Teach Me, I Dare You! Reaching Disengaged Students

Written by Bev Bramble, Instructional Designer with UNB’s Center for Enhanced Teaching and Learning. Based on a Sept. 28, 2007 presentation at UNB by Tom Haffie, Learning Development Coordinator, Faculty of Science, University of Western Ontario.

Background:
UNB Instructors have expressed concerns about how many students they have in first and second year large classes in which most students seem disinterested, unmotivated, and aren’t following what the instructor is doing. They seem disconnected from faculty, one another and the course material. Tom Haffie, who in his role as Learning Development Coordinator is responsible for supporting the learning experience of Science students at UWO, was invited to present on the subject.

Introduction

Does the cartoon above describe students in your classes?
There is nothing I can suggest for “lumps.” If people are just there and don’t know why
and don’t want to do anything, there is no hope. For example, last night I spoke with a
bartender about why I am in Fredericton and he said “I spent a year at UNB and hated it.
I was in the wrong program.” There is nothing anyone could have done for him—he was
just in the wrong program and needed to come to realize it on his own.

Lumps with a flicker, however, those we may be able to do something with.

An audience participation exercise completed during the presentation requested audience
members to summarize on a 3x5 card what they consider the main obstacle to connection
between faculty and students at UNB. What’s the one thing that sits between you and
your students? This is an activity that can be done in your classes where students write
the biggest obstacle for them at UNB. The fact that you are asking is significant.

Shrinking the obstacle to one word is OK. Now, what is the evidence that your summary
is valid? How do you know this is true?

Spread the cards around so other participants can read and discuss each others’ main
obstacle. When doing this with your class, have a student collect all the cards after the
discussion, and have another student write results on an overhead or on newsprint.
Connect and categorize similar and related items. Make a concept map.

The following are examples of obstacles written in this session:

- Obstacle: Generation gap. Evidence: students’ ease with technology
- Obstacle: Intimidation. Evidence: students afraid to ask questions
- Obstacle: Classroom design. Evidence: Classrooms are often poorly designed—
cramped, chairs unmovable, too close together, not enough space to place your
books during class, if you try to work in groups, when you turn around, the other
person is a few feet higher than you, etc.
- Obstacle: System, program, curriculum, etc.

The Biology faculty at UWO is lobbying to get a large classroom where chairs will turn
around, and also, once turned, the chairs are on same level so you can talk comfortably
for peer instruction and group work.

Obstacles tend to fall into 4 categories:
1. Teachers
2. Students
3. Classroom
4. The System
1. Teachers

Control PowerPoint, don’t let it control you. On the classroom remote, the “B” button blacks the screen—people will think the power went off. You are now the center of attention. You don’t have to play second string to the PowerPoint presentation. Get students used to the idea that PowerPoint is there to help you, not you to help it.

Your presentation doesn’t have to be linear—my presentation can move to any of the four obstacles in any order, then come back to the selection screen. Depending on what is happening in the class and the energy and interest, you can go to a later point in the presentation first and come back to pick up the next thing.

I show this picture and tell students I hope this is not happening in the room:
Just asking the question and entertaining feedback from students seriously shows you are sensitive to students and their learning needs. This can be motivating for them. Parker Palmer, In The Courage to Teach, (if you are one of those people who feel that teaching is what you were built to do, that if you’re not doing it then you are missing out, then this book is for you) says that one of the issues that gets between teacher and students is fear:

“After thirty years of teaching, my own fear remains close at hand. When a class that has gone badly comes to a merciful end, I am fearful long after it is over—fearful that I am not just a bad teacher but a bad person, so closely is my sense of self tied to the work I do.

I should have remembered from my own experience that students, too, are afraid: of failing, of not understanding . . . of having their prejudices challenged . . .

When my students’ fears mix with mine, fear multiplies geometrically - and education is paralyzed.” Parker Palmer

If you are paralyzed by your situation—look within. We have to take care of ourselves. If you feel like you are in a particularly troublesome teaching environment where students just seem to not be responding, you might be able to get some leverage or some ideas or be able to move forward by going inward rather than out, and spending an afternoon with Parker Palmer’s book to get some insight into what is going on in your class and get some ideas about how you might progress.

