TEACHING MATTERS
newsletter
UNB Saint John

FALL 2010

INSIDE THIS ISSUE:



Editors: David Creelman & Sandra Bell
Design: Mary Astorino & Anne Fullerton

# FROM ME TO WII: ENGAGING MILLENNIAL STUDENTS

In the fall of 2008, the NBCC in Saint John sent an invitation to the University of New Brunswick to create a professional development seminar focusing on the millennial student. Teachers at the community college had sensed that their students' backgrounds, strengths, and challenges had changed over time, and they were interested in learning more about the needs and abilities of the new cohort. A number of people at UNBSJ, in particular the group of volunteers who work to support the campus's Teaching and Learning Centre, realized that we had significant expertise regarding the millennial student experience, and thus the "From Me to Wii" team was born. Each member of the team spoke to aspects of the millennial student that were linked to his or her own expertise within the university. An English professor in the group began to examine the issue of how millennial students write, the technology experts explored the role of new technologies in the classroom, and the librarian considered information needs in a Google world. Through the fall and early winter we collaborated and organized, and the first workshop was presented in March 2009. So positive was the feedback from that first event that the team has continued to update and revise the workshop, and we have since presented the material featured in this publication at two more community colleges, a national teaching conference, and the Effective Teaching Institute hosted by Saint Thomas University. This process was partly driven by happenstance, but our research into the needs and traits of the millennial student has proved enlightening.

Beginning in the fall of 2000, the first cohort of Millennials arrived on campus. Many educators perceived noticeable differences in the classroom environment, which prompted us to try to better understand this 'new breed' of students. Who are they and what are they about? Widely accepted generational characteristics of Millennials include special, sheltered, confident, team-oriented and tech-savvy. If, as educators, we believe that any or all of these characteristics have implications for instructional design, course delivery, and teacher-student interactions, then we

## FROM ME TO WII: ENGAGING MILLENNIAL STUDENTS (CONTINUED FROM PAGE 1)

need to remain open-minded, flexible and accessible to these students' learning needs. Our team set about finding ways that faculty and those services supporting student learning could help to foster rich and rewarding educational experiences for them.

As we have developed the workshop, we have increasingly sensed that our task was not to define who millennial students are, but who we are in relation to them. We need to rediscover ourselves as teachers in the context of our millennial students—a process we undergo for every learning environment. Using our strengths as teachers, we can continue to use proven techniques in the classroom. Recognizing our limitations, we need to acknowledge the challenges we face and to consider how we might address those challenges. How can we adapt our teaching styles and add diversity to our teaching toolkits? How can we, in a word, learn? One of the ways to grow as educators is to reach out to those in our immediate environment: our students, other faculty members, IT and library staff, student advisors, and our Teaching and Learning Centres. We can also reach out to those in parallel environments, such as colleagues at other institutions. Collaborative learning is for all learners, instructors and students alike.

We need to rely on more than age to determine who our millennial students are. Availability of technology to both students and faculty has changed the expectations of students in our classrooms. For example, if notes are posted online in a learning application such as Blackboard, the forty year old student is going to want as much access to those notes as the 18 year old student. As we look around our classrooms we notice students of all age brackets carrying smart phones and other Personal Digital Appliances (PDAs). Might we suggest that the availability of, and the expected use of, technology may play a large role in determining who a millennial student is rather than chronological age alone?

In the end, we hope this collection of articles provides some helpful insights about teaching millennial students whatever their age. We want to thank James Whitehead, and the members or STU's Teaching Learning Development Committee for their hard work producing the Spring 2010 edition of Teaching Perspectives, the publication from St. Thomas University in which these articles first appeared. We hope particularly that this edition catches a bit of the engaged spirit which characterized our various workshops. Developing these presentations has reminded us that as researchers we need to connect with each others' perspectives more deeply. Linking to each other across the old disciplinary divides will surely remain as one the defining traits of the millennial age.

# THE MILLENNIALS: DEMOGRAPHICS AND MYTHS

BY BOON KEK - DEPT OF NURSING

A new cohort is moving through the education system, and while they have been labeled in different ways, they do form an identifiable and interesting group. As teachers we need to be aware of some of their characteristics and expectations. In the two separate sections of this article, I will explore the 'Millennial' generation, first by touching briefly on the study of demographics, and second by examining three common misconceptions or myths which have been discussed in the literature about the issue.

Demography is the study of human populations, and it is a variable which affects all facets of our society. Understanding demographic realities can help all policy makers decide on appropriate plans for the future. The ways in which demographical information can help us accomplish this are twofold.

