Illuminating Learning: Exploring the Use of Traffic Light Cards in a Secondary English Classroom

STUDENT RESEARCH REPORT

Illuminating Learning: Exploring the Use of Traffic Light Cards in a Secondary English Classroom

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Abstract

Context: This study takes place in a diverse Year 7 class at Comberton Village College (CVC), which has a mixed-attainment structure and emphasizes inclusivity and educational equality. The focus is on addressing the challenge of keeping all students engaged in English lessons, particularly in a classroom where students have varying degrees of confidence and learning needs in the language learning.

Aims: The primary aim of the research is to investigate the impact of the traffic light card system—a teaching tool designed to encourage student participation and facilitate monitoring of learning—in a mixed-attainment classroom. The study seeks to answer three research questions: whether the traffic light card can help teachers assess students' learning situations, whether it can improve students' engagement in class, and how best to implement this method effectively.

Methods: The research was conducted with a class of 32 students using a traffic light card system where students could signal their understanding by showing green (confident) or red (confused) cards. Classroom observations, transcripts of student dialogues, and feedback from students, teachers, and peer reviewers were collected across multiple lessons featuring different teaching approaches, including question-driven activities and peer collaboration.

Findings: The findings indicated that the traffic light card system effectively illuminated student understanding and engagement. The variability in students' responses highlighted the challenge of managing mixed learning readiness and needs. Initial usage showed some students preferred direct interaction with the teacher over seeking peer support, indicating reliance on teacher authority. However, as the lessons progressed, there was an increase in students' willingness to engage with peers for assistance, leading to more collaborative learning.

Implications: This study suggests that the traffic light card system can facilitate formative assessment and promote a collaborative classroom environment. It emphasizes the importance of explicit instruction on its use, enabling teachers to adjust their methods in response to real-time feedback from students. The increasing use of peer support signifies a potential shift toward student-centred learning, where students feel more empowered to communicate their learning needs without fear of embarrassment.

Keywords: Traffic light cards; formative assessment; educational dialogue; learner confidence

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Introduction

Majoring in English, I have received formal teacher training as a pre-service teacher at Beijing Normal University (BNU), a top institution in China for teacher cultivation. I have participated in two teaching practicums in the poverty regions of China, where most students have limited English proficiency, except for one small group that excelled at English. During the two teaching practicums, I exerted every effort in arousing their interests in English and keeping the whole class at the same pace, but often in vain.

Therefore, as a pre-service teacher, I am keenly aware of the huge gap between my learned theory and actual classroom practice. What I have learned tells me that we should not give up any student, but the reality is that many learners with low interests or limited confidence struggle to keep up with the pace of the lessons. This motivated me to search for an effective method that can support these students more effectively, and Think-Talk Toolbox (TTT) (Ji & Hennessy, 2024) appears to be a promising solution because it offers structured yet accessible scaffolds that visualize the thinking process and encourages low-stakes participation. These features align with the goal of enabling every student, regardless of their starting point, to meaningfully engage and progress. So I participated in this program organized by Camtree and Beijing Normal University (BNU) with the expectation of applying TTT skills into a real classroom and observing the potential changes that may be brought on students.

Context

The internship of this program was conducted in Comberton Village College (CVC), a secondary school located five miles southwest of Cambridge, UK. Owing to its unique catchment area, the school brings together students with diverse cultural backgrounds and varied prior learning experiences. As a result, learners within the same classroom may demonstrate different levels of readiness and distinct learning needs, which presents both challenges and opportunities for teachers.

However, the 'Comprehensive Principle' of CVC, one of the five core principles (Excellence, Comprehensiveness, Community, Partnership, International), emphasizes that education should benefit all students. Moreover, exam and grades are by no means the single pursuit. Instead, CVC focuses more attention on cultivating students to be caring, confident, and capable (the '3C' ethos in CVC). In the staff room, CVC had a board showing students with additional needs to help teachers better understand which students needed more support in their daily learning.

Education dialogue plays a paramount role in English teaching. No matter in the Chinese or British English curriculum, the oral engagement of students is always emphasized, aligning with both the form and goal of education dialogue. Moreover, in Chinese English classes, where the teaching design is framed by the 'question chain' and 'activity chain', classroom dialogues serve as a basic foundation and premise for the conduct of classroom activities. They can help optimize the quality of questions that teachers propose in class: for example, alter a closed question into an open question. Also, it can improve peer-talk strategies, assisting students to build constructive conversations. Moreover, combining speaking and writing, allows students to deepen their thinking and make more meaningful and high-quality output.

Motivation, focus and questions

In a school which attaches great importance to inclusion and education equality, it's paramount to ensure every student's full engagement to the class. However, the students in the Year 7 in CVC, typically aged 11-12, had just joined the school at the time of the research and were still in mixed-form groups where students in the same class have varied learning needs and diversified learning readiness. Therefore, it is likely that some students might fall behind during class activities.

