

Developing primary students' ability to elaborate during stimulus-based conversation

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Abstract

This study focused on teachers' attempts to develop students' oral communication skills in English during stimulus-based conversational tasks. Using WICK (Words, Images, Colour and Knowledge) as a frame, Primary 4 and Primary 5 students were taught to pay attention to the words, images, colour of the given stimuli and to link them to their personal experiences and knowledge during stimulus-based conversation. Selected students were monitored to track their progress. Students' responses to stimulus-based conversation and teachers' reflections provided insights on the approach adopted. The study revealed that WICK, coupled with the explicit teaching of oral skills and the use of multimodal resources and sentence starters, enhanced students' awareness of details and enabled them to make links to their prior knowledge. Overall, these helped primary students to elaborate during stimulus-based conversation to some extent.

Introduction

In primary schools, stimulus-based conversation is one way through which students' communication skills are assessed. During stimulus-based conversation, students are given a visual text to talk about. The teacher will ask an opening question and use question prompts to guide the conversation. What the teachers in this study observed was that, during stimulus-based conversation, their students generally gave brief responses and were not able to elaborate by relating personal experiences, giving reasons or stating personal opinions, in order to expand on their ideas about the visual text. The purpose of the study was to examine to what extent the use of the Words, Images, Colour and Knowledge (WICK) frame, coupled with the explicit teaching of speaking skills and sentence starters as scaffolds, enabled students to provide elaborated responses during stimulus-based conversation.

Literature Review

The ability to communicate effectively is an essential skill for students. According to the Ministry of Education's English Language Syllabus 2010, teachers need to explicitly teach speaking skills to enable students to verbally express their ideas. These skills include elaborating on a topic, giving

details, anecdotes and concrete examples to illustrate a point, supporting opinions and ideas with reasons, highlighting similarities and differences to explain different perspectives. (Curriculum Planning and Development Division, 2008). Explicit teaching, which is generally acknowledged by researchers to be structured, systematic and scaffolded (Archer & Hughes, 2011; Goeke, 2009), was an essential focus of this study. Students were closely guided in learning the various speaking skills during explicit instruction.

Studies on providing support for speaking include Goh's research (2007) on the role of pre-speaking support for scaffolding the learning of speaking skills. As some learners experience cognitive overload when they try to attend to content and language demands when they speak, it is useful to provide support for the speaking tasks that are required. Goh and Burns (2012) highlighted that pre-speaking support could include building students' knowledge input and vocabulary about the topic so that they could draw from this bank of knowledge when they engage in conversation. The scaffolding should be gradually withdrawn to enable students to complete tasks independently with accuracy and understanding (Hughes, Morris, Therrien, & Benson, 2017).

To construct meaning from visual texts, students would also need support in building their visual literacy. According to Sinatra (1986), visual literacy is the "active reconstruction of past experiences with incoming visual information to obtain meaning" (1986, p. 5). Visual literacy skills are "learnable", "teachable" and "capable of development and improvement" (Avgerinou, 2009, p.29). To be visually literate, students need to have knowledge of visual vocabulary which includes terminology such as "line", "shape", "colour" and "space". They also need to have knowledge of visual signs and symbols, and what these mean in specific contexts. In addition, students need to be able to visually discriminate or see differences between two or more visual stimuli (Avgerinou, 2009). Draper (2010) investigated how visual stimuli could be analysed in a structured manner and developed a question protocol known as SLICK (an acronym for Shapes, Lines, Images, Colour and Knowledge) which was intended to guide students' analysis of pictures and picture books. The teachers in this study acknowledged that, in the local context, visual literacy skills were not frequently practised with students.

Pearson and Gallagher (1983) advocated the use of the Gradual Release of Responsibility (GRR) framework to provide a pedagogical structure for scaffolding students' learning. The GRR framework emphasises the use of teacher modelling through think-alouds to make explicit the skills students need to learn. In this study, the GRR framework was adopted for the intervention so that the cognitive work could be gradually and intentionally shifted from teacher to joint responsibility between teacher and students, and then to independent practice and application by students. The teachers explicitly taught the skills by modelling through think-alouds. They adapted the question protocol developed by Draper (2010) to create a frame to help students analyse words, images, colours and relate visuals to their personal knowledge when they were given multimodal texts or realia. This adapted version of SLICK was referred to as 'WICK' (an acronym for Words, Images, Colour and Knowledge). Sentence starters were provided to scaffold students' utterances as they practised the speaking skills with their peers.

