JET
The Journal of Effective Teaching
an online journal devoted to teaching excellence

"Mind the Gap" in the Classroom

Sarah M. Ginsberg[1]
Eastern Michigan University, Ypsilanti, MI 48197

Abstract

This reflective essay describes a teacher's development of a student-centered approach to teaching which bridges the gap between students' knowledge before and after a course. In "mind the gap teaching," students' prior knowledge leads the conversation and, in turn, the teaching, allowing them to integrate new information more effectively.

Keywords: Student-centered learning, student led discussions, teacher reflections, classroom dialogue.

Anyone who has ever travelled on the London subway, or the tube as it is known there, has heard the caution to "mind the gap" as the train pulls into the station. The phrase has been in use since the late 1960's and it is delivered as an automatic message to warn passengers to step clear of the gap between the train door and the station platform as they leave the train. I often think of this phrase in association with university teaching.

As a now seasoned faculty member, I am keenly aware that one strategy for increasing learning amongst our students is to be sure to integrate the new knowledge they are acquiring to the prior knowledge they held (Fink, 2003). We must help the students bridge the space between what they come to us knowing and the knowledge we want them to have upon leaving us. It is our job to be effective in helping students integrate old and new knowledge so that from that point forward, they can use the knowledge to analyze and synthesize at higher levels (Bloom, 1956) as they move forward in their educations and careers. That is indeed a gap that must be minded.

Like the London tube, this gap can be treacherous. In many classes, we are uncertain that our students come to us with any prior knowledge about the content we are teaching. This poses a unique problem to us as teachers. If we aren't sure that students in our classes hold any prior knowledge, we may struggle to help them make connections to what we are teaching and to help them integrate the new information into their mental models. If we believe that they hold certain knowledge, based on the completion of a course prerequisite, for example, we enter dangerous territory in basing our teaching on assumptions of their existing knowledge. In other words, we can mind the gap, but how do get across it safely and effectively in the classroom?

[1] Corresponding author's email: sarah.ginsberg@emich.edu

From Teacher-Centered to Student-Centered Teaching

After 10 years of university teaching, I have developed what I have come to think of, with hindsight and reflection, as "mind the gap teaching." This method has evolved for me over the years as I have struggled to identify what it is I am doing and why it seems to work. When I first began teaching, I was entirely focused on content. I made many bad assumptions and knew little about how people learn. I took it on faith that because students had passed the courses leading up to mine, they would come to me equipped with the prerequisite knowledge needed to understand what I was teaching them. The emphasis was on me and my classroom was very teacher-centered (Barr & Tagg, 1995). Perhaps because I had not learned about being student-centered yet, I did not give any consideration to how to unpack my new content in a way that would be meaningful or enduring for my students. I came to class with every little detail of what I wanted to say to them prepared. The only time I created opportunity for them to speak was when I asked if they had any questions. I may have been less successful than I would have hoped.

After a short period of time, I started realizing that I was perhaps making some false assumptions about the prior knowledge that my students brought with them to class. Because I began to realize that my students were not always confident in the knowledge I thought that they would have upon beginning a course, I began to check in with them regarding prerequisite information. I still planned out most details of what I wanted to say, but I was becoming more aware that I wasn't always right in my assumptions about their previous learning. I began moving toward being more student-centered (Barr & Tagg, 1995) by taking the time to be sure that they were firm in their knowledge of past material before moving on to introducing new content I know now that the extensive use of lectures is ineffective for promoting thought, changing attitudes, inspiring interest, advancing personal and social adjustment, or for teaching behavioral skills (Bligh, 2000). However, at that time I still, unfortunately, relied primarily on lectures that I had planned and had control over.

Jump forward a few years and take into account a great deal of learning about the scholarship of teaching and learning (SOTL). Thanks to my many patient and knowledgeable colleagues, I began to learn about Bloom's taxonomy (1956), Carroll's mastery learning (Block, 1971), Barkley, Cross and Major's (2005) work on collaborative learning techniques, and Fink's (2003) integrated model of teaching, for example. As my classrooms became far more learner-centered (Barr & Tagg, 1995) and far more interactive, I spent more time listening to what my students knew from prior experiences and what they thought they understood from our class. I regularly walked out of the classroom thinking that the students were amazing in what they knew and what they brought to the classroom. Even in classes where I was introducing completely unique and novel information, I found that students routinely had some piece of knowledge, experience, or insight from somewhere in their past that lent itself to making the connections that would bridge the gap. All I had to do was give *them* the opportunity to teach *me* what they knew.