In my observation of one class in the year 7 of CVC, some students kept talking and playing with each other during the whole class, while some remained silent and never expressed their views. For the former group of students, this may suggest they lack the concentration span to focus on class; while for the latter group of students, it is difficult for the teachers to check their understanding. Therefore, the traffic light cards approach, commonly used as a formative assessment strategy, seems to be a good choice to address this challenge, since it enables teachers to gain rapid, whole-class feedback on students' understanding, and to support students' self-assessment of learning. (Black et al., 2003). Each student was given a traffic-light card with a green side and a red side. The green side indicates that they understood the task or could follow the teacher's instructions, whereas the red side signalled uncertainty or confusion.

At the start of the lesson, all students placed the card on their desk with the green side facing up, and they were encouraged to turn it to red whenever they encountered difficulties. This subtle form of response from students enabled even the most introverted students to express their inner thoughts. Also, the alteration of the colour allows teachers to monitor students' learning condition in real time. Moreover, it requires every student to fully concentrate on the class since in this approach, the green-card student will be invited to answer the question of red-card student. Apart from that, TTT skills were also involved in this approach. TTT skills comprise a set of dialogic skills - such as clarifying, elaborating, building on, and reasoning - designed to promote high-quality classroom talk. This research particularly focuses on the skill of 'clarifying' (Ji & Hennessy, 2024). It aims to encourage students to better identify and express their confusions, and foster their critical and logical thinking. These clarifying interactions are not only pedagogical techniques, but are also grounded in established learning theory. During the dialogic process of inviting and responding to clarification, interlocutors provide learning opportunities for one another, which aligns with Vygotsky's (1978) concept of the zone of proximal development (ZPD).

Therefore, I proposed the idea of traffic light cards approach incorporated with clarifying skills and discussed in advance with the class teacher, who agreed to trial the approach during regular English lessons. While the overall lesson planning and classroom instruction remained teacher-led, the strategy was implemented collaboratively. My role in the classroom was twofold. First, as a Teaching Assistant, I supported students during lessons by responding to red-card signals, helping to clarify task requirements, or guiding students to seek explanations from peers displaying green cards, in line with the intended peer-support focus of the approach. Second, I acted as an observer, systematically noting students' use of the cards, patterns of participation, and classroom interactions, which informed ongoing reflection and data collection for the study.

And this study therefore seeks to find how traffic light card approach, incorporated with 'clarifying' skill in TTT, improves the teaching in a classroom with mixed learning levels and needs. To be more specific, the research questions can be:

(1) Can traffic light card help teachers better monitor students' learning situation?
(2) Can traffic light card together with TTT clarifying skills help students better engage in class?
(3) How can we implement this method into the classroom?

Inquiry Activities and Data

I was working as a Teaching Assistant (TA) with a Year 7 class of 32 students. The class was characterized by cultural and linguistic diversity, having students with Spanish, Portuguese, Indian, and Chinese background. Most students of the class used English as their first language. There was one student needing a TA to offer extra support during the class. They were a mixed-level group, with some students demonstrating high levels of engagement and persistence in tasks, while others showed lower levels of on-task behaviour, such as being easily distracted or requiring frequent teacher reminders. Even with so much diversity, the classroom atmosphere was generally friendly and cooperative.

In this study, traffic light cards were used during English lessons to support formative assessment. Students signalled uncertainty by turning their cards, prompting peer discussion and teacher-guided clarification, and the teacher would give instructions to guide the students to utilize their cards through the whole lesson.

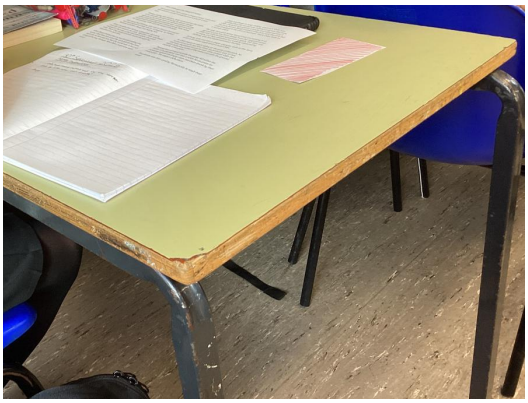

Figure 1: A student put the green side on the desk at the beginning of the class.

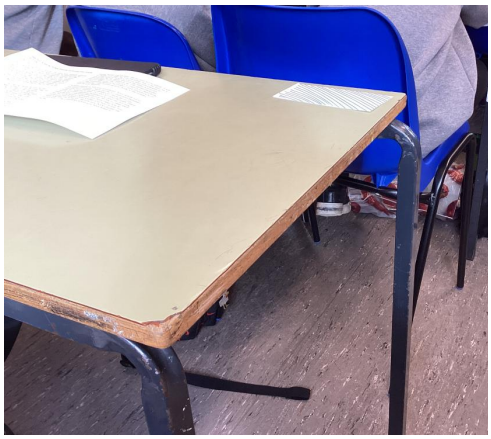

Figure 2: A student flipped her card to the red side during the class.

During the dialogue, the students were encouraged to use the clarifying skill with sentence starters provided by teacher. For example, for the red-card student, they could use the sentence starter "I am confused about XX. Could you explain...".

