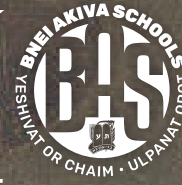


REFLECTIONS ON EDUCATION & LEARNING



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Jacob Toorenvliet, *Rabbinical Discussion*, c. 1679, oil on canvas.

TALKING TO LEARN AND LEARNING TO MASTER

A CLASSROOM CASE STUDY IN ALTERNATIVE APPROACHES TO STUDENT LEARNING AND ASSESSMENT



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THIS ESSAY, AND THE ACCOMPANYING

video, is about two fundamental adjustments I made in how I teach my senior high school Philosophy seminar. The first harnessed the power of discussion to tilt the learning goals from knowledge-centred to skill-centred. The second sought to remove the restrictions that require students to master their learning on the same schedule. My hope here is to reflect on the benefits I believe have accrued from these changes and the challenges and trade-offs that remain.

DISCUSSION-BASED LEARNING

Let's begin with the use of discussion as a technique for learning. Since I began teaching, I prided myself on conducting a "socratic"

classroom (Kruse, 2023), where discussions and student reflection drove the learning forward. From bell to bell I would continually solicit student feedback, offer different prompts for engagement, and encourage students to think and grapple with challenging questions and concepts. But then I encountered Discussion-Based Learning (Cook & Tashlik, 2004) and I began to understand how much more I could be doing to harness the power of discussion as a tool for learning.

My current Philosophy course, which is the course I have taught most consistently since I began teaching, evolved from a few earlier iterations that were more exclusively focused on Jewish Philosophy and *Emunah* (faith). When I moved to Toronto, I expanded the course to fit the Ontario Secondary Schools Curriculum

(Ontario Ministry of Education, 2013) and it became a significantly more robust and interdisciplinary learning experience. As the Ontario curriculum outlines, we try to cover three main topics: Metaphysics, Ethics and Political Philosophy (inevitably, some Epistemology as well). In each topic, my initial goal was to build student learning upon the following scaffold:

- **Knowledge:** Students should be able to independently identify and summarize the positions of various Philosophers covering a selection of Jewish and traditional Western thinkers.
- **Thinking and Application:** Students should be able to independently apply the knowledge learned to new situations and demonstrate their thinking in so doing.
- **Communication:** Students should be able to communicate all their learning in clear and compelling ways.

Like most traditional learning settings, knowledge was the foundation of the learning process in my classroom. For example, it was of primary importance for my students to know Aristotle's position on X and Rambam's position on Y. This information was provided through various familiar means, such as lectures, videos, primary and secondary sources and *chavruta* (partner) learning. Student knowledge was assessed mostly through culminating tests and projects. Students sat in rows and were expected to take notes on the learning presented. There was also a pressure to cover the material, and by that I mean the selected thinkers that I decided (in consultation with colleagues) were most important to know.

The majority of the learning time we had together was dedicated to learning this

"knowledge". Thinking and application were features of the knowledge learning experience—meaning, in the course of my lessons I would challenge students with questions and topics for discussion. For a classic example, I might ask students to consider what they would do if faced with the prospect of sacrificing one life to save many lives as a means of learning about Utilitarianism. I would carefully manage the discussion, responding to and framing student contributions to push them to the desired knowledge goal for the lesson, that is, to learn what Bentham, Mill, and other philosophers have to say about these scenarios.

Even with these participatory experiences, most of the work on application and thinking, let alone communication, was relegated to the students' independent (and occasional group) work and my feedback on assignments. Discussions were frequent features of our classroom but more as a way of making the knowledge come to life than as measured exercise of skill. They were a feature of my style as an educator that served the learning goal of "covering the material". The learning process was designed to "deliver" the required knowledge and not, primarily, to develop thinking skills.

With time I began questioning this approach to my teaching. I asked myself the following questions that I imagine others have asked: How important is any particular lesson in knowledge? Will students really retain and deploy each idea we study? Is my primary purpose as a Jewish high school teacher to function as a sort of pre-university professor exposing students to a list of foundational thinkers within a particular field of study?

Alternatively, I wondered if philosophy as a field of study was far less valuable to my students than philosophy as a way of thinking?

While some students certainly connected with some thinkers, such that those thinkers would become part of their worldview, it seemed unlikely that most students were connecting with most of the thinkers in such a meaningful manner. But I did wonder, could I train most students on skills in the processes of critical thinking, logical reasoning, and effective argumentation that could become a permanent prism through which they would evaluate information? And if that intuition was correct, shouldn't the knowledge of my course become secondary to the process of thinking and application instead of the other way around?

