



CASE 3

Designing Formative Assessments that Encourage Learners to Learn How to Learn

Stewards Pooi Kei Primary School

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School

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Background

To meet the demands of educating students to be autonomous learners, who can analyse, reason and collaborate with others to solve problems, teachers have been exploring ways to facilitate students taking the initiative and be more responsible for learning how to learn. Conducting assessment-for-learning activities in the classroom that encourage students to practise discovery learning and collaborative learning simultaneously, teachers are training students in (1) reading, handling, organising and sharing information, (2) raising questions, (3) sharing opinions, (4) expressing difficulties, and (5) seeking assistance, simultaneously (Dann, 2002). Such activities aim to diagnose students' strengths and weaknesses and encourage students to self-assess and self-monitor their progress. By so doing, the teachers switch their role from being a knowledge-transmitter to more of a learning facilitator while their students practise being not just an active learner, but also a contributor and an assessor during the process (Dann, 2002; Lee & Mak; 2014).

This article describes how the teachers of Stewards Pooi Kei Primary School adopted discovery learning techniques to teach and assess students' grammar knowledge. Their students demonstrate relatively higher English competencies compared to other schools in the same district. The teachers wished the students to take an active role and establish broader applications for language learning and communicative skills through 'learning by doing' instead of passively receiving knowledge. By observing students' responses and learning outputs, the teachers were able to make immediate adjustments to the teaching plan based on students' needs.

Level

Primary 5

Strategies Used

1. Discovery Learning

Discovery learning, introduced by Jerome Bruner in the 1960s, is a method of active learning. Students are arranged to wrestle with the given questions by combining existing and newly acquired information. Students are encouraged to probe and to take risks while solving a problem. Verner (2014) believes that students pay more attention and stay more engaged as they are guided to solve a grammar mystery, playing the role of language discoverers. Discovery learning is an inductive instructional approach.

Teaching grammar to students by adopting discovery learning, what comes first is the meaning, followed by the form and the rules. The teacher avoids teaching the grammar rules by rote learning but by helping students to discover the relationship between bits of information using a series of activities.

- a. Present the students with a variety of sample sentences featuring a particular grammar concept without explaining how such concept is used.
- b. Prompt the students to identify the similarities and differences appear in the sample sentences.
- c. Facilitate the students to share their discoveries with peers and then figure out the grammar rules on their own.
- d. Offer support to guide students to consolidate and organise the knowledge gained.
- e. Create opportunities that allow the students to put their knowledge into practice.

2. Using Classroom Assessment as Learning Tools

Assessment should be an integral part of the instructional process to identify students' individual learning difficulties and then prescribe remediation procedures (Bloom, 1971). Launching activities in the classroom to assess students' knowledge before or after teaching makes learning and teaching effective (Stobart, 2014) because these activities assist students in (1) finding out where they are in their learning, (2) making clear the learning intentions and success criteria, (3) responding to teacher feedback and (4) building knowledge. Hence classroom assessments 'would not take time away from learning but would serve to assist and enhance learning' (Guskey & Jung, 2013, p.29). A good classroom assessment plan even provides a road map for instructional changes (short-term), even curricular changes (long-term).

Actions Taken

Using 'when' and 'while' to describe two simultaneous actions in the past has been one of the most challenging grammar points to teach. Many students are confused about whether they should use simple past or past continuous tense in the sentence. Instead of teaching it explicitly, the teachers made their P5 students read a series of sample sentences taken from a passage they had just read in the previous lesson to generalise the grammar rules on their own. Students acquired study skills such as comparing and contrasting ideas and supporting opinions with evidence during the learning process. They shared their discovery with their peers by saying, for example, "According to sentence C, we can use 'while' to start a sentence. However, we can also use it in the middle of a sentence, like sentences A and B." Based on students' responses, the teachers provided students with instant feedback to tackle their difficulties and misconceptions.

The table below displays the teaching plan used by the teachers to guide students through the discovery task in a double lesson.

