

Reflective Metacognitive Teaching, Productive Learning: The Right Amount of Confusion, Discomfort, and Success

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Abstract

The primary goal of this research was to demonstrate how the instructor's reflective metacognition can act as a powerful tool for real-time course modification as well as an effective means for reevaluating longitudinal data of students' feedback for the course. The key to this approach was timely, frequent documentation based on a set of insightful prompts, which elicited deeper contemplation, rather than placing a superficial judgment whether we or the students believe the class session went well. By collecting additional qualitative data, such as midterm student perception surveys and final student evaluation of teaching (SETs), particularly the student narrative feedback, we were able to triangulate the data, creating areas of agreement and outlier data. Ultimately, we found that by using several data collection instruments for reflection of teaching and documenting the data on a regular basis, we were able to collect and make sense of the methods that worked well in the course and be better prepared to redesign our course for the next term. Longitudinal data of students' perceptions three months following the course indicated they still (1) are using course specific terminology; (2) are sharing the major course themes with others; and (3) can articulate central ideas. In conclusion, we propose the methods entailed in reflective metacognition can offer an effective toolkit in real-time teaching, especially for junior scholars and first-time teachers in the early stage of their career paths.

Keywords: Reflective Metacognition, Active Teaching Methods, Formative Self-Assessment, Student-Narrative Feedback

Introduction

How can reflective metacognition, when methodologically applied in teaching, help improve transformative learning? How can early career faculty assess and improve their active teaching methods in real time? How to manage productive discomfort among first-year college students in a diverse study setting? To address these questions, this study was performed at a small, private university in China where half of the student population is from China and the other half are international students. The result of this study shows a positive connection between the methods of reflective metacognition, the short- and medium-term retention of students' memory of class contents, and the overall improvement of teaching quality through formative self-assessment, especially among the early career faculty with limited teaching experiences.

Our reflective metacognition method is derived from the early conversations between the author and co-author, discussing how they collect and interpret data in their respective field. We believe that there might be several ways to generalize this method to other disciplines, as every area has developed their own way of observing, communicating, classifying, inferring, measuring, and predicting. For example, the co-author is an environmental chemist trained to take detailed notes of the environment and determine if there is any correlation between the data and the contaminants, like collecting student behavior data and determining if instruction is having the desired effect.

The first author, trained as a professional anthropologist, pays close attention to the relationship between observation, action, and reflection in various social settings. From an anthropological perspective, education is a key channel through which ideas and actions could be communicated, cultivated, observed, and transformed in a society (Ingold, 2017; Zaharlick, 1992). For that end, the professional skills of participant observation and note-taking of behaviors as indicators are useful for reflecting upon one's approach to teaching. Through such metacognitive reflection, we can start to notice patterns and exceptions in (in)effective teaching manifested through students' behaviors in class, performance in assignments, course evaluation and feedback, as well as future development.

Furthermore, as the title of this study suggests, "productive discomfort" is one of the many perspectives on effective teaching methods. Liu et al.'s (2013) article, "Sequences of Frustration and Confusion, and Learning" support this approach. They share literature on how confusion and frustration can assist in learning if they are offered, monitored, and addressed in intentional ways. The major findings suggest that the effect may be stronger for frustration than confusion and is strongest when these two affective states are taken together. They found a pattern where confusion and frustration are associated positively with learning for brief episodes and negatively for lengthy episodes. This study shows that reflective metacognition can help the instructor self-monitor and modify the effects of confusion and frustration in pedagogy in real time and the duration of the course.

Hypothesis

1. In a common first year experience (FYE) large enrollment recitation, a combination of three factors—the instructor documentation, reflective metacognition, and course feedback inform current and subsequent active teaching methods—is effective for improving and evaluating the FYE course.
2. Early career faculty, especially someone with limited teaching experience, can apply this reflective method to improve their teaching methods.

This research used a real-time note taking data collection approach followed by a qualitative data analysis to produce suggested methodologies for possible integration into first year experience recitations.

Literature Review

The theoretical framework for this study centers around reflective metacognition. This approach aligns well with the interdisciplinary approach of this study and the course. We will first define terms in the construct of education, then through the discipline of anthropology.

Reflective Metacognition

A typical definition of metacognition from an educational perspective can be defined by Flavell (1976) as one's knowledge concerning one's own cognitive processes or anything related to them, e.g., the learning-relevant properties of information or data. There is a direct connection between reflection and productive metacognition. Hemans et al. (2019) found evidence and replicable measurements in support of the benefits of reflection. They document that reflection leads to transformation in observable and measurable ways, a piece that is often missing from the theoretical literature. King and Kitchener (1994) found that growth in thinking can be achieved by modeling reflection through guided practice and communication. Reflective instructors are also more likely to integrate intercultural teaching methods (Kleinfeld & Nordhoff, 1988) and demonstrate ethical responsibilities towards learners (Hursch, 1988).

There is an on-going connection between the concept of metacognition and transformative learning. Minnes et al., (2017) found significant improvement in the quality and depth of students' written reflection at the end of an internship enriched with regular writing. These findings align with how metacognitive reflections facilitate Mezirows' (1997) transformative learning theory during the internship

experiences. The writing exercises helped students attend to Mezirow's two attributes of instrumental learning (task-oriented problem solving) and communicative learning (evaluation of cause-and-effect relationships). Another key connection between transformative learning and metacognition is reflection as part of integrated High Impact Instructional Practices (HIIPs). Kuh et al., (2017) detailed eight "key features" of HIIPs that could account for improved student learning outcomes. Performance expectations set at appropriately high levels; significant investment of concentrated effort by students over an extended period of time; interactions with faculty and peers about substantive matters; experiences with diversity, wherein students engage in ideas that differ from their own; frequent, timely, and constructive feedback; opportunities to discover relevance of learning through real-world applications; public demonstration of competence; and periodic, structured opportunities to reflect and integrate learning.

From an anthropological perspective, the concept of metacognition aligns with the "reflective turn" since the 1970s as critical, feminist, and postmodern perspectives flourished in humanities and social sciences. Similar to metacognition defined above, the reflective turn means that the ethnographers turn to the self as a subject for observation, inquiry, and reflection while interacting, observing, and writing about the people they study. Early anthropologists such as Malinowski (1922) and Mead (1943) have long explored the relationship between their research interlocutors and their own cultural backgrounds. Yet, it was not until the 1970s that scholars such as Asad (1973), Hurston and Washington (1979), Clifford and Marcus (1985), Marcus and Fischer (1986), and Rabinow (2007) began to critically analyze the various power dynamics in the fieldwork that affect both ethnographers and their interlocutors. Moreover, Vankatesh (2016) noted that this reflective turn is often marked by the adoption of the first-person narrative voice. The use of "I" in writing shows a strong commitment—both ethical and methodological—to understanding personal biases and even cultural conflicts during the processes of interpersonal interaction and knowledge production.

A key outcome for integrating metacognition is to reflect upon the type of instructional approaches that can lead to student engagement through the use of active learning methods.

Active Teaching Methods

Active learning can often be associated with discomfort. Taylor and Baker (2019) found potential benefits of "discomfort" while learning, differentiating from cognitive dissonance—the psychological reaction to inconsistency in two or more thoughts—as the catalyst for these processes (Festinger, 1957; Gao & Hargis, 2010). The authors describe "discomfort" as an aversive psychological and physiological state (Elliot & Devine, 1994) as a consequence of experiencing dissonance. Ultimately, the authors found that when students' discomfort is part of the process and when they have the support, the experiences may lead to learning. They argue that three conditions distinguish productive from unproductive: discomfort should not be due to trauma or external threats; be attributed to internal causes; and should be paired with support.