Ethical considerations and relationships

Several ethical considerations were carefully addressed to ensure responsible practice. First, informed consent was obtained from the class teacher and the head of department, who were clearly informed about the purpose of the project and how the information would be used. And students were informed that classroom interactions would be observed and documented for reflective and research purposes. Two photographs were taken during the lessons with students' consent; these images did not include students' faces or any identifying features.

In addition, brief classroom dialogue transcripts were produced based on my lesson notes and post-lesson reflections, rather than audio or video recordings. Students were informed of this note-taking process and gave their consent. No verbatim recordings were made. All data collected were anonymized, and pseudonyms were used throughout the report to ensure that no individual student was identifiable.

As the project involved working with students, I was particularly aware of my professional role and the power dynamics that might exist in the TA–student relationship. I made sure to maintain appropriate boundaries and to create an atmosphere of mutual trust and respect. Feedback was given constructively, and students' privacy was always protected.

For the project to succeed, I had been communicating closely with the class teacher, the head of department, and other colleagues. Their guidance helped ensure that the project aligned with the school's policies and educational objectives. Safeguarding was also a key consideration. Personal data were stored securely and anonymized where appropriate to protect confidentiality. I also followed the school's safeguarding and data protection policies to ensure that both students and colleagues were safe and supported throughout the process.

Findings

In this research, I collected rich data from diversified sources, including detailed classroom observations, transcripts of dialogues, feedback from students, the class teacher and colleagues, and my reflections each class.

The classroom observations involved approximately everything happening in the classroom, encompassing students' behaviours, the frequency of students raising hands, classroom atmosphere and so on. This helps us better understand the context and the environment of the research. For example, the following excerpt depicts the situation (in square brackets) and also the student's response so that readers have a more comprehensive knowledge about the dialogue. All names are pseudonyms.

Rad: Kevin, you need to share paragraph A.

[Everyone was waiting for Kevin but Kevin remained silent.]

TA: Kevin, do you know what we should do now?

[Kevin shook his head carelessly]

(Classroom transcript 1, 26 September 2025)

Furthermore, the research data were supplemented by feedback from teachers, students, and peer researchers. This feedback proved particularly valuable as it helped identify the most promising directions for the subsequent trials. In addition, acting as an observer, I maintained reflective notes after each class session, thereby enabling timely adjustments to the instructional approach.

This research involved four trials of traffic light card in distinctive types of lesson, including jigsaw reading, question-chain-driven reading and reading and writing lesson. These lessons were conducted consecutively, allowing the students' and teacher's quick familiarity and employment of the traffic light card.

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1. First trial

This class was students' first use of the traffic light card. Therefore, introduction to the rules became the primary objective for this class. In this class, the students would learn the story of Trojan War.

1.1 Implementation Details

The teacher began by distributing a card with two sides of color to each student. Before the activity, clear instructions were provided: students were asked to place their cards on the desk with the green side facing up. The teacher then explained that the green card signified, "*I am confident and I understand the instructions and the content.*" Conversely, the red card indicated, "*I am unsure or confused about what to do.*" If the students flipped their card to red, the teacher would invite a partner with a green card to address their confusion.

After that, the lesson commenced with an introduction to the Trojan War. For the first ten minutes, the narrative was delivered through a round-robin reading session by the students. This was followed by approximately ten minutes of guided drawing, where the teacher helped the students illustrate key plot points and character relationships. Until then, while no student used a red card to signal confusion during this segment, two students, Lucy and Rad (pseudonyms), sought clarification by directly raising their hands with questions.

Later, Amy displayed her red card while simultaneously raising her hand to ensure she was seen. The teacher noticed the signal and approached her, at which point Amy asked a question regarding spelling.

During the subsequent critical thinking and discussion session, where students were tasked with identifying adjectives to describe Achilles, a different scenario unfolded. Another student, Betty,

also flipped her red card. This time, however, the teacher did not notice the signal. Consequently, I, as the TA, stepped in to address her query.

> TA: Any questions?
>
> Betty: I just don't know... how... to...[she mumbled, her words unclear due to her soft voice.]
>
> TA: [Noticing Jay's green card] Okay, no problem. Jay, can you help B out? B, can you repeat your question for us?
>
> Betty: I... don't know... um... this thing...[pointing to 'Achilles']
>
> Jay: What do you mean by "this thing"?
>
> Betty: How do you pronounce this?
>
> Jay: It's "Achilles".[he said, modelling the pronunciation clearly.]
>
> *(Classroom transcript 2, 23 September 2025)*

Here, I intentionally invited Jay to participate in the conversation, aiming to encourage peer support and the use of clarifying skills among students.

I again intervened when Amy's red card was missed. However, after Amy stated her difficulty with the adjective task, I had to disengage from the conversation to avoid interrupting the teacher-led class discussion that had just begun.

