

## *PowerPoint's Pedagogy*

Catherine A. Adams, University of Alberta

Email: [cathy.adams@ualberta.ca](mailto:cathy.adams@ualberta.ca)

### Abstract

Teacher-student discourse is increasingly mediated through, by and with digital technologies. In-class discussions have found new, textually-rich venues online; chalk and whiteboard lectures are rapidly giving way to PowerPoint presentations. Yet, what does this mean experientially for students? This article investigates college students' experiences of PowerPoint in the classroom. The research asks: What are the tacit and pedagogical dimensions of the PowerPoint presentation for students? The method of inquiry is informed by a hermeneutic phenomenological approach and by the heuristic notions of pedagogical tact and thoughtfulness.

*I am walking along a main corridor in the college where I teach. To my left, through the half-drawn vertical blinds, I glimpse a colleague teaching. I pause, unseen, and watch for a moment. The door is closed, so I cannot hear what she is saying. But I see she is addressing her class directly, her face animated, her hands and arms engaged dramatically in illustrating her speech. A large, bright PowerPoint slide frames her upper body. The slide, entitled "Kohlberg's Stages of Moral Development," has a deep blue background with several bulleted points listed in white sans serif font. Shortly she turns back to the slide, gestures towards one of the points, then another, and returns to face the class. The particular angle of the blinds blocks her students from my view. I wonder: What is this class experience like for them? How different it seems from the old chalk-and-blackboard lessons! Or is it?<sup>1</sup>*

Today's post-secondary classroom experiences are increasingly mediated by a dizzying array of software programs and digital devices: from Virtual Learning Environments (VLEs)<sup>2</sup> to interactive whiteboards; from wikis, blogs and podcasts to clickers, cell phones and Personal Digital Assistants (PDAs). Among these, PowerPoint stands alone as the iconic staple of the late 20<sup>th</sup>-early 21<sup>st</sup> century lecture hall. In the popular and academic press, it is both revered and despised. But regardless of one's opinion of its pedagogical worth, PowerPoint is now a taken-for-granted aspect of today's college students' everyday learning experience.

The hermeneutic phenomenological study presented in this article explores post-secondary students' lived experiences of PowerPoint in their classrooms. The project involved observation of a variety of undergraduate classrooms at two post-secondary institutions, as well as in-depth

interviews with 14 male and female subjects, aged 22–45. Participants were asked to recall moments or incidents involving PowerPoint during their recent tenure as college or university students. Classroom observations, my personal recollections as an audience member for different PowerPoint lectures, along with students' remembered moments of their college lecture experiences primarily informed the rendering of the phenomenology of PowerPoint represented in the discussion that follows here. Of primary interest to this study were students' everyday experiences of PowerPoint, that is, PowerPoint as it is most commonly realized and stabilized in post-secondary classrooms.

### **The PowerPoint of View**

In important ways, PowerPoint presentations vary significantly from one teacher to another, from one discipline to another, and much more so than is the case, say, with chalkboard-supported classes. How then shall the PowerPoint learning experience be delimited and described? If a teacher uses PowerPoint to display a few photographs, shall we call that a PowerPoint presentation? Yes, of course. But can we group that teaching-learning instance in the same experiential category as the lecture delivered at the hand of a two hundred-slide PowerPoint presentation of bulleted text and clipart? What of the class that integrates PowerPoint with all the available tools of a Smart Classroom or interactive whiteboard? And what do we make of an identical PowerPoint slide-set in the hands of the monotoned “slide-reading” teacher-lecturer versus the lively teacher-dramatist?

It seems that all such PowerPoint-mediated teaching-learning experiences share certain common characteristics. For instance, one or more slides are presented during the course of the class period. The slides are formed by coloured light projected on a large flat rectangular screen (or whiteboard or wall space), magnified large enough for all to see. A white projection surface is used, typically located at the front and centre of the room. Each slide appears as a rectangular image with a 4:3 aspect ratio. This may be compared with the bright snipped-cornered, square-framed overhead foil image, or the variable rectangular landscapes of shiny whiteboards or chalky blackboards. While the slide default proportions may be adjusted within the software or through the data projection unit, they rarely are. This four-by-three frame is deeply familiar, being the exact rectangular display of the standard computer screen, classic films, and of course, the 20<sup>th</sup> century family television set.

What the student sees may depend in part on his or her past experience with PowerPoint lessons:

After some tinkering with cables and connectors, he's ready at last. My eyes move to the PowerPoint title slide now projected on the big screen. I recognize the color scheme and format: one of those tired Microsoft templates everyone seems to use these days.<sup>3</sup>

Indeed, PowerPoint presentations may be said to have a characteristic look-and-feel. This easily-identified aesthetic is generated in part through the ubiquitous use of the design patterns and choices PowerPoint provides. For example, the instructor's handwriting is seldom seen on

PowerPoint slides since handwritten characters are not an available font choice (an exception is when the instructor is using a digital pen with an interactive whiteboard, for example). Instead, Arial is an all-too-familiar font since it is the default. There is a standard set of design templates and graphics (Clipart) that come with PowerPoint. This does not mean these are the only designs or images used, but rather, they are used often because they are ready-to-hand. Colour choices—slide background and text—are often decided by templates, default selections, or the standard colour palette provided. Indeed, PowerPoint is itself a template for presenting information in a certain way.