The research question guiding the study was:

How does the explicit teaching of speaking skills using WICK as a frame and sentence starters contribute to students' ability to elaborate during stimulus-based conversation?

Methodology

This section describes the participants, instrumentation and the processes involved in the intervention.

Participants

This study focused on six Primary 4 students and six Primary 5 students from the larger pool of thirty-nine Primary 4 and forty-three Primary 5 students. The students were selected randomly to ensure a mix of race, gender and abilities. The lessons were taught by two teachers with 14 and 19 years of experience respectively.

Instrumentation

Data were collected over four months from July to October 2018 and included the following:

- Video recordings of the twelve selected students engaged in stimulus-based conversations prior to intervention
- Audio recordings of the twelve selected students' responses during intervention lessons
- Video recordings of the twelve selected students engaged in stimulus-based conversations after intervention
- Teachers' reflections of the intervention lessons.

Audio recordings of the twelve selected students were collected from all intervention lessons and transcribed. The transcriptions were used to analyse the responses of these students. The video recordings were used to examine student behaviours more closely, such as students looking at the words and images in the realia and using these to elaborate their points.

Pre-intervention

At the pre-intervention stage, all students sat for a stimulus-based conversation task with the teacher. In the pre-intervention task, three types of snacks were provided as stimuli for the conversation; namely, Tom and Jerry prawn crackers, Marigold yoghurt drink and Alfredo Chicken Delight pizza slice. Realia in the form of snacks familiar to the students made the conversation task more authentic and accessible for the students. The snacks featured written text, images and colour which the students could talk about. The students were given five minutes to examine items before they were asked the following questions:

1. Which snack would you choose for your break time and why?
2. How are these snacks similar? How are they different?
3. Has what your friends brought ever affected what you brought for snack time? If yes, why? If no, why?

The purpose of this pre-intervention task was to gather baseline data on the students' ability to elaborate during stimulus-based conversation. Their conversations were video recorded.

When crafting the questions as prompts for the stimulus-based conversation, the teachers referred to the English Language Syllabus 2010 (Curriculum Planning and Development Division, 2008). The aim of the questions was to assess the students' ability in the following speaking and viewing skills:

Question 1: to make a choice and support the choice with reasons.

Question 2: to compare and contrast options.

Question 3: to express personal experiences or opinions.

The students' responses were video recorded and transcribed verbatim, and subsequently coded and grouped into categories of elaboration skills. The teacher researchers identified three skills that were essential in enabling the students to elaborate during conversation tasks:

Skill 1: Using information from visual text to support personal views;

Skill 2: Comparing and contrasting options to make a choice;

Skill 3: Making connections to personal knowledge and experiences.

Intervention

Six lessons of one-hour duration each were designed for the intervention phase. Different teaching resources were used with the students. However, the skills taught were the same. The specific learning objectives, resources and procedure carried out in each lesson are outlined in Table 1.

Table 1

Intervention Plan

Lesson	Specific Instructional Objectives	Resources	Procedure
One	Students to understand what WICK is and to apply it to elaborate on visual texts.	20 copies of the story book <i>Voices in the Park</i> ; WICK frame.	The teacher explained what WICK was and demonstrated its application in a visual text from <i>Voices in the Park</i> (Browne, 2000) before getting students to practise speaking in groups and pairs.
Two	Students to apply WICK to different stimuli using sentence starters to scaffold the talk.	WICK frame; Sentence starter cards.	The teacher recapitulated WICK and provided the students with different stimuli and sentence starters to help them in elaboration. Mars, Hershey and Kit Kat chocolates were used at Primary 4 and a Brands essence of chicken advertisement was used at Primary 5.
Three	Students to identify criteria they would consider to make a decision.	Realia such as Hershey's, Kit Kat chocolate and Brand's Essence of Chicken.	The teacher demonstrated her thinking and decision-making using the think-aloud strategy to show how she came up with a set of criteria to guide her decision on a purchase. She explained how the sentence starters could be used before giving the students time to work on their set of criteria for selecting their CCA (Primary 4) and the brand of chocolates to buy (Primary 5).

Lesson	Specific Instructional Objectives	Resources	Procedure
Four	Students to compare and contrast visual texts using WICK and sentence starters.	20 copies of the story book <i>Voices in the Park</i> ; Sentence Starter card.	The teacher guided the students through questioning how to compare and contrast a visual text using WICK. She taught the students how to use the sentence starters to compare and contrast before getting them into pairs to practise using different visual texts in <i>Voices in the Park</i> .
Five	Students to compare and contrast options before making a choice.	Sentence Starter cards.	The teacher used a printed stimulus similar to what is used in the national examination. This was to demonstrate how to compare and contrast options before making a decision. The students had to compare and contrast CCAs (Primary 4) and physical exercises (Primary 5) before making their choice.
Six	Students to elaborate based on personal experience using 5W1H.	20 copies of the story book <i>Voices in the Park</i> ; Sentence Starter cards.	The teacher demonstrated how she connected a visual text from <i>Voices in the Park</i> to her own experiences using the 5W1H to elaborate on that experience. The students practised connecting the visual text to their personal experiences in pairs.