1.2 Feedback

After this lesson, I collected feedback from the teacher, student and peers. In the informal chatting right after the class, the teacher commented that this approach was lovely but that they still needed time to practice this method. In the email after the first practice, the teacher expressed her supportive attitude towards this approach, commenting it more effective than "thumbs up/down". And she agreed that pair-work should be encouraged when students turned their cards to red since peer support remained paramount. Nevertheless, she also suggested that the instruction about cards should be more explicit to promote the usage of the card.

> It sounds like a great idea for students to help each other - I think it would work well when they are working in pairs if that's okay? I can offer some sentence starters to help with this as you suggested.
>
> In answer to your questions:
>
> - I think the cards are much more effective as a visual rather than thumbs up/down as they are more subtle.
>
> - Pupils are often used to hands up as a strategy from primary school so it may also be a habit in their routine
>
> - I think the cards are the right size/colour for their purpose
>
> We could potentially be more explicit about when we want them to use the cards rather than for the whole lesson?
>
> *(An excerpt from the class teacher's email)*

For the students, they thought this method was good because they didn't "need to raise their hands". But the peer reviewer (another placement student) expressed the view that the card system had a diminished necessity, as students were observed to readily raise their hands to ask questions directly, often bypassing the cards altogether.

1.3 Reflection and next steps

Based on the collected data, the implementation of the traffic light card revealed several key challenges for refinement.

Challenges	Refinements
Limited Teacher Attention: With a class size of approximately 30 students, the teacher's attention is inevitably divided, leading to some red cards being occasionally overlooked.	Enhanced Monitoring by Teachers and Assistants: The teacher and TA should circulate more proactively during task-based activities, systematically scanning for and responding to red cards to ensure all signals for help are acknowledged.
Variable Effectiveness Across Lesson Segments: The utility of the cards was not uniform throughout the lesson. Usage was minimal during teacher-led storytelling and drawing activities but became concentrated during discussion and critical thinking sessions.	Targeted, Segment-Specific Implementation: • After explanations – to check understanding (green = understood, red = need more help) • During pair or group work – if they get stuck or need support • After practice/questions – to show confidence (green = confident, red = not sure) • At the end of the lesson – as a quick exit check (green = clear, red = unclear)
Lack of Student Familiarity and Habit Formation Students are not yet accustomed to integrating the card system into their regular classroom practice as a primary tool for seeking help.	Provide more explicit instructions • Explicitly frame using the red card as a positive and proactive strategy. • Provide immediate positive reinforcement (e.g., "Thank you for asking") • Allow students a clear adaptation period to build the new habit.
Teacher-Centered Dialogue: Interactions triggered by the cards predominantly occurred between the student and the teacher/TA, under-utilizing the potential for peer-supported learning.	Promotion of Peer-to-Peer Dialogue: The teaching team should actively facilitate peer support by promptly inviting students with green cards to address the questions or confusions raised by those displaying red cards.

2. Second trial

The topic of this reading class was “Did Atlantis really exist?”. The students were divided into groups of four through the whole class, with each student assigned a specific paragraph (A-D) to read and master before sharing its information with their group members.

2.1 Implementation Details

During the information sharing phase, Kevin, a student whose first language was not English and who consequently faced challenges in reading and listening comprehension, displayed a red card. Assigned to Paragraph A, Kevin struggled to engage with the text and was observed being off-task. The following interaction was documented:

> Rad: Kevin [Student], you need to share paragraph A.
>
> [Everyone was waiting for Kevin but Kevin remained silent.]
>
> TA: Kevin, do you know what we should do now?
>
> [Kevin shook his head carelessly]
>
> TA: John, can you help him and explain what we should do now?
>
> *(Classroom transcript 3, 26 September 2025)*

John, who typically engaged in off-task behaviour with Kevin, instead assumed a supportive role.

> J [talked to K]: Do you want to read paragraph A? [and he pointed at the paragraph]
>
> [Kevin still played with him with a careless attitude]
>
> J: I am not playing with you.
>
> [K looked around, not paying attention on the worksheet.]
>
> J: Can you stop looking at the picture?!
>
> [K stopped to look at the worksheet, and J was using the pencil to help K circle some keywords.]
>
> J: You just need to read volcano, earthquake...
>
> [K just listened and looked at the worksheet.]
>
> *(Classroom transcript 4, 26 September 2025)*

This interaction demonstrates John's unexpected shift to a guiding role. Rather than perpetuating off-task behaviour, he actively directed Kevin and scaffolded his reading process. This improved engagement and responsibility is likely a combined effect of the collaborative jigsaw structure and the card system, which made the need for help visible and fostered interdependence within the group.

After the information exchange, the activity moved to a discussion phase: “*Which fact do you think is the most/least convincing?*” Kevin again displayed a red card. When I asked Kevin what the task required, he indicated he did not know. Without any prompt from me as the TA, John proactively

explained: “You need to write which one did you like the best. Have you heard of it? So you need to write which one do you think is the most convincing.” He then pointed to the whiteboard and added, “You just need to use the sentence there, and add some words. Write it down.” Kevin subsequently began writing in his notebook. While John's instructions might not have been perfectly precise, his unprompted initiative successfully facilitated Kevin's participation in the activity.