I was sharing these thoughts with a colleague one day, and he suggested I dive more deeply into a discussion-based learning methodology on which he had been trained by the teachers who had developed it in New York City.

This led me to visit

Urban Academy in Manhattan, a "second chance" high school that exists as an exception within the New York City public school system. Most public schools are required to conform to the curricular expectations of the New York Board of Regents, leading students to take courses of study that prepare them for required standardized tests at the conclusion of each grade in high school. Urban was part of

a small consortium of publicly funded schools that were exempted from this requirement and allowed to pursue diverse and experimental approaches to education and learning (New York Performance Standards Consortium, n.d.). As it was described to me during my visit, only 30% of Urban Academy graduates began with the school in grade 9. Most students join after leaving the traditional system for one reason or another.

My visit to Urban Academy was preceded by a Zoom call with Phyllis Tashlik who

co-wrote *Talk, Talk, Talk: Discussion Based Classrooms* (2004) for Teachers College Press. While at Urban I observed a class on current events co-taught by Herb Mack and Avram Barlow. These are essentially the theoretical and practical architects of this methodology and, in observing their work, I had one of those moments where I could clearly see a path forward relating to the

questions that I was considering. Here's what Tashlik and her co-author, Ann Cok, have to say in their book:

In [Discussion-Based Learning] what you're trying to do is take a question that has no prescribed answer and frame that question so that there's genuine speculation, debate, and discussion. The teacher often presents

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conflicting evidence and asks students to examine materials, draw conclusions, and support those conclusions in thoughtful discussions with others who (using the same evidence) may have reached divergent conclusions.

Real discussion has everything to do with the question posed. It occurs when responses to the questions are unpredictable, when the questions asked lead to new questions that weren't there when the class first began, when more than one response seems reasonable—or can be reasonably argued—and when students are drawn into the conversation, compelled to participate by speaking up or listening attentively. (p. 14)

What I observed in practice at Urban Academy was a classroom that placed discussion and debate as the primary point of the learning. On the day I visited, the class followed a presentation from an outside speaker on Covid-19 vaccine mandates, a hot topic at the time. The class opened with an opportunity for students to write their opinions on the appropriateness of such mandates for about 5-10 minutes followed by a discussion that would run for the remainder of the one hour period. The class had about 20 students ranging in age across grades 10-12. There were two students per table, positioned in a large circle with the two teachers at one of the tables. What happened in those 50 minutes was nothing short of impressive. Students conducted a respectful, almost entirely self-driven conversation that was both substantive and evolving. Herb Mack was maintaining a list that dictated the order in which students spoke and Avram Barlow was taking notes on the students'

comments while also conducting some very basic classroom management, consisting mostly of occasional reminders for select students to put their phones away. Neither teacher interjected at any point to paraphrase, reframe, request note-taking or really drive the conversation in any particular direction. The discussion had a life of its own, guided by the students as they followed the list being kept.

It was a double period class and I took some time during the break between periods to chat with Mack and Barlow about this approach. They smiled knowingly at each other when I shared my surprise at their passive presence as teachers during the discussion. They told me that is the most difficult adjustment for any teacher adopting a discussion-based approach, to remove yourself as the guide of learning and trust the students to carry it forward. Rather, to let go of a need to steer the conversation in a particular direction. Mack and Barlow shared excitedly that they did not know where the students were going to take the lesson I had just watched. In fact, their preparation for the coming classes was entirely contingent on where students wanted the conversation to go. As teachers, they select (sometimes with student input) the general topics to explore. They provide initial framing, usually in the form of a short presentation or teacher-led debate so that students can draw upon a foundation when articulating their own thoughts. But then they let the students run with the learning exercise. The teacher continually adapts the upcoming lessons to the places the students bring the prior class conversations.

To be fair, Mack and Barlow were more active during the second of the double periods where they did some summarizing and collating of the positions expressed during the first

period, choosing to open shorter student discussions on key points they wanted to stress. So it wasn't as if they had no designs on the learning that was occurring. But it was very clear that the direction of the learning within any particular inquiry was guided by the students with the teachers serving primarily as observers, measuring and providing constructive feedback on the discussion itself. Herb Mack remarks:

The [traditional] teacher who has covered the material usually means he has talked about the material, and he's had students read about it. But he often has no idea which kid was simply looking out the window thinking about his birthday. However, if inquiry is working, I am hearing what the kids are thinking ... I'm hearing them thinking. (Cook & Tashlik, 2004, p. 39).

