schema may be understood as the learner's familiarity with text conventions, structure and rhetorical organisation (Carrell, 1984b).

Notably, from the data collected, the presence of content schema activation was most evident among the strongest participants. Among the participants, the most competent speakers tended to activate their content schema by drawing an association to related topics or content. This was observed in participants when they attempted to produce a more detailed elaboration to a question prompt, or to get around a question which they lacked personal experience in. Consequently, the researcher posits that content schema activation is a manifestation of the participant's metacognitive regulation, in a bid to circumvent unfamiliar topics and still continue to be coherent in their elaboration.

Evidence of schema activation as a manifestation of metacognitive regulation

In the paragraphs that follow, I present some salient observations to show how each participant activated their content schema by associating the given topic with related topics or content, either to circumvent seemingly unfamiliar topics, or to produce a more detailed response. An analysis of the evidence gathered strongly suggested that content schema activation is a manifestation of the participant's metacognitive regulation when faced with an unfamiliar spoken interaction topic. In addition, some evidence of formal schema activation was also observed.

Participant A

Participant A reported a score of '1' for both topics on National Pride and Vegetarianism during the pre-study questionnaire, suggesting that he was not confident about engaging in conversations pertaining to these two topics.

When prompted to share about his personal experience related to National Day Parades, Participant A showed some difficulty responding initially given his lack of personal experience. Despite that, there was an attempt to relate it to the fact that he had watched National Day Parades on television many times.

> *Erm, personally I've not went to see the National Day Parade live, but however I've seen multiple times on television. I've seen many performances happening. There'll be a lot of marching of the soldiers and the flying of the aircrafts and I think it's really amazing to see how much Singaporeans have put in their hard work into making this performance for all of us.*

I suggest that this phenomenon itself is evidently metacognitive in nature, as there was an attempt to get out of a difficult situation which possibly resulted from Participant A's lack of personal experience. Participant A did this by means of association with the content schema of parades broadcast on TV, which could be a possible strategy resulting from Participant A's metacognitive regulation to provide some elaboration despite his lack of personal experience.

Participant A's somewhat elaborated response to the additional prompt for the second topic – "How about people around you? Do you know of anyone who is vegetarian?" also suggested that he actually did have the relevant content knowledge required for elaboration; only that it was not tapped on.

> *Yes, I do have friends who are vegetarian and usually they bring, erm, home food to school, uh, usually prepared by their mother, and I think it's quite interesting to see how many […]*

there's a variety of dishes in vegetarian itself. Some people may think that vegetarians do not have variety of food choices and so it's quite interesting to learn how the vegetarians intake their food and use vegetables in their daily food.

Notably, in the response above, Participant A ventured into a discussion of society's opinion on vegetarian food immediately after the additional prompt; yet another possible content schema association and topic which could potentially be elaborated on further to produce more depth and maturity in his response. The additional prompt could thus be seen as a form of content schema activation, a manifestation of Participant A's metacognitive regulation that aided Participant A in the retrieval of content knowledge which provided good details for elaboration.

Participant B

Participant B's confidence level score for both National Pride ('2') and Vegetarianism ('1') were low, similar to that of the case presented for Participant A. Evidence of content schema activation was especially apparent in Participant B's response to the prompt, "How do you feel about this event (National Day Parade) taking place in the picture?" When prompted, Participant B first responded to the question directly, as seen below. The researcher notes that this verbalisation was not a product of Participant B's metacognitive regulation given that it was a mere direct response to the prompt.

> *Erm, I feel, think for, erm, everyone that would agree with me that I feel a bit of sense of, erm, patriotism, cos this is of course our National Day Parade.*

After this verbalisation, however, Participant B went on to share a somewhat humorous experience, suggesting an activation of a 'personal experience' content schema in an attempt to provide more elaboration and details to the prompt.