The slides are presented one at a time. The control to advance to the next slide—or to the next animated point or graphic on a slide—resides under the one-touch authority of an individual, almost invariably the teacher or presenter. The one-touch control tethers this teacher to the mouse or keyboard location, unless he or she has a remote device. The transition from one slide to the next is electronically generated and seamless. The manner of any slide transition is based on preset options chosen at an earlier date by the slide-set's author or is based on the default settings given by presentation software. Only one slide is displayed at a time; previous and future slides are typically not visible to either the students (unless they have the file printout at hand or on their laptop before them) or the teacher (unless he or she is using a printout or PowerPoint's Presenter Tools). For students, too, the “feel” of a lesson mediated by PowerPoint tends to be more regimented than lessons that are less dependent on a previously committed sequence of content. It also means that when things go wrong they may go terribly wrong:

We were about half way into class, moving through the slides at a fair clip, when suddenly, out of the blue, the black “end of slide presentation” screen appeared. The teacher said, “Darn, I must have the wrong version,” meaning of course he had no more slides. Someone offered helpfully that maybe he had pressed the wrong button. He said, no, walked over and turned on all the lights, and started talking, trying to pick up from where he had left off. He wrote a single word up on the whiteboard— “Building”—which seemed out of context, or at least not noteworthy enough for me to write it down on my (usual) blank sheet of paper. At first he had some steam behind his words, but then that quickly fizzled out. He seemed at a loss. Then, much to my astonishment, he announced we would end there, some twenty minutes early. “Not much point in tracking down the correct version with only twenty minutes left,” he mumbled. We all straggled out slowly.

The PowerPoint slide-deck, regardless of length, has been previously composed and electronically stored in a file. The ordering of the slides is predetermined; the content and form of the slides have also been decided at an earlier date and saved. In this sense, the PowerPoint slide-set is presented to the student as a finished product.

Most everyone associates PowerPoint slides with the use of bulleted text, even though some presentations never use them. As a rule, however, bullets are a regular feature of PowerPoint presentations. The ubiquity of bullets is due in no small part to the default slide that explicitly invites the author of the presentation to title and bullet text. To avoid the use of bulleted text, the author must “erase” the bullets and adjust the placement of text, or deselect the bullets using the bullet tool, or insert a text box in its place. On the other hand, given the need for the slide text to

be readable to all in the room, some abbreviation of the presentation material seems quite natural. Thus, in preparing a presentation, the author finds herself confronted with these questions: What information should be presented on each slide? How might each portion of important information be best represented? The template suggests bulleted text.

PowerPoint's rigidly framed form—the large 4:3 rectangle of projected light on a flat white surface, the pre-determined, linearly sequenced content, and its corporate-flavoured default aesthetics—serves to inform, shape and mediate the lived space students inhabit while they are viewing PowerPoint slides.

### **PowerPoint-mediated Lessons: The Presentative and the Representative**

*I continue along the hallway. In the next classroom, the lights are dimmed, blinds drawn, door closed. Perhaps the class is cancelled today? But then there is a sudden flash of light from within. I stop, straining to see through the narrow slits between the vertical blinds. PowerPoint again, but I can't see the presenter, at all, or the students, for that matter. Of course, I know they are all in there! Against the darkness, the slide shines brightly with its white background. I easily make out the black perpendicular x-y axes displayed. As I stand there, different coloured lines appear on the graph, one by one, at irregular intervals. Suddenly the presenter steps into my view. I can hardly make out his face in the dark. I don't know him and decide it best to move along.*

In the educational context, a PowerPoint presentation is always more than just the showing of a slide deck. The teacher is also present. Van Manen (2005) describes the pedagogical relationship as experienced along two modal dimensions: the presentative and the representative. In the presentative, learning occurs in an immediate (non-mediated) mode:

The teacher pages through a book while eyeing the latecomers who are wandering into the class. He exchanges some comments with students in the front and then straightens out, positioning himself directly opposite the class. There is still some commotion in the room when suddenly, the teacher rises up and bellows with a baffling sneer:

“You're nothing but a nothing, a rum thing, a dumb thing. You're nothing but a nothing—you're not a thing at all!”

Within seconds the class is completely quiet and everyone stares in disbelief at the teacher. What? What is he saying? But the teacher does not let up, and, after a pause, he repeats the same lines. But this time his voice has lowered to a near whisper as he slowly pronounces each word as if to make sure that it will sink into our heads. We all strain to hear:

“You're nothing but a nothing,  
a rum thing, a dumb thing.  
You're nothing but a nothing—  
you're not a thing at all!”