Formative Self-Assessment and Student-narrative Feedback

There are several ways to collect empirical self-assessment data of teaching. One method is to collect midterm small group student perception data (Hargis & Soto, 2017; Hargis, 2014) (Appendix C). A study by Cohen (1980), replicated by Murray (2007), found that students' mid-semester perceptions of teaching can have a positive effect on instruction and learning; provide specific areas for improvement; and potentially lead to higher final evaluations. Another is to collect narrative feedback from students several months after the course ends in order to evaluate the medium- or long-term effects of active teaching methods (Svinicki et al., 2016).

Methods

Setting

This study was conducted at a small private international university in China with a joint US partnership. The data for this study was compiled through instruction in a common first year large enrollment recitation course. The enrollment in this course and other break-out sessions was approximately 16 students. The university mission focuses on preparing globally minded citizens. The goal of the first-year common course is designed to expose students to a broad scope of thinkers and practitioners, as well as to the diverse approaches to thinking about and understanding the world. This course is valuable to the humanities student because it exposes them to canonical texts and theories. It is valuable to business students, because it informs their later careers within the contexts of societies, economies, and nations. And it is valuable for science students, because it shines a light on the potential for biases within the scientific fields.

Twice a week during the fall semester, first-year college students attend lectures with themes such as City, State, Media, Capital, Empire, and Environment. Readings from political economists to poets are assigned to complement the lectures. A team of “Fellows”—postdoctoral scholars from a range of specializations in the social sciences and humanities—then lead weekly “recitations” for small groups of students, where they discuss ideas raised in the texts. Occasionally, guest speakers are invited to give short lectures on a specific topic related to their expertise. Fellows also take initiatives to organize short field trips to local museums whose exhibitions are particularly relevant for the course. Overall, the first-year students are exposed to a wide variety of topics, perspectives, and teaching methods based on who their specific instructor is. After an in-depth discussion between two authors of this article, we find such settings are particularly fit for the collection of qualitative rather than quantitative data given its diverse thematics and highly individualized approaches. Our study aims to reveal how reflective metacognition and transformative learning can mutually reinforce each other through a semester-long real-time formative self-assessment.

Data Collection

Data was collected through a real-time note taking method during the fall semester, 2019. Data was gathered through instructor reflections after each class based upon the following prompts and research:

1. In what ways did I engage students this week? Do I think the activities were successful, i.e., did they align with the class outcomes? What type of indirect (perceptions) and/or direct (artifacts, products, media—anything students produced that could be an indicator of performance) measures of evidence did I gather (Schraw & Dennison, 1994)?
2. Did I share a roadmap with students at the beginning of the term? If so/or not, do I continue to share the roadmap, with benchmarks to show where we have been / where we are going? Again, what evidence do you have of effectiveness—student voices, formative assessments, student response systems, etc. (Flavell, 1976)?
3. Were there key ideas or concepts that you shared and you felt students have used to begin making critical connections in the content? Did you capture these moments from students, either with succinct statements or things they produced that align with the concepts (Ottenhoff, 2011)?

After the author discussed with the co-author at the beginning of fall semester about her intention to take notes for teaching purposes, the co-author suggested the three prompts based on research. We created a shared Google Document (GDoc) for sharing data. The basic idea was to answer those prompts after the two recitation sections on each Wednesday and Thursday. The author could flexibly take notes based on her own schedule and re-organize those notes while answering those questions. Throughout the semester, the author usually took notes on Friday or during weekends. But during some busy weeks, she also postponed writing in the shared GDoc. Usually, such a delay would not exceed two weeks.

Data Analysis Procedure

A multi-faceted qualitative analysis was used to produce suggested methodologies for possible integration into first year experience recitations.

1. The written responses to the three prompts were documented weekly in the shared GDoc for final critical analysis. Key teaching methods were identified each week to address a certain teaching goal, with the instructor's formative self-assessment on a regular basis.
2. Case studies of specific scenarios in which students experienced productive discomfort and frustration were carefully documented in the data collection. This case-specific approach can help instructors reconstruct scenarios and processes through which transformative learning takes place.
3. Besides written responses and case study, all collected data—weekly notes, midterm student perception surveys, final student evaluation of teaching (SETs), and the student narrative feedback—was presented as Word Clouds, Tables, and Figures. This text-based qualitative analysis with the aid of quantitative tools helps identify common patterns as well as outliers.

Results

Written Response to Prompts

The following represent the prompts which the instructor used to capture her thoughts during the term. See Appendix B for a sample response from Week 01.

1. In what ways did I engage students this week? Do I think the activities were successful, i.e., did they align with the class outcomes? What type of indirect (perceptions) and/or direct (artifacts, products, media—anything students produced that could be an indicator of performance) measures of evidence did I gather?

Mutual Intro Warm-up: I buy a set of meme-featured poker cards and use it as an aid for introduction. First, students make a blind draw from the pre-selected poker cards. Those who get the same number with different patterns randomly pair up. I ask them to know each other's names, know how to pronounce them, and share one or two things about themselves. Then each pair comes to the center of the room, introducing each other rather than themselves. Given the odd number, I also pair up with one student. We introduce each other as a demo. Students are at first quiet. But they get to know at least one person quickly and become more relaxed at the beginning of the class.

2. Did I share a roadmap with students at the beginning of the term? If so/or not, do I continue to share the roadmap, with benchmarks to show where we have been / where we are going? Again, what evidence do you have of effectiveness—student voices, formative assessments, student response systems, etc.

Besides the general syllabus, each fellow has their own syllabi. So, I develop a separate syllabus, print it out, and distribute it among students in Week 1. Students get an overview of all readings and topics, general objectives, and a basic structure of our recitations. The current link offers an updated version after several rounds of consultations with students in the weeks to follow. The original version was more inflexible and less considerate of what students need. In that sense, I do not include student voices, formative assessments, and student response systems in the syllabus itself. I also do not question what a syllabus really is, what is my relationship to it as an educator, how students can relate to it as an educational tool and guide.

3. Were there key ideas, concepts that you shared and you felt students have begun to make critical connections in the content? Did you capture these moments from students with statements or things they produced that align with the concepts?

I introduce the idea of the “Golden Triangle” as a guiding structure throughout the semester. This could be seen as part of the intellectual roadmap, too, for the entire semester. Basically, “close reading” represents Prof.’s major intervention in all her lectures as a literary/feminist scholar; “philosophical questions” reflects the professor’s approach as a philosopher; “ethnography/ethnographic methods” speaks about my approach in pedagogy and research as an anthropologist. Then, I use this Golden Triangle to show students how our text in Week 1 could be comprehended by integrating these three aspects together. Podcast is one of the examples to show how ethnographic methods work and how students can practice those methods in class to better understand the text and the philosophical questions. Students express confusion when I explain the terms. After we do a close reading of the text and listen to the podcast, some can quickly articulate what they see as methods in both the text and podcast. Some students are still confused and say this is the first time they hear about such methods.

Case Study: Scenario of One Specific Incident

(Partly reconstructed from Week 10 notes, see Appendix B)

Students were uncomfortable on a topic, but the instructor created an open environment, so students approached the instructor, but still they engaged in uncomfortable chats. After time, students integrated the concepts into subsequent papers, assignments, etc. The reader can view the connections of these events when compared to highlighted raw data in the appendix.

One class reading was Appadurai’s “Disjunctures and Differences” on the five cultural scapes and globalization. Meanwhile, students were really interested in the events happening on the university campus in Hong Kong around the time when our classes took place. I noticed that the protests on campus created fractured reactions among students who came from different backgrounds. Rather than ask them to offer their opinions, I used the class activity to let them examine and reflect what shaped their views on certain events in the global era.

Based on the key concepts in the reading, I designed a class activity which I called the “Intentionally Fractured Ideoscape.” I selected four news sources (CNN, BBC, GLOBAL TIMES, SOUTH CHINA MORNING POST) and their respective reports on the Chinese University of Hong Kong (CUHK) campus one day before the class. Students sat in the roundtable form and were each given one piece of news randomly. I gave them a basic sheet of what to look for in a news report and the criteria. They read it in five minutes. I asked them to identify which news source they had. Then, each group presented what they just read and commented on what they learned or not from that specific angle. As one student put it in class:

We are all blinded by our own viewpoints or the sources of news we read. If we don’t share with others, we may continue in our narrow views. But even if we share with each other, we still don’t know for sure what is going on from far away. It is better to understand the complicated situations first than to make a quick judgement.