> *[…] the only experience I've ever had with the National Day Parade erm personally was the every P5 student that will be invited to watch one of the rehearsals. Although it's quite a long time now, the most funniest thing that I can, the most memorable […] thing that I can recall was them, erm, the people that were, that came up to represent the different Members of Parliament. Cos, when as a child in, as a ten, eleven-year-old, when the announcement said 'Please welcome the President of Singapore', I was quite, erm, how would you say, shocked and excited cos, erm, it would be the first time that, whoa, I got to see such a famous person. And then instead when I heard, like, erm, soft […] laughter, I was questioning, why is everyone laughing at the President? Then when I went to look at the big screen, it turns out it was just some volunteer that came up and all I remember was that the entire floating platform laughing out loud because we were all so excited and our adolescent minds do not really […] have the sense of, how would you say, hmm, that it's just a rehearsal and they wouldn't invite the President every day for rehearsal.*

Participant B then went on to give his honest opinion about such events, suggesting an activation of another possible content schema.

> *Erm, for me, I don't really, erm, although it sounds quite, erm, demeaning, I don't really take, erm, interest as much though it's a once-in-a-year thing, I do sometimes watch a few moments but I don't really find any interest in it.*

When prompted by the researcher to elaborate more on why he does not take much interest in National Day Parades, Participant B was able to provide further details.

> *What I mean by 'not very interested' is when, cos, I, for me, I do not really, erm, have that sense, have that strong sense of patriotism although in school we are taught that we should*

be patriotic, we should love our own country, and I do love my Singapore but in a sense that every year, though it may change sometimes, I find it kind of, erm, a little boring at moments because it's the same procedure every year where they showcase the marching band, the different, uh, uniform groups, the Singapore Infantry, so that is what throws me off a bit when it comes to watching the National Day Parade and that's the reason why I find it not interesting.

The above verbalisation suggests that the successful activation of a content schema to provide an honest opinion could have potentially produced a more insightful and genuine response. Participant B's unwillingness to elaborate more about his 'disinterest' in National Day Parades may be understood in light of formal schema activation – Participant B could have been feeling insecure about saying anything negative or deemed it inappropriate in the formal context of an assessment. Interestingly, this observation also showed how Participant B's metacognitive knowledge of task influenced his strategy deployment. He was aware of the conventions of an assessment, and was thus cautious in determining the content he chose to deliver. This could possibly explain why Participant B was willing to divulge his views, albeit in a hesitant manner, only when prompted by the examiner.

Participant B's elaboration for the topic on Vegetarianism also suggests evidence of a content schema activation involving his personal growth, when he provided details about his experience as a child before taking on a reflective stance on his views about healthy eating. Even though admittedly, Participant B may possibly have misunderstood the term "Vegetarianism" to be merely eating vegetables, his response, nonetheless, provided evidence of content schema activation. In addition, Participant B's response also suggests a possible formal schema activation, as a clear thought organisation was displayed given the chronological flow from childhood to adulthood.

> *[...] as a child, I always remember that when I come back from school, my parents would always, erm, buy me a packet of food every time I come back and, to me as a child, I grew up eating a lot of meat, so every time when I opened the packet, I would always either see meat, or always meat with vegetables. So every time I see a side of vegetables, I always push them away but, as a I grow up, I grew more mature and I realise that vegetables are actually good for me, so I would have my fair share and, I think for every Singaporean like me, we always grow up eating this type of food or in hawker centres, we call it 'economic rice' and, for me it's, I would consider it as a, erm, delicacy or a childhood favourite of every Singaporean.*

It is interesting to note that although Participant B indicated relatively low confidence level scores for both topics on National Pride ('2') and Vegetarianism ('1'), he was still able to provide sufficiently elaborated responses. In the case of Participant B, there is strong evidence of a variety of content schema activation throughout the mock assessment, as well as formal schema activation when he displayed awareness of conventions and rhetorical organisation. These two forms of schema activation may potentially be evidence of metacognitive regulation at work.