"Mind the Gap" Teaching

And so began my process of being so student-centered that I rarely begin any class with the information I plan to present anymore. Make no mistake, I still go in to each class with a plan and a very clear sense of what information I expect them to learn by the end of class. The goal/outcome for the teaching hasn't changed, but the process has. I no longer attempt to deliver instruction so much as I try to create opportunities for student learning within the classroom (Umbach & Wawrzynski, 2005). Instead of beginning a class by delivering a lecture, I typically begin class by sharing what we will be talking about that day, and then asking them what they already know about that topic or what they think they know, which may be very different. In this way, I learn what prior learning they have retained from other courses. I learn what assumptions or biases they have about the topic. I learn about their life experiences outside of the classroom that may have given them a very intimate, if not different, point of view on the topic. I let them lead me, whether their information is right or wrong, academic or personal. I accept most all of it and write much of it on the board. Before long, the board is covered with their comments, thoughts, and observations rather than just mine. We move from the students' ideas forward toward the learning objectives together in a discussion format. Together we explore the details of what is right or wrong; what needs to be expanded upon or linked to other content; and what the implications are of the newly discovered set of ideas. I add some of my own thoughts too. In this way, the material is addressed and learning new information takes place, all without my delivering a monologue.

The process of taking in information from them first, before I try to teach them, does numerous things for our class. First, and perhaps most importantly from the stand of this paper, it allows me to mind the gap. By finding out where they are cognitively and affectively (Bloom, 1956) before I introduce new material, I am able to share new information more appropriately because I know what their current knowledge is. In the process of gently making the corrections, adding clarifications, and highlighting their comments, I weave together their old learning and their new without having to deliver formal lectures. What I find is that the class is now led by them, focused on moving them toward new understanding and skills, and at the end of the day, we have accomplished the same goals as I had set out to accomplish when I first started teaching through 100% lecture.

Benefits of Minding the Gap

There are what may be considered by some to be secondary benefits of my "mind the gap teaching." I don't believe that they are secondary in that they are less important so much as they are extra perks that come along with the process. By avoiding lengthy lectures, I avoid the obvious pitfall of boring my students to tears during each class (Bligh, 2000). They may choose to be quiet during the conversation. They may or may not choose to add their views to those on the board, but they are not listening to just me and it is more engaging to listen to discussion than to listen to one speaker for any length of time. These classes are lively and I sense that there are more people participating than there were when I only stopped my lectures for long enough to ask questions. This process has increased the degree of engagement and reciprocity in my classroom, both of which are

associated with good learning outcomes (Chickering & Gamson, 1987; Kuh, 2009). Prior to receiving tenure, a colleague who came to observe me teaching remarked on the overall high level of engagement of a large percentage of students in my classes. At the time, I knew it was a positive observation, but I had no clear sense of what to attribute it to. I believe, however, that what he was seeing was the result of this process I was using to teach.

I believe, based on the quality of comments that students contribute to the discussions, that they are thoughtful and reflective about their knowledge or experiences as they share them with the class. They know that they are quite likely to have their comments written on the board and want those comments to reflect on them positively as contributors to the discussion. This leads to what may be another secondary, but for me critical, benefit of mind the gap teaching. When I spend that much of our class time listening to their comments, writing down what they say, and then expanding on their thoughts, I communicate to them unequivocally that their ideas are important to me. I convey to them that I am not the only person in the room with knowledge worthy of sharing and that we all bring something of value to the teaching and learning table. They know that I respect their opinions and in turn, them. Creating the opportunity for an exchange of ideas and sharing of information, I am no longer the sage on the stage, not to be approached because I know it all and they know nothing. I am now a partner in their learning and accessible to them. I create the opportunity to connect on an affective level. Making affective connections with faculty is a key contributor to students' development of their emerging professional identity (Chickering & Reisser, 1993). By increasing their engagement with the course content and with me, I influence how they feel about the course and their learning experience, which positively influences their cognitive processes (Bruinsma, 2004). I find that the conversations begun in the classroom no longer end in the classroom. Often they continue into the halls after class and in my office during office hours.

I know that this process may look very different in different disciplines and in different types of college classrooms. There is a marked distinction between what an 18 year old freshman comes to us knowing and what a doctoral student who has been working in his field for 10 years brings with him. On the face of it, this process may appear to be impossible for some classes. While that may be, I doubt it. The reality is that even the most wide-eyed, dewy-faced freshmen are not blank slates. They come to us with 18 years of some kind of learning and life experiences. They might not know anything at all about the topic that they are there to learn about, but they might think that they do. The place to begin the conversation with them might be what they think they know about the topic, what they have heard, and where they have heard it. This is a common classroom assessment technique described by Angelo and Cross (1993). An astonishing number of our students come to us with life experiences that have taught them informal lessons that are relevant in some way to what we are there to teach. We often don't have any sense of their life knowledge because we don't take the time to ask or the time to listen. When I first began to use this method in an Introduction to Special Education course, my assumption was the virtually none of the students would know anything about most of what I was going to teach them. As I began listening to them and allowing their comments to lead the discussions, I learned that many had grown up around children or siblings with

disabilities and they had an entirely different, but very valuable, perspective to share with the class.

