

Case 1

Using Students' Data to Inform Teaching of Reading Comprehension

Choi Wan St. Joseph's Primary School

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School

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Background

Brushing up students' reading skills was the major target that the teachers from Choi Wan St. Joseph's Primary School intended to achieve. Despite meticulous planning of the reading skills to be taught from P1 to P6, supplemented with teaching resources developed over the years, there was still room for improvement in reading comprehension, as reflected by students' performance in assessments.

The teachers had two questions in mind: (1) *What else should they do so that students could better pick up reading skills?* and (2) *How in-depth should they re-teach the area that students were not able to master in a recent assessment?*

In this collaboration, the effort was paid to reinforce the learning-teaching-assessment (L-T-A) cycle. In addition, supplementary materials were developed to provide students with more practice in the skills in which they were weak in.

Level

Primary 6

Strategies Used

- 1. Tracking Students' Performance and Developing Subsequent Follow-ups through Backward Design**
- 2. Adopting a Range of Classroom Assessments to Track Students' Learning**

Actions Taken

1. Tracking Students' Performance and Developing Subsequent Follow-ups through Backward Design

A results-focused lesson is considered to be more effective than a content-focused one as the former focuses on the *learnings* that we expect students should be able to grasp by the end of a lesson (Wiggins & McTighe, 2005). Based on the backward design put forth by Wiggins and McTighe (2005) to structure a results-focused lesson, the teachers first identified problems that students showed in assessments as the focus to work on. They thus communicated regarding the desired results that students were expected to achieve at the end of a collaboration cycle. Following this very first step, the work then moved on to developing materials and teaching strategies that could achieve the desired learning outcomes.

With a consensus to brush up students' reading skills, steps to locate and tackle students' weaknesses were carried out in the first term ('Phase 1') and second term ('Phase 2') respectively.

a. Phase 1

i. Analysing students' performance data

After the first term test, the teachers processed students' scores and located questions that the majority of students performed unsatisfactorily. It was found that questions asking about the duration of time were the most common weakness seen among students.

There were two questions in the test asking about time. The questions and common mistakes are shown in Table 1.

Table 1: Questions with unsatisfactory student performance in 1st Term Test 2021/22

Part	Text	Question	Correct answer	Common mistake
C	A poster about the Music and Arts Week	Q.4 How long is the Music and Arts Week?	5 days	13 th to 17 th March
G	Radio show dialogues between a host and a badminton star	Q.4 How long has May played badminton?	10 years	<ul style="list-style-type: none"> ◇ seven ◇ seven years old ◇ seventeen years old

As seen in the table, several possible problems might have been attributed to the wrong answers.

For Part C, it showed that students might not have a concrete idea of the type of answers to respond to the question phrase 'how long'. As a result, they stated the dates instead of the duration.

For Part G, there involved the calculation of the years (see the excerpt of the text in Figure 1). Students might have problems with questions requesting them to process data, such as the need to do calculation in this case. They also had difficulties giving the right quantifiers in answer.

Figure 1: Excerpt of Part G in 1st Term Test 2021/22

Jerry:	Congratulations on winning the Hong Kong Badminton Championship. You're just seventeen years old and you've achieved so much. What is your reason for your success?	10
May:	Well, lots of sweat.	
Jerry:	I see. When did you started playing badminton?	
May:	I was seven when I had my first badminton lesson. I just fell in love with the game.	

The skill of extracting information to answer questions about duration was not the main focus in P6. Yet, data reflected that there was a need to re-teach this.

ii. Devising teaching materials in collaborative lesson planning sessions

Material design: Aligning with the theme being taught

According to the scheme of work, the coming chapter to be taught was about film reviews. There were no questions about duration of time in the chapter comprehension section. Therefore, the teachers developed a supplementary worksheet on film advertisements with the showing times (Figure 2). The material was made in line with the theme being taught in that period, incorporating the target skill to be re-taught.

Figure 2: Supplementary material about duration of time

Extended Text – Advertisement

Kathy is reading some film advertisements. Read the advertisements carefully and choose the best answer for Questions 1-3 and 6. Give short answers for Questions 4-5.

Trendy Cinema

Good news for all students! In August, you can get \$20 off when buying any ticket at our cinema with your student card. This special offer is valid by 31 August. For more information, please visit www.trendycinema.com or call 2876 5432.