Participant C

Similar to the two participants earlier, Participant C's confidence level scores for both topics on National Pride and Vegetarianism were low; a score of '1' for both was indicated. Participant C started off by providing a direct response when asked about how he felt towards the National Day Parade. Again, the researcher notes that this verbalisation was not a product of metacognitive regulation. Rather, it was a direct response to the prompt.

> *I feel that when I see this picture, uh, the first thing that comes to my mind is pride. Erm, you can see that many of the Singaporeans right, looking up towards the Singapore flag, uh, definitely gives them a sense of identity? [...] And then together with all the contingents, and*

the guard of honour contingent, uh, they're all definitely feeling that aura, uh, together with the Singaporeans and it's just that feeling you get, to be proud, uh, to be proud to be a Singaporean.

Participant C then proceeded to elaborate on a particular factor which led to Singapore's success; the fact that Singapore embraces diversity. Such details thus hint at a possible content schema activation which led to a fuller response.

And that, you know that there's, Singapore is very [...] cos today is Racial Harmony Day. Talk about how it's a diverse [...] society. Then National Day is just a day where put all our differences aside. Just look towards one goal which is the Singapore flag and how we can make our nation better? Another thing that also comes to my mind is that, everyone has a common goal. It's that, no one can, no one is different. Everyone is different from each other, but just for today, we're all one Singapore, and that it's not the, it's not those, erm, differences that we have that define us. It's what makes us Singaporean which defines us. So that's what I feel when I see this picture.

Participant C faced much difficulty when responding to the question of whether he would consider eating at the vegetarian food stall shown in the visual stimulus. His initial response was somewhat disorganised until a further prompt was given, "Do you happen to know of anyone who is a vegetarian?" At this juncture, it is interesting to note that Participant C was able to give a relatively more coherent response.

Uh, yes, uh, I have one of my friends, his name is Anand, he is a vegetarian so [...] Being a vegetarian is, uh, not easy for him because, uh, in our school, the canteen stalls don't really sell that, very few vegetarian selections. Uh, but, for him, shouldn't be much of problem because he brings his own food to school so, uh, I asked him once what he was eating. It was mainly eggs and a few, erm, uh, vegetables and that's it. So for him to be eating like that, I don't think I can be used to eating that kind of diet pretty much twenty four seven. So, yeah [...]

The fact that Participant C was able to provide a more detailed response only when further prompted suggests a possible content schema activation. This activated content schema may then have aided retrieval of his existing content knowledge which was used for elaboration.

Participant D

Participant D indicated a relatively low confidence level score of '2' for the topic on National Pride, and a score of '3' for Vegetarianism. When prompted about how he felt about the National Day Parade taking place in the visual stimulus, Participant D first mentioned that he felt proud of being a Singaporean, which was a direct response to the question.

Erm, despite just celebrating our nation's birthday and feeling proud to be a Singaporean, we should also get together on different occasions, not only on 9th of August and show our unity as Singaporeans.

He then went on to elaborate relevant details about some factors that may contribute to Singapore's continuing success, similar to that of Participant C.

Uh, some ways that we can show how united we are as Singaporeans are helping each other during times of trouble and being there for each other during, if we need any help, despite our status, race or religion, the language we speak, and when we do this, I think as a nation, Singaporeans will become very strong and indeed help one another during any time of trouble or emergency, and we need help from each other.

The above again hints at content schema activation being a possible product of Participant D's metacognitive regulation in a bid to provide a more elaborate response to the initial prompt.

When prompted to share a personal experience related to the National Day Parade, it was apparent that Participant D was not able to share any specific personal experience. He did, however, attempt to elaborate with some details about his family, and how he felt as a Singaporean in general.