If you ask students questions and they don’t respond, it may not be because they’re stupid, disengaged, unmotivated, trying to anger you—it may be that they are afraid. It may be the polarity between teachers and students that is inhibiting responses. The age difference contributes. To get past this, you need to address the fear.

Palmer also talks a lot about paradox, about the polarity between teachers and students, and how unnecessary it is.

“Holding the tension of a paradox so that our students can learn at deeper levels is among the most difficult demands of good teaching. How are we to do it?

Imagine yourself in a classroom. You ask a well-framed question, and then you wait as the great silence descends. You know you should wait some more, not jump, but your heart pounds, then sinks, and finally feels helpless and out of control. So you answer your own question with an emotional mix of anxiety, anger and authoritarianism that only makes things worse. Then you watch as the opening to learning offered by the silence vanishes - and teaching becomes more and more like running headlong into walls.” Parker Palmer, in his book The Courage to Teach.
Don’t answer your own question. In teaching pedagogy courses, they tell us “wait seven seconds…” Don’t be afraid of initial awkward silence. It’s better that they learn they need to respond, and not that if they just wait, you’ll answer the question for them.

Student engagement not a new issue. In the picture above, there are 24 students. As you can see, not all are paying attention, but are engaged in actions that are familiar to teachers everywhere.

2. Students

Students’ issues:
A. Fear
B. Lost their reference group
C. Understanding under construction
D. Preconceived ideas about “school”.
E. School ideas vs. Personal ideas:
F. Culture shock [adult language and thought]
G. Oral rather than literate.

A. Fear: The issues students face when they come to university include such things as fear of failing, of being in the wrong program, of their parents being freaked out by their grades—you don’t have to look far to find lots of things that invoke fear for them.
B. Lost their reference group: They have come from high school, they have lost their reference group, they have to make all new friends; everything is different and weird.

C. Understanding under construction: This is an opportunity for us to establish a different kind of reference, a different kind of culture for them.

They are students, they are young, of course they don’t understand as well as we do. That’s why we have them as students.

D. Preconceived ideas about “school”: They have preconceived notions about school, and they are not the same as what is happening in my class. For example, I ask them to talk to each other but they have been told their whole lives not to talk to each other in class, so there are lots of things that are different in the learning culture that students must adjust to.

E. School ideas vs. personal ideas: We have this idea in our culture that tropical rainforests are the lungs of the earth. This is in fact not true, but it is difficult to dislodge this popular misconception just by telling something different. In my biology class, I teach students that the oceans put far more oxygen in the atmosphere than rainforests. This point is that students put things they learn in school in a different part of their brain from personal ideas. So, they may answer the question correctly on an exam, but in everyday life still believe (and say) that tropical rainforests are the lungs of the earth. It is very hard to dislodge such naïve misunderstandings, and this may also lead to disengagement because they sit there, impermeable; they don’t want school ideas to affect their own personal ideas. But that is precisely what we are trying to do, to transform their understanding.

F. Culture shock [adult language and thought]: The university is largely an adult culture that runs on adult language and adult patterns of thought. It is literally a different culture.

G. Oral rather than literate: Our culture is based much more on the written word. Their culture is far more orally-based. I have three sons, and women my sons’ age are unfamiliar to me—my contact with them is through my sons bringing them home. One of my sons’ girlfriend was visiting and I was explaining to her that the speckling in the flowers in a vase on our dinner table was caused by mobile DNA that is jumping around in the petals, causing this speckling pattern. She responded, “Shut up! That’s so sick!” My son translated on the fly: “Oh, she thinks that’s really amazing.” The difference between “she’s so sick!” and “she’s so sick” is all a matter of inflection and body language. It is a very oral culture. Their language and culture is foreign to us.

Part of what leads to disengagement is that we ignore all this and wish it would go away; and that they would just smarten up and read more, instead of trying to acknowledge the above factors and take them into consideration in the way we teach. There is a lot of talk these days about students being underprepared and not being able to do university-level work. This may have some truth to it, but it’s not that simple. There are a lot of other issues going on that we can, perhaps, do something about.
A question from the audience: When does this student mindset change? Is this group of ideas just first year?
Answer: This group of ideas is mostly first year, and we hope to change it over 4 years. We have to do things in our courses to support that change. Students come with very black-and-white, very rigid epistemologies—just tell me the right answer and don’t confuse me with other stuff. We have to challenge and expand them.