Simultaneously, Amy displayed a red card. According to corroborating observations from two other observers, the teacher noticed Amy's signal, approached her, and invited her group members to address her question. This initiated a discussion between Robert and Amy, followed by the participation of another student, Betty. Betty later indicated she was unable to fully complete her point due to time constraints, and it appeared Amy's confusion might not have been entirely resolved.

2.2 Summary and Reflection

- During small-group activities, numerous dialogues occurred naturally and simultaneously. As an observer, it was challenging to monitor and document all group interactions comprehensively, leading to some conversations not being recorded in detail.
- For some activities, particularly the jigsaw reading, certain students lacked sufficient scaffolding (e.g., structured guides, sentence starters, or fill-in-the-blank supports). This may have contributed to confusion and uncertainty about the required tasks for some individuals.
- Most student dialogue occurred organically within groups. This raises a question regarding the specific rationale for using the red card during such collaborative work, as students typically asked peers for help directly without signaling. The distinct value and intended trigger for the card within small-group settings requires further clarification.
- Due to the teacher's emphasis on the system and the collaborative group format, the incidence of peer assistance and dialogue noticeably increased. This dynamic appeared to enhance the sense of responsibility among some students, thereby positively influencing their motivation and engagement levels.
- Students demonstrated greater awareness and conscious use of the red-green cards during this second implementation compared to previous observations.

2.3 Next Steps

To address the identified issues and further leverage the system’s potential, introducing structured class-wide talks is recommended. For instance, when a student signals a question or confusion on a specific concept with a red card, the teacher could facilitate a whole-class discussion by openly presenting the query and inviting students displaying green cards to offer explanations. This strategy would promote collective sense-making, diversify explanatory voices beyond the teacher, and provide clearer rationale for public use of the cards while maintaining a student-centred learning environment.

3. Third trial

As the employment of traffic light cards went on, students had gradually developed a better understanding of how to use the traffic light cards. This class, as a reading lesson, centred on the

story of Odin. Driven by series of questions, it guided students to understand the reading materials from a textual to comprehension level.

3.1 Implementation Details

At the beginning of the class, the teacher restated the rules of traffic light cards, emphasizing that teacher intervention would only happen when both students in a pair flipped the cards to the red side, so as to encourage the peer conversations.

The teacher began the lesson by explaining to the students that the words they had just learned were Norse in origin, as a way to introduce the story of Odin. The teacher then guided the class to read the background information on a PowerPoint, inviting students to take turns reading aloud. Later, students commenced their reading on the worksheet individually. The teacher then used class-wide questioning to check students' understanding and encourage them to think and respond actively.

Q1: What animals does Odin transform into?

T: what animals does Odin transform into?

[several students raised their hands, intending to share their ideas.]

T [looking around]: Use your card to tell me.

[Almost all of the students have green cards.]

[T looked around to check the card. And then invited Pearl to answer the question.]

T: Pearl, your card is green, what do you think?

[Pearl gave her reasonable answers.]

[Other students shared their answers as well.]

(Classroom transcript 5, 30 September 2025)

In this class, the teacher strengthened the usage of instructions about traffic light cards, for example, "use your card to tell me" and "your card is green", aiming to improve students' awareness of better employing the cards. Because the students could directly use the textual information to answer this question, basically all of the students had their green cards to this point.

Q2: Can you think of other myths that also involve transformation into animals?

(T gave Ss time to think.)

[Only some students turned their cards to the red side (e.g., Sarah; Amy)]

[T asked Ss to use their cards to tell her if they have any ideas.]

[A large amount of students turned their cards to the red side (almost 80%), which shows that most students didn't have ideas about this question.]

T: Thank you for your honesty.

[T invited green-card students to share their ideas.]

T: Grant, your card is green, what other myths?

G: The Myth of Medusa.

T: Yes, that's good. Think of the assignment last week. What other myth?

[After the reminder, some students thought of the myth and began to speak out the answer. A lot of red-card students turned their cards back to the green side.]

(Classroom transcript 6, 30 September 2025)

Q3: Why do you think transformation is important?

(T gave Ss time to think about.)

T: Use your cards to tell me.

[Nearly half of students had red cards]

[T invited green-card students to answer the question]

Milo: Because it shows their power.

Rex: To disguise.

(Classroom transcript 7, 30 September 2025)

In these two conversations, the red cards convey the information that "I couldn't think of other myths that also involve transformation into animals" or "I didn't know why transformation was important.".

Also, the amount of the students flipping their cards to the red side obviously increased, which indicated that most students had no idea towards the two question. And owing to the teacher's explicit instruction, for example, "use your cards to tell me" and "thank you for your honesty", the effect of the traffic light card was obvious.

The teacher also invited green-card students to share their ideas in class as a peer support, which truly helped other students with no ideas, based on the observation of the changing amount of the red-card students. Therefore, as a class-implemented tool, the traffic light card allows the teacher to monitor the dynamic change of the students' thinking and knowledge.

Q4: What did Baugi do to make Odin not trust him?

Q5: What things does Odin do that seem unheroic? Why do you think he does these things?