> For the past few years, I have been going to the National Day Parade, live, with my family. Erm, I think it's a time where I actually really feel that I'm very proud to be a Singaporean because I feel the energy when I'm over there with all the other Singaporeans and because Singaporeans are generally very friendly, we make friends very easily, and these friends usually last a long time. And, erm, I think that, just thinking of Singapore makes me feel that we're all actually a really big family, and I can always depend on anyone when I need help

While the above may arguably be hastily concluded and described as an irrelevant, off-topic response, I posit it to be a manifestation of Participant D's metacognitive regulation intended to circumvent an otherwise challenging question. Precisely because of Participant D's low confidence level score of '2' in engaging in conversations about National Pride, he had to activate relevant content schema to circumvent his lack of personal experience and keep the conversation going.

Participant D's response to the prompt on whether he would consider eating at the vegetarian food stall also suggests a likely content schema activation as a strategy. This is most apparent when Participant D elaborated on his personal childhood experience.

> I definitely will consider eating at this vegetarian shop. From the picture, it shows that there's many different types of food cooked for us to buy and eat. Erm, I have experience eating vegetarian food a lot since young time as my father is a vegetarian. And thus I think that vegetarian is also as delicious as non-vegetarian food. Erm, my mum's office has a vegetarian shop, under her block, and the food there is really delicious.

Participant D eventually provided a direct response to the question by elaborating on the reason why he would not mind eating at the vegetarian food stall; vegetarian food is healthy. Due to this verbalisation being a direct response to the prompt, it was not taken as an instance of metacognitive regulation. In other words, there was no content schema activation in the following.

> And although the 'meat' doesn't taste the same as non-vegetarian meat, it's pretty delicious and eating vegetarian food is also quite healthy because they have a lot of vegetables in it. And eating vegetables are really healthy for our body, to give us nutritions and keep the energy in our body to, erm, be very energetic throughout the day. And I think that if we have a habit of really eating vegetarian once in a while, we'll also learn that vegetarian food is also quite pretty well-cooked, uh, other than non-vegetarian as well.

Participant E

Participant E rated himself as having a confidence level score of '3' for conversations pertaining to National Pride, and a score of '2' for Vegetarianism. When prompted about how he felt about the National Day Parade shown on the visual stimulus, Participant E responded to the question directly by saying he was proud of Singapore, before proceeding to elaborate on details about Singapore's past and some factors which have contributed to Singapore's success. Again, these are likely manifestations of the participant's metacognitive regulatory processes - the activation of content schema which eventually led to a more elaborated response.

> Hmm, I feel very proud that Singapore is able to celebrate our National Day since I know that

it was very hard for our founding fathers to even get Singapore's independence. We've been through a lot and to see all our soldiers and all the youths in the crowd being patriotic to Singapore, it makes me feel proud to be a Singaporean. Singapore is unlike any other country, we are multiracial, we have peace and harmony, and we are also voted as the most safest country in 2017. This shows that we need to, like, stay united as one Singapore to maintain the peace in Singapore.

When asked to share about his personal experience with National Day Parades, Participant E was able to do so comfortably. This coincides with his self-rated confidence score of '3' with conversations pertaining to National Pride.

When I was P5, my school took me to National Day. It was really a mind opener for me as my family doesn't usually go to the National Day Parade due to time constraints. Seeing it in person compared to seeing it on the TV was really different. I could see my classmates were all very happy to be there as some of them were less financially stable and couldn't afford the tickets or the time to go there. Seeing the youths marching there, I feel like, I feel very proud that they had practised a lot to perform in the National Day Parade as it's not easy to stand there in front of thousands of people and stay still for hours upon hours.

The fact that Participant E was able to detail his personal experience when prompted suggests that he did have the necessary content knowledge, but that the associated content schema was not activated to retrieve them without prompting. One possible explanation for this could be due to the participant's own positive evaluation of his performance and initial response to the question prompt. In other words, Participant E might have already been satisfied with his initial response and felt that it was sufficiently elaborated. Thus, he may have felt that there was no longer a need to activate a further content schema related to a personal experience in order to provide further details.