### 3. Classroom:

**Classroom Culture**

Establish rituals, rules, expectations for civility: In the classroom, students who think they have nothing to contribute, or that you don’t care about what they think, or won’t listen to what they have to say, won’t be very engaged. We can address this in the first class by bringing them into a negotiation and discussing what the rules are going to be. Are we going to have laptops in the room? If we are, what are we going to use them for, and not use them for? Similarly for cellphones, etc.

Overtly explain pedagogy: Explain why we are doing things the way we are. Why am I skipping around in PowerPoint? Why am I reading from a book? Why did I give people M&Ms? What is that all about? I try to be quite overt. Involving students in such discussion shows them that they are adults and helps them think about how they learn, and how best to learn, which are points on the roadmap to becoming more mature, self-directed learners.

Have a dialogue system: I can read people’s wrinkled brows, and posture, and get some sense of where they are, but you should have some kind of dialogue system that will let you know how students are doing and how well things are going. I meet students all over the world—I have over 600 each year—and you see people and they look familiar, but you’re not sure… so, we have a secret signal when meeting outside of class. We make the American Sign Language signal for B, as in Biology. When I see that, I can wave or say hello—I know who they are.

**Physical Setting**

Make sure people can see and hear adequately. This may be less of an issue in modern teaching auditoriums, but worth checking out.

I like to move into aisles; interact with groups in the auditorium, etc.

**Engaged Pedagogy**

Offer activities to help students engage with the discipline and with one another. Ask and encourage questions

When I see that “teach me, I dare you” posture, I think. “I am a highly-trained professional. I dare you not to learn something in my class.” Have lots of questions, lots
of back-and-forth discussion; come right back at them. I have lots of tricks up my sleeve, and won’t let them get away with that disengaged demeanour.

The following is an information model from Queens that I use in my pedagogical approach:

**Illustration 1**

It’s about sorting content into types:

- **Information**: Is what we are presenting in class just independent factoids, things students need to know? (Illustration 1)
- **Connection**: Or, is the content information about the relationship between factoids? (Illustration 2)
- **Extension**: Or, is the content you are presenting about how to take that knowledge and apply it to situations not applied to before, make predictions, help people organize information from your course? (Illustration 3)
Thinking Levels . . .

ICE:
Information ↔ Connection ↔ Extension

Illustration 2

Thinking Levels . . .

ICE:
Information ↔ Connection ↔ Extension

Illustration 3
Classroom Activities
This is a list of possible pedagogical techniques for engaging students in classes:

- Think-Pair Share
- One-minute Paper
- Debate
- Small group discussion or problem solving
- Write-to-Learn (one word summaries & evidence, the activity used earlier in this presentation)
- Case studies
- Quescussion (a discussion in which the only way to contribute is to ask a question. Works well with hot topics that may get out of control if people could actually go after each other—ex. NB recommendations)
- “Popcorn” questions (asking students to offer questions as they pop into their minds—some I address as they come up and some I let go. This gives students a sense of what kinds of questions are dealt with by biologists, and also gives me a sense of what’s going on in their minds.)
- Google Jockeying (going out on the Internet during class time, to find specific resources or to see what’s current on a particular topic.)
- On-the-fly, on-line research (Reading and discussing/analyzeing blogs, or social media live off the Internet during the class. Encourage students to contribute to Wikipedia.)
- Students as data source (Finding out from the class how many have something relevant to the topic, to use them as a cross-section of society. One example was using clickers to anonymously find out how many students knew someone who is HIV positive and finding that 50 students did. This brought the issue home to Canada, rather than leaving the impression that it was an African problem.)
- Large group projects, presentations (One colleague teaching gerontology has groups of 25 students find an issue, make a presentation of recommendations, preferably to someone who can do something about it, and if possible make the pitch to that person in class.)
- “Just in Time” exercises (This is for assigned readings and preparation in advance, about which there are quizzes in Blackboard, where the last question is always “What do you not understand.” I view the answers before the class and organize the lecture around their questions.)

As an illustrative exercise in class, small packets of M&Ms were handed out. Participants were directed to open them and note the colour distribution. There could be a spreadsheet in Blackboard that we could then view that would give the typical colour ratios in M&M batches. Students with laptops could go online and check what the distribution is in their big vat. Individuals would then compare their sampling with that distribution. This is a
good practical example to use in teaching statistical analysis of sampling and sampling error. Not to mention a treat.