Yet, this activity also made one student from mainland China very uncomfortable. He stayed after class and approached me to further discuss the issue for more than one hour. Since he was drafting his writing assignment, I asked him to integrate his reflections in the essay. At first, he found it hard and struggled in the second draft. He then visited me during the subsequent office hours to talk about his reflections and struggles in writing. We worked through his specific examples and arguments in relation to the course readings as well as the most updated news in Hong Kong. In the end, he turned in his assignment with a more critical perspective on how the protesters exerted their agency through photography and social media in the age of globalization. After this incident, the same student showed more enthusiasm toward analyzing contemporary events in relation to the course.

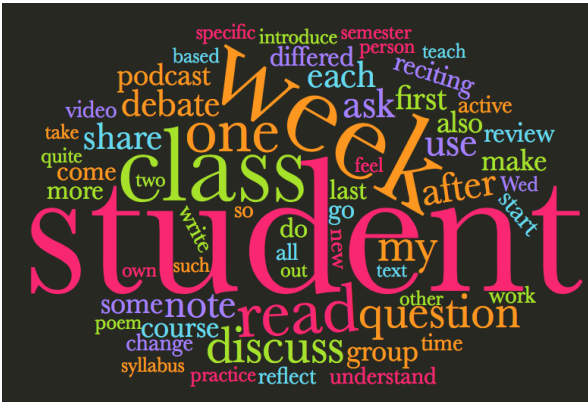

Data Presented as Word Clouds, Tables, and Figures

The data was reviewed to identify common themes, then coded based on the theme. Codes were analyzed quantitatively and for patterns or trends. Outliers are stated. Following the structure of Table 1, these are the common themes for each of the word clouds:

- I. Class design and instructor reflection from the word cloud. Terms included “Discuss” (15), “Read” (20), “Question” (14), “Note” (12), “Debate” (11), “Group” (9), “Podcast” (9), “Video” (7), “Syllabus” (6), “Poem” (6), and “Practice” (6).
- II. Midterm student perception feedback (Appendix C). This included cooperative group activities (3), videos (3), debate (3), concept maps (2), posting on discussion forum (2), class participation/discussion (2), as well as taking polls, physical copies of feedback, creating their own government, enthusiasm of instructor, revising lecture materials, additional resources provided by instructor, office hours and workshop.
- III. Final Student Evaluations of Teaching (SET) included major terms, such as “Help,” “Readings,” “Improve,” “Feedback,” “Writing,” “Encouraging,” “Questions,” “Activities,” “Appreciate,” “Learning,” “Understand,” “Discuss,” and “Academic.”
- IV. Longitudinal Student Perception Data included the retention of key concepts from the course, such as feminism, otherness, gender (in)equality, climate change, cityness, postmodernism, and neoliberalism. The data also shows the retention of active teaching methods such as the use of debate, group activity, video, office hours, art, reading, concept map, and workshop.

Table 1

Word Cloud Summary

I. Instructor Reflection to Four Prompts	II. Student Responses during Midterm
	

Therefore, we believe that the background, setting, and approach supported our initial hypothesis of determining if the documentation, reflective metacognition, and course feedback inform current and subsequent active teaching methods.

Hypothesis 1

In a common first year experience (FYE) large enrollment recitation, a combination of three factors—the instructor documentation, reflective metacognition, and course feedback inform current and subsequent active teaching methods—is effective for improving and evaluating the FYE course.

The research on effective practices of large first year common courses with multiple recitations or break-out sections is rather extensive (Coker, Haskell & Nelson, 2014; Fuller, 2014; Padgett, Keup & Pascarella, 2013; World Economic Forum, 2016). These courses are often the foundational aspect of FYE seminars. The current research on FYE instructor development finds that these courses offer fertile ground for innovative strategies (faculty who participate typically enhance their other courses). Many FYE provide faculty development sessions for the new instructors (Fellows) which might include pertinent sections of a Course Design studio (CDS). Common elements of CDS include learning outcomes, aligned assessment and active teaching methods. Active methods can include experiential learning, collaborative projects, discussions, role play, cooperative learning, oral presentations. Many universities offer FYEs and continue to struggle on an effective structure within a general education program (Thibodeaux, Deutsch, Kitsantas & Winsler, 2017). Traditional institutions frequently use regulatory and financial considerations to drive practices; whereas progressive universities are exploring programs aligned with desired outcomes of graduates. Historically, these outcomes included communication and study skills; time and financial management, etc. Recently, some institutions have explored skills identified through employers anticipating the future needs of society (Singer-Freeman & Bastone, 2016). These skills include social emotional competence, active listening, and learning to learn (self-regulated learning) (World Economic Forum, 2016).

With reference to teaching large classes, Nilson (2010) reinforces the research on effective teaching, which include writing specific and measurable outcomes using Bloom’s Taxonomy, basing your active learning strategies on those outcomes, spending time designing activities related to essential concepts (“less is more”), making the material relatable, using a variety of active teaching techniques, being clear in your inclusive syllabus, and offering transparent pedagogy.

To support our findings, we summarized the qualitative data in Table 1, Word Cloud Summary in the Results section by creating word clouds to compare them with three sets of data: instructor reflection, mid-term small group student perception survey and final student evaluation of teaching (SET). The data for each of these instruments afforded different, but similar prompts. The following summarizes the prompts for comparison:

Instructor Reflection

1. In what ways did I engage students this week? Do I think the activities were successful, i.e., did they align with the class outcomes? What type of indirect (perceptions) and/or direct (artifacts, products, media—anything students produced that could be an indicator of performance) measures of evidence did I gather?
2. Did I share a roadmap with students at the beginning of the term? If so/or not, do I continue to share the roadmap, with benchmarks to show where we have been / where we are going? Again, what evidence do you have of effectiveness—student voices, formative assessments, student response systems, etc.
3. Were there key ideas, concepts that you shared and you felt students have begun to make critical connections in the content? Did you capture these moments from students with statements or things they produced that align with the concepts?

Midterm Small Group Student Perception Survey

1. What is contributing to student learning in this class (what is going well)?
2. What might need improvement to enhance learning?
3. What is one concrete action which the instructor can do now to improve learning?
4. What is one word that describes how you feel about this course now?

Final Student Evaluation of Teaching (SET)

1. Overall evaluation of the instructor.
2. Overall evaluation of the course.
3. Provided an environment that was conducive to learning.
4. Provided helpful feedback on assessed class components.
5. Course objectives were clearly stated.
6. Course was well organized.
7. Course was intellectually stimulating.

Course Questions

1. My primary reason for taking this course:
2. How many hours a week did you work on this course?
3. What grade do you expect to earn in this course?

Instructor Questions

1. What was effective in helping you learn?
2. What would you suggest to improve the course?
3. If multiple instructors, would you like to evaluate another?

Our goal was not to norm these prompts, but more to triangulate the data, i.e., creating some commonalities, but also offering a place where we might be able to gain data that could fill potential gaps, which we could analyze for trends or patterns that might be noteworthy.