Discovering Grammar Using 'when' and 'while' to describe two simultaneous actions in the past	
Objectives	Teaching steps
<ul style="list-style-type: none"> Discover rules of using 'when' and 'while' Share opinions with peers; explain with evidence to resolve discrepancies Display the known and unknown about using 'when' and 'while'; actively inform teacher about their learning needs 	<ol style="list-style-type: none"> T explains the lesson flow. T emphasises the importance of learning through discovery and assures them of their ability to learn grammar rules through comparing and contrasting. T gives out Worksheet 1 (<i>Appendix 1</i>), on which four sample sentences written with 'when' (Task 1) and some prompting questions (Task 2) are there. Make sure ss are given sufficient time to read through the worksheet and think about the prompting questions before they are assigned to discuss with peers. T models how to use the prompting questions for ss, that guide them to investigate and discuss, and explains explicitly the expected student behaviours, which include: <ul style="list-style-type: none"> describing their observation, telling the similarities and differences, explaining their thoughts/assumptions supported with evidence, and

	<ul style="list-style-type: none"> raising questions or rebutting to resolve discrepancies. (***T must deliberate his/her modelling so that ss learn what to do and say during the learning process.) (For stronger students, T may invite them to voice their prediction without using the prompting questions. Make sure the students are guided to justify their predictions.) <ol style="list-style-type: none"> T provides cues and monitors students' understanding Based on ss' responses, T guides ss to consolidate; helps them to integrate and synthesise key ideas. <p>(Repeat the steps above when teaching 'while' using Grammar Worksheet 2 (<i>Appendix 2</i>).)</p>
<ul style="list-style-type: none"> To apply the grammar knowledge gained and self-/peer-assess their learning performance 	<ol style="list-style-type: none"> Ss complete a post-learning quiz independently to demonstrate their understanding of using 'when' and 'while'. (T may give out the quiz via Classkick, an e-learning tool, for data collection purposes.) T reminds ss to justify their answers using the rules constructed before submitting their work to the teacher T gives instant feedback to ss who complete their work fast so that they could revisit their work instead of idling. T encourages ss to value mistakes by correcting an answer using a colour pen and making notes that help improve performance. (T demonstrates how to make notes if necessary.) As a conclusion to the activity, the teacher can ask the students to explain the grammar rules as a final check. (For less able students, T may ask students to proofread a few more sentences and point out the mistakes using the knowledge acquired.)
<ul style="list-style-type: none"> To organise and consolidate the knowledge gained 	<ol style="list-style-type: none"> T shows ss how to organise the knowledge they gained using a table featuring the similarity and differences of using 'when' and 'while'. (Picture 2 on Page 34 shows the table used.) T assigns ss to complete a workbook exercise as homework.

Impact

1. Student Level

Learning grammar through a discovery approach, the students have become more engaged in the lessons. They have been urged to observe, question and exchange their thoughts and ideas, which allowed their misunderstanding and misconceptions to expose during the process. They played the role of contributors, enhancing the quality of learning and teaching in the classroom. For example, reading the sentence 'Mr. Kwok was watching his favourite football team on television while he was drinking beer.', a few students wondered if drinking beer was a shorter action and asked why using while + past continuous tense to go with that. The students' queries informed what the teacher should teach that fully addressed students' learning needs.

Students have learnt to analyse and interpret the acquired information rather than memorising the correct answers. More importantly, they have realised that learning takes place not only through success but also making mistakes. Even the passive and less able learners are more on task because they are arranged to be part of the learning process instead of just being spectators. They are practising what an active learner should do. Picture 1 shows a student's answers to the guided questions, and his personalised remarks added to the worksheet after listening to the teacher's consolidation.

Picture 1

Name: [Redacted] Stewards Pooi Kei Primary School Class: J.5 [Redacted]

LE5B Ch.8 Accidents around us
Discovering learning 2 – Using 'while'

Task 1 - Read the following sentences carefully. Compare the two actions mentioned in each sentence, is one of them very much longer than the other one? If yes, circle the longer one.