Firstly, demographic information enables us to accurately forecast trends and issues by applying the knowledge of the number of people in an age range and the chances of the group in engaging in certain behaviours (Foot, 1996). For example, a person who is 18 will be more likely to play hockey than someone who is 50. Secondly, demography is also a proxy for many other socioeconomic characteristics (Foot, 1996). For example, an individual who is 40 is more likely to purchase a house than someone who is 20. Of course there will be exceptions, but as a snapshot of the population, demography provides a fairly accurate picture (Foot, 1996).

The 'Millennials' are the generation that has been provoking thought among most researchers; they are also recognized to have a significant impact on society as the next 'Boomer generation' (Howe & Strauss, 2000). It is generally accepted that the members of this generation are those born between 1982 and 2000; the label 'Millennials' was decided in an online vote conducted by ABC (Howe & Strauss, 2000).

For the purposes of education policy makers, the 'Millennials' are large in number and will be making an impact in adult education as the cohort moves along, as in the case of the Boomers. It will be important to tie public education funding to the cohort instead of to the institutions so that resources can be flexible and go where they are needed, instead of being locked into place physically when the 'Millennials' have moved on (Foot, 1996).

In terms of understanding this new cohort, academics, recruiters, advisors and faculty should not rely too heavily on the exterior perceptions of 'Millennials'. It is important that we do not create an impression of the 'Millennials' based on anecdotal or memorable experiences. It is important to refer to data before jumping to conclusions that 'Millennials are this…' or Millennials are that….'

**Is there a Millennial generation?**

According to Howe & Strauss (2000), as a result of increasing fertility rates and growth of immigration, the 'Millennials' outnumber the Baby Boomers and are the biggest demographic group to date. Reflecting on the importance of demographics above, the sheer size of the 'Millennials' requires us to pay attention to them. Howe & Strauss (2000) also note that today's children are more affluent (or have more affluent parents). With the combination of size and money, people are paying attention to them and are focusing marketing efforts on them.

I believe that the perception of the number of 'Millennials' in New Brunswick could be the first misconception. Howe & Strauss (2000) figures are from the United States and if we take a look at New Brunswick's demographics, the 'Millennials' are not the biggest demographic group. According to Statistics Canada (2006), they account for 16% of the population in New Brunswick, with the Canadian average being about 18%. This suggests that the impact of the 'Millennials' will not be as great in New Brunswick as thought, since the Baby Boomers are still the majority. In fact, in most of the cities in the Atlantic Canada, due to stagnant birth rates, the Baby Boomers outnumber the 'Millennials'. This reality for New Brunswick dilutes the impact that 'Millennials' have and not all marketing efforts have to be targeted at them to the neglect of other demographic groups.

# THE MILLENNIALS: DEMOGRAPHICS AND MYTHS (CONTINUED)

## BY BOON KEK - DEPT OF NURSING

### Do 'Millennials' have a sense of entitlement?

Another impression of the 'Millennials' that often surfaces is that they are self-entitled. 'Millennials' feel that they are special and have a sense of self-entitlement, or perhaps, we feel that 'Millennials' feel that they are special and have a sense of self-entitlement.

However, it is difficult to ascertain through literature whether or not the 'Millennials' have a sense of self-entitlement. Each researcher is able to find data that supports his or her point of view. E.g. Howe & Strauss (2000) measured the rise in volunteerism among 'Millennials' that they are not just thinking about themselves. Conversely, Jeanne Twenge (2006) used a Narcissistic Personality Inventory on 15,000 students and found out that students do score higher on that test than previous cohorts.

Twenge (2006) attributes this to the self esteem movement and helicopter parenting: we do not disrupt their self esteem by correcting their mistakes. This becomes really apparent when the students are in their upper years of post secondary education where they are expected to work independently and take initiative for their learning. A consequence of this lack of correction is that when the majority of the 'Millennials' reach adulthood and enter the workforce, there will be a strong dissonance between what they've been told and the reality they encounter. For employers and educators, the goal is to set boundaries, challenge them and make the 'Millennials' take responsibility. The understanding is that they are not lacking in enthusiasm, but lack the knowledge of the structure.

It is important not to allow ourselves to have negative attitudes about the students of today. We should understand why they feel that way and engage them to take responsibility and initiative.

### Is technology negatively affecting communication?

Technology is certainly the hallmark of this generation, and the expectations surrounding communication have changed radically as new technologies have come into widespread use. For example, Millennials expect email responses to be immediate, and some dispense with formal language and formatting. Some academics have declared that this is the beginning of the end of conventional language rules; the lament is not only for the loss of the rules, but also that the loss of those rules results in ineffectiveness in communicating ideas – an important part of post secondary education.

Erin Anderssen (Globe and Mail, 2009) has shown that there has been a loss in students' knowledge of formal language structure, but it is not as pronounced as educators thought it was. The implication would then be for educators to prepare students for academic writing from the first semester onwards, including helping them to realize that academic writing is different from high school writing.