Post-intervention

After the intervention, the students were given the same stimulus-based conversation tasks and engaged in conversation using different types of snacks featuring written text, images and colour. As in the pre-intervention stage, the students' responses were video recorded and transcribed. The purpose was to gather qualitative data to determine how effectively students could apply the WICK strategy to analyse the visual stimuli and how effectively they could use the skills learnt during stimulus-based conversation.

Analysis

We compared the students' pre-intervention stimulus-based conversation responses with their post-intervention stimulus-based conversation responses using the three main skills that the study focussed on:

Skill 1: Using information from visual text to support personal views.

Question 1: Which snack would you choose for snack time and why?

This question required the students to use information from the given visual text about food items (Tom and Jerry prawn crackers, Marigold yoghurt drink and Alfredo Chicken Delight pizza slice) to support their personal preferences.

Skill 2: Comparing and contrasting options to make a choice.

Question 2: How are these snacks similar? How are they different?

This question required the students to make comparisons and show contrasts between the food items given before making a choice.

Skill 3: Making connections to personal knowledge and experiences.

Question 3: *Has the food brought by your friends ever affected the type of food brought by you for snack time? If yes, why? If no, why not?*

This question required the students to make connections to their personal knowledge and prior experiences to express their personal views.

Findings

Nine out of the twelve selected students (75%) could offer elaborated responses with greater details in the post-intervention conversation, indicating that they were able and more confident in expressing their views. However, not all the students gave elaborated responses for all three questions. Some gave more elaborated responses for Question prompts 1 and 2 but not for Question 3. The student responses below were selected to highlight the qualitative differences in the students' ability to elaborate after the intervention.

The following sections feature samples of student responses to the three questions at the pre-intervention and the post-intervention stages. These responses were taken solely from the selected group of twelve students.

Using information from visual texts to support personal views.

At the pre-intervention stage, as shown in Figure 1, the students were able to state their choices of snacks. However, many based their choices mainly on their personal preferences ("I'm a big fan of pizza" and "I don't like strawberries"), experiences ("Strawberries are very sweet", "I can eat it faster") and general knowledge ("pizza is very unhealthy" and "have to drink... healthy drinks"). The students did not make much use of **Words** (for e.g. ingredients or nutritional information) or the **Images** (healthier choice or halal symbols) found on the packaging to support their choices. Colour did not feature in the students' responses.

Question 1: Which of the three snacks would you choose and why?

Student 5A: If I have to choose one, I'll choose the pizza slice because I'm a big fan of pizza.

Student 5C: Maybe this (*pointing to the chicken crackers*). Cos we only have ten minutes to eat snack time and I can eat it faster than drinking yoghurt or eating pizza. I don't like strawberries and pizza is very unhealthy. Strawberries are very sweet.

Student 4C: Mmm... I will choose the yoghurt drink. Then... recess time will eat a bit only. Because when I have PE time, my PE teacher tell me do not eat ... this pizza and then the chips... have to drink like the healthy drinks.

Figure 1. Pre-intervention: Students' responses for Question 1.

After the intervention, the students were using **Words** ("ingredients", "sugar and calories", "vitamins and calcium and iron" and "expiry date") and **Images** ("healthier choice" indicated by the healthier choice symbol) found on the packaging to elaborate and support their selection, as shown in Figure 2. However, Colour was not mentioned in the students' responses. There was also evidence that students used sentence stems for comparison ("compared to" and "as... as") to support their choices.

Question 1: Which of the three snacks would you choose and why?

Student 5A: I would pick the cookies and cream bun as it contain a few vitamins and calcium and iron. It is also a healthier choice among the other three products. It also contain less sugar as compared to the chocolates.

Student 5C: I would take the banana muffin as sometimes my classmates don't bring food and I can share it with them. It is low in calories and it is healthy for us to eat. The other two options are higher in sugar and calories. So, it is not as healthy as the banana muffin.