Ways to Begin Finding the Gap

There are numerous ways to begin identifying that elusive gap between what our students know and what we want them to know. The most critical aspect of all of them is giving the students an opportunity for their voices to be heard. One common method is the use of classroom assessment techniques (CAT) noted above (Angelo & Cross, 1993). Some CATs feel more formal, such as administration of a "pre-test" at the beginning of a course or a specific topic. With this method, the teacher administers a test to the students, to find out what the students know about the content that they are about to teach. Students are informed that the expectation is not for them to know the correct answers in order to allay anxiety. This method also consumes minimal time during the class, if that is of particular concern at a given point in time.

More informal methods of identifying the students' initial knowledge include the use of more collaborative learning techniques (Barkley, Cross & Major, 2005), such as the think-pair-share process. Using this process, I ask students to identify some previous formal or informal knowledge. For example, in a class where I know that they have not had the content formally before, I might ask them to think about what they have heard, seen, or think that they understand about an issue. They write down their thoughts, share it with the person next to them who also shares her thoughts, and then bringing the entire class back together, the students report out what each group listed. In this way, no one individual has to claim their knowledge as their own, but as coming from within the group. This is particularly effective if students fear that their thoughts may be inaccurate or ill-informed and therefore might embarrass them. I find that this exercise is helpful for topics where the students think that they understand something, such as autism, but truly only have popular media-based knowledge.

I also use the think-pair-share process for topics that I expect students to have prior formal knowledge of from a preceding course. If I want to learn what students have retained from a course taught by a colleague the semester before, I will ask them to create a list of that knowledge or describe the concept individually, share it with the person next to them, and then have them report out to the entire group to identify quickly how much has really been retained.

The critical piece of the practice, independent of how I approach finding the gap, is using what I learn to lead the discussion of the content forward. As the small groups report out, in the collaborative learning techniques, I write their comments on the board. Often, I organize them as I am writing them. I might put comments that address an early phase of a developmental issue on the left side of the board, the middle phase of development in the middle of the board, and late stages of development on the right side of the board. As I write, I invite discussion from all members of the class. I add these comments to the board, particularly highlighting the ideas that I would like them to retain, and add my own thoughts and bits of information. When we are done, the students have notes, which

they have invariably copied right off the board, which are already organized by a time-line, or some other category, that reflects what they were supposed to be learning.

I have not yet begun to collect data on the impact of minding the gap in my courses. In many respects, we already know from previous literature that (Chickering & Gamson, 1987; Fink, 2003; Kuh, 2009) teaching techniques that allow for integration of previous knowledge and new knowledge while actively engaging the students improve learning outcomes. If I need further proof of this, I might, as noted above, make use of pre-test and post-test measures. However, I suspect that one of the most valuable characteristics of this teaching for my students' learning is their recognition that I place importance on their ideas and understanding. The next step for my work will be to study learner satisfaction, through survey tools or interviews, with their learning in this format. Finding the affective connection between this method of teaching and student experiences would yield valuable insights into the teaching and learning process (Bruinsma, 2004; Chickering & Reisser, 1993).

By minding the gap between what my students already know and what I want to teach them, I have created a student-centered classroom (Barr & Tagg, 1995). The process allows them to lead and for me to follow. I still teach. I still do my best to impart new information. I don't note any decrease in the amount of learning. There is no evidence that their performance on assessments has declined. At the same time, I have little concrete evidence that their performance has increased as a result of my teaching method. What I do know is that for the 110 minutes that we are all in the classroom together, there are more of us actively participating in the educational process than there used to be when I lectured. By minding the gap, none of us, the students nor myself, trip and fall into the space between what was known before and what is known now as much as we used to.

References

Angelo, T. A., & Cross, K. P. (1993). *Classroom Assessment Techniques*. San Francisco: Jossey-Bass.

Barkley, E. F., Cross, K. P., & Major, C. H. (2005). *Collaborative learning techniques*. San Francisco: Jossey-Bass.

Barr, R. B., & Tagg, J. (1995) From teaching to learning: A new paradigm for undergraduate education.

Block, J. H. (1971). Introduction to mastery learning: Theory and practice. In J. H. Block (Ed.) *Mastery Learning* (pp. 2-12). New York: Holt, Rinehart and Winston, Inc.

Bligh, D.A. (2000). *What's the use of lectures?* San Francisco: Jossey-Bass.

Bloom, B. S. (1956). *Taxonomy of educational objectives: The classification of goals: Handbook I: Cognitive domain*. New York; Longmans, Green.

Bruinsma, M. (2004). Motivation, cognitive processing and achievement in higher education. *Learning and Instruction, 14*, 549-568.

Chickering, A. W., & Gamson, Z. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin, 40 (7), 3-7*.

Chickering, A. W., & Reisser, L. (1993). *Education and Identity.* San Francisco: Jossey-Bass.

Fink, D. L. (2003). Creating Significant Learning Experiences

Kuh, G. D. (2009). The national survey of student engagement: Conceptual and empirical foundations. *New Directions for Institutional Research, 141,* 5-20.

Umbach, P. D., & Wawrzynski, M. R. (2005). Faculty do matter: The role of college faculty in student learning and engagement. *Research in Higher Education, 46*(2), 153-184.