Some students look puzzled. Others smile or snigger. By now it seems clear: the teacher is reciting the lines of a poem. And, indeed the teacher repeats it for a third time, but only the first and last part:

“You’re nothing but a nothing—  
you’re not a thing at all!”

He stops. Silence. He regards our faces. Frowning. Then a sense of wonder slowly spreads across his face. Almost automatically we imitate his wondering grimace. The silence deepens and he queries enigmatically: “So how does it feel to be called less than a thing? Should you feel insulted? What is a thing anyway?”

Here is a teacher who “is” what he teaches. He is not just teaching about poetry or about the nature of things. He himself “presences” the poem; he embodies the questioning in his very way of being. In the presentative mode, the pedagogical relationship is experienced directly and implicitly, that is, the students learn through the living example of the teacher. The teacher’s presence, his being and doing in the world, is inevitably a powerful dimension of the pedagogical relationship. The teacher shows implicitly her own image or way of being in the world, and students learn by simply dwelling with the teacher. First language learning at home, for instance, is highly presentative. The child learns to speak, gesture, and converse from and through the parents in an ongoing everyday manner.

The other modal dimension of the pedagogical relation described by van Manen is representative:

The first slide shows a lexicon of terms. The teacher is standing beside the screen; he points to the different categories and explains briefly what each stands for: material objects, theoretical objects, transcendental objects. In what sense are these “things”? He moves with a hop back to his laptop to touch his keypad and returns to the screen. The new slide lists several examples of theoretical objects: quark, IQ, mind.

Next slide. He describes what transcendental means and examines each bulleted word. The teacher points to them with his hand as he names them and explains how they are embedded in categorical contexts. He moves quickly back to his laptop again. The next slide shows images of objects. Can theoretical, transcendental, and virtual objects be represented by means of images or pictures? So in what sense are these things?

Here, the teacher selectively introduces students to representative examples or images of different ways of knowing and making sense of the world. Together these examples comprise the explicit curriculum. This type of information, the subject matter, is detached somewhat from everyday living; bodies of knowledge are not the world, but “stand for” the world. They are considered reflections—on or about particular subjects—enabled through historically developed frameworks. Algebra, for instance, is highly representative. In formal schooling, the educator deliberately selects representative examples (subject matter, knowledge) and presentational modes (telling, showing, embodying, etcetera.). Thus, in teaching, both modal dimensions are

active in varying degrees. Similarly, the student experiences varying relationships—immediate/implicit as well as mediated/explicit—to the subject/object of study.

At first blush, we might think to draw a fair line between the teacher and his or her slide-deck based on these two modalities: the teacher dwells in the presentative, the PowerPoint slides in the representative. The student experiences the teacher as presentational and immediate, whereas the projected PowerPoint slide is representative of the subject-at-hand. We must, however, look a little closer:

He reminds us briefly what we were talking about last time as he turns on the projector. I look to the screen as the first slide comes up.

From the moment the very first slide appears, PowerPoint commands an enviable authority, appeal and presence in the classroom. Without hesitation, students turn expectantly to the new slide, but more importantly, its radiance has already drawn and captured the students' gaze. Thus, Merleau-Ponty says that perception is unconscious: in the instant of the moment, we see things before we think them. The PowerPoint slide has seen us before we have really "seen" or understood it, so to speak.

The slide draws the student's interest initially by virtue of its sudden large, lit presence. Outside of the classroom, advertisers count on our eyes being drawn similarly to their billboards. Neon signage, especially when the lighting involves moving text or bright, flashing images, draws our attention even more irresistibly and sometimes annoyingly. When our attention is thus caught, we engage immediately in making sense of what "presences" in front of us. Such text and images take hold of us prereflectively; we find ourselves searching for their meaning regardless of the personal relevance the text or images may turn out to hold for us.

PowerPoint slide presentations may not necessarily command the same visual fascination as blinking neon billboards. However, the largeness of the projected image, its location at the front of the classroom, as well as the sudden flash of slide changes, occasional animations and even forgotten screensavers, render PowerPoint a visual presence to be reckoned with. Indeed, it is not the value of the slide content that first draws the student to the slide, although quality content surely helps sustain interest. But even when the content is poor or irrelevant, each transition easily draws the student back to the slide anew. A deliberate effort is then needed to break this spontaneous pull towards the big, bright slide along with its text and images, and to ignore extraneous information.

The PowerPoint slide demands to be looked at, grasped, read, and re-read within the context of the teacher's talk, and the talk, too, is interpreted alongside and within the context of the slide. PowerPoint invites teacher and student alike to participate in the space of digital media. PowerPoint's presence in the classroom is thus highly evocative (Turkle, 2004). PowerPoint invites students to look at it, and to look at it again with every slide change. At home, the television invites us to watch it, the radio or CD player to listen to it. This invitation is particularly compelling when the television or radio is already "on." We may also observe that PowerPoint's presence possesses a similar persistence. "It's probably no accident that...a PowerPoint is 'always on'" (Atkinson, 2005). Of course, PowerPoint is not "on" all the time in every classroom. However, like the television or radio being on in our homes, the relative

frequency of “on”-ness of such technologies changes the experiential milieu of a home. The following recollection of one college student describes change in the experiential milieu of the classroom as it relates to PowerPoint:

I am listening to a talk, and while there is no PowerPoint yet, I know there is going to be one [i.e. a PowerPoint presentation]. The equipment is set up, and the presenter was fiddling with it as I came in. I feel impatient for him to start it.