I also learned the rather simple structure that allows for this to happen. There are essentially three primary rules to a discussion-based classroom:

1. *Attack ideas, not people.* Essentially, this means no ad hominem attacks. Once students adapt to this model they are actually surprisingly eager to self-reinforce the expectation when a student slips into some sort of personal attack.
2. *Respect "the list".* The list is a simple first-come, first-serve method whereby students who raise their hands are placed on a list and will be given the floor according to the order of the list. This eliminates calling out or teachers getting drawn to the first or "loudest" hand they see. It also provides students uninterrupted time to make their points clearly. Finally, it encourages healthy discussion practices where students have to listen and often wait to make a point, requiring them to jot down notes and consider more carefully what they want to say in response to a peer.
3. *Skip the list when challenged.* When a student challenges the ideas of a prior speaker, the list is paused and the challenged speaker can defend her positions in a back-and-forth debate moderated by the teacher. When that is concluded, either naturally or by the teacher, the overall discussion continues according to the order of the list.

This was the "aha!" moment for me. I was searching for a way to put knowledge second and to elevate application, thinking, and communication to the primary point of learning, and here it was, a full method that could easily support this switch. So I set about revamping my Philosophy course to

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work within a discussion-based framework. First, I changed my unit structure to an inquiry-driven model. For example, instead of a unit on Epistemology where I introduced a series of thinkers the student ought to know, I begin with an inquiry: *Are we living in a simulation?* From this inquiry we will have a series of discussions about reality and the nature of knowledge.

Here is a sample of how this example has played out in class:

- I spend five minutes introducing and reading Plato's Allegory of the Cave and ask students to take another five minutes and briefly write their best argument for or against the proposition: *It is always better to leave the cave.*
- The bulk of the period is then devoted to students presenting their arguments and challenging each other using the discussion-based model.
- I am mostly in the background, managing the list and taking notes on the student responses.
- At the end of the class, I will ask the students to make any changes to their initial arguments based on what they might have learned from the class and submit their final written arguments.
- Prior to the next class, I review and mark up student arguments, evaluating primarily their thinking, application and communication skills drawing on their writing and my notes from their contributions in the discussion
- In advance of the next class, I choose a new discussion prompt based on what emerged from the prior discussion and the arguments students submitted.

With one of my classes this year, the discussion of Plato's cave evolved to a discussion about God's role in the universe. Based on this, I opened the next class by posing a debate between Rabbi Eliyahu Dessler and Rabbi Mordichai Yosef Leiner, using selections from the original sources, discussing a new proposition: *We all exist in a dream of God.*

In many ways students are being exposed to the same sources of knowledge that I'd present in a traditional methodology. But the sources are not viewed as the primary goal of the learning process. There is far less pressure on the student to know the source. The pressure is instead to use the source to build certain cognitive skills, which of course means they end up knowing it fairly well. In addition, the specific sources brought into the classroom and the total volume of sources presented are not prescribed by me in advance of the learning. They are curated by me in reaction to the student discussions (often having the added benefit of expanding my own learning concurrently with students.) Over the three years running this model, my reflection is that my students have ended up exploring sources in greater depth with more enthusiasm and feelings of relevance to their interests.

This switch to a skills focus is an adjustment for many students who still orient themselves toward the idea that there is something they must know, and knowing that thing will mean a good mark in the class. And so it is important to continually evaluate students within a consistent context of skill development. All expressions of learning from the students, such as the aforementioned example with Plato's Allegory, are marked using the same six criteria, or as I call them, the three A's and the three C's:

- **Apprehend:** I understand the position I have learned such that I can teach it to someone else.
- **Apply:** I apply the position I have learned to new situations.
- **Argue:** I effectively defend the position regardless of whether I personally agree with it.
- **Connect:** I effectively build connections and/or make distinctions between ideas
- **Critique:** I critically evaluate ideas and challenge them effectively.
- **Create:** I develop my own unique ideas and articulate them so others can understand.

Within the initial 4-6 weeks of class, students typically adjust to a classroom-centred assessment structure focused most heavily on how they develop and deploy their thinking in response to a given set of information.

In switching to a discussion-based methodology and focusing primarily on skill development, the following important challenges and trade-offs have emerged:

- There is less opportunity to intentionally mould young minds toward a specific way of thinking about the world. Providing more autonomy in the learning process inevitably removes some of the preferences I might have for a given thinker or set of ideas. Students learn how to think more than they learn what to think.
- We end up covering fewer ideas while delving into greater depth on each idea, sacrificing breadth for depth.
- Developing thinking skills, especially critical thinking skills, can present a challenge for students accustomed to understanding

the process of learning as knowing the “right” answer.