On the other hand, while 'Millennials' are early adopters and are comfortable with technology, supports must be put in place to help educators and companies adopt those technologies in their operations.

### Conclusion

Through literature search, it becomes apparent that not all researchers agree with one another. For example, self confidence to some is narcissism to others, or for parents, being involved with your children shows interest or "you're hovering". Also, it is important for us to question which group of 'Millennials' the researchers are referring to in their literature. Defining a generation based solely on years of birth is an overgeneralization. It is more accurate to consider the environment in which the 'Millennials' develop. We have to contemplate factors such as culture and socioeconomic status, as they have just as much influence on the individuals.

It is apparent that there are other misconceptions than the ones stated above; they all affect our impression of this generation of students, and hence our interactions with them. We must not allow a one- dimensional concept of the millennial student to affect our communication with them, nor allow a single characteristic to define the students. Environmental and cultural

## THE MILLENNIALS: DEMOGRAPHICS AND MYTHS (CONTINUED)

### BY BOON KEK - DEPT OF NURSING

changes have definitely redefined the student, and it is important to remember that the 'Millennials' are greater than the sum of their characteristics. It is up to educators to meet the students at their current level and bring them to the level that they need to reach.

**References**

Erin Anderssen (Dec 12th, 2009) GR8 news: we're entering a new era of literacy. *Globe and Mail*. pp F1, F4.

Foot, D (1996) *Boom, Bust and Echo*. Toronto. Macfarlane Walter & Ross.

Foot, D. (2001) Canadian Education: Demographic change and future challenges. *Education Canada*. Toronto. Spring 2001. 41 (1). 24

Hoover, E (2009) The Millennial Muddle. Chronicle of Higher Education. Internet. Retrieved, March 5th, 2010. Access from: http://chronicle.com/article/The-Millennial-Muddle-How-/48772/

Howe, N & Strauss, W (2000) *Millennials Rising: The next Great Generation*. New York. Vintage Books.

Twenge, J (2006) Generation ME: Why today's young Americans are more confident, assertive, entitled – and more miserable than ever before. *Free Press*. Simon & Shuster Inc.

Statistics Canada (2006). Age and sex for the population of census metropolitan areas. Retrieved Dec 11, 2008. Access from: http://www12.statcan.ca/english/census06/data/topics/Index.cfm

## CALL FOR PAPERS: NEXT ISSUE

### DAVID CREELMAN & SANDRA BELL

**Next Issue:** The winter 2011 issue of Teaching Matters will provide a venue for students to speak out about what works (or not) in the classroom, and what motivates them to learn. Watch for the "Dear Professor" issue! Here's the call we will be sending out to students.

**"Dear Professor"**

**Students: We need your opinions!**

*Teaching Matters* is a bi-annual publication devoted to teaching and learning on the UNB Saint John Campus; its primary audience is our faculty—your professors. We are hoping to make the 2010 Winter publication our "Dear Professor" edition, full of teaching and learning issues that you, the students, feel are important. As professors, we don't often get the feedback we need to become better teachers, so **help us** by letting us know what you think. What are the teaching approaches in the classroom that help you learn? What does and doesn't work? What motivates you to want to learn? What were your best (or worst) learning experiences?

If you wish to contribute to this publication of *Teaching Matters*, please send a one or two paragraph "Dear Professor" letter to one of the co-editors: Dr. David Creelman and Dr. Sandra Bell. If you have any questions, please send inquiries to either creelman@unbsj.ca or sbell@unbsj.ca .

If you wish your letter to be anonymous, please send it to Rosemary Dionne, secretary for the Teaching and Learning Centre on campus; Rosemary will remove any identifying material from your email. Her email address is rdionne@unbsj.ca . You can also bring a hard-copy to the Teaching and Learning Centre (Ward Chipman Library 234A), marked "Attention: Rosemary Dionne."

The co-editors of *Teaching Matters* reserve the right to edit letters. Remember that your letter might be published, so please make your criticism constructive and avoid personal attacks!

# ENGAGING THE MILLENNIAL STUDENT

BY ROB MOIR- DEPT OF ECONOMICS

## Introduction

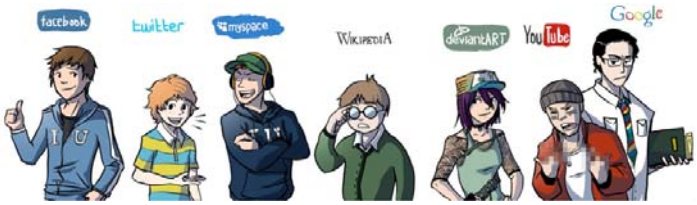
As educators, when we ask ourselves how to engage millennial students, it is helpful to think of the question in two parts: what defines millennial students, and how do we engage them? Separate answers in hand, we can then attempt to stitch together a complete response to the larger query.