[T presented a task that required Ss to answer two questions in their exercise book using full sentences. Ss began writing their thoughts on their own, but they were allowed to discuss with their classmates.]

[Pearl turned her card to the red side.]

T: Pearl, what's your confusion?

[Pearl expressed her confusion to the teacher.]

T: Troy, you have a green card. Can you answer Pearl's confusion?

[Troy began to explain to Pearl]

[Lily turned her card to the red side.]

T: Lily, any question?

L: I don't understand the question: What things does Odin do that seem unheroic?

T: It means what things does he do that make you think he is not a hero. For example, (T guided the student to go back into the text and found some evidence), he calls himself "evil". So now you can try to find other lines.

[Charles turned his card to the red side. The teacher explained to him as well. It was a teacher-student dialogue.]

(Classroom transcript 8, 30 September 2025)

The red card here conveyed the information that "I didn't understand the question". Several dialogues happened in this section. Although the teacher had guided the students to seek for support from their peers, for example, "Troy, you have a green card, could you answer Pearl's confusion?" most of the dialogues occurred between students and teachers.

Q6: Why do you think poetry is often related to myths and legends?

(T gave Ss time to think.)

T: Use your cards to tell me.

[around 16 students (of 30 students in total) flipped their cards to the red side.]

[T invited green-card students to share their ideas.]

T: Regina, what's your idea?

[Regina thought for a while and then said she didn't know.]

T: oh, well. Remember to flip your card next time when you have no ideas.

[Regina flipped her card immediately.]

[T continued to invite other green-card students.]

Ross: Because you can sing.

T: Excellent!

(Classroom transcript 9, 30 September 2025)

In this conversation, the red card conveys the information that "I didn't know why poetry was often related to myths and legends".

The traffic light card mechanism discourages students from pretending to understand, as those who raise a green card are expected to articulate their ideas when called upon. In this episode, when the teacher invited Regina, who had shown a green card, to share her opinion, she was unable to respond and finally admitted she did not know. The teacher then reminded her to "flip your card next time when you have no ideas," and she immediately complied. Regina's experience served as an implicit reminder to the rest of the class that displaying the green card without genuine

understanding could lead to discomfort or embarrassment, thereby reinforcing the honesty and accountability promoted by the card system.

3.2 Summary and Reflection

This lesson demonstrated the highest level of engagement and effectiveness in the use of the red and green card system. Several factors contributed to this outcome.

First, unlike the previous lesson, which was primarily based on group collaboration, this lesson was organized around a sequence of guiding questions. The question chain created more opportunities for whole-class (CW) and pair work (PW) interactions, shifting the classroom dynamics toward teacher–student and student–whole-class exchanges. Under such a structure, the visibility and function of the traffic light cards were maximized.

Second, the teacher provided more explicit verbal cues for card use, such as "Use your card to tell me," which made the moments of application clearer and strengthened students' awareness of when and how to use the cards appropriately.

Third, the cards were typically used immediately after the teacher posed a question, serving as an efficient tool to check whether students had formed ideas or needed more time to think.

Fourth, the teacher reinforced honest participation through both verbal prompts and classroom management. Students who displayed a green card were often invited to share their ideas, as shown in the prompt "You are green, so can you share your answer with us?" In one instance, a green-card student was unable to respond and was reminded to "flip your card next time when you have no ideas." This incident served as a useful example for other students, illustrating that pretending to understand could result in visible accountability.

Finally, after the first large-scale instance in which many students turned their cards to red, they realized that doing so would not lead to any negative consequences. Consequently, students became more comfortable and proactive in flipping their cards to red voluntarily, even without explicit teacher reminders.

3.3 Next Steps

Despite these positive outcomes, several challenges remain. During group discussions and individual thinking stages, a considerable number of students still showed red cards. Due to time limitations, the teacher was unable to attend to all of them individually. Moreover, although students were encouraged to seek assistance from peers when showing red cards—and to involve the teacher only if both partners displayed red—the majority of students still lacked the habit of initiating peer support. Many red-card students continued to rely on teacher intervention rather than peer collaboration.

Moving forward, it will be important to guide students in developing more autonomous strategies for problem-solving and peer assistance. During group discussions or independent work, when a student encounters difficulty, they should first turn their card to red and actively seek help from a nearby green-card peer. If the issue remains unresolved, or if both students display red cards, they should then raise their hands to seek the teacher's help. This gradual approach aims to foster a

more collaborative and self-regulated classroom environment, where students take greater responsibility for monitoring and supporting one another's learning.

4. Fourth trial

This lesson consisted of two consecutive sessions focusing on reading and writing. The main instructional stages included: (1) completing the unfinished poem "Write a Myth" from the previous class; (2) reading the Selkie Story and answering related questions; (3) reading a short story by J.K. Rowling on the theme of transformation; and (4) writing an original story about transformation modelled after Rowling's text.

4.1 Implementation Details

4.1.1 Stage 1

The task was "write a short poem about any of the myths and legends we've looked at so far". After reading the teacher's example work, the students started their individual writing.