A. Mr. Kwok was watching his favourite football team on television while he was drinking beer.

B. Alan Tse was eating popcorn while he was watching his favourite team, South China.

C. While we were playing in the playground, the alarm went off.

Task 2 - Read the sentences again to figure out the rules of using 'while' to talk about past events. Fill in the blanks and circle the answers.

1. We use 'while' to talk about two actions that were happening at the same time.

2. We use 'while' before mentioning the (shorter / longer) action and we present it by using (simple past / past continuous) tense.
Sentence (A / B / C) show(s) that.

3. We can use 'while' at the (beginning / end) of the sentence. Sentence (A / B / C) show(s) that.

4. We can also use 'while' (before / between) the two clauses. Sentence (A / B / C) show(s) that.

5. We use 'while' to talk about two (short / long) actions happening at the same time. Sentence (A / B / C) show(s) that.

6. We cannot use 'while' before short or the shorter actions.

2. Teacher Level

Teachers have demonstrated a stronger sense of mission that drove them to continually guide and motivate students to seek solutions using their previous and newly acquired knowledge. They help students become more active learners using discovery activities that encouraged risk-taking and problem-solving. They have realised that using familiar scenarios as the basis of new information could support learners to extend what they know and discover something new.

Teachers have achieved a better sense of achievement because they could see the students' learning needs and help them tackle the problems, which often led to immediate improvements. They have gained more confidence and trust in their students' ability to learn independently, especially when clear instructions and prompts are given. They have learnt that they could use direct instruction less. Their awareness of prioritising students' active participation to contribute to their instruction has been heightened.

Moreover, teachers have recognised the importance of deliberating their modelling to show students how to perform the expected learning behaviours, including thinking aloud, expressing thoughts, supporting ideas with evidence, and consolidating knowledge. Picture 2 shows how the teacher modelled for the students how to organise the grammar knowledge they gained in the lesson using a summary table to serve revision and self-assessment purposes.

Picture 2

Organising knowledge

- Teacher showed students how to organize knowledge
 - compare and contrast the rules; present the similarities and differences using a table, which can be used as a tool for self-assessment later.

when	while
two actions happening at the same time	
Before shorter actions	X
Before longer actions	
Sentence starter (Beginning)	
Connective (Between two clauses)	

Task 2 - Read the sentences again to figure out the rules of using 'when' to talk about past events. Fill in the blanks and circle the answers.

- We use 'when' to talk about two actions that were happening at the same time.
- We usually use 'when' before the (longer / shorter) action and present it using (simple past / past continuous) tense. Sentence(s) (A / B / D / E / F) show(s) that.
- We sometimes use 'when' before the (longer / shorter) action too. Sentence(s) (A / B / C / D / E / F) show(s) that.
- We can use 'when' at the (beginning / end) of a sentence. Sentence(s) (A / B / C / E / F) show(s) that.
- We can also use 'when' (before / between) the two clauses. Sentence(s) (A / B / C / D / E / F) show(s) that.
- We can use 'when' to talk about two long actions too. Sentence(s) (A / B / C / D / E / F) show(s) that.

when

Task 2 - Read the sentences again to figure out the rules of using 'while' to talk about past events. Fill in the blanks and circle the answers.

- We use 'while' to talk about two actions that were happening at the same time.
- We use 'while' before mentioning the (shorter / longer) action and we present it by using (simple past / past continuous) tense. Sentence(s) (A / B / C) show(s) that.
- We can use 'while' at the (beginning / end) of the sentence. Sentence(s) (A / B / C) show(s) that.
- We can also use 'while' (before / between) the two clauses. Sentence(s) (A / B / C) show(s) that.
- We use 'while' to talk about two (short / long) actions happening at the same time. Sentence(s) (B / C) show(s) that.
- We cannot use 'while' before short or the shorter actions.

while

3. Curriculum Level

There is no doubt that teaching using the deductive, direct-teaching approach is faster and can be an efficient way to teach large numbers of facts and concrete concepts. However, when student engagement and assessment for/as learning are the learning outcomes of the intended curriculum, lesson activities should be conducted using the inductive approach. Now, there is a clear direction for refining grammar teaching for promoting student-centred learning, providing students with more opportunities to actively connect the knowns with the unknowns so that students play the role of learners and assessors at the same time in the lesson. Picture 3 illustrates the long- and short-term modifications the teachers have planned to make to the lesson design and curriculum of P5 and 6.