MASTERY-BASED LEARNING

All this change in my classroom called attention to a more fundamental problem that exists in traditional high school settings. Most students do not succeed at their learning in high school, at least not fully anyway. When students are grouped by arbitrarily selected birth dates and forced to matriculate before mastering (not just passing) their learning, traditional schools create a perpetually under-served population that never really figures out how to master many of the learning goals presented to them. The tragedy is that most learners in high school fall somewhere in this category.

Any formal learning experience should set out to define a set of goals for student learning and then measure learning against those goals. In my experience, typically about 30% of students consistently receive marks that indicate they have fully mastered the goals for their learning. We know this because we consistently evaluate and mark student learning and the distributions fall, more or less, on the well known “bell curve”. Students who do not master the goals are keenly aware that they have not succeeded to greater or lesser degrees. For example, a student who earns a B has demonstrated a greater degree of mastery than a student who earns an F but has still failed to fully meet the goals for his learning. So our own data indicates that most students don’t fully succeed in their learning at school. That should give us all pause to question how effective the education system is at achieving the goals it ostensibly sets out to accomplish.

So here my class was with newly developed

skill-centred learning goals, approached within a new methodology of discussion-based learning, and I still had this basic problem. Most of my students would never be able to demonstrate mastery of these thinking skills at exactly the same time in exactly the same context. In a further complication, I was keenly aware that pushing students to unfamiliar and uncomfortable places in their learning (from knowledge to thinking) and evaluating them at fixed intervals was a recipe for failure. Many students would quickly want to return to the familiar knowledge-centred approach where at least they know what is expected and when and how to earn a high mark. I understood that if I was going to ask students to enter an unfamiliar learning environment, I would need to enter an unfamiliar marking environment when evaluating and providing feedback on their learning.

I decided to adopt a mastery-based learning framework (Barnett, 2022), an idea that has been gaining momentum recently (Khan, 2015). The basic idea is to structure student learning such that every student has the opportunity to master their learning at the individual pace required. Put simply, it removes the artificial timeframes of unit completion, tests, due dates, etc. It does not remove those requirements, but it affords students many opportunities to revise, rework and rethink their learning so that the opportunity to learn does not expire with a date selected on the calendar or with a final test score earned. My challenge was to provide this open-ended framework for my classes while still operating within a traditional school setting.

My inspiration for taking this approach comes from Theodore R.Sizer, whose 1984 book, *Horace's Compromise*, remains

absolutely relevant and revealing of the typical high school experience nearly forty years after its publication. Sizer argued that we should reimagine the high school teacher as a coach of learning and not a provider of knowledge:

Schools that always insist on the right answer with no concern as to how a student reaches it, smother the student's efforts to become an effective intuitive thinker. A person who is groping to understand and is on a fruitful but somewhat misdirected track, needs to learn how to redirect his thoughts and to try a parallel but somewhat different scheme. Simply telling that person that he is wrong throws away the opportunity to engage him in questions about his logic and approach. Well-directed questions by teachers can promote ever more effective intuition, albeit often by a process that is difficult to ascertain. Nonetheless, like aspirin whose precise functioning we do not understand, it works ... So it is in athletics. I can tell you how to throw the javelin. I can show you movies of people throwing the javelin, and I can analyze these movie athletes, the good and the bad. All this does help you become a javelin thrower. But until you pick up the instrument and hurl it, the whole process is an abstraction. Until I can point out your particular failings and skills ... I can not help you very much to become a competent javelin thrower. You throw, I criticize, suggesting some possible improvements. You throw again. And again I criticize. This is how skills in a strong athletic program are shaped. The analogies to intellectual training are powerful and apt. (p. 105-106).

I would adopt this approach when marking student work. I shifted from assigning a few major tests and projects marked at the end of a period of learning to assigning smaller assignments that were an essential part of the process of learning. In fact, everything I ask students to submit is marked, but it is marked for ongoing revision for as long as it takes until the student has reached mastery. Each mark is a real mark that counts but students have as many opportunities as they want to take to revise their work and change their mark. The

meaningful feedback while leaving room for students to discover a path to mastering the task at hand.

For the first adjustment, I developed a rubric that sets a fixed value for the baseline expectation while also providing a range for improving work above the baseline. My goal is for the “baseline” to be as objective as possible and for the “range” to be a more subjective evaluation where most of my coaching will take place. The sample below shows a student task and the accompanying rubric.