To specifically address our research question, we have seen that through instructor documentation, metacognitive reflection, and feedback does inform current and subsequent active teaching methods. Trends that were common through data sets included:

Table 2

Frequency of Word Usage, Part 1

Instructor Reflection	Midterm Small Group Perceptions	Final SETs
(56) student	(3 for each of the following): coop	(9) help
(37) week	group activities, videos, debate	(7) very
(31) class		(6) class, my
(20) read	(2 for each of the following):	(5) improve, readings, writing
(19) one	enthusiasm, we love her, concept	(4) also, always, recitation
(15) discuss	maps, posting on discussion,	(3) course, during, essay,
(14) my, question	participation, discussion, taking	feedback, fun, hour, lot, made,
(12) after, ask, note, use	polls, relaxed, happy	me, more, office, really, than,
(11) debate, each, share		way
(10) first	(1 for each of the following):	(2) discuss, give, ****,
(9) also, course, group, make,	physical feedback copies, creating	optional, professor, academic,
podcast, some,	own government, revising lecture,	activities, advisors, appreciate,
		assignment,

Table 2 Continued

Frequency of Word Usage, Part 1

Instructor Reflection	Midterm Small Group Perceptions	Final SETs
(8) come, differed, do, go, last, more, reciting, review, start (7) active, all, change, new, reflect, so, time, understand, video, work, write (6) Wed, based, feel, two, introduce, other, out, own, person, poem, practice, quite, semester, specific, such, syllabus, take, teach, text	(1 for each of the following): materials, additional resources, office hour, workshop, play music, active, inspiring, interested, welcomed, sleepy, stressful, curious, engaged, normal, bored, foolish, feel like home, keep doing what she's doing	(2) context, encouraging, feel, future, interesting, learning, lectures, much, open, put, questions, so, student, understand, were

Table 3

Frequency of Word Usage, Part 2

Instructor Reflection	Midterm Small Group Perceptions
(56) student (37) week (31) class (20) read (19) one (15) discuss (14) my, question (12) after, ask, note, use (11) debate, each, share (10) first (9) also, course, group, make, podcast, some (8) come, differed, do, go, last, more, reciting, review, start (7) active, all, change, new, reflect, so, time, understand, video, work, write (6) Wed, based, feel, two, introduce, other, out, own, person, poem, practice, quite, semester, specific, such, syllabus, take, teach, text	(3 for each of the following): coop group activities, videos, debate (2 for each of the following): enthusiasm, we love her, concept maps, posting on discussion, participation, discussion, taking polls, relaxed, happy (1 for each of the following): physical feedback copies, creating own government, revising lecture, materials, additional resources, office hour, workshop, play music, active, inspiring, interested, welcomed, sleepy, stressful, curious, engaged, normal, bored, foolish, feel like home, keep doing what she's doing

Table 4

Frequency of Word Usage, Part 3

Midterm Small Group Perceptions	Final SETs
(3 for each of the following): coop group activities, videos, debate	(9) help (7) very (6) class, my
(2 for each of the following): enthusiasm, we love her, concept maps, posting on discussion, participation, discussion, taking polls, relaxed, happy	(5) improve, readings, writing (4) also, always, recitation (3) course, during, essay, feedback, fun, hour, lot, made, me, more, office, really, than, way
(1 for each of the following): physical feedback copies, creating own government, revising lecture, materials, additional resources, office hour, workshop, play music, active, inspiring, interested, welcomed, sleepy, stressful, curious, engaged, normal, bored, foolish, feel like home, keep doing what she's doing	(2) Discuss, Give, ****, Optional, Professor, academic, activities, advisors, appreciate, assignment, context, encouraging, feel, future, interesting, learning, lectures, much, open, put, questions, so, student, understand, were

Table 5

Frequency of Word Usage, Part 4

Instructor Reflection	Final SETs
(56) student	(9) help
(37) week	(7) very
(31) class	(6) class, my
(20) read	(5) improve, readings, writing
(19) one	(4) also, always, recitation
(15) discuss	(3) course, during, essay, feedback, fun, hour, lot, made, me, more, office, really, than, way
(14) my, question	(2) discuss, give, ****, optional, professor, academic, activities, advisors, appreciate, assignment, context, encouraging, feel, future, interesting, learning, lectures, much, open, put, questions, so, student, understand, were
(12) after, ask, note, use	
(11) debate, each, share	
(10) first	
(9) also, course, group, make, podcast, some	
(8) come, differed, do, go, last, more, reciting, review	
(7) active, all, change, new, reflect, so, time, understand, video, work, write	
(6) Wed, based, feel, two, introduce, other, out, own, person, poem, practice, quite, semester, specific, such, syllabus, take, teach, text	

Note: "****" replaces the instructor's name.

A student comment that supports the hypothesis and the data collection well is, "*You challenged my thinking through the scope of different styles of writing. You also challenged my creativity.*"

Hypothesis 2

Early career faculty, especially someone with limited teaching experience, can apply this reflective method to improve their teaching methods. Although this reflective method seems to be time-consuming at the first sight, it turns out to well complement the existing teaching programs in the university where the data was collected.

First, we find this method does not require much pre-training while yielding a consistent, semester-long result ready for further analysis and improvement. Higher education institutions, including the university where both authors are working, often offer faculty development programs for its faculty through the Center of Teaching and Learning (CTL). For new and/or early career faculty, the CTL in our university includes programs such Pedagogy Workshops, Course Design Studio, Consultations, Classroom Observations, Graduate Seminars, etc. While such programs are carefully designed to meet faculty's needs, individual faculty members always have their own specific questions. We also notice the common trend of attendance reduction in the CTL programs as the semester progresses. Taking these into consideration, the self-motivated reflective metacognition based on notetaking can be offered during a 45-minute or one-hour training session at the beginning of a semester when the attendance rate for the CTL program is still high.

Second, the metacognitive reflection method helps early career faculty focus on the continuous progress of their teaching rather than sporadic or once-/twice-in-a-semester evaluation. Compared to more experienced faculty, early career faculty often struggle to gain more feedback to improve their teaching. Yet, the current student-evaluation-based model only offers anonymous feedback once or twice in a semester. Such evaluations often come too late for faculty to incorporate into their active teaching methods. Besides, the lack of context-based observation and follow-up mechanism tend to obscure the meanings of students' feedback, thus making the early career faculty feel even more uncertain or insecure about how to interpret those evaluations. Our method offers a real-time dataset to compare, cross-check, and balance with the current student-evaluation-based model. Reflective mode can help relatively inexperienced faculty focus on their longitudinal progress without losing sight of students' reactions. The data we collected (see the word cloud Table 1 and the data analysis in Hypothesis 1 show 1) "students" (56 times) remains the center of faculty's attention; 2) the instructor could return to her notes and check the self-recorded observation of students' receptivity to the methods and contents she used in class; 3) the notes remain helpful for reflection when comparing with students' feedback from a longitudinal perspective (Appendix E).

Since this method requires weekly notetaking, one effective way to prevent procrastination is to use the shared GDoc with another colleague (such as one of the co-authors in this study) and to check in from time to time. One method is to put aside 15 to 30 minutes every week and set it up in your calendar with automatic, repeating reminders throughout the whole semester. Another tip is to take quick notes during or right after every class to record key things you notice. The cues accumulated from those quick notes can become very useful when reconstructing the memory of the class.

Third, this method gives much flexibility to early career educators who embrace necessary modification in their teaching without feeling stressed toward the third-party evaluation. Early career faculty often face pressures from multiple sources, which affect their teaching quality and personal wellbeing (Hollywood, McCarthy & Winstone, 2019). Rather than mechanically filling out an evaluation form or following a quantitative procedure, early career faculty are encouraged to add modification based on their own schedule and subsequent reflections.

In the first week, the instructor strictly followed the three prompts and answered in meticulous details, adding her notes after answering three questions (e.g. W01, Appendix B). However, as the workload quickly became heavier, the author organically deviated from the original Q&A structure. From Week 02 to Week 14, she did not answer each prompt individually but developed a hybrid approach. Each week, she used quick notes from class to record major class activities. While the two sections on Wednesday and Thursday were repetitive in methods and contents, she took notes of adjustments or

differences (e.g. W07, Appendix B). She sometimes added a section of “personal reflections” to specifically record her own emotional stress or uncertainty regarding the effectiveness of her teaching (e.g. W04 & 08, Appendix B). Such reflections, though, were not all recorded under a specific section since the instructor would highlight some specific changes in the teaching methods and learning responses based on the previous weeks’ observation (e.g. W05, 09 & 10, Appendix B). The instructor also developed a narrative approach in some weeks to remap the class plan (e.g. W01, 11, 13 & 14, Appendix B) or to reconstruct some specific scenarios during which a method, text, students’ reactions, and her own reflections were combined (e.g. W10, Appendix B). The last point—the narrative approach—is particularly useful for tracing students’ frustration and confusion as well as for reflecting upon how the instructor could (or not) effectively work with students to enhance their learning afterwards.

