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Author(s)	Seng Chee Tan, Aik Ling Tan, Alwyn Vwen Yen Lee and Choon Lang Gwendoline Quek

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Managing Student Behaviors and Maintaining Positive Learning Environment – Reminder or Reprimand

Seng Chee TAN, Aik Ling TAN, Alwyn Vwen Yen LEE, Choon Lang Gwendoline QUEK

National Institute of Education, Nanyang Technological University, Singapore

Sengchee.tan@nie.edu.sg

Abstract: This paper reports an empirical study on the use of a teacher noticing approach to investigate how two teachers managed students' classroom behaviours. We examined the integration of data from an eye-tracking device and video cameras, focusing on what the teachers paid attention to in classrooms with their corresponding managing practices. Our findings show that the experienced teacher was able to advise her students calmly and smoothly resume the lesson to preserve the welcoming environment for the students. The novice teachers constantly scanned for misbehaved students and at times used strong words and a stern voice that betrayed her emotions. The awkward silence of the class ensued, suggesting a break in the flow of the instruction.

Keywords: Teacher noticing, teaching practice, managing students' behaviors

1. Introduction

It is broadly acknowledged that students' disruptive behaviors – ranging from talking, showing disrespect, or inappropriate emotional expressions – are still a concern in many classrooms (Lana & Brunila, 2019). Disruptive behaviors are closely associated with poor disciplines and under-achievement (Armstrong, 2019). Thus, the way misbehaviors are dealt with could be associated with oppressive teaching or a lack of inclusiveness.

Teachers need to understand that misbehaviors are simply not a disciplinary issue that can be resolved through institutional power but is a multi-faceted issue related to students' motivation, control and agency. It is also related to a sense of belonging and emotional climate of the classroom. Hence, the management of students' behaviors cannot be dissociated from the long-term maintenance of positive relationships. Teachers who resort to harsh reprimands have reported experiencing more disruptive behaviors from students and a higher level of emotional exhaustion (Jennings & Greenberg, 2009); they could also face a loss of instructional hours (Muscott, Mann, & LeBrun, 2008).

However, the complexity and volatility of classroom events mean that even when teachers possess the theoretical knowledge of classroom management, their ability to process a multitude of information and make moment-to-moment decisions in a classroom is critical. The differences between

experienced and novice teachers, both in terms of knowledge and practical experience, could affect their classroom management scripts (Wolff et al., 2020). For this reason, this study was conducted through the lens of the teacher noticing research. Noticing is considered a natural part of human sense-making that aids interpretation based on one's orientations and goals. Teacher noticing patterns are nuanced and predictive about teachers' in-the-moment decisions and actions (Mason, 2002) that have a direct impact on students' learning, and is specialized to its purposes, such as noticing things that are central not to personal goals, but to professional ones (Sherin, Jacobs, & Philipp, 2011). This study also leverages eye-tracking devices (Jarodzka, Holmqvist, & Gruber, 2017) that help to visualize what teachers noticed (the antecedent event) leading to their classroom management behaviors.

The research question guiding this study is: "How and what do expert and novice teachers notice in classrooms, how do they manage students' behaviors and what are the corresponding outcomes?"

2. Research Methods

2.1 Participants

The participants were two teachers, Linda and Kate (pseudonyms), who were teaching General Science at the same 7th Grade class in an all-girls school located in Singapore. Linda is considered a novice teacher as she had been teaching for two years; Kate had 15 years of teaching experience and she served as a mentor when Linda was a student-teacher undergoing school practicum. The sampling was purposive based on the differences in their teaching experience. This study reports data that were drawn from two video recordings of lessons, one from each teacher.

2.2 Data Collection, Processing, and Analysis

Data collection started after the ethics clearance was obtained from the university (2018-01-030). The teachers were equipped with an eye-tracking device with a forward-facing camera to capture what the teachers saw during the lesson and stored in the form of a Point-of-View (POV) video. The data collected from the lessons were processed using the software called D-Lab. Gaze points from the eye-tracking device were used to calculate the teacher's fixations, gaze patterns, and durations on objects in the classroom. Two inward-facing cameras were installed in the eye-tracking device to capture the positions of the teachers' eye pupils. The pupil-tracking data was used to calculate a gaze point that was superimposed on the POV video. In addition, we also set up two video recorders at the front and the back of the classroom to avoid missing events that were not captured by the eye-tracking device.