Even the presence of laptop and projection equipment evokes a certain expectation, a desire for a presentation beyond “just” the teacher talking. This student is impatient for the preamble to be over, for the teacher to get to the PowerPoint presentation where, as he also relates, the “real” and “important” information is located, that is, the information that will later appear on the exam.

For many students, PowerPoint slide-sets have become an efficient way to prepare for examinations (Frey & Birnbaum, 2002). This presumption is accurate in a very practical sense. Knowledge that lends itself easily to a PowerPoint slide likely translates well into an examination question. Whether a teacher is intending it or not, PowerPoint’s message of economy to students is: if it does not appear on a slide, it is probably not important because it did not warrant being pointed at powerfully. Here “important” equates with high probability of appearing on a test. The overall effect is the devaluing of knowledge presented orally or represented via media other than PowerPoint, for example, on the whiteboard. PowerPoint exercises a powerful presentative sway with students, underlining its authority as the indicative or representational.

## **Determined Beforehand**

*Continuing down the corridor, I look briefly off to my right, through a doorway into a large lecture hall. Near the middle of the theatre, I spot a student with his hand raised. I hear the distant voice of the presenter, although I cannot make out his words. I pass by the room, and, glancing back through the other entrance, I notice the student is still holding up his hand.*

PowerPoint presentations are determined beforehand. The slide deck, slide order, the manner of presentation (bullets, images) are all decided, arranged and composed in advance. Typically, the teacher and students walk through the slides in the order they arrive, one by one, to the end. To determine literally means to limit; to limit the scope or extent of; to fix or define the position. Material delivered via PowerPoint is invariably determined or programmed, that is, encoded or written ahead of time.

Of course it is the author of the slide-set who sets the course of the presentation beforehand. And while the author of the slides may very well be the teacher, when composing the slides, the author does not have the benefit of the actual teaching moment that the teacher is now dwelling in. The specific sequence he or she originally imagined may no longer “work” in practice:

In my class yesterday, I asked a question and the teacher said that she’d be covering that a few slides ahead. But then several slides later I remember thinking, hey, she’s forgotten

my question. I felt annoyed and wanted to say something, but then I couldn't remember exactly what I was wondering about. The moment had passed.

Knowing what works in this moment, with these particular students, falls in the domain of tactful teaching. A tactful teacher is able to respond to the “unplannable” moments of situations, where, for instance, it becomes clear that the current tack is not being understood, and so a different approach is taken or other background information is given. Good planning prepares for the unplannable:

To plan is not just to program an inflexible script. To plan is to think through, to anticipate, to imagine how things might go, how these [students] might experience or see things...The more carefully an educator thinks through anticipated interactions with the [students], the more likely that he or she will be able to improvise on the planned script in order to be more responsive to the contingencies of a situation. A good teacher thoroughly plans lessons in order to be able to teach extemporaneously on the basis of planning. (van Manen, 2002, p. 188)

PowerPoint runs counter this more bricoleur dimension of the practice of teaching and instead tends to compel the lesson along its predetermined unidirectional course. However, a thoughtful teacher is willing to step away from the current slide set—perhaps using the B-key to temporarily shut off the slide-set—and improvise, using whatever means or materials are at hand to tackle a new course if deemed pedagogically appropriate (and perhaps later to return to the original curriculum lined up in the slide-set). Even the most thoughtfully composed PowerPoint presentation may not be easily adapted to the unexpected question or the one that is “answered” several slides hence, but rather, is more aptly responded to in the moment.

PowerPoint's decidedly linear slide sequence is both strength and weakness. The predetermined deck helps map out a clear, singular course for both teachers and students to follow. It is efficient, expedient. But this one-way-ness has pedagogical consequences if the students' learning ends up being forced mechanically along an inappropriate path. The slides tend to impel the “conversation” along a preset unidirectional course disregarding and sometimes blind to—witness a teacher entirely occupied with the projected image—the unbidden: the unsolicited question or unexpected comment. Importantly, the decision to diverge, jump ahead, or remain on course resides in the hands of the teacher. However, it is not difficult to recognize the influence exerted by the preset course of the slideshow, and the reticence of the teacher to abandon such a highly articulated (and thus difficult to alter) projected course.

