

How do Teaching Assistants Make Decisions in the Classroom?

M.H. Nair¹, B. Cheng¹, E. Marquis¹, T. Roxå², A.S. Martino¹
¹McMaster University, ²Lund University

ABSTRACT: This study seeks to explore how undergraduate and graduate teaching assistants (TAs) make decisions in the classroom as they teach. Classroom decision-making constitutes a fundamental aspect of teaching, and a range of existing research explores how this process unfolds for early through late career faculty. TA decision-making processes are comparatively under-researched. In order to contribute to filling this gap, the present research analysed TAs' decision-making processes by audio-recording and observing tutorial sessions to capture TA responses to student cues, and subsequently completing one-on-one interviews in which participating TAs reflected on self-selected moments from these recordings and/or on their decision-making more broadly. Preliminary readings of the data reveal that TAs navigate classroom dynamics by monitoring student cues such as body language and facial expressions, draw upon a range of previous experiences to respond to these cues, and seek social supports, all while actively building their identity as a teacher. As a pilot study, this work offers initial insights with the potential to contribute to a better understanding of how TAs' teaching practices differ from those of other instructors, which might in turn provide more information on how to better support TAs in their teaching.

1 INTRODUCTION

There is an existing body of literature examining how faculty in higher education institutions engage in impromptu decision-making by reflecting on student cues as they teach in the classroom (e.g., McAlpine & Weston, 2000). These verbal and nonverbal cues indicate to instructors how students react to what they are being taught, and can influence how instructors modify or continue with their teaching practices. McAlpine et al. (1999) develop the concept of a 'corridor of tolerance', which suggests that "many aspects of teaching are not modified or changed as long as the cues being monitored in the classroom fall within what the instructor deems to be acceptable progress" (p. 109). They further explore this concept in their study through videotaping mid- to late-career faculty members to understand how they respond to student cues and make decisions in the classroom. The study found that these faculty members often grounded their decision making in previous teaching experience. Sadler (2012) also found that junior faculty, as they progress in their careers, used 'critical interactions' with students in the classroom to inform their subsequent decision-making processes. Therefore, the existing literature suggests that instructors often base their teaching-related decision-making upon interactions with students.

Nevertheless, in spite of work like Sadler's, the literature looking at the decision-making processes of early-career post-secondary instructors—specifically teaching assistants (TAs)—remains relatively sparse. TAs are often new instructors with little prior formal teaching experiences, and are in markedly different academic positions in comparison to mid- and late-career faculty members. Additionally, they are students themselves completing their undergraduate or graduate degrees, which could influence the ways in which they read cues from students in their classroom or the experiences on which they draw upon.

Against this backdrop, the present study aims to explore how undergraduate and graduate student Teaching Assistants (TAs) make decisions in the classroom as they teach. It addresses the following research questions:

- 1) How do TAs make decisions while teaching in the classroom?
 - a) What sort of cues do TAs respond to? What do they look for in their classrooms?
 - b) How do TAs experience situations in which they are making decisions in the classroom?

- c) What experience and/or knowledge do TAs draw upon when making classroom decisions?

By addressing these questions, we aim to contribute to the growing literature focused on graduate student teaching development and the development of academic identities (e.g., Boman, 2013; Finch & Fernandez, 2014).

2 METHODOLOGY

In line with the experiential focus of our research questions, we elected to take a qualitative approach to data collection (Merriam, 2009). Our initial intention was to follow the methodology employed by McAlpine et al. (1999), wherein instructors were video-recorded as they were teaching, and subsequently participated in interviews in which they watched segments of those recordings and reflected on what was happening. Ultimately, however, we were unable to get clearance from our university research ethics board for such an approach, due to significant concerns about interfering in classes and about the need for students to be able to participate in class while refusing consent to be recorded. In order to account for these concerns, we instead elected to invite teaching assistants to allow us to observe and audio record one of their classes (with their students' consent), and to participate in a subsequent reflective interview.

Once clearance was received from the McMaster University Research Ethics Board, instructors of first year classes in the Faculties of Humanities, Social Sciences, and Science at McMaster University (Ontario, Canada) were contacted and asked for permission to invite their TAs to participate in the study. Where such permission was granted, TAs were then recruited via email invitations. Ultimately, ten TAs expressed an interest in taking part. These TAs had a range of teaching experience, and were leading tutorials for courses in math, communication studies, English, health studies, life sciences, medical physics, peace studies, psychology, and theatre & film.