In this study, we analyzed a 58-minute lesson by Linda on the topic of photosynthesis and a 23-minute lesson by Kate on the main organs of a plant. Both lessons were conducted with the same class of students. We first viewed the integrated video, comprising the POV video, the front and the back view of the classroom, to identify events related to the management of students' behaviors. Triangulation from multiple sources of information helped us to identify these events. For example, in one instance,

Linda gazed at a student for 2 seconds (POV video), then called her name with a stern voice; from the class-facing video, we could tell that the student was not paying attention. Some instances were more apparent when the teachers' talks focused on addressing behavioural issues (e.g., "why are you sharing the textbook?"). After these events were identified, we analyzed the teachers' approach and the students' responses.

3. Findings and Discussion

Table 1 summarized the episodes of managing students' behaviors by Linda.

Linda adopted a "telling" approach for teaching, providing instructions to the students and expecting their full attention. She was actively scanning the class (based on the gaze points in the video) and would gaze at a student or a group of students for more than two seconds before addressing their misbehaviors. Initially, she was calm and composed, and the class's atmosphere did not seem to be affected in the first four episodes. She seemed to get more impatient as the lesson proceeded. Her tone and talks betrayed annoyance and impatience for several events (L3, L6, L8). On two occasions, the gaze, or stare, lasted for at least five to eight seconds, coupled with silence after the students were addressed. For example, in L6, she gazed for two seconds at the students who were whispering while she was giving instructions, and annoyingly said:

I think the two of you are (inaudible)... (1 second of silence and gazing). Is there something interesting about two of you that I should be addressing now? (7 seconds of silence and gazing).

In L8, she detected a group of students who were not paying attention and she gazed at them for 6 seconds in silence before saying loudly in annoyance:

You said you don't understand, right? (2 seconds of silence and gazing)... I am trying to conduct a learning activity here, but you don't seem to be (getting) ready quickly (2 seconds of silence and gazing). There's where the problem lies... (2 seconds of silence and gazing).

The students' response was silence, with the students looking downwards or slightly embarrassed as the episode had attracted unwanted gazes from their classmates. The atmosphere was, metaphorically, frozen. The repeated patterns (gaze with silence, advise or reprimand, gaze with silence) along with the frequent distribution of the episodes of managing behaviors indicate that this was part of Linda's classroom managing repertoire.

The approach taken by Kate, the experienced teacher, was markedly different in terms of actions, frequency, and students' responses. Table 2 summarized the episodes of managing students' behaviors by Kate.

Table 1. Episodes of managing students' behaviors by Linda

Episodes	Time	Teacher's action	Students' responses
L1	0:05:53 – 0:06:05	Gaze at Student A who was not paying attention and calmly asked “Are you ready?” The student said she was putting on a plaster.	Student A hurried to get ready. A few students turned to look at her.
L2	0:10:16 – 0:10:17	Gaze at Student B and said, “<name> you might want to pay attention to this.” in a calm manner and smoothly switched back to instruction. It lasted only for a second.	No visible impact on the students as the episode lasted only 1s.
L3	0:11:10 – 0:11:13	Gaze at Student C and said, “<name>, are you ready?” The tone shows that she was annoyed. It lasted only for 3 seconds.	No visible impact on the students as the episode lasted only 3s.
L4	0:21:00 – 0:21:06	While playing a video clip, gaze at Student D, called the student's name, and gestured to her to look at the screen.	No visible impact on the students as most students were looking at the video casted on the screen.
L5	0:21:47– 0:22:00	While playing the same video clip, gaze at student E (next to A), called the student's name. The student was smiling and whispering to the girl next to her.	Student E sat straight immediately. No visible impact on other students as most students were looking at the video casted on the screen.
L6	0:25:48 – 0:26:08	Student A and E were whispering and smiling while the teacher was giving instruction to the next activity, she paused her instruction, gazed at them, addressed their misbehaviors and stared at them. It lasted for a relatively long duration (20s).	There was silence. The pair looked embarrassed. A few students turned to look at them.
L7	0:49:12– 0:49:48	Gaze at Student F and said, “<name>, what are you doing?” followed by 4s of gaze with silence.	The students were in groups but the volume of discussion decreased drastically.
L8	0:49:24– 0:49:48	While giving instructions during group work, she found a group of students not paying attention. She gazed at them, addressed their misbehaviors, and stared at them. It lasted for a relatively long duration (25s).	There was silence; the noise from the ceiling fans can be heard. Some students looked down, others turned to look at the group.