Limitations

Several limitations were identified for this study. The following variables were identified:

1. The data is only collected within one semester in one university. Its replicability and applicability need to be tested by additional early career faculty who are interested and willing to try out this method.
2. The method depends on a highly intrinsically motivated faculty member.
3. Having a CTL, a colleague, or some entity that a faculty can consult, discuss and at least get started is a key factor for success.

Future Work

The first author plans to collect additional data during the next time this course is taught, fall 2020. The overarching course will be undergoing major revisions, which include:

1. The course syllabus may be modified, as the material could potential be updated that one third will be changed for the fall 2020 course;
2. The Fellows will lose and gain new members, thus adding new dynamics to the collective teaching experiences;
3. Student recruitment and composition are uncertain given the COVID-19 situation; and
4. Teaching methods might include blended and/or online teaching methods given the COVID-19 situation.

The primary author plans to use the data and findings of this research to update the assessment and teaching methods for the next time this course is taught.

Conclusion

Overall, our study shows that reflective metacognition is conducive to creating an inclusive environment in which a certain amount of productive discomfort in class can improve students’ learning experience. We also find that formative self-assessment allows the instructor to employ a diverse range of active teaching methods while aligning well with the pedagogical outcomes through constant modification and reflection. Our data further suggests that a real-time formative assessment development could be well integrated into the existing CTL resources and student evaluation system in a university.

We also believe that the act of reflective metacognition holds important implications for instructors (both early career and more experienced) and their students. We approach this study as one accessible to all instructors, which could benefit their teaching and student learning. Emphasizing the implications for an on-going practice, and the ways in which reflective metacognition can transform

teaching and learning, would strengthen individual teaching methods, provide institutional resources for colleagues, add an important dimension to assessment accreditation, and overall provide important additions to the literature.

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Appendix A

Teaching Materials (Course Syllabus with Learning Outcomes, Assessments and Teaching Methods)

Appendix B

Raw Data Gathered Through Reflections After Each Class based upon the following prompts:

1. **In what ways did I engage students this week? Do I think the activities were successful, i.e., did they align with the class outcomes? What type of indirect (perceptions) and/or direct (artifacts, products, media – anything students produced that could be an indicator of performance) measures of evidence did I gather?**
2. **Did I share a roadmap** with students at the beginning of the term – if so/or not, do I continue to share the roadmap, with benchmarks to show where we have been; where we are going? Again, what evidence do you have of effectiveness – student voices; formative assessments, student response systems, etc.
3. **Were there key ideas or concepts that you shared and did you feel students were beginning to make critical connections in the content?** Did you to capture these moments from students, either with succinct statements or things they produced that align with the concepts?

Week 1, Sept 2-6, 2019

1. **In what ways did I engage students this week? Do I think the activities were successful, i.e., did they align with the class outcomes? What type of indirect (perceptions) and/or direct (artifacts, products, media - anything students produced that could be an indicator of performance) measures of evidence did I gather?**

Mutual Intro Warm-up: I buy a set of meme-featured poker cards and use it as an aid for introduction. First, students make a blind draw from the pre-selected poker cards. Those who get the same number with different patterns randomly pair up. I ask them to know each others' names, know how to pronounce them, and share one or two things about themselves. Then each pair comes to the center of the room, introducing each other rather than themselves. Given the odd number, I also pair up with one student. We introduce each other as a demo. [Students are at first quiet. But they get to know at least one person quickly and become more relaxed at the beginning of the class.]

Podcast: I produce a special podcast for the first class on cities and cityness. During the pedagogy meeting, one GPS fellow [Pippa Morgan] indicates she used to live in the neighborhood in the same area in which one of our texts focuses on. I interviewed her during the weekend before Week 1. Then I make the content into a podcast for students to hear about her experiences as a former resident. To accompany the podcast, I provide a sheet with five note-taking prompts. Students fill out the sheet while listening to the podcast and share their thoughts in relation to the reading after listening to the podcast in class. [More than one student note that the sound effect is helpful for them to understand the content. Some also note that the complicated feelings the interviewee has toward the neighborhood reflects their own mixed feelings toward the development in a cosmopolitan city like Shanghai.]

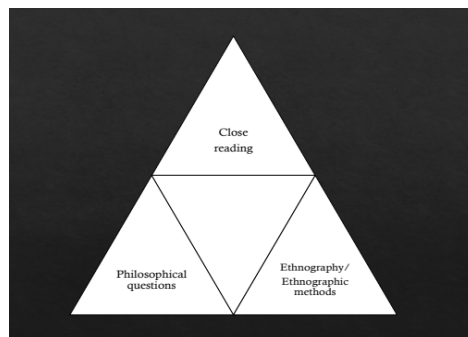
Students take a survey in the last ten minutes of the class. This is something I learned from my former colleague [Svetlana Borodina]. She gives students surveys at the beginning of her course and does another one at the end of the semester. She says it helps her understand students' motivation in taking her class, their needs, expectations, and questions from the beginning. I find the idea quite compelling. So I email her to get her questions and adapt it to my recitations. [I collect all surveys, read through them after class, and make a few notes. Also, I produce a WordCloud image of all cities that students come from and/or interested based on their survey answers. I share this image with all of them as part of the warm-up for Week 2. I also ask some of them to explain to me some cities in the image to the rest of the class. Another thing I do with the survey is to encourage them to come to my office hours. Some students are clearly very confused and feel disoriented, as they write in their response. So I reach out to them to invite them to come to my office hours and have a chat to further see what their specific questions are and how we can work together in the rest of the semester.]

2. Did I share a roadmap with students at the beginning of the term? If so/or not, do I continue to share the roadmap, with benchmarks to show where we have been; where we are going? Again, what evidence do you have of effectiveness—student voices; formative assessments, student response systems, etc.

Besides the GPS general syllabus, each fellow has their own syllabi. So I develop a separate syllabus, print it out, and distribute it among students in Week 1. Students get an overview of all readings and topics, general objectives, and a basic structure of our recitations. [The current link offers an updated version after several rounds of consultations with students in the weeks to follow. The original version was more inflexible and less considerate of what students need. In that sense, I do not include student voices, formative assessments, and student response systems in the syllabus itself. I also do not question what a syllabus really is, what is my relationship to it as an educator, how students can/should/might relate to it as an educational tool and guide.]

3. Were there key ideas, concepts that you shared and you felt students have begun to make critical connections in the content? Were you to capture these moments from students, either with succinct statements, and/or things they produced that align with the concepts.

I introduce the idea of “Golden Triangle” as a guiding structure throughout the semester (see below and PPT for Week1). This could be seen as part of the intellectual roadmap, too, for the entire semester. Basically, “close reading” represents Prof. Edwin’s major intervention in all her lectures as a literary/feminist scholar; “philosophical questions” reflects Prof. Weslake’s approach as a philosopher; “ethnography/ethnographic methods” speaks about my approach in pedagogy and research as an anthropologist. Then, I use this Golden Triangle to show students how our text in Week 1 could be comprehended by integrating these three aspects together. Podcast is one of the examples to show how ethnographic methods work and how students can practice those methods in class to better understand the text and the philosophical questions. [Students express confusion when I explain the terms. After we do a close reading of the text and listen to the podcast, some can quickly articulate what they see as methods in both the text and podcast. But some students are still very confused and say this is the first time they hear about such methods. Since Week 2 material is connected to ethnography, I take students’ questions and use them to prepare for the recitation sections.] to be elaborated in Week 2 with a quiz, discussion.



