

**How Students Learn  
Middlebury College  
February 19, 2013**

**Panelists:** Jason Arndt (Psychology), Penny Campbell (Dance), Barbara Hofer (Psychology), Jonathan Miller-Lane (Education Studies). Moderated by James Davis (Religion/Academic Affairs).

JCD: Last Spring, several faculty colleagues shared that a discussion of pedagogy is premature without first discussing how students learn. We hope that this discussion will prime the pump for future conversations.

BH: Some students believe they don't need to know information beyond the test because they think they can look it up again later. But this attitude prevents synthesis, analysis, etc. We need to think about how we assess. If they think they are tested on facts, they make flash cards. If they think they'll be assessed on higher ordered tasks, they will study as such.

Beliefs about intelligence: fixed or incremental. A lot of students believe that intelligence is fixed. "I'm not a scientist." "I'm a math person." "I'm a language person." Students who think it's about ability go the safe route, so they don't "look bad" and they can maintain self-esteem. But we want them to take risks. What beliefs impede their learning?

Every human being has some fundamental desire for autonomy. But students often believe the classroom is tightly controlled. There are small changes teachers can make to change this, like open-ended assignments with flexible due dates.

Stress: a little can be stimulating, but too much can be overwhelming and can impede learning. Changes: don't administer tests with time limits if you don't need to; allow for explanation on multiple-choice tests, etc.

JA: Cognitive psychologist. Working memory: we can think about things in the moment, but it is limited in what it can pull. This comes into play in a lot of classroom situations. When material is particularly complex, we need to keep this in mind. For example, my power point slides have "maddeningly" few words.

Doing things that demand or inspire a lot of active thinking is important for long-term memory and engagement. If we do things in a shallow way, that information is not there for us even 5 minutes later.

Humans are not good in the moment at intuiting how well their memory will function at a later point—known as meta memory. We need other techniques to evaluate or assess what we know. The act of retrieval is the most important thing you can do: the more times you retrieve something, the better it will be there in the future.

JML: Returning to context of conversation. (see attached slides)

PC: I'm an improviser. I bring the body to the center of our inquiry and study. As I have been listening today, I wonder where the whole of us is. That's a giant question that's being asked here.

My practice and my study is in the classroom with my students. It is mostly improvisational without telling them what the expectation is.

Living on the edge of chaos is something we can do. We can have faith that we are developing a system of perception, that we have intuitive responses to things, that things happen outside of our awareness.

We need to find comfort and discomfort and exist in situations that are complex and paradoxical. The arts are a huge resource because for many years, artists have been investigating this way of living, learning, teaching, and collaborating. Our culture keeps the arts at a distance with the belief of "I'm not creative," "I can't draw," and so on. When I teach an improvisation class, I am helping students to go out into the world and deal.

## **Q&A**

Tracy Himmel Isham (EIA): Common words from all panelists: innovation, risk, improvisation. What needs to change more? Our teaching or how students are learning? It seems like there are responsibilities on both sides.

PC: There is a syllabus in the improvisation class! There is a process, but the course outline only says what you're reading and when the writing is due. But I have to be in dialogue with what the students are telling me on a daily basis. I feel blessed to go into that teaching situation, whereas others might not feel comfortable with this.

JML: As professor here, I have been given tremendous latitude. That's part of education studies: thinking about pedagogy. However, there is a feeling among young, female faculty that they cannot explore. There's a perception that if you're not standing at the front of the room delivering a lecture, then you don't have the chops! We didn't get PhDs by taking risks, we did it by pleasing our committee. We didn't get tenure by taking risks, we did it by pleasing our departments. And now you want us to take a risk 20 years later? We don't know what those are!

Students tell us they don't have experience with curiosity in high school.

BKH: I would like to counter this a little bit. I'm excited by what a lot of our faculty are doing. I'm on online pedagogy task force—how could this work at Middlebury? A lot of people post-tenure are taking risks.

JA: There are a variety of ways in which you can approach getting to the end goal. Whatever is the most inspiring, engaging way to get there is the best way.

Angela (parent): I want to get back to the notion of space. This is a student-centered concept. How can we make this more accessible for students? (comment)

Becky (Chemistry): A lot of my students have the anxiety that was discussed. How can we mitigate the anxiety so they can take risks?

JML: What is the source of anxiety?

Becky: A lot of them are pre-med. They feel they need to get a certain grade in my class. I'm a visitor, so they don't know what I'm expecting, or that my expectations might be too high. These students are used to being the top, but they're no longer the top.

BH: Don't grade on a curve, making A's an unreasonable scarcity. If they understand they can all do well, that goes a long way.

Ira Schiffer: How do you create a framework?

BH: Set the standards (high expectations) and give students the opportunity to succeed. It doesn't mean everyone is going to get an A. It gives students the sense that they can work together instead of against each other.

JCD: Creating a community of learning instead of competition.

JML: Then creating community becomes content objective. That's a switch! I like what Professor Davis said a few months ago: "Intellectual maturation in community."

Amy Morsman: I love the points about making the space for learning, but doing that in a lecture course is a challenge when you have 50 minutes. Can we all say across the curriculum that sacrificing some of the content in favor of such content objectives is important?

PC: FYSE is a good example. Anyone who has taught these kinds of courses has experience with and has griped about sacrificing content for other objectives. We need to remember that we're not going to solve all the problems in our little Middlebury bubble. The Creative Process is a great way to learn how to play and explore.

Catharine Wright: I'm interested in content and community. Jonathan was talking about this in a community and Penny, you talked about the body. We are often described as an "intellectual community." Is intellectual maturity the only way we can be in a community?

JCD: If you start with holistic meaning of intellectualism, then you can avoid the pitfalls. Think about body/mind/spirit.

JML: We're doing res life interviews right now. 20 students come in and talk about what it means to be here.

BK: Offered example of studying emotions in the classroom. All of the studies were on anxiety, but there are so many other emotions experienced in the classroom.

AL: Biology is a hierarchical discipline and there are things students need to learn to move on. If you create the space, it can be difficult to get through it all. But if you reduce the content, students can learn more.

Student: I sense a separation between different academic disciplines and it is rooted in traditional academic culture. It impedes community. Like, why can't we have an economic improvisation course? Do you see fewer disciplines as a way of bringing together an intellectual community? We rarely have lived experiences that are rooted in a single discipline. When do you have a chemistry problem that doesn't address other issues?

PC: You might be looking to the future when we don't have defined departments. Students could create a choreography of moving through departments.

JML: Charlie MacCormack has been talking about this a lot. We claim ethical global leadership as a thing we do here. Is everybody on board with that? Who's responsibility is it? If a student comes here with a particular curiosity, how can we facilitate that? Majors exist before you get here. Then the question becomes: what question are you working on? Not which major?