Students in these TAs' tutorials were informed in advance that we would be attending a class session and asking their permission to observe and audio record it. If we did not receive consent from all attending students, the recording and observation did not proceed. For all tutorials for which we were able to secure class consent (n=7), a member of the research team sat in on a tutorial, audio recording and taking some descriptive observation notes focused on what the TA did throughout the class. The audio recording and observation notes were then sent electronically to the TA shortly after the tutorial in question. TA participants were encouraged to review these materials and select one or two moments from the tutorial that they saw as particularly salient in relation to our research questions. Subsequently, they participated in semi-structured, one-on-one interviews of approximately 30-60 minutes in length, in which they reflected on the observed tutorial session and on the ways in which they made decisions in their teaching more generally.

In cases in which we did not receive full class consent or we were unable to schedule the necessary class visits (n=3), TAs were invited to participate in just the one-on-one, semi-structured interview. These interviews followed the same basic interview guide as was used in cases where an observation had occurred, with an initial question about the TA's reflection on the observed tutorial removed.

Analysis of these interviews is currently ongoing. Preliminary insights arising from our early readings of the data are summarized below.

3 FINDINGS

3.1 Navigating classroom dynamics

Participants consistently noted that they often relied on students' body language as an external cue to capture whether students understood what was being taught. As one TA noted, it is important to "pay attention to the room" because "it's a body language thing". As they taught, participants attempted to interpret students' body language and movements, observing moments in which students seemed to be looking at their laptops or phones for long periods, typing a lot, talking among themselves, having their "bodies pointed at the window," or being silent.

Participants were particularly attentive to students' facial expression and, at times, had somewhat nuanced interpretations of those expressions. For instance, participants watched for expressions which they interpreted as students feeling "lost," "bored," "tired," and "disgruntled," and frequently modified

their actions in response to such cues. Participants also relied on head nods to confirm that students were following the class, though, as one participant noted, students sometimes nod their heads to “fake understanding” as well. By paying attention to students’ body language and movements, some participants felt that they were able to “feel the room,” and make decisions about how to best proceed as they taught.

In their interviews, some participants also spoke about how they attempt to manage their own body language, or perhaps their self-presentation more generally, in order to “assert authority” and construct an image of expertise in the classroom. One participant, for example, spoke about the need to “maintain a pose” if he made a mistake while teaching. Following the advice of her younger sister, who is an undergraduate student, another participant shared: “I stopped talking about how sweaty and nervous I was to my students.” Another participant talked about her struggle with knowing how to “assert authority” while feeling she doesn’t “know enough” herself.

Participants nonetheless mentioned that they also wanted to maintain a friendly environment in the class, tempering an image of expertise with one of approachability. For one of the participants, creating such an environment sometimes involved the use of humour; as he said, “you can be a little ghetto sometimes.” For another participant, creating a safe space that allowed students to participate also meant carefully managing her own body language in the classroom, including, even, controlling her eyebrow movements. As she noted, “I really have tried to not convey judgment so I try to keep my face sort of straight.”

3.2 Drawing on past experiences

TAs reported drawing upon a variety of past experiences when making decisions in the classroom. Previous experiences as a student, as an instructor, and with an assortment of extracurricular activities provided a frame of reference when preparing for tutorials and responding to student needs in the classroom.

Firstly, most TAs described drawing upon their experiences as a student in order to relate to their students’ perspectives. Some participants had previously been students in the course that they currently teach, which helped them identify limitations in the course which they then sought to address in their tutorials. For example, one TA noted the lack of practical applications of theoretical course material when she took the course, and subsequently decided to incorporate more interactive application-based practice problems into her own tutorials. Additionally, TAs noted a desire to respond to student interest and deviate from the lesson plan in order to make the tutorial more engaging for their students. TAs were likely to use both negative and positive experiences they had as students in order to inform how they acted in their tutorials. Through this, they were able to identify qualities that they wished to emulate in the classroom, such as openness, responsiveness, and a willingness to express uncertainty.