As identified elsewhere in this publication, millennial students are different than other students in their technological abilities and in their growing sense of what we have made them to be, but fundamentally the same in terms of how their brains work (see Best). It is quite easy to find lists of characteristics shared by Millennials; Sweeney (2006), Donnison (2007), and Price (*no date*) are but a few examples to add to the lists you find elsewhere in this publication. While these commentators are largely in agreement, there are cases where diametrically opposed characteristics appear on different lists. One must ask, however, whether any such list can ever be complete or even correct?

Donnison (2007) in particular notes that the North American millennial generation has been studied from three distinct viewpoints: marketing and advertising (mid-1990s), management and training (late-1990s), and higher education (late-1990s). Three distinct research agendas each with their particular research biases. The common feature across this research is the vintage of the researchers. "Most millennial experts are Baby Boomers; members of the generation that cocooned their millennial children with child safety legislation, child oriented social policies, and child-friendly rearing practices" (p.8) [1]. It is quite possible that the "characteristics" detached researchers find in Millennials are consequences and attributes researchers hope to find in them. Millennials have not yet actively participated as researchers in the process of defining their generation; they have not defined themselves but have come to be understood, for better and for worse, by experts who are of their parents' and grandparents' vintage.

Should we modify our teaching styles based on a set of characteristics which may reflect wishful thinking on the part of well-meaning researchers to classes with mixed age groups [2] and increasing numbers of international students? Likely not. Rather than looking at millennial student characteristics and how we should consequently adjust our teaching styles, it may make more sense to look at how shared experience affects society and informs us as educators both in terms of content and method.

North American millennial students have, for the most part, always lived with computers and the Internet. They generally have increased computer literacy. They have witnessed and often participated in the development of first person shooters (FPSs) and massively multiplayer online role playing games (MMORPGs). They google [3] tweet, text, facebook, and understand social networking in terms of mass communication and organization as opposed to something you do in-person at a party. They have witnessed the Columbine shootings (and school lock-down exercises), 9/11, global warming, a world without the Berlin Wall, and the election of president Obama. As an exercise, google "events by years" (no quotes), and use an events timeline to chart your own experiences from birth to twenty as compared to those of your incoming students [4]. In the case of millennial students, the difference is not so much in who they are and how they operate, but rather in what they have witnessed and experienced. The remainder of this article is devoted to exploring engagement techniques and suggesting how we might modify them to suit the incoming students.




1 We might want to include early Gen-Xers as part of the millennial experts.

2 After the recession that started in 2008 and with the rise of Baby Boomer retirements, it is quite likely we will see a number of older students returning to the class for re-training, updating, or general interest.

3 One consequence of our computer culture is the rapid expansion of language and words. I will adopt the convention that proper nouns like "Google" will be capitalized (e.g., "use Google to look up millennials") while the "verbed" version will appear in lower case (e.g., "google millennials").

4 The first yearly events site I come to is http://www.infoplease.com/yearbyyear.html.

5 In fact, it was Plato in the Republic who attributes the quote to Socrates, but given many students are unaware of Plato, let alone Socrates, this is nitpicking.

# ENGAGING THE MILLENNIAL STUDENT (CONTINUED)

## BY ROB MOIR- DEPT OF ECONOMICS

### They're Here – Now What?

In order to be engaging, an instructor must be engaged. "Engaging is as engaging does," as Forrest Gump might say. Students prefer to see you being an economist as opposed to teaching them economics. Be a nurse rather than reiterating what it says in a nursing textbook. This sort of active teaching requires you to be both current and relevant, which is appealing to students of all sorts.

"As for me, all I know is that I know nothing," are wise words to live by and a lifesaver for educators. Likely, incoming students will not know that this is a famous quotation. However, let them know that it is a quote, ask them who said it, and with a quick google they will tell you it is Socrates [5]. Start a course with this quotation and invite students to learn with you as opposed to from you. Moreover, you immediately indicate that you do not have all the answers, which gives you room to make mistakes [6]. The Socratic Method is inherently participatory, using a series of questions and answers to arrive at a conclusion [7]. Ask a question and wait for them to answer, even if the waiting becomes uncomfortable. Finally, acknowledge your limitations and be willing to grow with your students' help; use your knowledge to drive course content and their skills to develop alternative delivery methods (e.g., Wiki sites, blogs, podcasts).