### **Moving From Split Attention to Transparency: Parsing Shifting Eyes**

*Coming immediately upon the next lecture hall entrance, I recognize the familiar voice of another colleague. Through the open door, I see a full roster of students occupying the theatre. I cannot see my colleague, but I feel certain he is using PowerPoint. I wonder why I would think*

*this, tarrying a moment. A few students have laptops open on their desks. Of these, half are looking at their own little screens, half towards the front of the class. It appears one of them is typing. The balance of the students are sitting almost motionless, staring straight ahead. In the far corner a student has his head resting on the desk, asleep perhaps. My presence outside the lecture room door has inadvertently caught the attention of some students near the back; they look over at me curiously. I move on.*

To attend, according to the dictionary, is “to be present”, “to listen to; heed”, and “to be ready to serve; wait.” Van Lennep (1969) describes attention as “a form of pregnant contact”; it is “the manner in which we relate ourselves to the things on the basis of the meaning they have for us: that is, on the basis of the manner in which they are related to us as we perform a task” (p. 210). Students may often feel torn in their attention between the teacher and the PowerPoint medium. Sitting in a PowerPoint mediated class means that one must try to attend to both the slide text and to the teacher’s person—words, vocal quality, body and facial gestures, eyes—at once. Of course, whenever a teacher uses a dual representation—the teacher accompanied by chalk or blackboard, a handout, or overhead foils—such dual attention is called for. And yet, is there something different about this demand when issued by a PowerPoint slide?

The teacher moves on to his next slide filled with several bulleted points, same design scheme. I read each one quickly, trying to make sense of them as he talks. I am surprised and confused they do not seem to match any of the sub-topics I have just heard. Maybe he’s not presenting them in order. When I am done reading all the points, I shift my attention more intently back to the teacher. I now realize I have missed the last bit of what he has been saying again. He flips to the next slide, pauses to look at it briefly and, before I can finish reading the second point, he flips to the next slide. Once more, I feel as if I’ve missed something crucial. For a moment I try to hold onto what I just saw...but we are now looking at the screen print of a website he had referred to at the very beginning. The site is familiar to me, and I turn back to listen to him. He talks for a time now, occasionally looking to his paper notes beside his laptop. I listen carefully, glancing periodically over at the same projected image, wondering whether he will refer to it again or whether it is just “there.” I am slowly grasping the direction of his talk. A question occurs to me and I jot it down. The screen suddenly darkens; a screensaver starts bouncing randomly about. He doesn’t seem to notice.

The student is drawn towards both teacher and slide. In his attempt to attend to both, his eyes shift back and forth, back and forth. This shifting or split in attention is felt most acutely when the contents of the slide and the teacher’s narrative do not bear a clear resemblance to one another. Here, the PowerPoint slides are perceived as disruptive to the process of understanding the speaker’s meaning. The student is torn between attending to the speaker and to the slides, until finally he decides to stick with the speaker. Still, the screen continues to draw her attention periodically even though it is not being referred to by the speaker. Moreover, any change in the state of the projected slide, for example, a screensaver appearing, immediately draws the student’s eyes away once more. In contrast, the teacher with chalk on the blackboard necessarily writes and illustrates in close relationship to what she is immediately saying. In a different sense,

a class handout or an overhead foil, too, remain closer to the teacher's hand, dispensed in the natural flow of the classroom talk. Once handed over to PowerPoint, the prepared slides seem to command their own attentional demand, a demand not necessarily in concert with the immediate intentions of the teacher or with the student's desire to comprehend.

When I don't understand, the slide text seems hard, impenetrable, not helpful, even "in the way" of my understanding. The slide holds out the false promise that I will comprehend something if I read it. Instead, I get caught in the text and panicked that I have meanwhile missed what the teacher was saying.

Here the student reaches towards the text in his grasp to understand, but to no avail. He wishes he had instead chosen to attend to the teacher's words. In this instance, the teacher is perceived as the authoritative voice, not the slide.

When I understand more or less what is being taught, I seem only to glance at the text, my eyes light on it, like confirmation.

At other times, the struggle to balance between the two competing objects of attention may lessen. In this moment, the eyes have found a dependable home with the presenter, but continue to "light upon" the slide periodically.

I remember one day watching a lecture and realizing I had forgotten it was PowerPoint. I mean, I had forgotten about the particular slide I was looking at and was focusing on the content. It was partly, I think, because what was being covered required quite some thought and concentration on my part, but, strangely, I remember being conscious of the slides to that point.

In periods of full engagement with the presentation, the division between teacher and slide falls away, becoming "transparent" or seamless. No split in attention is experienced. The slide, and perhaps the teacher, are no longer competing objects or obstacles, but slip transparently into the meaningful landscape. The focus becomes the subject at hand, not the slide, not the presenter. Another student describes how he methodically reads the slides and listens to the teacher's talk:

The next slide appears. I look at it briefly, scanning for the main words, the ones belonging to the main bullet set. I turn back to the teacher and listen. She is looking at us and occasionally glancing back, pointing at the slide, talking about the first point. While I am following her, I glance back at the slide. I take in a little more this time, the whole of the first point, and scan the second along with its sub-points, and the third again. I look again at the teacher, continuing to listen. Now she looks directly at the screen and reads out the first and second points as well as the three sub-points beneath. I read along with her. She turns back to us and expands on the second point and its sub points. I listen carefully for a time. Then, I look again at the slide, read it again quickly and turn back to the teacher. She reads the third point and I read along again, but I also glance back to the

text above, reading the whole slide through quickly, now having a clearer sense of how they all fit with her talk, what they mean. She expands further on the third point. I “get it” and look ahead on my printout [of the slides] to see where we’re going to next. I look again at the speaker. The next slide appears. By the time the slide changes, I have read it over three, maybe four times.