Secondly, past experiences as an instructor also shaped how TAs responded and made decisions in the classroom. Participants in the study were at various stages in their academic careers, and thus had different levels of previous teaching experience. Veteran TAs spoke about having curated a long history of teaching experiences, which informed how they acted in the classroom. Consequently, these TAs felt more confident and better equipped to deal with unplanned situations that arose in the classroom as they had most likely already encountered those situations in the past.

Finally, TAs also drew on transferrable skills that they acquired from various other jobs and extracurricular activities. Some participants spoke about leadership positions and project work on and off campus that involved navigating group dynamics, which taught them how to read cues from people and support group processes. These skills were then translated into the classroom setting. Drawing upon non-teaching experiences to inform decisions made in the classroom highlights the adaptable ways in which TAs approach their teaching positions, and emphasizes both the need and the potential to draw on other relevant experiences when still a relatively junior instructor.

3.3 Building social networks

Our interviews revealed that many participants perceive a lack of formal training tools and resources to support them in their teaching positions. In response to this perceived lack of support, participants turned to their social networks, including peer TAs, professors, and family members, for teaching support and guidance on making decisions in the classroom.

Many participants shared that they sought assistance from other TAs to design lesson activities that were engaging and relevant to student learning. For example, one participant collaborated with colleagues to organize an interactive trivia game, while another created multiple choice questions in partnership with her peers to test students' course knowledge and increase interactivity in tutorial. Collaborating with other TAs also provided practical opportunities for identifying and sharing strategies to address classroom conflicts and improve content delivery. One participant noted that weekly meetings with other TAs allowed the opportunity to share tips on how to teach difficult course topics. Another participant indicated that talking with peers allowed them to identify areas of improvement in their teaching that they may otherwise not have noticed. However, time constraints and student preparation may act as barriers to implementing the strategies suggested by their peer networks.

Less commonly, some participants also shared that they sought guidance from the course instructor or from other professors with whom they work. Professors were seen to be teaching experts who could provide reliable teaching advice and direction on the information covered in tutorial. However, the perceived level of support that TAs received from professors varied depending on the nature of the TA and professor's relationship.

TAs also turned to their relatives for advice on teaching. One participant shared that they would seek advice from their sister on how to approach certain classroom scenarios based on the sister's experience as a current undergraduate student. Another participant reported discussing their teaching strategies with their partner and a parent, both of whom had teaching experience.

The variety of social supports that TAs consult in order to support their decision-making processes points to the perception that there are few formal opportunities for TAs to talk about teaching. However, some participants mentioned using a formally developed TA training course or other training materials to improve their decision-making capacity in tutorials, but such comments were rare.

3.4 Identity development and the 'how' and 'what' of teaching

Considering the range of interpersonal cues participants described using while monitoring their teaching, it suggests that teaching is a very social activity. It is like the overwhelming complexity of the classroom exchange fuels the process of becoming a teacher. Participants talked about things they see, hear, or otherwise perceive in the classroom as signs that make them reflect on and continuously monitor the situation, with the aim of having students engaged, listening, or participating in discussions. Arguably, it is through this process that the TAs become teachers—by focusing on the 'how' of teaching.

The social nature of this process is further emphasized by the fact that participants seek out people to talk with about teaching, as described above. While some attempt to work as soloists, either by choice or by the fact they do not have anyone to talk to, many seek to support their decision-making by talking and collaborating with peers, friends, family, and (rarely) professors. These social exchanges again contribute to solidifying a teaching identity.

Another aspect of this emphasis on teaching as a social activity, however, is that student learning, which is arguably more internal and difficult to monitor, might remain hidden. This aspect of teaching—which might be termed the 'what' of teaching—did not emerge as tangibly as the social and interpersonal elements did in the interviews. Indeed, when prompted about how they know whether or not students have understood something, some participants paused and then exclaimed that this is much harder than monitoring how their own teaching is being perceived, or how the group is functioning. The parallel to teaching centeredness, as formulated by Prosser and Trigwell (2014), is clear. The possibility thus surfaces in our data that the prominence of social interaction in TAs' minds hides the learning aspect to some degree, not least since this aspect is less obviously apparent. Learning doesn't necessarily reveal itself in the moment but shows itself to the TA as a result of inquiry, or via student performance on course assignments.