Table 2. Episodes of managing students' behaviors by Kate

Event	Time	Teacher's action	Students' responses
K1	0:00:00-0:00:41	Students just returned from a short break; Kate reminded students to settle down quickly, put away their mobile phones, and stopped eating. She asked, "You all just came back from recess right?"	The students settled down quickly.
K2	0:02:15-0:02:22	Asking Student A to stop playing with her stapler. She said calmly, "what are you doing with the stapler? You're your book, transport and plants, thank you very much." Then smoothly transit back to instruction.	Student A sat straight. A few students turned to look at her.
K3	0:04:17-0:04:33	Asking a pair of students (B & C) why they were sharing a textbook. Then said, "you need to bring the textbook, ya?"	The pair looked at the teacher and answered her. One student turned to look at the pair. Did not seem to affect the rest of the students.
K4	0:05:00-0:05:27	The same pair of students (B & C) were talking and smiling and apparently not paying attention. The teacher took off her eye-tracker, walked to the same pair of students and appeared to give some advice softly. She calmly resumed the instruction.	There was silence in the class. A few students turned to look at them. When the teacher walked back to the front, the pair smiled and looked at her. Lesson resumed as usual.

Kate's approach involved teacher-centric instruction through the control of pace, content, and learning activities in planned sequences. The classroom atmosphere, however, was welcoming. Her shorter lesson may have resulted in fewer instances of managing student behaviors. Kate tended to speak to the students in a calm voice, such as in episode K3, as she gazed at Students B and C who were sharing a textbook before conversing with them:

Kate: Your textbook?
Student B: Ya
Kate: Then, whose textbook is this?
Student C: I left it at home.
Kate: Oh, you need to bring your textbook.

During episode K4, Kate removed her eye-tracker (so as not to be recorded), before walking to the same pair of students and talked to them privately and softly. She then equipped the eye-tracker before resuming teaching with the same calm voice as if nothing has transpired. Although Kate's lesson was teacher-centric, it was also engaging. She prepared her presentation slides but also made a point to write the lesson objectives on the whiteboard. From 0:15:40 to 0:20:50, she pulled up half of the screen, juxtaposed the presentation slide that was projected on the screen (displaying a vascular bundle cross-sectional diagram) with her hand-drawn diagrams on the whiteboard to provide a more vivid and

engaging manner of drawing the xylem and phloem. She further used her arm as a “teaching aid” to explain how xylem and phloem are positioned from the stem to the leaves by drawing on her arm with a marker to show xylem and phloem's positions and the ending positions in the leaves. Her interesting and lively explanation could be the reason why the students were listening attentively. Consequently, there was less opportunity for misbehaviors. In short, Kate reacted to students’ behaviors without sacrificing the positive welcoming environment and she prevented students’ misbehaviors with her engaging lesson.

4. Conclusion

This study uncovers the different practices of a novice and an experienced teacher in their approaches to managing student misbehaviors. These may be minor misbehaviors of inattention, but the teachers’ actions revealed their possible scripts and beliefs. The novice teacher appeared to rely on institutional power, controlling reactively and frequently creating a tense atmosphere and moving towards oppressive teaching. The experienced teacher showed sensitivity to students’ feeling, was proactive in maintaining a positive environment and engaged students through effective pedagogy. We are aware of the limitations of a small sample size that prevents generalization. However, the intention of this research is not to stop at the identification of differences or highlight weaknesses of novice teachers; we would risk conducting “oppressive research” that is judgmental and discriminating against the novice teacher. Future research could explore ways to use the videos as reflective tools to enhance teachers’ self-awareness and empower them to engage in discussions to improve teaching practices. We have begun engaging teachers to reflect on their adaptive teaching practices and would continue with other aspects of teaching, including classroom management approaches.

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