Look hard to "find" your students. They may lurk on Facebook or actively lead a campaign in some MMORPG. They may volunteer in the community or spend hours studying. They may just sit in front of a television. Your students are many-faceted, individually and as a group, and you cannot be everywhere. However, you can ask them about their activities and often link it back to the subject at hand. "Has social networking affected your ability and desire to engage in political protest?" might spark the interest of facebooking first-years in a political science class. As a result of inviting students to help *you* discover *them*, they engage in the process of discovering (and inventing) themselves. Along the way, you may learn something useful too.

6 I have sometimes taught an entire lecture that is "wrong" hoping that at least one brave student will stop me. If I make it to the end of the class without an interruption then I get them to tear up their notes and chastise them for letting me make-it-up.

7 See http://www.garlikov.com/Soc_Meth.html (accessed 20 January 2010) for instance.

Ultimately, as the resident expert, it is your job to take them to where they have to be. Your expertise and your past – and continuing – hard work make you qualified to judge them in terms of your discipline or trade.

### Two Ideas

For the sake of brevity, I will explore two ideas below. I have tried elements of the first with some success, while the second is still at the level of musing.

Use the Internet, but bring with it your discernment as an expert. For instance, googling "engaging millennials" (no quotes) leads to over 240,000 hits, whereas googling "engaging AND millennials" (no quotes) leads to a more manageable 50,000-plus hits. Shift gears to Google Scholar (click on the drop menu item "more?") and we see 1,500 scholarly articles which can be expanded to almost 16,000 hits if we type "engage* AND millennial*" (no quotes) to include alternative endings. By using your skills as a researcher to fine-tune your search, you simplify your task. By limiting where you search, you are able to raise the academic quality of the information. What an opportunity to talk about peer-review. Select two papers with contradictory conclusions and engage students in a discussion or a debate with the goal of defining a research proposal to select between the two findings. While this example is academically focussed, it can easily be modified for the trades and applied courses, although in those instances image and video searches might be more productive. As an educator, you are still teaching research skills, but together with your students you are exploring new ways to conduct research.

As the parent of young children, I am fascinated with their fascination with Nintendo games. My 10 year-old son will spend hours working his way through relatively mundane tasks just so he can face some "boss" character. The "boss" character is defeated using the very skills developed earlier in the stage. When the "boss" is beaten, a new level is achieved, new skills are available and developed, and the process continues. My son spends hours and days in an attempt to beat the game, and will even go back to some levels to "beat them better" after he has completed the game. Why doesn't he show the same devotion to learning his times tables, which seem to me eminently more useful? Are there ways I can incorporate the Nintendo idea of levelling-up in some aspects of my courses?

## ENGAGING THE MILLENNIAL STUDENT (CONTINUED)

## BY ROB MOIR- DEPT OF ECONOMICS

**Concluding Comment**

While incoming students may have a new skill set and are certainly the product of different experiences, they are not all that different from students of other vintages. In our classes, diverse in age and nationality, it is not clear that developing a very specific engagement technique is either fair or effective. Rather than redeveloping our engagement techniques, it makes more sense to see how we can use technology to enhance already-proven techniques.

**References**

Day, P.R. Jr. (2001). "Back to the Future of Learning." Mid-year Address to the City College of San Fransisco. (http://www.ccsf.edu/Offices/Public_Information/City_Currents/2001/Currents012201.pdf accessed 12 Jan. 2010).

Donnison, S. (2007). Unpacking the Millennials: A Cautionary Tale for Teacher Education. Australian Journal of Teacher Education. 32(3): 1-13. (http://ajte.education.ecu.edu.au/issues/PDF/323/Donnison.pdf accessed 12 Jan. 2010).

Price, C. (*no date*). "Why Don't my Students Think I'm Groovy?: The New "R"s for Engaging Millennial Learners" (http://www.drtomlifvendahl.com/Millennial%20Characturistics.pdf accessed 12 Jan 2010).

Sweeney, R. (2006). "Millennial Behaviors & Demographics" (http://library2.njit.edu/staff-folders/sweeney/Millennials/Article-Millennial-Behaviors.doc accessed 12 Jan. 2010).

# Where Is This Place?


## Win a Mystery Prize!

If you are the first to respond via email to sjteach@unbsj.ca with the correct location you will be the winner of the mystery prize.

Competition is stiff, so act quickly!

VPETC members are excluded from this competition.

# IS THE MILLENNIAL BRAIN RE-WIRED?

LISA BEST — DEPT OF PSYCHOLOGY

We live in a world that is rich in technology—cell phones, MP3 players, video gaming systems, television, and the internet have changed our lives. Unlike previous generations, the exposure of the *Millennial* generation began at birth and the world, for this generation, has always been rich in technology. According to Mark Prensky, this exposure has changed the wiring of the *Millennial* brain and, as a consequence, the learning styles of students of this generation are different. Prensky (2001) argues that our teaching methods must change to accommodate these differences. The purpose of this article is to provide a critical examination of this argument.