Picture 3

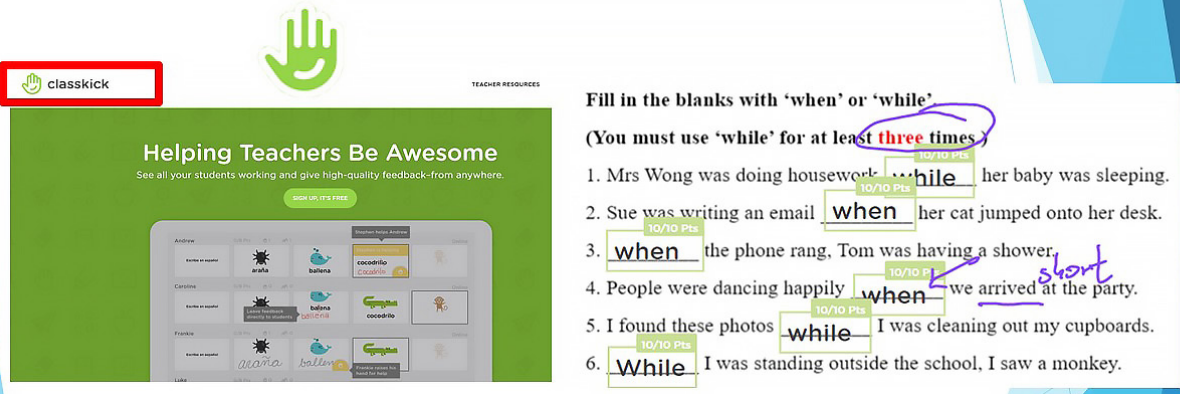
The adjustments made based on student performance

- ▶ Short-term adjustment(s)
 - Used discovery learning to teach grammar
e.g. 'so' vs 'so that', and 'If' conditional sentences
 - Run end-of-lesson quizzes (exit tickets) to help students consolidate the knowledge gained and check their understanding at the same time.
- ▶ Long-term adjustment(s)
 - Use discovery learning in the upper primary
 - Use e-learning tools to collect students' performance data (pre-test & post-test)
 - Arrange peer discussions to train students in justifying answers and expressing thoughts

Learning and teaching in class no longer focuses on finding the correct answers but also on the things students discover in the process. Picture 4 shows how a teacher delivered an end-of-lesson quiz via Classkick to collect student performance data so that instant feedback could be given to guide students to self-correct. With such data, the teacher identified the common mistakes and then discussed them with the students instead of going through all the questions.

Picture 4

End-of-lesson quiz (Exit-ticket)



Helping Teachers Be Awesome
See all your students working and give high-quality feedback-from anywhere.
SIGN UP, IT'S FREE

Fill in the blanks with 'when' or 'while'
(You must use 'while' for at least **three** times.)

1. Mrs Wong was doing housework **while** her baby was sleeping.
2. Sue was writing an email **when** her cat jumped onto her desk.
3. **when** the phone rang, Tom was having a shower.
4. People were dancing happily **when** we arrived at the party.
5. I found these photos **while** I was cleaning out my cupboards.
6. **While** I was standing outside the school, I saw a monkey.

The teacher could see students' answers and provide them with swift feedback.