My goal is to draw their attention to a weaker part of their work without providing what exactly would make their work stronger.

In this task, students were introduced to Peter Singer's (1971) essay “Famine, Affluence and Morality” as part of our class discussion on the proposition: *We are all terrible people* (based on Singer's contention that we ought to give most of our non-essential income to provide food for hungry people anywhere in the world.) The task asked for the following:

mark is just the indicator of progress at a point in time. My role is to be a coach, consistently facilitating and pushing students to improve their work as they progress toward the goal.

This required two important adjustments. First, I needed to clearly define what mastery is within the traditional (and in Ontario, required) 0-100 marking scheme. I wondered, how I could create a baseline for mastery that still allows for differentiated performance beyond that baseline? Second, I would need to mark student work as a coach, not an instructor. This meant having to consider how to provide

- In 1-2 paragraphs, compose your strongest argument for or against the proposition (don't submit yet).
- Present your argument to the class in about one minute .
- Respond effectively to any clarifying questions on your argument .
- Respond effectively to at least one challenge to your argument .
- If desired, revise argument .
- Submit.

Scale	Base Criteria	Additional Marks
4. Exceeds Mastery: 96-100	Your argument is durable and can withstand multiple challenges	You demonstrate mental agility in explaining defending your argument from multiple points of view and in response to multiple challenges
3. Mastered: 85-95	You compose a clear and valid argument in writing and articulate that argument clearly in class.	You have: clear language; understandable writing and speaking; compelling ideas You can: Respond orally and effectively to clarifying questions on your writing and at least one challenge question
2. Partially Mastered: 70-84	Your argument is somewhat unclear and/or not totally valid.	How weak is the argument? Is there a discrepancy between your written and oral presentation?
1. Not Mastered: 0-69	Your argument is unclear and/or not valid.	You have something that comes close to meeting any of the base criteria for mastery.

The rubric provided the following guidance for student work.

What you can see here is the lowest mark at each level is the “base criteria”. Meeting these criteria is mostly objective and identified in the middle column. Raising a score within the range provided at each level (i.e. going from 85 to 95 within level 3) is a more subjective measure with the guidelines to reaching it outlined in the third column, “additional marks”. Here I have created a baseline for mastery while also providing for differentiated performance. It is in the range of “additional marks” where I made my second adjustment, adopting the approach of a coach when providing students feedback on their work.

To this end, I am careful not to tell students what is wrong about their presentation. Instead I try to prod them with open-ended

critiques or challenge them with questions. My goal is to draw their attention to a weaker part of their work without providing what exactly would make their work stronger. This way students can take back their work with my comment or question and attempt to rework their presentation to better meet the learning goals for the assessment. And they can do this as many times as they would like. The assessment itself becomes an essential part of the learning process in the same way it does with almost every learning challenge of life. Imagine deciding to learn to play guitar or if your manager asks you to research a new product line. Most of the time when we are challenged to learn something new, outside of the artificial restrictions of school we keep working at it until we get it, and that practice is actually the assessment. Some get it faster than others and the most

important feature of learning is self-awareness regarding the time needed until we feel we've mastered it.

Here are some sample critiques I have used to push students toward mastering their arguments:

- This reads like you're expressing that a lot of people may not like Camus as opposed to critiquing his argument on the merits.
- This is good but I wonder if you could state this in even stronger terms. What is potentially problematic about leaving it all in the hands of a higher power?
- I'm not sure I understand how James would say meaning comes from God but it is not inherent in the world? What could be more inherent than God?

Adopting a mastery-based learning framework has also not been without trade-offs and challenges:

- It is incumbent upon the teacher to mark student work with regularity so that students can get into a flow of correcting and improving.
- Students with executive functioning challenges can struggle to stay on top of many revisions and the lack of finality that comes without hard deadlines.
- There are still some deadlines imposed by the larger system. In Ontario, grade 12 students have certain periods where their marks are submitted to the universities they have applied to. Also, the school year still ends in June.
- Some students opt out of mastering their work and take lower marks. This happens in particular at the end of grade 12 when

students see less importance to earning higher marks.

Closing out my third year after adopting these changes, I have come to appreciate the mutually beneficial ways these two strategies work together. Discussion-Based Learning has put the focus of my students' learning squarely on skill development and Mastery-Based Learning has provided the framework for ongoing coaching in building those skills. In detailing my approach here, I commend these adjustments for your consideration as a means to achieve a more effective learning strategy that offers successful outcomes to a much larger number of students. ■

The ideas discussed in this article are presented in video format here:



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