This student demonstrates astonishing concentration of attention to the content that the teacher is presenting. He works persistently and systematically to understand all that the teacher is saying to him and to situate that understanding within the context of the slide framework provided. The student brings printouts of the slides to class, jots down extra notes and looks ahead and back. He studies for exams mainly from the PowerPoint decks and printouts, using them to recall the “voice” of the teacher.

### **Idle Hands, Idle Minds?**

*I come to the second last classroom before my office. Does everyone use PowerPoint now? No. Here is someone writing on the whiteboard. Math, I think. The teacher is talking as she writes. At some point, she stops writing, turns and addresses her class directly. Most of the students are still copying down the whiteboard material into their notebooks. The teacher moves to another section of the board, and erases it while she continues to talk. She turns back to the class, says something then sits on the desk at the front. She appears to be waiting. She points at a student whose hand is raised. While the student is talking, she moves back to the whiteboard and begins writing once more. The students too begin writing again in their notebooks.*

The teacher using PowerPoint is relieved of the burden of writing. So often are the students. Of course, one of the hands of the teacher is now occupied periodically with pressing the mouse button, the keyboard or the remote control to evoke slide changes. But essentially, both hands are free, for example, to gesture in support of vocal articulation, or to point to a pertinent section of the slide. Students too are no longer obliged to record notes if they are provided with the PowerPoint slides before or after the lesson. The hands of students in a PowerPoint lecture are typically idle. Or doodling. Or typing, perhaps annotating the slides provided, or surfing the Web! In this sense, PowerPoint takes the writing and drawing part of teaching and learning out of our hands.

Relieved of the burden of note-taking, students can, if they wish, devote their full (albeit not necessarily undivided) attention to listening and watching the presentation. The student is free to simply listen to the teacher, with the secure understanding that the notes will be made available on the Web. However, when students know that they will not have access to the PowerPoint slides afterwards, they are required to adopt a different mode of attentiveness.

I had decided not to make my PowerPoint slides available to my students. I told them that it is important for them to compose their own notes, to digest the material in their own way. There were objections. And, in the next class, a student stood up right in the middle of the room and started taking digital photos of my slides!

The student above is unwilling to endure the strenuous burden of note-taking, even though the teacher deemed such activity important for understanding. It is known by all students that a lesson based on PowerPoint has a product—an easily distributed commodity—associated with it: the .ppt file. The content of these slides is sometimes used as the basis of exams. To *not* make one's PowerPoint slides available to students may be perceived as an unfair withholding of a precious resource.

To recognize what a striking change for both teacher and student that this release from the demand to “write” is, we might examine the evolutionary “smaller” shift from chalk-and-blackboard to felt-pen-and-whiteboard. Both technologies allow the teacher to write words and draw diagrams on a large surface for students to see. But only chalk allows the teacher to truly shade her drawings (for example, by placing the chalk on its side and applying uneven pressure), to overlap and mix colors, thus helping students to “see” certain objects three-dimensionally. Of course, the teacher must possess a certain artistry to write and draw like this, but without colored chalk and blackboard, the creation of such nuanced illustrations is simply not possible. Thus we may understand whiteboard technology as a movement away from shaded drawing in teaching.

With PowerPoint the teacher is no longer writing or drawing (except perhaps on the whiteboard to the left or right of the screen, or on an interactive whiteboard). Still, why bother with aesthetically pleasing chalk drawings when we can create 3D animations that will illustrate better? A medical student describes a favourite lecturer:

On the blackboard, using white chalk, he starts drawing the bones of the lower arm, the radius and the ulna. He puts labels on them telling us what they are. We label ours too on our sheets. The sheets are his hand-drawn diagrams of bones photocopied for us to use. In blue chalk, he draws on the top of the bones the deepest muscle telling us how that works. When he is done, he moves his own arm to show what it does. He points to the blue muscle. Then on top of that muscle he draws in yellow chalk the next muscle. We are also drawing and colouring each of these in with matching coloured pencils, labelling them just like he has. I jot a few notes beside each muscle as I am doing my drawing; my notes match the muscle colour.