The Millennial student has been described as being *special, sheltered, achieving, creative, team-oriented, pressured*, and, *conventional (Howe & Strauss, 2000).* Cognitive psychologists have done many studies to examine how the activity in the brain changes as we perform different types of tasks; I would like to examine studies in brain plasticity, multitasking, and creativity to evaluate the claim that the brain of the Millennial student has fundamentally changed.

*Brain Plasticity: The Capacity for Re-Organization*

Plasticity is the brain's ability to reorganize itself by creating new brain cells through mental and physical exercises. Brain plasticity can be considered on two levels. At the macro level, the brain has three major parts: the *brain stem*, the *limbic system* and the *cerebral cortex (Ward, 2010)* .Very generally, the brain stem is responsible for functions necessary for life, such as heart beat and respiration. The limbic system is sometimes called the emotional centre of the brain. The cerebral cortex is the part of our brain responsible for higher sensory and cognitive processing and is divided into different areas that are responsible for processing specific types of information. For example, the visual cortex processes visual information, the auditory cortex processes auditory information, areas on the left side of the brain are responsible for language, and areas in the frontal cortex are responsible for complex thought. At the macro level, the functions of the brain do not change and function similarly for people with a normal brain. If any of these areas are damaged, the resulting deficits are predictable and, depending on the amount of the damage, recovery is slow or impossible.

At the micro level, the human brain consists of about one hundred billion nerve cells, called *neurons*. The role of neurons is to process and communicate information amongst themselves; neurons have *dendrites* to transmit information and *axons* to receive information. As we think, learn, and experience new things, the participating neurons process and communicate information and, as they do this, they build stronger and more direct dendrite-to-axon pathways with other neurons. At the micro level, the brain is plastic, and there are individual differences in how our brain is wired. Our experiences, throughout our life, can change the wiring of our brains (Ward, 2010).

Eleanor Maguire and her colleagues (2000, 2006) conducted a series of studies to examine whether different experiences can lead to specific changes in different brain areas. In the brain, the parietal lobes are responsible for creating representations of the environment, and the hippocampus stores long-term representations of space. Together these areas help us to navigate through our environment and remember the places that we have been before. To examine whether these areas of the brain change in response to specific experiences, Maguire and her colleagues (2000) recruited a sample of London (England) taxi cab drivers. This sample was chosen because driving in London is a complex task and taxi drivers have to go through several years of training prior to receiving their licence. Brain scans were obtained from the taxi cab drivers and a group of control participants, and the results showed that the taxi cab drivers had larger hippocampi. Macguire and her colleagues concluded that the differences were due to their experience with complex navigation, but other researchers argued that the differences could have been pre-existing (the cab drivers could have larger hippocampi to begin with) and not due to experince.

To control for this possibility, Maguire and her colleagues (2006) compared London taxi drivers with London bus drivers. The bus and taxi cab drivers were matched for driving experience and levels of stress, but differed in that the bus drivers follow a constrained set of routes and the taxi cab drivers had no set routes. The results showed interesting differences: the taxi cab drivers had greater volumes in the right mid-posterior hippocampus, and the bus drivers had greater volume in the left mid-posterior hippocampus. These results are supported by previous neuroscience research that showed that the anterior hippocampus is generally responsible for our memory of relationships between objects, and the posterior hippocampus helps us to remember the location of different locations (spatial memory). Overall, many studies have been done to examine neuro-

## IS THE MILLENNIAL BRAIN RE-WIRED? (CONTINUED)

LISA BEST — DEPT OF PSYCHOLOGY

plasticity and neuroscientists accept that the brain does change as we experience and learn new things. Learning, whether enhanced by technology or not, affects the wiring of the human brain.

*The Effectiveness of Multi-tasking*

When we combine media use (e.g., TV viewing) with other activities (e.g., eating), we are multitasking with media. When high school and college students were asked to keep a diary of their media use, they reported that they spent most of their media time multitasking. The most popular types of multitasking combinations involved: audio media with traveling, homework, grooming, and social interaction; television viewing with eating and homework; and the Internet with homework (Jeong et al., 2005). Recent statistics show that 39% of children who are younger than four years old live in households where the television is on always or most of the time, even if no one is watching. Children from these homes spend more time playing video games and listening to music and less time reading or being read to, and, compared with other children, are less likely to be able to read (Rideout, Foehr, & Roberts, 2010). Many studies show that people are not able to successfully complete two tasks simultaneously. Multitasking becomes more difficult as the complexity of the tasks increases, which means that we might be able to do two relatively simple tasks at the same time, but if one of the tasks is more complex, it becomes more and more difficult to successfully complete both tasks.