\$50 for
a movie
ticket

Penguin Crisis

Director : Kitano Matsushima
Time : 9:00pm-10:30pm

Penguin Yuki (dubbed by Carrie Lee) lives in the Antarctica peacefully. One day, she finds that the sea ice is melting quickly and her home is going to disappear. She is forced to move her home. The story is meaningful and it tells an important message of protecting our environment! Will Penguin Yuki survive?

Class 8

Director : James Brown
Time: 7:30pm-9:30pm

A French teacher, Leila (Sophia Marshall), moves to another high school in Paris. Two students, Jean and Mitch (Joe and Michelle) turn the teacher's life and the class into a mess. At the end of the film Joe plays truant but the teacher succeeds in convincing him to go back to school. After that, can Miss Leila change Jean and Mitch to become good students? The film explores the importance of the relationship between students and teacher.

Hidden Secret

Director : Grace Yung
Time : 7:40pm – 9:15pm

Sanders (Patrick Leung) and Roy (Luke Ma) are siblings. They look friendly to each other but actually they compete to inherit their father's vast fortune. Who can get the money and property at the end? The ending happens out of the blue will surely surprise you!

Only You

Director: Tammy Lee
Time 7:20pm-9:00pm

Maggie (Bertha Hui) and Thomas (Tim Kwan) are a pair of couple. They fall in love with each other but their parents do not approve their relationship. Can they get married at the end? This film definitely melts your heart this year. You should prepare a packet of tissue while watching.

Material design: Scaffolding

To better address students' weaknesses, a graphic organiser was used to help them process data. For less able classes, a simplified version of a graphic organiser was used (Figure 3a), while a graphic organiser requesting students to find more information was used in more able classes (Figure 3b). Both versions had the core function of drawing students' attention to the duration of time that each movie lasted.

Figure 3a: Graphic organiser for less able classes (Teacher's version)

Movie Name	Duration	Actor(s) / Actress(es) / Voice Actor
e.g., <i>Penguin Crisis</i>	1 hour 30 minutes	Carrie Lee
2. <i>Class 8</i>	2 hours	Sophia Marshall, Joe, Michelle
3. <i>Hidden Secret</i>	1 hour 35 minutes	Patrick Leung, Luke Ma
4. <i>Only You</i>	1 hour 40 minutes	Bertha Hui, Tim Kwan

Figure 3b: Graphic organiser for more able classes (Teacher's version)

Movie Name	Director	Duration	Character(s)	Actor(s) / Actress(es) / Voice Actor
e.g., <i>Penguin Crisis</i>	Kitano Matsushima	1 hour 30 minutes	Penguin Yuki	Carrie Lee
2. <i>Class 8</i>	James Brown	2 hours	Leila, Jean and Mitch	Sophia Marshall, Joe, Michelle
3. <i>Hidden Secret</i>	Grace Yung	1 hour 35 minutes	Sanders, Roy	Patrick Leung, Luke Ma
4. <i>Only You</i>	Tammy Lee	1 hour 40 minutes	Maggie, Thomas	Bertha Hui, Tim Kwan

The above graphic organisers were means to deconstruct the text into smaller, more readily understandable pieces. At the same time, they set examples for students to follow on how to convert the showing time into a duration. In addition, using a graphic organiser in class can serve as a form of formative assessment to track students' understanding, and to give feedback accordingly.

Out of the seven comprehension questions designed for this supplementary worksheet, one was devoted to testing if students could respond correctly to the question phrase 'how long'. The question '*How long does "Class 8" last?*' was set. Students could mostly answer this question correctly after the scaffolding.

iii. Incorporating the re-taught elements in the next assessment

To complete the L-T-A cycle, a question testing students on the duration of time was intentionally added to the following assessment (1st Term Exam). Please see the excerpts from the corresponding text and answers in Figure 4 and Table 2, respectively.

Figure 4: Excerpt of a comprehension text (Part H) in 1st Term Exam 2021/22

I was astonished by the story plot. Kevin Kwan played the role of Martin well. His acting showed a clever and careful Martin. Though the film kept me from 5pm to 7 pm, I enjoyed every minute in the cinema. I highly recommend this film to all my friends.