“Writing-with” develops a common understanding. Just as white board pens eliminate the possibility of beautifully shaded three-dimensional drawings of bygone chalkboard days (e.g. laying the coloured chalk on its side, applying uneven pressure, etc.), so PowerPoint takes the writing and drawing part of teaching literally out of our hands. With PowerPoint, we maintain but a single touch in the evocation of the subject matter. The hand is involved in advancing the slides, no longer in the finesse of the writing or the aesthetic of drawing. Both teacher and student write less, draw less, with PowerPoint. Student and teacher do not write or draw *together*. As a pedagogic medium, PowerPoint is forgetful of the mimetic moments of teaching and learning: when a student learns by imitating the presentative gestures, writing, drawing, and thinking of the teacher. Merleau-Ponty (1964) describes the phenomenological power of mimetic relations:

Mimesis is the ensnaring of me by the other, the invasion of me by the other; it is that attitude whereby I assume the gestures, the conducts, the favorite words, the ways of doing things of those whom I confront...It is a manifestation of a unique system which unites my body, the other's body, and the other himself. (p. 145)

In the following description, one student demonstrates keen insight into the value of mimetic moments of teaching:

Last year I had a teacher who used PowerPoint to teach chemistry, but I did not like that. It helps to work through things together. When you actually see someone do it, it's a lot easier to understand than put up on a slide and just look at. It's important to be working something out on paper at the same time as the teacher is working through it on the board. You're having a shared experience; you're experiencing the problem together at the same time. When you're working through it together, that's a lot more powerful than looking over an already worked-out problem on a slide. So PowerPoint works for some kinds of knowledge and not others.

### **Time Slides By—Well, Not Exactly**

*As I proceed down the hallways, I suddenly remember some work I must do. Yet, I cannot help but peer swiftly through the window of the last classroom to my right. I see students situated randomly about the classroom, hanging about in their seats. They appear bored and barely interested in the slide that is projected onto the front wall of the room. Even the voice of the teacher sounds grating and tired. I see a student glance at the clock...*

PowerPoint seems to have its own sense of temporality that comes to dominate the entire lesson. One student says, "Sometimes, I am just dying for each slide to fall so that the lecture will be over because I can't stand sitting through it—waiting, and waiting for all of the slides to be done." Here, each slide-fall marks the interminably slow passage of time. In a different lecture, the same student describes time disappearing with machinic expediency, "flying by at a fair clip". In moments of full engagement with the presentation, the slides, like clock-time, may pass by unnoticed. Sometimes the speaker flips disconcertingly quickly past several slides; at other times, a slide is allowed to persist for a long while, forgotten perhaps, only to be replaced suddenly by a bouncing screensaver. At another time, the turning of the slides is experienced as "tortuous", falling dependably at regular but monotonous intervals: slide 29, slide 30, slide 31...

Waiting on the turning of a slide is sometimes not unlike waiting on a red light to turn green in a long line-up of cars. The student sits in wait for the next slide to arrive, only to wait once more. How different from oral speech, which seems to travel by—in its swiftness, leisure, or sluggishness—more like the continuous crawl of the second-hand around an analog clock! Of course, both senses of time are present in a PowerPoint mediated class. But it is the slides—in their relentless sequential countdown, arriving and disappearing at irregular intervals—that officially measure the minutia of the presentation. Each slide-fall punctuates the current narrative; each new slide frames another set of speech moments.

In the PowerPoint classroom, “seeing” appears to be the dominant modality of knowing. “Seeing”, Straus (1963) observes, “is an analytical sense”, whereas “hearing is a synthesizing sense.”

In hearing...only fragments are present from moment to moment, fragments which, in the temporal horizon, point forward and backward to be linked into a whole with other such parts, just like the spoken words in a heard sentence. (Straus 1963, p. 377)

Interestingly, PowerPoint too separates the student’s visual field into discrete, temporal fragments. With PowerPoint, the temporal horizon appears perturbed and punctuated by the disappearance/arrival moments of each slide. One student relates this anecdote:

Once we had a guest speaker who had preset his slides so that they automatically switched to the next one after a certain interval. That way, he told us, he would be sure to be done in exactly 30 minutes. I thought: great, I know exactly how long this will be. Well, it was hilarious! He spent most of his presentation running to catch up with his slides as they flew by much faster than he expected. At some point he tried to take control again, but of course PowerPoint had a mind of its own!

Here, the preset timing overwhelms the guest speaker, a scene reminiscent of Charlie Chaplin’s lovable tramp, in his silent film *Modern Times* (1936), frantically struggling—often hilariously—to keep pace with an automatic feeding machine. Chaplin’s vivid protest against modern society, where human beings are endangered by the relentless demands of the machines of their own making, provides a timely reflection on the place of the PowerPoint machine in classrooms. Of course, the incident above is unusual. But consider a related anecdote told by a professor at the same university:

Not so long ago, I gave a lecture for a PowerPoint-loving colleague of mine who had to be away. Standing before his students, I opened his PowerPoint file on my laptop, the whole system struggling to cope with the gigantic file. While we are waiting, I tell his students that their professor has left me 143 slides to cover today. “That means,” I calculate, “one slide every 21 seconds. So we better hurry up and get started!”

PowerPoint exhibits the possibility of, or certainly the desire for, maximum efficiency in the delivery of subject matter. Along these lines, some students describe the speed with which information is presented in some of their lectures as attaining “an inhuman pace” and being “impossible to keep up with.” For some of these students, consolation is found in the availability of online class slide sets before or afterwards.