When Participant E was initially asked if he would consider eating at the vegetarian food stall shown in the visual stimulus, he showed some difficulty responding and merely tried to describe what he saw in the image. However, when he was asked if he knew anyone who was a vegetarian, he proceeded to detail the benefits of being a vegetarian to provide a satisfactory response. This again suggests that Participant E actually did have the relevant content to elaborate on the question prompt, but, this time, he did not manage to activate the associated content schema.

Hmm, mostly all my friends are not vegetarian, as they do not get why being a vegetarian is, like, beneficial to them. From what I learnt in Science, my teacher has taught us that being vegetarian might not necessary be good to your health as vegetables lack protein which can, with a lack of it, can lead to serious health problems. Although one of my family members, my distant cousin, is a vegetarian, they do not eat meat as they believe it's cruel to the animals which the meats come from. Although I do not agree with her stand, I, I respect her choice and I do not question it.

The importance of content schema activation as a strategy becomes apparent in the above response given by Participant E. When asked if he would consider eating at the restaurant, he was clearly unable to provide a satisfactory response. However, once a 'friends and family' schema was activated, albeit by means of an additional examiner prompt, Participant E managed to introduce even more relevant details such as health implications, all of which eventually worked together to help him respond to the prompt sufficiently.

Implications of findings

In the analysis of each participant's responses in the above section, the evidence strongly suggests

that content schema activation was a strategy deployed as a result of participants' metacognitive regulation when circumventing seemingly unfamiliar topics in a bid to ensure that the conversation did not stall, or to produce a more detailed response. Content schema refers to the participant's background and content knowledge in various content areas. To a lesser extent, formal schema, which is understood as the participant's familiarity with text conventions, structure and rhetorical organisation (Devine, Carrell, & Eskey, 1987), was also observed to be activated in one of the participants, Participant B.

The mock assessment setting in which the study was conducted led to some interesting insights pertaining to the use of content schema activation as a strategy. While additional prompts during the mock spoken interaction assessment were intended to help participants avoid stalling the conversation, the detailed responses to such additional prompts by most of the participants suggest that these participants do have the necessary content knowledge that could aid them in elaborating. The only missing component then would be an explicit awareness of content schema activation as a strategy that could help participants retrieve this content knowledge. This understanding could potentially change the way educators prepare learners for the spoken interaction assessment in the classroom. Educators may consider equipping learners with strategies such as content schema activation in the classroom and expose them to a wide variety of content schema involving closely related topics. This suggests that the conventional approach to teaching content to learners ought to be reconsidered. While exposing learners to a wide range of content and contemporary issues is certainly still a practical and viable approach, what educators may consider is to raise learners' metacognitive awareness of strategies through the explicit teaching of strategies such as content schema activation. This can help learners access the content in the first place. As evidenced in the participants of this study, it is not uncommon for learners to be unable to access content knowledge which they actually have. Such a phenomenon points to the need for the explicit teaching of content schema activation as a strategy in the classroom.

Suggestion for Educators - Capitalising on Individual Learner's Areas of Expertise

A possible way in which content schema activation as a strategy may be taught in the classroom would be through an association activity or exercise which taps on each individual learner's areas of expertise. This method capitalises on content knowledge which learners already possess and are 'experts' in, so as to circumvent seemingly challenging or unfamiliar conversation scenarios. It is strongly rooted in the assumption that even if a learner may have little to no personal experience in a given topic during a conversation, it is still possible to elaborate relevant details drawing from a topic or area which he is more knowledgeable in. This strategy was devised from the various content schema activations observed in participants of the study and is intended to be systematic enough for learners to adopt. The primary intention here is to aid learners in getting around seemingly unfamiliar topics during a conversation, instead of merely stalling. By doing so, learners will be empowered to take on challenging spoken interaction scenarios, and this will hopefully raise their confidence and competency levels in the long run. In the following, I will attempt to construct a scenario to illustrate how content schema activation can be systematically utilised when the candidate does not have any personal experience in the topic of online gaming.