4. Notes: This is the first time I lead semi-independent classes after graduation. During my graduate study period, I was the head TA of an Introduction to Anthropology course for one semester. However, that course did not ask us to lead independent recitation sections after the big lectures. I did some community-based teaching during the fieldwork period. However, after my fieldwork, I spent most of my time away from my home department. As an F-1 student, I could not legally work off campus. Therefore, in the past two years, I mainly worked on my own research and dissertation in another city—no teaching at all. Even when I was applying for the GPS position and eventually got the position, I was very worried that the time gap between the last time I

taught on campus and this time I'll teach in Shanghai might have a huge impact on my ability to teach. Lack of experience and lack of access to teaching resources were two of my biggest fears when I started this semester.

Week 2, Sept 9-13

1. Quiz. Use a comparative case for understanding the story of Sundiata: Epic of King Gesar, the longest epic in the world but very little known among majority of students (I have two Mongolian students in Thursday class so I expected them to know a little bit of the story by including the Mongolian text. It turned out that one Mongolian student is a practicing Buddhist and was reciting the story of King Gesar for the transition from summer to fall that week.)
2. Use of video clips.
3. Group discussions: 3 groups, starting to practice how to use evidence/examples to back up their claims. Review of discussion questions. ARC fellow visit.

Week 3, Sept 16-20

1. PollEverywhere: (1) change syllabus, (2) key elements that make an ideal society, (3) what to change
2. Two students on Wed want to present something on the caste system in India
3. Intro the debating activity through reading: How to argue like Dr. Ambedkar → pair debate
4. Review of discussion questions
5. Explain the grading rubric before the first assignment

Week 4, Sept 23-27

1. Pair debate: debating sheet, based on class materials (Descartes vs Vasubandhu), introducing a new element (artificial intelligence—video clip)
2. Design studio: Impossible Ideal Society Association commission

Week 5, Oct 30-Nov 4

1. Quick notes: Make changes in the syllabus and signing up for museum visit in PollEverywhere
2. Video: Simone de Beauvoir, #MeToo
3. Concept mapping: prompts (thanks to Roslynn) → similar to pub crawling
4. Review first assignment
5. Writing workshops: Friday (sentence, grammar, etc.), Monday (outlining), Tuesday (outlining)

Personal reflections: Outstretching myself a bit: workshops are fun but also exhausting. Other people usually advise students to use ARC resources. Am I doing too much? But again, the response from the students who attended was quite positive. And I can tell from their second assignments that they did learn a lot from those workshops (for those who attended).

Week 6, Oct 7-11

1. Notes: Reading on language, mestiza, feminism, intersectionality
2. Video clips: Coco (film), Alexandria Ocasio-Cortez, Jakelin Caal
3. Prep for debating practice on Language policies in NYU Shanghai (specific prompts in a single shared google doc so that everyone can see each other's work).

Week 7, Oct 14-18

1. Notes: Guest speaker (Brett): Stolen Generation in Australia, Wed
2. Xinjiang video: Wed, Thur
3. Feminist video (Yuan shared): Thursday

Wed: debating practice (specific guidelines in google docs only within the same group)

Thur: cancel the debating activity at the last minute because of a student's email and organized roundtable group discussion

Personal reflection: How to develop a preventative/responsive mechanism to deal with more personal issues, such as sexual harassment and domestic violence---how to develop professional language, attitudes, and appropriate means to communicate with students.

Week 8, Oct 21-25

Quick notes for writing: Debating activity → graded (specific prompts and guidelines in google docs only within the same group, design rubric, students vote for best debaters of the day)

Personal reflection: Teaching is really an unpredictable adventure. Last week I feel the Thur class went much better while the Wed class somehow got stuck. And I expected students to perform better in Thur this week. Then it turns out that the Wed class students got a better sense of the debating activity and enjoyed it more while the Thur class was more tense and stressed.

How to develop a preventative/responsive mechanism to deal with students' personal issues, such as mental stress.

Week 9 Nov 4-7

1. Notes: Use of discussion forums more productively

I ask students to post images, analyze the photographic techniques, and comment on the effects of photography. The practice is intended to help students understand the readings from Week 8 after the lectures and recitations. The warm-up in Week 9 starts with students' sharing some of the images they posted, why, etc. I provide both contextual information and visual commentaries after their discussions.

I integrate the Assignment requirements and this week's readings together. The focus is to show them how the claim and counter-argument (in Assignment) work through a re-reading of the lecture contents.

Week 10 Nov 11-14

1. Notes: This week's reading is about the division of labour and political economy (Adam Smith and Karl Marx). So I start the recitation session by asking them to write down their dream jobs (at the end of the class, we will go back to the jobs and challenges).

I have a mini writing workshop on how to revise thesis statements (4 tips and 4 exercises) for their final essay. Students were quite engaged and told me in the office hour that they found such mini-sessions quite useful.

After reviewing the course content, I design a class activity which might be called **“intentionally fractured ideoscape.”**

Context: One class reading is Appadurai's “Disjunctures and Differences” on five -scapes and globalization. Students are really interested in the events happening on the university campus in Hong Kong around the time when our classes take place. Rather than ask them to offer their opinions, I use the class activity to let them examine and reflect what shape their views on certain events in the global era.

Design: I select four news sources (CNN, BBC, GLOBAL TIMES, SOUTH CHINA MORNING POST) and their respective reports on the CUHK campus one day before the class. Students sit in the roundtable form and are each given one piece of news randomly. I give them a basic sheet of what to look for in a news report and the criteria. They read it in 5 minutes. I ask them to self identify which news source they have and have the group present what they just read. We go over four groups one by one. Students realize in the end how each news source has a different focus and highlight different aspects of the events. But they also realize, as one student puts it in class, “we are all blinded by our own viewpoints or the sources of news we read. If we don't share with others, we may continue in our narrow views. But

even if we share with each other, we still don't know for sure what is going on from far away. It is better to understand the complicated situations first than to make a quick judgement."

Week 11 18-20

1. Notes: The class structure is different this week--two recitation section students come together. I need to go to a conference in Vancouver. Students agree to merge two sections. So, 29 students in total (2 absent).

The theme for this week is climate change.

In the first half, I open the class by "**A Letter to Future.**" I give each student an envelope and an A4 paper with a written opening. The letter is addressed to the future generation in 2100. I ask them to keep thinking about the letter and leave the last five to ten minutes for them to write the letter as part of class participation. Then, I quickly review the question of climate change and ask them briefly to discuss the phenomenon of young climate activists such as Greta Thunberg.

In the second half, students use **active learning tech (Padlet) and visit an art exhibition.**

NYU Shanghai Art Institute has an ongoing exhibition on the first floor. It features three sections: eco-socialist gardens, pteridophilia, and goldenrod. Since the feature fits well with our theme, I talk to the curator Michelle together with Chenshu about taking our students there.

My plan is (1) to ask students to visit the exhibition by themselves and submit a comment in the discussion forum as their weekly assignment; (2) to update students with their comments before going to the exhibition and encouraged to look more closely after listening to the curator's introduction and contextualization; (3) to require students upload their photos and comments in Padlet while exploring the gallery; (4) to come back to the classroom, have a discussion and let students share their views on art and Anthropocene based on what they share in Padlet.

The last task is to finish writing a letter to the future.

Week 12 Nov 25-28:

No class this week. I asked students to submit questions in the discussion forum. A specific requirement is to submit an audio file of themselves reading one of the poems from that week's reading. In the following week, I will make a sound collage based on their audio files.

Week 13 Dec 2-5

1. Notes: This week, I use Kahoot.it as warm up. The content is about David Harvey's article on neoliberalism. Students seem quite excited to play the game. Their attention level becomes quite high when it comes to winning the game.

Then, we review Xu Lizhi's poems by listening to the audio collage I make based on students' own recordings. They choose one poem to read, record, and upload to the NYU Classes discussion forum as part of the weekly assignment. After letting them hear their own voices, I invite them to speak about their feelings, understandings, and reflections of the poems based on the course materials.