In this stage of the lesson, students who turned their cards to red tended to seek help directly from the teacher rather than from their green-card peers. They seemed to believe that only the teacher could provide the "correct" answers to their questions, which likely reflects their perception of the teacher as the primary authority of knowledge in the classroom. For instance, Lily, Milo, Amy, and Lucy all displayed red cards when they felt uncertain about how to write their poems. The teacher responded to their concerns with guidance and encouragement, as shown in remarks such as "You can steal my first sentence and change it to yours" and "Be creative girls, and it doesn't have to rhyme." In this context, the red card functioned primarily as a signal to the teacher—an indication that "I need help."

> Lily (sitting alone): I don't know how to start.
>
> T: You can steal my first sentence and change it to yours
>
> [After ten minutes also, she flipped her card into red again because she was uncertain about her poem.]
>
> L: I'm not sure if it make sense.
>
> [T read her poem carefully.]
>
> T: Oh, I really like that. It is brilliant.
>
> *(Classroom transcript 10, 1 October 2025)*

4.1.2 Stage 2

In this stage, the teacher asked the students two questions after they read the Selkie story:

- Your thoughts: As a modern reader, what moral purpose do you think the Selkie story has?
- What is it saying about people?

The teacher then gave the students time to think about the question and gave instruction about the traffic light cards, "if you flip your card to red, please talk to the people around you. If both of you still can't solve the problem, then I will pop out to help you."

- Sarah and Tracy (a pair), and Charlie and Milo (a pair) flipped their card to red.
- Rad and Lily flipped their card to red as well, but they did not ask their desk-mate for help.

In this stage, the teacher did not address each red-card student individually. Instead, she invited green-card students to share their ideas, using their responses to clarify key points and indirectly resolve the uncertainties of those who had shown red cards. The teacher then provided a brief summary to consolidate the discussion. In this context, the traffic light cards mainly served as a formative assessment tool, allowing the teacher to check whether students had ideas about the given question. The cards also functioned as a form of silent communication—an implicit dialogue through which students conveyed, "I have no idea about this question."

4.1.3 Stage 4

In this stage, the student needed to write a story about transformation by imitating J.K.Rowling's story in the stage 3. First, the teacher asked the students to decide an animal that they wanted to be. Then, the teacher asked the students to flip their cards if they were not sure what animals they wanted to be. Ross, Sarah, Ovila, Milo, Andrew, Tessy, Jet and Pacy flipped their cards. Based on the students' response, the teacher provided more support.

> T: think about your favourite animal! What's your favourite animal?
>
> [At the same time, T also talked with the green-card students and repeat their animals in a voice that can be heard by the whole class]
>
> [5 minutes later, every student except the red-card students (only two) shared their animals one by one. The teacher would skip the two red-card students quietly in order not to embarrass them.]
>
> *(Classroom transcript 11, 1 October 2025)*

Here, the red cards expressed the message: "skip me please because I am not sure what animal I want to be". After deciding what animal they wanted to be, they began planning their stories individually. Simultaneously, the teacher emphasized that "turn to your partner if you are on red. If both of you cannot solve the problem, flip your card and raise your hand. I will help you."

Several instances illustrated how students used the red cards to communicate their needs. Hilda and Rosy raised their red cards and asked, "Can we do first person perspective?" - a signal that they needed help understanding task requirements. Linda, who was working alone, asked, "Can I say I fell on the ground, and after I stood up, I found myself turning into a giraffe?" Her red card indicated a request for advice rather than confusion. Similarly, Rad first consulted his partner and then raised his hand, explaining that he wanted to change his story idea. The teacher provided gentle guidance, suggesting that "pond would be too small" and recommending "lake" instead. In these examples, red cards served as a clear communication tool that conveyed messages such as "I need help" or "I need advice," allowing the teacher to respond effectively to different types of student needs.

4.2 Summary and Reflection

- Compared with the first and second lessons, students in this session used the traffic light cards much more frequently. Their awareness of expressing learning difficulties through the red card noticeably increased. This improvement can largely be attributed to the teacher's consistent guidance and timely instructions. Clear instructions are essential, as they help students understand the immediate purpose of using the cards. At the same time, teachers themselves need to develop a stronger awareness of using the cards as a tool to gather information about students' learning states.
- The traffic light cards can also be regarded as a form of dialogue—though an invisible one. The content of this dialogue varies according to the teacher's instructions, intentions, and the nature of classroom activities.
- Since this was a writing-based lesson, much of the class time was devoted to individual idea generation and story writing. Therefore, the primary purpose of using the cards was to seek help and resolve uncertainties encountered during the writing process.
- In writing lessons such as this, students tend to seek assistance directly from the teacher whenever they have doubts about their writing content or task requirements, as they view the teacher as the "authority of knowledge."
- Despite these positive developments, some challenges remain. A number of students still preferred to ask the teacher directly after showing a red card. Others, after turning their cards to red, neither sought help from peers nor took the initiative to raise their hands for teacher assistance.