## **The PowerPoint Effect**

*Back in my office, I cannot help but wonder: How might this much-employed method of teaching—whereby subject matter is rendered as a bulleted, professional quality slideshow, and subsequently dispatched with such enviable swiftness—be altering how students come to hold and experience new knowledge?*

One student describes how her reading of class materials is affected or “coloured” by the way information was originally presented to her in a PowerPoint lecture:

When I’m reading the text[book], I notice I read it in the same framework as the PowerPoint presentation I was given—in points, bullet-points. I pick out the points that I heard in the lecture. It colours my reading of the topic.

As Walter Ong (1982) suggests, all technologies of information and communication—dating back to alphabetic writing—affect our *noetic* economies, that is, our structures of thought. As we interiorize the forms inherent in a particular information and communication technology—for example, the one authorized by a teacher’s regular use of bullet-points in PowerPoint—our world begins to show itself differently to us. A new world opens, but too, such technologies of knowledge “encourage a sense of noetic closure” (Ong, 1982, p. 132). Like printed text, PowerPoint “isolates thought on a written surface...self-contained and complete”. Unlike print, PowerPoint in the lecture hall is not “detached from any interlocutor” for its author, the teacher, now dwells in the room, a room filled with his or her students.

Nonetheless, in the classroom context and beyond, the PowerPoint medium itself can have a striking effect on how we begin to think about our world. Parker (2001) humorously notes how PowerPoint seems to promote a certain kind of thinking: “Last week I caught myself planning out (in my head) the slides I would need to explain to my wife why we couldn’t afford a vacation this year” (p. 78). Thus we must ask, what does it mean for us, as teachers and for our students to increasingly “see” or “enframe”—to borrow Heidegger’s (1977) term to describe our current ontotheological moment, the technological mode of revealing—our teaching and learning worlds as slides and bullets?

## **Conclusion**

PowerPoint can, in some of its finest pedagogical examples, maintain a strong, detailed curricular structure through which the teacher may navigate her students. Even so, such presentations may not easily accommodate the sometimes “unplannable and improvisational” responses requisite in interactive teaching-learning actions, situations and relations. By virtue of its predetermined, “published” state, PowerPoint may constrain or even preclude pedagogically sensitive dialogue. As well, PowerPoint may impose on the ambience of the class a certain dispositional style that may determine in a favourable or unfavourable manner how knowledge is internalized, understood, and how it is constitutive of the formative growth of the student.

## References

- Atkinson, C. (2005) Beyond bullets: People communicating with people. Available online at: [http://sociablemedia.typepad.com/beyond\\_bullets/](http://sociablemedia.typepad.com/beyond_bullets/) accessed 9 July 2008.
- Chaplin, C. (Producer & Director). (1936). *Hard Times* [Motion picture]. United States: United Artists.
- Frey, B.A. and Birnbaum, D.J. (2002). Learners' perceptions of the value of Powerpoint in lectures. ERIC ED 467 192.
- Heidegger, M. (1977). *The question concerning technology* (W. Lovitt, trans.). New York: Harper and Row.
- Merleau-Ponty, M. (1964). The Child's Relations with Others. In *The Primacy of Perception*. (pp. 96-155). James M. Edie, (Ed.). Evanston: Northwestern University Press.
- Ong, W. J. (1982). *Orality & literacy: The technologizing of the word*. Florence, KY: Routledge.
- Parker, I. (2001, May). Absolute Powerpoint: Can a software package edit our thoughts. *The New Yorker*, May 28, 2001, pg. 76.
- Straus, E. (1963). *The primary world of the senses*. New York: Free Press of Glencoe.
- Turkle, S. (2004) The fellowship of the microchip: Global technologies as evocative objects. In M. M. Suárez-Orozco and D. B. Qin-Hilliard (eds), *Globalization: Culture and education in the new millennium*, pp. 97–113. Berkeley, CA: University of California Press.
- van Lennep, D. J. (1987). The psychology of driving a car. In J. J. Kockelmans (Ed.) *Phenomenological psychology: The Dutch school*. Dordrecht: Nijhoff. (pp. 209-216)
- van Manen, M. (2002). *The tact of teaching: The meaning of pedagogical thoughtfulness*. London, ON: The Althouse Press.
- van Manen, M. (2005) Personal communication, October.

## Endnotes

---

<sup>1</sup> Throughout this manuscript, the italicized text designates my own reflections as I walked through a college campus where I taught.

<sup>2</sup> Virtual Learning Environment (VLE) describes a class of software systems designed to support teaching and learning. This general term intends to encompass a broad set of e-learning systems, including software designated as Computer Management Systems (CMS), Learning Management Systems (LMS). VLE included traditional online learning systems such as WebCT, BlackBoard, as well as emerging technologies such as Moodle, Second Life and FaceBook.

<sup>3</sup> This and other undergraduate student anecdotes which are formatted similarly in this paper come from a phenomenological research project investigating the lived experience of software presentation tools in college classrooms.