> *Examiner: How do you feel about this activity shown in the picture? (The picture shows a group of gamers participating in an online gaming competition)*
>
> *Candidate: The picture shows a group of gamers participating in some sort of gaming competition, and I think it must be rather fun and intense at the same time. **Personally, I am not too into online gaming although my brother is an avid fan. I always see him spending time in front of the computer after school playing all sorts of games. [Activation of 'family /***

friends' content schema]

To be honest, I feel that such online games may not be that bad, in fact I feel they foster teamwork among the players when they consider ways or strategies to win the game as a team. [Activation of 'values / benefits' content schema].

It's almost similar to playing in a team sport like basketball, which I am familiar with. As a captain of my school's basketball team, a challenge that I face would be getting everyone on the same page when there are differing viewpoints during a match. I believe this also happens in online gaming, and thus I definitely feel that such activities are great at fostering teamwork, provided they do not develop into an addiction of course. [Activation of area of expertise content schema - my hobby, basketball]

In the above illustration, the candidate is able to sustain the conversation despite having no personal real-life experience in online gaming. This is done through the activation of various content schemata as annotated above, and also by capitalising on the candidate's own area of expertise, which is his hobby, basketball. Educators may thus adapt and construct similar scenarios as the one above to encourage learners to consider various content schema activations that can help circumvent seemingly challenging conversation scenarios. They could first start off by encouraging learners to identify possible areas that they think they are 'experts' in. Subsequently, educators could expose learners to various seemingly unrelated themes or topics, and encourage them to make connections between them and their own areas of expertise. Doing so would allow learners the opportunity to activate relevant content schemata and associations and raise the metacognitive awareness of strategy usage. Hopefully, this would eventually boost learner confidence to a greater extent, as they become increasingly ready to take on unfamiliar topics.

Conclusion

In conclusion, this action research study has suggested that competent speakers are able to get around seemingly challenging or unfamiliar conversation topics because of their ability to activate various content schemata, which aid in their retrieval of relevant content knowledge and details that keep the conversation going. The study revealed strong evidence of content schema activation being deployed as a strategy when high proficiency speakers engage in metacognitive regulation while attempting to overcome a challenging spoken task. The study also revealed, albeit to a small extent, the activation of formal schemata, which aided in the organisation of spoken content delivery. Overall, data gathered from this study suggest that schema activation is a strategy deployed by high proficiency speakers as a result of their metacognitive regulation when faced with an unfamiliar spoken task. Consequently, this strategy can be made known and taught explicitly to learners, in order for them to fully capitalise on the content knowledge they have. It also implies that even if learners do have the necessary content knowledge, they may need access to the relevant strategy to tap into this knowledge. Thus, classroom teachers ought not to conclude too hastily that a lack of elaboration during the spoken interaction assessment is due to a lack of content knowledge. Rather, the case might be that the learner lacks the appropriate strategy needed to access this knowledge in the first place.

As the number of participants for this study was limited, it should not be generalised that only competent speakers are capable of using content and formal schema activation as a strategy to overcome challenging tasks. Future studies could instead consider participants of varying abilities to ascertain their extent of metacognitive regulation. A fuller analysis which explores all three components of metacognitive knowledge would also be useful, since metacognitive regulation is a dynamic process involving more than just strategic knowledge (Tarricone, 2011).

References

Azevedo, R. (2009). Theoretical, conceptual, methodological, and instructional issues in research on metacognition and self-regulated learning: A discussion. *Metacognition and Learning, 4*(1), 87-95.

Carrell, P. L. (1984a). Schema theory and ESL reading: Classroom implications and applications. *The Modern Language Journal, 68*(4), 332-343.

Carrell, P. L. (1984b). Evidence of a formal schema in second language comprehension. *Language Learning, 34*(2), 87-108.

Devine, J., Carrell, P. L., & Eskey, D. E. (Eds.) (1987). *Research in reading in English as a second language.* Washington, DC: Teachers of English to Speakers of Other Languages.

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. *American Psychologist, 34*(10), 906.