Then, we watched a video of black lung in China. It is about 10 minutes long, telling a story of a family destroyed by the black lung and coal industry. Again, students are invited to compare the poems and video in relation to the class readings. I ask them to discuss in small groups "What would you do, if you were a policymaker/journalist/activist/entrepreneur, to change or ameliorate the situations of the workers like Xu Lizhi or coal miners?" They come up with different answers but also initiate debate on whether their proposals could ever be realized in the Chinese context.

Since it is the last but the second week, I start to review the themes of the whole GPS course before directly going into this week's specific topic on post-isms. I start reviewing the course by giving

them the framework of modernity and how our perspectives on the world have differed and changed around the world. I share with them how we typically view the triad of pre-modern--modern--post-modern. Then, I introduced the historical contexts of the emergence of the postmodern by using course readings from different weeks. The class ends with three questions on post-isms that students raised in their discussion forum.

Week 14 Dec 9-12

This is the final class. It starts with the prep for final exam. We go over the basic requirements and question types. I remind them what to prepare on the day of the exam and offer accommodation contact. Memes such as “KEEP CALM AND DESTROY FINAL EXAM” are used to make them feel relaxed.

The lecture starts with the three questions we leave last week. We go through three sessions one by one, each followed by a small discussion.

At the beginning of the second session, I also designed a game in Kahoot. Students choose to decide which art works are modernist or postmodernist.

Then we wrap up the class by:

1. Fill out the student evaluation
2. Introduce some summer courses they might be interested
3. Read a short poem by Xu Lizhi
4. Take group photos

Appendix C.

Midterm Small Group Student Perception Summary.

A midterm Small Group Student Perception data collection was requested for classes that met on October 10, 2019 on the NYU Shanghai campus. For this service, the Center for Teaching & Learning (CTL) visits the instructor's class during the final ten minutes of a class session. After the instructor departs, the CTL divides students into small groups and facilitates a discussion asking students to record their thoughts on the following four prompts.

- 1. What is contributing to student learning in this class?**
- 2. What might need improvement to enhance learning?**
- 3. What is one concrete action that the instructor can do now to improve learning?**
- 4. What is one word that describes how you feel about this class now?**

The data was gathered, analyzed and summarized by the CTL and presented below as an anonymous aggregate for the instructors consideration. The () at the end of the comment is the number of times this comment was provided by students.

1. What is contributing to student learning in this class, i.e, what is going well?

- Cooperative group activities (3)
- Videos (3)
- Debate (3)
- Concept maps (2)
- Posting on discussion forum (2)
- Class participation/Discussion (2)
- Taking polls
- Physical copies of feedback
- Creating own government
- Enthusiasm of instructor!
- Revising lecture and materials
- Additional resources provided by instructor
- Office hour
- Workshop

2. What might need improvement to enhance learning?

- Beanbag chairs and ice cream/candy (3)
- Comb through ideas in articles
- More discussions
- More electronic devices

3. What is one concrete action which the instructor can do now to improve learning?

- We love her (2)
- Keep doing what she's doing
- Play music
- Higher grade

4. What is one word that describes how you feel about this course now?

Relaxed (2), Happy (2), Active, Inspiring, Interested, Welcomed, Sleepy, Stressful, Curious, Enthusiastic, Engaged, Normal, Bored, Foolish, Feel like home

Appendix D. Final Student Evaluation of Teaching (SET)

Recitation Instructor Questions

Score range is 1 - 5

Question	Average	# of Students Who Answered the Question	# of Responses to the Answer		
			Answer	Answer	Answer %
Overall evaluation of the recitation instructor.	4.8	17	5 - Excellent	14	82.4%
			4 - Good	3	17.6%
			3 - Adequate	0	0.0%
			2 - Poor	0	0.0%
			1 - Very Poor	0	0.0%
The recitation instructor provided an environment that was conducive to learning.	4.6	17	5 - Strongly Agree	11	64.7%
			4 - Agree	6	35.3%
			3 - Neutral	0	0.0%
			2 - Disagree	0	0.0%
			1 - Strongly Disagree	0	0.0%
The recitation instructor provided helpful feedback on assessed class components (e. g., exams, papers).	4.8	17	5 - Strongly Agree	14	82.4%
			4 - Agree	3	17.6%
			3 - Neutral	0	0.0%
			2 - Disagree	0	0.0%
			1 - Strongly Disagree	0	0.0%

What about the course or the instructor was effective in helping you learn? (Optional)

Professor Wang is easily my favorite member of the NYU faculty. She was easy to understand and an amazing person in general. She kept the class interesting and had a much more clear and diverse way of analyzing the readings than the lecturers. I was so surprised at how much I enjoyed this class.

The recitation advisors were one of the most helpful advisors I have met at NYU Shanghai. She organized the recitations in a very fun way which gave a lot of room for learning. She constantly included the student's opinion and was open to different responses to the readings. She made the class extremely fun through various activities like debates, writing a letter to the future which made us put the readings in the contemporary context.

- very organized classes, helpful feedback on my writing
- explaining readings, getting help in academic writings

She always tried to make the course readings fun and effective, even if it was boring. I really appreciate her and I love the recitation classes.

Excellent instructor! very helpful in understanding the context and writing essays.

Professor Jing is very kind and helpful. She voluntarily opened workshops for us and prepared snacks for every class.

Her class was warm and thought-provoking. She made us feel at home. She arranged many interesting after-class activities (e.g. Museum & Exhibition visiting)

During office hours, she not only answered my questions, but also offer ideas and advice that could help me improve my writing as well as course learning. She also corrected my mistakes in an encouraging way. It's a pleasure to talk with her during her office hour.

She replied to the email very quickly.

Her comments on essays were very helpful and encouraging.

From Jing, I learnt more than academic skills and knowledge, but also a positive attitude towards life and work.

She is always willing to help us during office hours time. Give a lot of useful feedback on each assignment. Discuss with me about how to construct my final essay.

She is always so friendly and cares a lot about us student's feelings, I really appreciate this. Also, she always gives us very detailed feedback on our assignments, which really helped me to realize what I have improved and what can still be improved in the future.

Slides; relative videos; concept map

What would you suggest to improve the course? (Optional)

- Ideally, put more emphasis on the recitation portion than the large lectures.
- Optional discussion questions.
- Too good to improve

Appendix E.

Letter to Students Sent February 29, 2020 to gather longitudinal data.

Dear all,

I hope that you are all safe and sound during the coronavirus outbreak. I'm writing to ask if you would like to help me reflect on our learning experience by sharing your thoughts on three questions (listed below) to improve the GPS class for the next semester. Your input will be really appreciated as I will be incorporating your feedback into my future classes.

1. Over the past several months, did you have conversations with your family or friends in relation to what we learned in the GPS class in 2019? If so, what are the things that you talked about and what responses did you get?
2. Which active teaching methods that I offered were the most effective for you in terms of learning? Please describe how such methods helped you learn.
3. Hypothetically, if you were going to be my teaching assistant in this course, what would you include in terms of teaching methods, tools, topics, assignments, etc.? Why would you want to include these approaches?

If you have any questions, please do not hesitate to let me know. Thanks a lot!

Response 01

February 29, 2020

1. Regarding the 2019 GPS, I thought I had introduced the idea of feminism to my family and friends. We spent lots of time discussing this topic and I construct essays on this topic, so it's impressive to me. That is the reason why I introduced it to people surrounds me.

All of my friends and family agree that female should gain more rights on society, especially China. I am not surprised that they all support feminism, since this idea has been on trend for many years.

2. I love the background you provide.

My only suggestion is to provide the background or related information before I start reading the articles, i.e. a week before?, so that I can understand these weird and ancient articles better and save my time.

3. I would like to... read your students' drafts...

Since every instructor has his/her standard, sometimes ARC cannot give us the best and most effective response. Hence, I would like to help you read the drafts.