Student 4C: I will choose the Milo and Sunshine bread as it has the healthier choice and I will want the food to be healthier food for me. I will not choose the Kit Kat as it does not contain the healthier choice. I notice that all of the ingredients (referring to the Sunshine bread) used are very healthy that's why the food is healthier choice... They have also stated the expiry date. The two items I have chosen has expiry in 2019 but the Kit Kat has no expiry.

Figure 2. Post-intervention: Students' responses for Question 1.

Comparing and contrasting options to make a choice

At the pre-intervention stage, as shown in Figure 3, most of the students were unsure of how to respond to the question as indicated by the pauses, fillers, short replies, and shrugging of shoulders, as well the admission of not being sure of how to answer. There was little attention paid by the students to the **Words** and **Images**. Only Student 4A mentioned **Colours** in his response.

Question 2: How are these snacks similar? How are they different?

Student 4A: Some colours are the same... Erm... some... fruits, some ... cartoon characters and biscuits... are not the same.

Student 4F: Erm... They have erm... sugar. They have erm... sugar. (*Shrugged shoulders when asked in what way the snacks were different.*)

Student 5B: The pizza... taste very nice and it also got sauce and other ingredients. Well... mmm... not sure... not sure what are they similar.

Figure 3. Pre-intervention: Students' responses for Question 2.

After the intervention, as seen in Figure 4, the students' responses were more coherent. There were attempts to compare using words like "similarities" and "similar". The students also used words such as "but", "different", "though", "more... than" and "lesser than" to signal contrast, indicating that there was some internalisation of the compare and contrast skills that were taught earlier. The students showed greater awareness of **Words** ("calcium and iron", "sugar and fat" and "vitamins") and **Images** ("halal sign") found on snack packaging. The words on the packaging provided the vocabulary needed to scaffold student talk. **Colour** was not mentioned in any the students' responses.

Question 2: How are these snacks similar? How are they different?

Student 4A: Halal sign... In the Kit Kat, here's the halal sign. In the bread, here's the halal

sign but in the Milo, the halal sign is here though it is very small. These three have the similarities... the halal sign.

Student 4F: They are similar because they are somehow healthy and they... also halal. They are different because one is Milo which is liquid and ...Kit Kat it is not healthy...and for the Sunshine (bread) it is with coco hazel and it is also high in calcium and iron and high in vitamin.

Student 5B: They are similar as they contain... they contain...sugar, but this one is lesser than the rest... They contain different amount of sugar and fat and also this one has more vitamins and calcium than there are in the other two.

Figure 4. Post-intervention: Students' responses for Question 2.

Making connections to personal knowledge and experiences

Before the intervention, as shown in Figure 5, many of the students were hesitant in their responses. For example, Student 4B's voice was soft when he responded and the use of "not really" indicated his uncertainty. There were relatively more fillers and pauses in the students' responses as shown by Student 4B and Student 5D. Though the students were able to state whether they were affected, the reasons provided by some of them (Students 5D and 5F) to explain why were not quite relevant.

Question 3: Has the food brought by your friends ever affected the type of food brought by you for snack time? Why?

Student 4B: Mmm, not really. Not really (*softly*)... because you know... I don't really get affected by their food, ah ... mmm, because I don't like people's food.

Student 5D: Erm ... it's your own choice what you want to bring... don't get affected by other people... So, I... in my opinion... I bring my own food then my friend bring their own food.

Student 5F: No... (*long pause*) I would choose my favourite kind of cereal and my favourite packet of drink.

Figure 5. Pre-intervention: Students' responses for Question 3.

After the intervention, many of the students were less hesitant in their responses, as seen in Figure 6. They made attempts to elaborate by citing examples, as seen with Student 4B ("like uh... stall 1 pizza, the hamburger"). Student 5D's answer, though direct, sounded terse compared to his pre-intervention response. Evidently, the students' language competence impeded their ability to express clearly, making their responses appear irrelevant and under-developed.

Question 3: Has the food brought by your friends ever affected the type of food brought by you for snack time? Why?

Student 4B: No...sometimes they bring unhealthy snack like... Stall 1 pizza, the hamburger... and just a lot of unhealthy food stuff. All my school mates and classmates bring unhealthy food... I don't usually bring food during snack time... sometimes healthy food is better than unhealthy food.

Student 5D: No, because they wanted to bring what is their business, not my business.

Student 5F: No... I bring different kinds of snacks to school... my other classmates won't even care about what I bring. As I think that what they brought for snack time is either unhealthy or maybe not good for your health.

Figure 6. Post-intervention: Students' responses for Question 3.

Discussion

The findings from the study indicated that the explicit teaching of speaking skills using WICK had, to some extent, contributed to the students' ability to elaborate during stimulus-based conversation.