Goh, C. C. (2007). *Teaching Speaking in the Language Classroom.* Singapore: SEAMEO Regional Language Centre.

Goh, C. C. (2014). Reconceptualising second language oracy instruction: Metacognitive engagement and direct teaching in listening and speaking. *The Asian Journal of English Language & Pedagogy, 2,* 1-31.

Goh, C., & Taib, Y. (2006). Metacognitive instruction in listening for young learners. *ELT Journal, 60*(3), 222–232. doi: 10.1093/elt/ccl002

Lee, N. H., Chang, A. S. C., & Lee, P. Y. (2001). The role of metacognition in the learning of mathematics among low-achieving students. *Teaching and Learning, 22*(2), 18-30.

Livingston, J. (1997). *Metacognition: An Overview.* Unpublished manuscript, State University of New York at Buffalo.

Nakatani, Y. (2005). The effects of awareness-raising training on oral communication strategy use. *The Modern Language Journal, 89*(1), 76-91.

Pintrich, P. R. (2002). The role of metacognitive knowledge in learning, teaching, and assessing. *Theory into Practice, 41*(4), 219-225.

Richards, J. C. (2006). Developing classroom speaking activities: From theory to practice. *Guidelines, 28*(2), 3.

Richards, J. C., & Nunan, D. (Eds.). (1990). *Second language teacher education.* Cambridge, UK: Cambridge University Press.

Roberts, M. J., & Erdos, G. (1993). Strategy selection and metacognition. *Educational Psychology, 13*(3-4), 259-266.

Sato, M., & Loewen, S. (2018). Metacognitive instruction enhances the effectiveness of corrective feedback: Variable effects of feedback types and linguistic targets. *Language Learning, 68*(2), 507–545.

SEAB. (2018). Singapore Examinations and Assessment Board. Retrieved 15 January, 2019, from O-Level Syllabuses Examined in 2020 - English Language: https://www.seab.gov.sg/docs/default-source/national-examinations/syllabus/olevel/2020syllabus/1128_y20_sy.pdf

Tan, Y. H., & Tan, S. C. (2010). A metacognitive approach to enhancing Chinese language speaking skills with audioblogs. *Australasian Journal of Educational Technology, 26*(7), 1075-1089.

Tarricone, P. (2011). *The taxonomy of metacognition.* New York, NY: Psychology Press.

Wenden, A. L. (1998). Metacognitive knowledge and language learning 1. *Applied linguistics, 19*(4), 515-537.

Zhang, L. J. (2010). A dynamic metacognitive systems account of Chinese university students' knowledge about EFL reading. *TESOL Quarterly, 44* (2), 320-353.

Zhang, L. J. (2016). A dynamic metacognitive systems perspective on language learner autonomy. In R. Barnard & J. Li (Eds.), *Language learner autonomy: Teachers' beliefs and practices in East Asian contexts* (pp. 150-166). Phnom Penh, Cambodia: IDP Education.

Zhang, L. J. & Qin, T. L. (2018). Validating a questionnaire on EFL writers' metacognitive awareness of writing strategies in multimedia environments. In Å. Haukås, C. Bjørke, & M. Dypedahl (Eds.), *Metacognition in Language Learning and Teaching* (*Routledge Studies in Applied Linguistics*) (pp. 156-178). New York, NY: Routledge.

Zhang, L. J., & Zhang, D. (2013). Thinking metacognitively about metacognition in second and foreign language learning, teaching, and research: Toward a dynamic metacognitive systems perspective. *Contemporary Foreign Languages Studies, 396*(12), 111-121.

Zhang, L. J., & Zhang, D. (2018). Metacognition in TESOL: Theory and practice. In J. I. Liontas & A. Shehadeh (Eds.), *The TESOL Encyclopaedia of English language teaching, Vol. II: Approaches and methods in English for speakers of other languages* (pp. 682-792). Hoboken, NJ: Wiley-Blackwell.