This raises an interesting question about the extent to which TAs might be encouraged to move beyond the social, interactive aspects of teaching, and start investigating their effect on student learning as it unfolds. That is, why would a TA who has managed to handle the social aspects of teaching and the frequent dissonances and modifications these entail start to search actively for what

might be dissonant experiences connected to the ‘what’ aspect of teaching? Why not remain comfortably in the achieved, socially balanced experience of the ‘how’ aspect, rather than searching for evidence of student learning?

4 DISCUSSION

While we are still in the early stages of our analysis, our preliminary reading of the data raises several interesting questions and ideas that are worthy of further consideration. The TAs in our study seem to share an emphasis on monitoring interpersonal cues in the classroom, for instance, highlighting the extent to which they engage in ‘reflection in action’ and modify their teaching practices in the moment in a manner not broadly unlike that reported by faculty in McAlpine et al.’s (1999) work. Nevertheless, the fact that many TAs in our study evinced a concern for projecting an image of expertise, while several also indicated that they wished they had a ‘broader arsenal’ of teaching tools at their disposal, suggests that responding to such classroom cues may be a somewhat different—and often anxiety-producing—process for TAs. In turn, this difficulty might be seen to at least partially explain the emphasis on what we call the ‘how’ aspects of teaching above. For junior educators, the interpersonal process of giving and receiving cues in the classroom may well be sufficiently challenging that little cognitive and/or emotional space remains for an active search for less obvious indicators of student learning.

Likewise, while TAs, like faculty, report drawing on past experiences to inform their teaching, the experiences they note are distinctive. Even within our group of ten participants, people noted calling on everything from past teaching experience, to relevant work activities, to time spent as a camp counsellor or student leader on campus. Many described relying to some degree on their own recent and/or ongoing experience as students. In many respects, the experiences drawn on to inform teaching thus appear somewhat unique to each participant, suggesting that, while many TAs want to be good teachers, there is not a clear sense of induction into a shared, professional culture. Rather, individuals are largely finding their own way, with varying levels of support and varying kinds of experience being used to inform their development.

A similar point might be made about the networks of significant others (Roxå & Martensson, 2009) into which TAs can tap to talk about teaching. While some participants described relatively extensive and well-established networks of both peers and senior educators, many seemed to be searching for additional sources of conversation and exchange about teaching, sometimes turning to family members and friends as well as others on campus for this purpose. This raises the provocative possibility that significant networks in which to talk about teaching may be both especially important for developing educators and simultaneously uncertain or difficult to establish, perhaps particularly for students at a research-intensive university.

Given the significant role teaching assistants play in undergraduate education and the extent to which their experiences as TAs might contribute to shaping their work as future faculty (for those who follow this path), these and other questions about their teaching experiences merit further attention and scrutiny.

REFERENCES

- Boman, J.S. (2013). Graduate student teaching development: Evaluating the effectiveness of training in relation to graduate student characteristics. *Canadian Journal of Higher Education*, 43(1), 100-114.
- Finch, J.K. & Fernandez, C. (2014). Mentoring graduate students in teaching: The FCCIC Model. *Teaching Sociology*, 42(1), 69-75.
- McAlpine, L., Weston, C., Beauchamp, J., Wiseman, C., & Beauchamp, C. (1999). Building a metacognitive model of reflection. *Higher Education*, 37(2), 105-131.
- McAlpine, L., & Weston, C. (2000). Reflection: Issues related to improving professors’ teaching and students’ learning. *Instructional Science*, 28(5), 363-385.
- Merriam, S.B. (2009). *Qualitative Research: A Guide to Design and Implementation* (3rd ed.). San Francisco: Jossey-Bass.
- Roxå, T. & Martensson, K. (2009). Significant conversations and significant networks – exploring the backstage of the teaching arena. *Studies in Higher Education*, 34(5), 547-559.

- Sadler, I. (2012). The influence of interactions with students for the development of new academics as teachers in higher education. *Higher Education*, 64(2), 147-160.
- Prosser, M., & Trigwell, K. (2014). Qualitative variation in approaches to university teaching and learning in large first-year classes. *Higher Education*, 67(6), 783-795.