Table 2: Details of the target question in 1st Term Exam 2021/22

Part	Text	Question	Answer
H	Film Review	Q.3 How long is the film 'Who Is the Real Burglar?'	◇ 2/two hours ◇ 120 minutes

A slight improvement in student performance was seen this time. More students were able to use duration of time to respond to the question phrase 'how long', and more students were able to give the right quantifier (i.e., hours/minutes) this time.

b. Phase 2

In the second term, a new round of performance analysis and follow-up was carried out.

i. Analysing students' performance data

The results of the 1st Term Exam revealed that students needed more support in handling summary cloze. A short summary cloze was set in comprehension Part I. The excerpt where answers are located, as well as the questions, are shown in Figure 5 and 6 respectively.

Figure 5: Excerpt from Part I

Lucky Draw

Donate \$20 and you can enter our highlight of the day, lucky draw! Thanks to our generous sponsor Wonder Shop! The prizes are a camera (\$1000) and a computer notebook (\$2000).

Admission Ticket

All students are welcome! You may come and join with your family and friends too! Tickets are sold at \$10 each. A group ticket for 4 is sold at \$30 only. Tickets are available from the School Office from 2nd December. You may also get the tickets at the school entrance on the Charity Fun Day.

Figure 6: The summary cloze question with answers

6. Tim is telling his uncle about the Charity Fun Day. Fill in the blanks with an appropriate word.

I joined the fun day with my parents and brother. I bought a (i) group ticket for only thirty dollars. My brother got prizes in Leap Frog. We sang two songs with Miss Lau! I was a winner in the lucky draw. I got a (ii) camera ! I can take photos of you next time when we meet.

In the collaborative lesson planning session, possible reasons for students' unsatisfactory performance were discussed.

Table 3: Possible reasons for students' unsatisfactory performance

	Question and Answer	Possible Reason(s)
6(i)	I joined the fun day with my parents and brother. I bought a (i) <u>group</u> ticket for only thirty dollars.	Common mistake: admission Possible problems: 1) Students did not realise that the article 'a' has restricted which word should be filled in. 2) Students did not realise other hints: ◇ \$30 for 4 (in the text) ◇ I, my parents, brother = 4 (in the question)
6(ii)	I was a winner in the lucky draw. I got a (ii) <u>camera</u> ! I can take photos of you next time when we meet.	Students might have failed to locate specific information because they missed the clues: 1) can take photos 2) winner 3) lucky draw

ii. Devising teaching materials in collaborative lesson planning sessions

Material design: Aligning with the theme being taught

Similar to the follow-up in the first term, a supplementary material was developed to address students' weaknesses shown in the assessment. According to the scheme of work, the following chapter to be taught covered the theme of endangered animals. Given that the teaching period was around the Chinese New Year, the teachers chose to adapt a material on tigers, which echoed the Chinese zodiac for the year. The material adapted is shown in Figure 7.

Figure 7: Tiger - Material adapted as a follow-up to 1st Term Exam 2021/22

P.6 Term 2 (Unit 4) _ Extended Reading Text (Tiger Facts)

Name : _____ () P.6 _____ Date : _____ ()

WWF (World Wild Fund) is the leading organization in wildlife conservation. Read the homepage of WWF and find out how WWF helps saving the endangered species.

[//www.wwf.org.hk/en/reslib/species/](http://www.wwf.org.hk/en/reslib/species/)

Who We Are

What We Do

Resources

Visitor Centres

Tiger



Tiger Facts

Appearance and Features

[1]Tiger is the largest member of the cat family. Tigers have stripes on their skin and fur. Each tiger has its own unique set of stripes. They have markings on their ears called 'ocelli' that look like eyes to fool their prey.

[2]The Amur tiger is the largest type. Its body can be 4 meters long and it can weigh up to 300 kilograms. Tigers can run up to 65 kilometers per hour and they are the true "King of the Jungle" because lions don't live in jungles but tigers do.

?

[3]Tigers are solitary animals. They like to hunt alone at night and they prey on a variety of animals. They love to eat larger prey such as deer and wild pigs. They especially like to eat porcupines which have long, pointed quills (feathers) that cover their backs to protect them. However, only one out of ten hunting activities is successful. They can eat 30 kilograms of meat at one time.

15 Population and Distribution

[4]Tigers have been around for over 2 million years. Six subspecies of tigers can be found around the world. You can see the six different kinds of tiger below.





Threats and Actions

20 [5]Tiger is the one of the most threatened animals. Tiger numbers have dropped dramatically. There are only about 3,890 remain in forests.