We need to reconsider how we measure the efficiency of learning and what’s really going on in the classroom.

4. The System

We are often cognizant of students’ different learning styles, special needs, accommodation, etc. and attuned to treating students as individuals whose needs should be addressed in ‘the system.’ Consider the work of Brent Davis in his book Complexity and Education. Davis points out three main types of systems.

<table>
<thead>
<tr>
<th>System</th>
<th>Characteristics</th>
<th>Considerations</th>
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<tbody>
<tr>
<td>Simple</td>
<td>Formulaic “inputs” give predictable “outputs”. Baking a cake from a recipe. If you have the same inputs, you should get the same results.</td>
<td>Systems are predictable only to the extent that their parts can be identified and optimized.</td>
</tr>
<tr>
<td>Complicated</td>
<td>Mechanistic interactions with several variables. Predictability improves by optimizing variables. Putting a monkey on the moon.</td>
<td>(once you figure out a complex system, chances for success improve—once you put one monkey on the moon, the chances of success for the second are a lot better.)</td>
</tr>
<tr>
<td>Complex</td>
<td>Components are changed as a result of interactions. Highly unpredictable, emergent properties. Raising a child: if you have raised one who turns out to be a reasonable person, that does not necessarily increase the chances of the second one being reasonable.).</td>
<td>The components in a complex system change during their interaction, vs. complicated systems—if we figured out all the variables, we could predict. Give up. It’s complex. Can’t predict. Classes are diverse, but we aim at a homogenized student. It won’t work</td>
</tr>
</tbody>
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We assume education is complicated, but can be Give up trying to predict the outcomes—education is a complex system. That’s what makes it fun.

Knowledge is held by the collective. Learning is an emergent feature in these learning collectives. Think at the macro rather than micro level. What are the principles we need to keep in mind in approaching education as a complex system?
With respect to education, complexivists see complex education systems as having the following characteristics:

- **Diversity**
- **Redundancy**
- **Diffuse Authority** (give up the authority, or at least give it back and forth)
- **Neighbour Relations**
- **Enabling Constraints** (ex. Rules of soccer—anything goes within parameters. Give an assignment’s parameters, but within that, students can figure out the topic and how to meet the criteria.)

What if we looked at a class of students and saw not a room full of individual learners, but a mutually interdependent learning system, of which we are but one component?

My Genetics in Everyday Life (GEL) course was approached as an exercise in complexivist student engagement (how can I increase the educational capital of “the whole town” and in the process bring individual students along). The characteristics above were addressed as follows:

- **Diverse student body** (a large number of students from diverse backgrounds, ages, and interests, will little experience in science, many afraid of not being able to do science well. Most had to take the course due to the science requirement in their program.)
- **Redundancy in goals** (allowed students to meet course goals while following interests and natural abilities.)
- **Diffuse Authority in scheduling, curriculum, service positions** (technical whizzes did work in WebCT; writers kept journals they shared with the class, etc.), **Guest hosting, embedded** (ex. A librarian sat in on one class per week, to see what we were doing and to show students how to use online library resources on the spot, connecting with students in their environment, rather than being that person up in that building.) **para-ed support etc.**
- **Neighbour Relations - lecture/report groups** (groups were set up to research topics and report to class), **project groups, WebCT, Collaborative RefWorks, presentations, Journal, Newspaper** (online, updatable)
- **Enabling Constraints - project guidelines, ICE, SCOPE, reflective writing**

I want to leave you with the notion that this was not chaos. I had very clear goals. It’s just that I wasn’t fussy about how students met them. That’s where the give-and-take was. I had objectives, but how they are met was up to the students (what topics, how to present the work, etc.) “You will understand at the end of this course something about mutation and its relationship to the environment.” But whether we talk about Chernobyl or cancer rates or whatever, it didn’t matter to me. That’s where I was able to negotiate with them. There were boundaries but within those boundaries people were able to present their work in quite diverse ways. One person wrote children’s books, one person sang *a capella*; there was lots of variety. It was all wrapped up with lots of reflective writing, helping people make sense of everything, to connect it to their life.
So, it was very difficult for these people to be disengaged in an environment where they were given direction but freedom and things were set out to connect the course material to them and their world.

**Recommended Resources:**