Ophir, Nass, and Wagner (2009) were interested in the relationship between chronic media multitasking and specific cognitive abilities. To identify people who are heavy and light media multitaskers, they developed a questionnaire to determine the average number of media a person simultaneously consumes. They had participants complete a series of cognitive tasks; it is important to note that all tasks were individual tasks and participants were NOT asked to multitask. Results showed that heavy media multitaskers had greater difficulty filtering out irrelevant stimuli from the environment, were less likely to ignore irrelevant representations in memory, and were less effective in suppressing the activation of irrelevant task sets. Given that switching between different tasks is a crucial component of multitasking, these results are important and suggest that people who regularly multi-task are at a disadvantage and have more difficultly on certain cognitive tasks. Just, Keller, and Cynkar (2008) were interested in a specific type of multi-tasking that is becoming more and more common: they examined the deficits in reaction time that occur when one talks on a cell phone while driving. These researchers had participants drive on a simulated course while listening to specific information and answering questions about the information that they heard. They measured brain activity while participants completed the tasks, and they found that the total brain activity was actually less when participants were multi-tasking. This suggests that, when multi-tasking, there are actually fewer resources available and, thus, performance on each task is lower.

*Creativity and the Brain*

As stated above, the Millennial student is often considered to be creative; like other cognitive abilities, creativity has its roots in the brain, and we know that the brains of highly creative people are different from the brains of those who are less creative. For example, Falk (2009) found that Albert Einstein's brain contained about 73% more glial cells than average. These cells feed and nourish the brain neurons, and this suggests that Einstein's neurons needed and used more energy. Furthermore, Einstein's brain had highly developed inferior parietal regions that were 15% wider than average. Although one cannot generalize based on a single case, it is known that these areas are important for spatial memory, mathematical thought, and imagery of movement, and their size suggests that Einstein would have had powerful visualization skills.

Creativity can be defined as *the ability to transcend traditional ideas, rules, patterns, relationships, or the like, and to create meaningful new ideas, forms, methods, interpretations*. Creativity is associated with both the arts and sciences, and brain scans show that the brains of professional musicians have different pathways that probably reflect both innate abilities and early exposure to musical training. Kim, Shin, Lee, Chu, Woo, Kim, et al. (2004) were interested in the effects of musical training and recruited people who were scheduled to learn to play a stringed instrument. fMRI scans of their brains taken before and after six months of practice showed that the brain does change with practice. Prior to practicing, there was high activity in the motor and sensory areas of the brain, but after practice there was actually less activity, suggesting that as the task became automatic, the required resources decreased. Overall, this study shows that the brain changes with musical practice and, as we learn,

# IS THE MILLENNIAL BRAIN RE-WIRED? (CONTINUED)

LISA BEST — DEPT OF PSYCHOLOGY

new and more efficient pathways form. Results such as these suggest that creativity can be fostered and that as we practice creative tasks, our brain does become more efficient.

*Conclusions*

In general, research strongly suggests that the brain can change as we experience new things. The brains of the Millennial students have most certainly been affected by the experiences that they have had. Exposure to technology does change the brain pathways. Thus, it is fair to argue that the Millennial brain is *re-wired,* but one must remember that this re-wiring is not unique to the Millennial brain. It is important to remember that this re-wiring is at the *micro* level and involves the brain pathways. At the *macro* level, the areas of the brain that are responsible for specific functions do not change.

Overall, these results suggest that our teaching methods do not necessarily have to change to include technology. In some courses, the inclusion of technology leads to a more positive learning experience, but in others it has less of an impact (Guo, Dobson, & Petrina, 2008). In fact, according to student surveys, students expect technology to be integrated into the classroom (Rickman, & Grudzinski, 2000), but they rate the approachability and knowledge of instructors as the most important elements of effective teaching (Moore, 2007).

**References**

Falk, D. (2009). New information about Albert Einstein's brain. *Frontiers in Evolutionary Neuroscience, 1*, 1-6.

Guo, R. X., Dobson, T., & Petrina, S. (2008). Digital natives, digital immigrants: An analysis of age and ICT competency in teacher education. *Journal of Educational Computing Research*, *38*, 235–254.

Howe, N., & Strauss, W. (2000). *Millennials Rising: The Next Great Generation.* New York: Vintage Books.

Just, M. A., Keller, T. A., & Cynkar, J. A. (2008). A decrease in brain activation associated with driving when listening to someone speak. *Brain Research, 1205*, 70-80.

Kim, D., Shin, M., Lee, K., Chu, K., Woo, S., Kim, Y., et al. (2004). Musical Training-Induced Functional Reorganization of the Adult Brain: Functional Magnetic Resonance Imaging and Transcranial Magnetic Stimulation Study on Amateur String Players. *Human Brain Mapping*, *23*, 188-199.