[6]By the 1940s, hunting had driven the Amur tigers to the brink of extinction – with no more than 40 remaining in the wild. The loss of habitats also stopped the growth of tigers. Tigers had no place to live and they died.

25 [7]Luckily, the amount of Amur tigers increased to 540 as conservationists pay effort. With successful promotion in India on tiger conservation, WWF has new ways for a Tiger Network Initiative to save the endangered tigers. Their works help reduce threats like habitat loss.

conservation : (對動植物、自然地區、歷史建築等的) 保育 **species** : (動植物的) 種, 物種

unique : 獨一無二的; 與眾不同的

Population : 泛指人口, 文章指動物總數

Distribution: 分佈

habitats : 棲息地

<Reading text adapted from National Geographic kids>

Employing scaffolding to help students tackle questions in a step-by-step manner

A summary cloze (Figure 8) was designed to teach students essential skills for handling this type of question.

Figure 8: Summary cloze with answers for the material on tigers


11. Read paragraphs 4 to 8, fill in each blank with **one** word. Make sure your answers are grammatically correct.

Numbers of tigers have (1) **dropped** all over Asia. There are 3980 tigers remaining in the (2) **forests**. Because of poaching and habitat loss, Amur tigers were in danger of (3) **extinction** by the 1940s. With successful promotion to India on tiger conservation, WWF has some new ways to (4) **save** the endangered tigers.


Diagnosing students' difficulties, the teachers agreed that students often lacked skills in handling a cloze.

To make the skills for tackling a cloze visible and easy to understand, the teachers came up with four essential steps for attempting to fill in blanks in a cloze. They then rephrased the steps into short, student-friendly phrases, as seen in the '4 Steps for Doing a "Cloze" ' in Figure 9. During the lesson, the teachers demonstrated how to fill in some of the blanks in Question 11 following the 4 steps.

Figure 9: 4 steps for doing a 'Cloze'



four



4 steps for doing a 'Cloze'

1. Read the sentence
+
find out the part of speech(adj/ v/ n..?)
2. Look for the words before and after in the passage
3. Re-read the sentence
+
confirm meaning
4. Check grammar

2. Adopting a Range of Classroom Assessments to Track Students' Learning

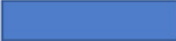

a. Pre-lesson tasks

A cloze always requires a thorough understanding of a text, and a mastery of grammar. To teach a cloze summary, the first step was to prepare students for the text content. To begin with, input that provided them with background information on the topic and motivated them to read more about it was essential.

The teachers prepared videos related to tigers and facts about the animal for students to watch at home. Google Forms were used in post-watching tasks. Depending on the class ability, the tasks ranged from giving short answers (for more able students) and filling in blanks (for average students) to providing a sentence of reflection (for less able students). Examples of post-watching tasks are shown in Figures 10a, b and c.

Figure 10a: Post-viewing task for more able students

Fun Things about Tigers

 切换帳戶 

在您提交這份表格時，系統會記錄您的電郵地址

***必填**

Name : *

您的答案 _____

After watching the video , choose one thing about tigers that you are most interested in. *

appearance

features

habitat

population

diet

What do you want to know more about tigers? *

您的答案 _____

According to your question, can you find the answer from "Tiger Facts" or the videos that you watch? What is the answer? *

您的答案 _____

Figure 10b: Post-viewing task for average students

Pre-task checking:

Video watching: <https://youtu.be/jE0aRY4YpVc>

1. Tigers have black and orange stripes.
2. Male tigers can reach a length of 3.3 metres and a weight of more than 300 kg.
3. Tigers are carnivores which means they eat meat.
4. They hunt by night.
5. They cannot outrun fast animals like deer.
6. They live in jungles, swamps, snowy pine forests, to grasslands.
7. Unlike lions who live together in prides, they live alone.
8. The cubs live with their mother until they are about two years old.
9. People cut down forests for cities and farms, the tigers have fewer and fewer places to make their homes.
10. Fortunately, people are working hard to save tigers from extinction.

Figure 10c: Post-viewing task for less able students

Watch the video (2:34-9:21).