During the pre-intervention, the students were not able to elaborate much. This was partly due to only being exposed to the black and white visual texts used in oral examinations. As the students' attention had almost never been directed to the words, images and colours on the packaging of snacks, the students paid little attention to these and depended very much on their personal experience or general knowledge to elaborate. A more pertinent reason for the students' inability to elaborate, as highlighted by Goh (2007), could be that though "speaking occurred frequently" in class, the explicit "teaching of speaking did not" (p.3). As a result, the students lacked the skills and the language necessary for effective oral communication.

The students performed better in the post-intervention stimulus-based conversation because there was explicit teaching of speaking skills. The six lessons planned with GRR (Pearson & Gallagher, 1983) provided the students with structured time to practise speaking skills in groups and in pairs. In addition, teacher modelling and think-aloud also scaffolded the students in their application of the speaking skills, building their confidence such that they were less hesitant in their verbal responses.

The introduction of the WICK frame raised the students' awareness that the words, images and colours found on the stimuli served to convey meaning. This resulted in the students being more focused on attending to these features, enabling them to make links to their personal experiences and knowledge to extend their talk. As seen in the students' post-intervention responses to Questions 1 and 2, the words and images found on the packaging provided the vocabulary and content for the students to make links with their experience and knowledge in order to extend talk.

The students' motivation to talk increased when the teachers used the picture book, the advertisement and the packaged snacks as stimuli for talk during the planned lessons. This could be because the stimuli were interesting, relevant to students' lives and in colour, unlike the black and white images used in the oral examination. The students' visual literacy was enhanced through the application of WICK to the different types of visual stimuli.

Though the students had practice during the intervention lessons to talk about the meaning conveyed through the colours in visual texts, colour was one aspect of WICK which the students hardly made use of during the post-intervention phase. This could be attributed to the lack of attention teachers placed on colours in visual texts at the lower levels, making it challenging for the students to connect meaning to the colours used.

Research has shown that students need to have knowledge of the topic in order to talk about it (Goh & Burns, 2012; Levelt, 2007). The food brought to school for snack time was the selected topic for the pre- and post-intervention stimulus-based conversation since every student was familiar with snack time. However, what was not taken into account was that there were a few students who did not bring food for snack time. They might not have been able to respond well to Question

3, which asked whether the food brought by their friends had ever affected their choice of food brought for snack time.

Although sentence stems were introduced to the students in each lesson to scaffold the talk, it was evident that students' language competence also needed to be addressed to enable them to clearly convey their thoughts and not be misunderstood.

Implications

For students to be able to elaborate when given visual texts or realia, they need to be able to attend to the words, images and colour found on them and be able to link the given stimuli to their own prior knowledge as highlighted by Avgerinou (2009). WICK could be used as a frame to enable them to achieve this. It is essential to explicitly teach speaking and provide ample opportunities for practice if we want students to be able to converse confidently and at length. Additionally, input in terms of knowledge of the topic, and the appropriate grammar and vocabulary, is essential for students to produce talk that can be understood.

The constraints affecting this study should also be acknowledged. Due to the small number of participants (12 students) and the intervention of just six lessons spread over a relatively brief period of four months, the results of this study cannot be generalised. As the pre-intervention and post-intervention interviews were conducted on a one-to-one basis, the students could have felt some anxiety and, therefore may not have been as forthcoming with their responses. The students might also have had more to say after being introduced to WICK, but could have been unable to do so due to their limited language ability.

Conclusion

This study showed that the explicit teaching of speaking skills, guided by the use of multimodal stimuli through WICK, did contribute to the students' ability to elaborate during stimulus-based conversation, to some extent. In addition, the teachers became more conscious of the need to teach speaking explicitly and provide opportunities for students to talk. The teachers were also more aware of the need to build students' spoken grammar, so that students could articulate their thoughts clearly and coherently.

The teachers have shared their learning and teaching resources with the other English Language teachers in their school. They have also uploaded the teaching resources to the Student Learning Space online platform, so that other teachers can access them for use with their students. They have provided guidance to their level teachers on how to explicitly teach the speaking skills using the WICK frame and sentence starters. Teachers who have used these in their classes have given feedback that students provided more elaborated responses in their oral conversations. Aside from sharing with their English Language teachers in their school, the teachers also presented their learning to the wider teaching fraternity by facilitating a teacher-led workshop at the Academy of Singapore Teachers. Additionally, they presented the findings from their classroom inquiry at the ELIS e-Conference 2020.

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