Response 02

February 29, 2020

1. Yes! I've talked about climate change and my education in GPS course on this topic with my friends in high school as well as my parents during winter break. I had gathered more perspectives on this issue.

One response left me with a deep impression: Greta and those who are against her have very different logics and angles of thinking about this problem. Greta, as well as those calling for immediate actions in climate change mitigation, has the logic of saving more and consuming less, with resources' utilization remaining the same. Those against it has the logic of consuming more but utilizing better, with optimization of the economic system and technology. Two different

thinking modes provide two kinds of solutions. And there's not a better-or-worse between them since both solutions are unrealistic when it comes to operation... But from these discussions I feel that there's limitation in GPS course materials. Since our lectures and textbooks all have a pre-existing value that those who are against climate change mitigation are morally corrupted. Voices from these people are absent.

I had a very thorough discussion with my new classmates in WAI in the forum. This discussion is about Vice Chancellor Lehman's testimony in the congressional hearing on whether the academic freedom is harmed by Chinese government interference. I attached the course materials and my detailed replies below.

2. I think one of the most effective teaching methods you offered was the office hour. It offered us a chance to ask personal questions and solve personal problems, which may be impossible during limited lecture time. I really gained a lot from in-depth discussion with you about the class materials as well as my essays.

The other one is concept maps. We were divided into groups and asked to draw connections between different concepts after a few sections were taught. Through this method, we became active thinkers and were incentivized to understand these concepts more deeply. It was a very effective way to review what we've learnt. At the same time, cooperation with classmates and you also brought in new perspectives. I remembered after your drawing the mindmaps on the topic Capitalism, some very complex concepts became clearer.

I also appreciate your efforts to sacrifice your leisure time and organize Q&A workshops. They helped me a lot on how to write essays, how to read effectively and how to understand a specific topic.

3. I think we can include more discussion on the forum. Although we had assignments post questions in the forum, we didn't need to reply to other students' postings or replies. Therefore, we weren't motivated to absorb perspectives from our fellow students. Since this course is about "Global Perspectives", perspectives from students are also valuable. Also, active interactions on forum can prompt us to think deeper and more carefully. It has a similar effect with a debate but we have more time to respond and understand the arguments of others as well as to organize our thoughts.

Response 03

February 29, 2020

1. I did have some conversations with my family and peers, especially about feminism and otherness. GPS really helps us to notice some voiceless people or minorities that we might don't notice before. I was amazed by the big difference existing especially when talking to my family as they might hold a relatively traditional opinion on those things. I also found a difference when I met my high school friends. They hold the opinion as I did, and most of them don't care about the minorities as they are not included in that group. I found even though I didn't read too much on GPS, but the environment and atmosphere that the GPS courses and our peers provided to me pretty much influenced me.

2. I still remember the Week 13 recitation on post-modernism and Neo-liberalism. I mean, that was the class I found myself most dedicated to. I believe the reason why is I can find something that connects to my experience or observation, whether in real life or on TV. Compare to Descartes and Vasubandhu's life story or history that cannot hook my interest, I prefer a thorough understanding of their theory and important notion with our real-life example.

3. If I am a teaching assistant, I think I would like to include an academic-oriented assignment that requires one group of students to finish every week. The assignment is to find and explain some of the critical notion and sentence that appears in that week's GPS reading. Therefore, the students won't need to spend too much time on their exam preparation. And I believe they will be excited to see how much they have done after the teamwork throughout the semester. Another thing I want to mention is to connect the topic with some of the incidents that we might experienced or experiencing. Especially the things happened after 2008, I think for most of the student, they might remember more clearly for the thing happened after that year, whether international or Chinese students. The last thing I would like to suggest is maybe for the student who doesn't have such an ability to finish all the GPS reading like me. That is to set a minimal reading requirement that requires students at least to read some of the essential paragraphs that will be discussed in the recitation. Therefore, they can be more engaged in class.

Response 04

February 29, 2020

1. I talked to my uncle about it. And he is very impressed by the way we read and learn all those stuff. He said that the English major students in China should practice the same thing.
2. I think it was the "relevant topic extensive reading." I started to do it when I began to read about Marx. It was really helpful through finding relevant articles which provided me a bigger picture of different authors.
3. I would say "skimming." Reading GPS took me quite an amount of time, part of which was not productive. If I had handled this skill, I would have done a better job. Also, I strongly suggest to delete one chapter (any chapter) so that students will not be in a rush.

Response 05

February 29, 2020

1. Over the break, I have incorporated the contents I've learned in GPS into my life in many ways I had not expected. Because I was largely focused on global perspectives on women during the course and I took up Simone de Beauvoir's writings even after, I've had the wonderful opportunity to discuss women's rights and the normalization of women's oppression with my friends. After many discussions and arguments with my friends and family, I've realized that they do not seem to care about such issues as much as I do. Perhaps I was also like that before the GPS course.
2. I have always thought the visuals you showed us, whether that be the videos or the photos, were such excellent representations of what we were learning about. It made the class more engaging and fun. I especially enjoyed and appreciated your offering office hours for us. It gave us an opportunity to get feedback on our essays while discussing the material at a deeper level.
3. If I were your TA, I would include more class sessions like the one we had with the art exhibition. I think interactive classes are fun and stimulating for the students and it is fun to hear people's interpretations of art. I saw that you liked art a lot, so I also think it would be fun for everyone to include self-expression in terms of art and paintings in your classes. Overall, you are a great instructor!

Response 06

March 01, 2020

1. I have had some conversations with friends, but I have only mentioned the content we learnt in passing, like Descartes. I have, however, thought more about what we have learned in the class personally, especially Tomasello, Haxan, Bordo, Sontag, Xu Lizhi, and On Cityness.
2. I felt the biggest help for me were concise summaries and main ideas from the main lectures, and maybe elaboration on key terms. I felt it was fun when you included your own take and examples on some of the readings.
3. Maybe create presentations on writing, in-depth citations, and other technical stuff, arrange for a time outside of regular recitations for people to sign up for and give a general guideline or example to follow. This way, those who don't feel confident can specifically aim to go to those, and it will be slightly different from the ARC because ARC might be more general. Also, maybe consolidate a list of key terms over the course of the semester and distribute word lists near the final. It took a long time for me to actually locate a lot of words, and even then I missed a few that cropped up in the final. I felt I could have used the time looking for key words to actually read back to the context it was used in and see interpretations of that context.

Response 07

March 01, 2020

1. Yes, I did. We talked about the three assignments I wrote last semester. My parents are very glad that I can have a chance to learn what we learn throughout the GPS classes and hope that I can develop my global acumen.
2. I really love the group activity in class, which asked us to work together and find relationships among several articles from the GPS textbook. It helped me to organize the whole structure and relationship between the articles as well as the important points in the articles. During this process, I can also learn from other students and figure out things that I cannot figure out by myself.
3. For this question, I cannot think of any specific approaches... For me, I think it's already very great! 😊

Response 08

March 09, 2020

1. I talked to my family about gender equality and climate change. I personally think that the topics discussed are closer to reality. Topics such as Sundiata and Vasubandhu may be too obscure to discuss with family and friends. Besides, I get a lot of different opinions on each subject. Taking gender equality as an example, some people support that women deserve equality. Others, especially the elders in the family, believe that women's abilities and duties are different from men's.
2. It's hard to say which method is the most effective because sometimes the article itself is the biggest reason for my learning effectiveness lol. But I have to say that the debate was indeed the most memorable and helpful. You need to prepare a lot of materials before class; you need to listen to others intently in class; you also need to find other people's logic loopholes in the shortest time. Of course, a debate can put a lot of academic pressure on students. So I suggest maybe it shouldn't be placed in the midterm week.
3. I suggest that students take turns to make a brief summary of the article in the first few minutes of class. This approach may allow the classroom to quickly enter a relatively academic atmosphere. On the other hand, this method can also help to understand or review the textbook, so this lesson can be more efficient.