Write one sentence of what you have learnt about tigers.



b. Classroom assessments

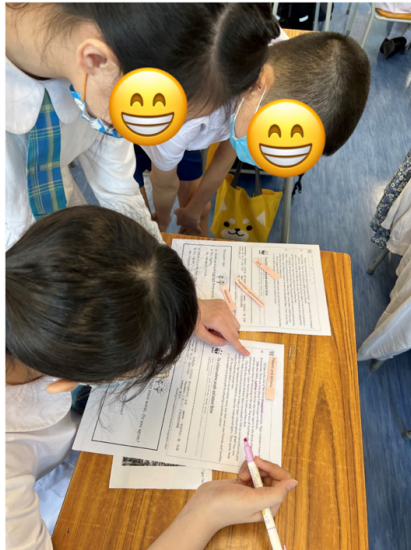
Classroom assessment is 'the kind of assessment that can be used as a part of instruction to support and enhance learning' (Shepard, 2000). Usually simple and ungraded, classroom assessment provides timely information for teachers on how students are learning at a particular stage. Such evidence is essential for teachers to provide instant feedback, as well as enabling them to design the next teaching episode so that it can better cater to students' needs.

i. Group work

Before arriving at the final stage of doing the summary cloze, it was important to teach students to understand the entire text. To do so, the teachers first used a simplified text about pandas to teach students how to generalise the key ideas presented in a paragraph. After that, students were asked to match the subheadings to the paragraphs in the target text 'Tiger'.

In small groups, students circled key words in paragraphs, discussed their choices and matched the subheadings printed on paper strips. The activity facilitated peer learning, and employed a tactile mode to cater for different learning styles. The product displayed by each group showed whether the group could circle key words and/or match the right subheadings, allowed the teachers to understand students' difficulties.

Figure 11: Students in a group work



ii. Hand signals

A reading text is loaded with information. A quick and simple way of tracking students' understanding is to use hand signals. The teachers used this technique during a lesson to ask for a range of information (the meaning of a word, specific information for a question, what a pronoun is referring to, etc.). A brief example of the usage of this approach is as follows:

T:	<p><i>Can you guess what the meaning of the word 'prey' is?</i></p> <p><i>Show your fingers for the option you think is correct:</i></p> <p><i>1: A toy</i></p> <p><i>2: Food (an animal)</i></p>
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This simple technique not only provides teachers with information about students' learning progress, but it also facilitates whole class participation. This kind of interaction is also less threatening for students who are nervous about whether they can answer questions correctly in front of a class.

Figure 12: Students responding to a question using hand signals



Impact

1. Student Level

The collaboration focused on the area in which students were weak in an assessment. It involved round of teaching targeting the particular area. As a result, the teachers noticed that students were more confident when attempting questions asking for duration or a summary cloze. The improvements that students showed in the two question types in the subsequent assessments also demonstrated that the re-teaching efforts paid off.

On the whole, the project motivated students to participate in class. After doing the pre-task, students were more prepared for lessons and, in turn, more willing to participate. Moreover, the use of classroom assessment that fostered peer support and was also less threatening in nature helped establish a lively, interactive classroom atmosphere.

2. Teacher Level

The teachers reflected that the collaboration offered them ideas on how to better follow up on students' performance. Before the collaboration, based on the data gained from assessments, the teachers carried out individual follow-ups. They expressed worries about how to juggle between carrying out post-assessment follow-ups and catching up with the teaching schedule. They were not sure how much time and effort to invest in because the assessment that followed might not cover that area again.

Therefore, the collaboration allowed the teachers to work as a team and gain mutual support. It first located the weak areas commonly seen in the grade level. Materials were developed in line with the chapters for that period of time. Thanks to this approach, the teachers did not need to worry if their classes were behind the teaching schedule. In addition, supplementary materials would not seem detached from the theme being taught during that period of time. Arranging to have the re-taught items in the next assessment completed the L-T-A cycle. This would provide the teachers with evidence to evaluate the effectiveness of the teaching strategies and the materials developed.

In sum, the teachers valued their experiences on developing materials to respond to students' problems. They saw the collaboration as a channel for professional exchanges and mutual support among teachers in the grade level.

Way Forward

The collaboration showcased how to use students' data to inform teaching and carry out a L-T-A cycle that complemented the original scheme of work. The English coordinators and the vice principal who participated in this year's collaboration have laid down two areas on which to focus:

- Strengthening the alignment of learning, teaching and assessment
- Further instilling the professional exchange function of collaborative lesson planning sessions within the department with reference to this collaboration

References

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- Wiggins, G., & McTighe, J. (2005). *Understanding by design* (2nd ed.). ASCD.