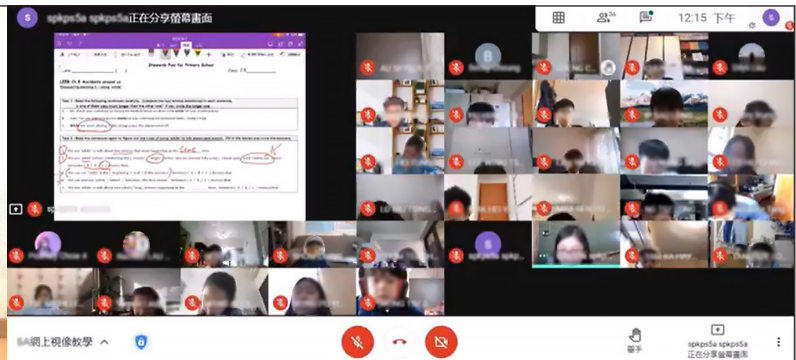
Classroom assessment has been used to check and reinforce student learning. Picture 4 illustrates how the more able students were challenged to practice high-order thinking. The students needed to tackle the question by applying the knowledge of both 'when' and 'while'. They were facilitated to re-read the rules and share their opinions with evidence. The culture of using student assessment performance to lead instructional and curriculum modifications has been acquired; it will take some more time to be secured.

4. Departmental Level and School Level

The facilitation of teacher collaboration, peer lesson observation and professional dialogues with regard to the features of both formative and summative assessments illustrated what being assessment literate entails and why teachers' assessment knowledge and competence are crucial to student learning. The school and curriculum leaders were made aware that the development of assessment literacy should be viewed as a career-long learning process, which is ongoing, experiential and collaborative. They will continue to learn and reflect on their practices to make improvements.



Collaborative lesson planning



Peer observation of online teaching

Areas for improvement

- ▶ Collecting students' first attempt data using e-Tools
- ▶ Peer-checking the answers if situation allowed so that students could explain how they found out their answers when there was a discrepancy (Assessment as Learning)

Teacher reflection about a lesson taught

Way Forward

It was an absolute pleasure working with such a great team of P5 teachers, one of whom is the vice principal and former head of the English panel. With her leadership as well as the knowledge gained from the CEAL Project, it is likely that she will lead her colleagues to reinforce good assessment practices in all contexts. They will continue to see student engagement, learning target clarity and appropriateness as a foundation of sound assessment practice and advocate for student involvement in their learning through using assessment as a learning and teaching strategy. They will also continue to share their experiences with other subject departments and fellow CEAL schools in the future.

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Appendixes

Appendix 1: Discovering Grammar 1 — Using ‘When’

Read the following sentences carefully. Compare the two actions mentioned in each sentence. Is one of them longer than the other one?

If yes, **circle the longer one**

- A. I was walking by the school football pitch **when** some pupils waved at me.
- B. The cleaners were still cleaning **when** I left.
- C. My dog died **when** I was 5 years' old.
- D. **When** the teacher was writing on the blackboard, the whole class burst into laughter.
- E. Mom was ironing the clothes **when** dad was reading the newspaper.

The rules of using ‘when’

1. We use ‘when’ to talk about two actions that were happening at the _____ time.
2. When one action is longer than the other one, we usually use ‘when’ before the (shorter / longer) action and present it using (past / past continuous tense).
3. We can also use ‘when’ before the (shorter / longer) action. Sentence(s) (A / B / C / D / E) show(s) that.
4. We can use ‘when’ at the (beginning / end) of the sentence. Sentence(s) (A / B / C / D / E) show(s) that.
5. We can also use ‘when’ (before / between) the two clauses. Sentence(s) (A / B / C / D / E) show(s) that.

Appendix 2: Discovering Grammar 2 – Using ‘While’

Read the following sentences carefully. Compare the two actions mentioned in each sentence. Is one of them longer than the other one?

If yes, **circle the longer one**.

F. Mr. Kwok was watching his favourite football team on television **while** he was drinking beer.

G. The thieves broke into the woman's house and stole her baby **while** she was cooking in the kitchen.

H. **While** the children were playing in the playground, the alarm went off.

The rules of using ‘while’

1. We use ‘while’ to talk about two actions that were happening at the _____ time.
 2. We use ‘while’ before mentioning the (shorter / longer) action and we present it using (past / past continuous tense). Sentence(s) (F / G / H) show(s) that.
 3. We can use ‘while’ at the (beginning / end) of the sentence. Sentence(s) (F / G / H) show(s) that.
 4. We can also use ‘while’ (before / between) the two clauses. Sentence(s) (F / G / H) shows that.
- 