4.3 Next Steps

Moving forward, the focus will be on guiding students to use the traffic light cards more autonomously and purposefully. Students will be reminded that turning the card to red is only the first step; they should then actively seek help from their peers before requesting teacher support. The teacher will also provide explicit modelling and prompts to strengthen this habit, for example by reminding students to "check with your partner first." In addition, the teacher will continue to give clear, timely instructions on when and why to use the cards, ensuring that the system functions as an active channel for classroom communication rather than a passive signal of difficulty.

Changes in Practice

In this study, the traffic light cards moved beyond their conventional role as a diagnostic assessment tool and were increasingly used to support learning through dialogue, peer explanation, and clarification. It proved to be an effective tool for both monitoring student learning and encouraging participation in mixed classrooms. The cards provided teachers with a quick visual overview of the whole class, allowing them to instantly identify students who were confused or confident. For example, in the Odin myth lesson, nearly 80% of students flipped to red, signalling that the question was too challenging. Such visual feedback enabled the teacher to adjust the pacing and level of questioning in real time. As the teacher moderated her teaching spontaneously according to the students' feedback, the traffic light card allows the teacher to monitor the students' dynamic cognitive development.

By asking students to use the cards to communicate their learning status, the teacher was essentially prompting them to notice, comprehend, and evaluate their understanding. This process encouraged students' self-awareness and engagement with the learning content. Moreover, the consistent teacher instructions - such as "Use your card to tell me" or "Thank you for your honesty" - helped normalize the use of the cards and built a classroom culture of openness and reflection.

Regarding the employment of the cards, findings suggest that explicit instruction at the beginning of the term is crucial. The effectiveness of the cards depends heavily on clear teacher guidance, intentional integration into question-driven activities, and the teacher's own attitude towards their use. The traffic light card serves as a form of dialogue between teachers and students, the content of which varies according to lesson context and teacher intention. It was found particularly useful in question-chain-based lessons, where students' understanding could be continuously checked.

The use of clarifying skills also emerged as a valuable extension. When flipping their cards, students preferred explaining their confusion to the teacher rather than to peers, reflecting a classroom culture still centred on teacher authority. However, when guided to seek help from "green-card" peers first, students began to engage in more peer-to-peer interactions, developing responsibility and collaborative habits.

Overall, the research demonstrated that the traffic light card approach not only supported teachers in real-time formative assessment, but also helped foster an inclusive classroom environment where every student could participate - visibly and safely. The system provided a subtle channel for less confident students to express uncertainty and contributed to the creation of a dialogue-based learning community.

This study has also informed how I can develop my own teaching practice in the future. Rather than viewing traffic light cards as a one-off intervention, I plan to integrate them more consistently as a routine formative assessment tool, particularly during question-driven and thinking-intensive lesson stages. Going forward, I will place greater emphasis on making students' understanding visible through low-stakes signals, allowing quieter or less confident learners to express uncertainty without fear of embarrassment.

In addition, the findings highlight the need to structure peer support more explicitly. Instead of responding to all red cards myself, I will guide students to seek assistance from green-card peers as a first step, thereby fostering greater learner autonomy and collaborative responsibility. More broadly, this study has strengthened my awareness that effective formative assessment does not always require verbal participation; subtle visual cues can offer powerful insights into students' learning and help teachers respond more responsively in real time.

Reflective evaluation on the process

Several challenges emerged during the implementation of the project. At that time, the school was carrying out a series of standardized tests, which meant that some lessons were shortened or replaced. As a result, there were fewer opportunities to use the traffic light cards as planned. In addition, the overall duration of the project was relatively short - only four weeks - so it was difficult

to examine the long-term influence of this strategy. During group discussions, I often concentrated on one group in order to record detailed interaction data, which made it difficult to observe other groups' participation and their use of the cards in real time.

Despite these challenges, several supportive factors helped the project progress smoothly. The students were highly cooperative and demonstrated enthusiasm towards the new learning approach, which created a positive and interactive classroom atmosphere. My mentor teacher and colleagues also provided valuable guidance and encouragement throughout the process. Their professional support, together with the students' active engagement, played a crucial role in ensuring the overall success of the project.

As for the study, admittedly, it was conducted on a small scale, involving four lessons within a single Year 7 class. As such, the findings are necessarily context-specific and should not be interpreted as generalisable beyond this particular classroom setting. The limited number of lessons also means that the study captures only short-term classroom responses, rather than longer-term changes in students' learning behaviours or sustained teaching practice. In addition, while the class teacher supported and implemented the traffic light card system during lessons, the inquiry was primarily led and documented by the researcher. Teacher reflections were therefore informal and limited in scope, which constrains the extent to which the findings represent a fully collaborative inquiry.

Nevertheless, the study provides useful, practice-based insights into how traffic light cards can function as a formative assessment tool and support classroom dialogue in a mixed-attainment context. While modest in scale, the findings are sufficiently encouraging to suggest that this approach warrants further exploration in future studies, potentially over a longer period or across multiple classes. And also, except for clarifying skill, future research could explore how traffic light cards function when combined with other dialogic or collaborative strategies, and how different modes of use influence students' autonomy and peer interaction over time.

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