Maguire, E. A., Gadian, D. G., Johnsrude, I. S., Good, C. D., Ashburner, J, Frackowiak, R. S. J., & Frith, C. D. (2000). Navigation-related structural change in the hippocampi of taxi drivers. *Proceedings of the National Academy of Science, 97,* 4398–4403.

Maguire, E., Woollett, K., & Spiers, H. (2006). London Taxi Drivers and Bus Drivers: A Structural MRI and Neuropsychological Analysis. *Hippocampus*, *16*, 1091-1101.

Moore, S. (2007). Retrospective insights on teaching: Exploring teaching excellence through the eyes of the alumni. *Journal of Further and Higher Education, 31*, 133-143.

Ophir, E., Nass, C., & Wagner, A. D. (2009). Cognitive control in media multitaskers. *The Proceedings of the National Academy of Sciences. 106,* 15583-15587.

Prensky, M. (2001). Digital Natives, Digital Immigrants, *Part II:* Do They Really *Think Differently?* MCB University Press, Vol. 9 No. 6.

Rickman, J., & Grudzinski, M. (2000). Student expectations of information technology use in the classroom. *Educause, 23,* 24-30.

Rideout, V. J., Foehr, U. G., & Roberts, D. F. (2010). GENERATION M$^2$. Media in the Lives of 8- to 18-Year-Olds. *A Kaiser Family Foundation Study*. Available online at http://www.kff.org/entmedia/upload/8010.pdf.

Small, G. W. (2009). Your brain on google: Patterns of cerebral activation during internet searching. *American Journal of Geriatric Psychiatry, 17*, 116-126.

# RESEARCH AND INFORMATION BEHAVIOURS OF MILLENNIAL STUDENTS

BY DAVID RIPLEY ROSS - LIBRARY

The term information behaviour refers to the ways in which people need, seek, use, manage, and share information in different contexts. The contexts and information needs can be big or small, academic or everyday. Information behaviours are revealed, for example, in how people research and write an academic paper and in how they gather information (or don't) when deciding what kind of car to buy. Whether we're conscious of it or not, we all exhibit information behaviours many times each day. Those who have "good" information behaviours—i.e., who are skilled at finding and using information—are said to be information literate.

Although most college and university students today are computer literate, many are not information literate and struggle with academic research. Teachers who encourage their students to think critically about ideas and about information sources, rather than accepting the "voice of authority," are already helping their students become information literate. But educators can and should do more to help their students master the skill of academic research. Students who have mastered this skill are able to learn more than what they hear from their professors or read in their textbooks, because they possess the ability to teach themselves.

It is important to recognize that information behaviours and research abilities vary from student to student. However, the following five behaviours are common and are perhaps the most important for educators to be aware of.

### 1. Expect Research to be Easy

Many students today expect academic research to be as easy as typing words into Google and hitting search. While Google is a powerful tool that is sometimes appropriate and helpful for academic research, it alone is insufficient to answer most academic research questions. Yet many students try to get by using only Google because it's more familiar and easier to use than the library's resources (see Law). Educators can help their students by talking to them about the nature of academic research and by pointing out that scholarly books and article databases contain a wealth of information that is not accessible through Internet search engines.

### 2. Reluctant to use the library

There are many reasons why students are reluctant to use the library's print and online resources, including (1) that Google is easier and more familiar; (2) that it is inconvenient to go to the library; (3) that they feel anxious and embarrassed about not knowing how to use the library; and (4) that they've gotten good grades in the past without having to do library research. Educators can help their students by introducing them to the library's resources and staff—and perhaps even to its physical location and website—and by requiring them to use library resources to complete assignments. Many students will only use the library when they are explicitly told they have to.

### 3. Overly confident and/or unaware of better search methods

Many students make the mistake of thinking that their computer skills automatically make them good researchers. But the Centre for Information Behaviour and the Evaluation of Research found that, among the millennial cohort, "there is a big gap between actual performance in information literacy tests and self-estimates of information skills" (24). A lot of students—and a lot of people in general—don't understand how search engines work and, consequently, don't know how to get the most out of them. Many students don't know how to select appropriate keywords and have trouble formulating effective search queries; many are unfamiliar with advanced search techniques and concepts like subject classification and controlled vocabulary that will help them find more relevant results; and they often have great difficulty evaluating the reliability and appropriateness of the sources they find. Educators can show their students how to use search engines more effectively and teach them how to evaluate sources. Educators can also invite a librarian to speak to their class about research, or encourage their students to consult a librarian for help. Students are often more likely to use the library and to ask librarians for help after a librarian has been to their class. Many students don't even realize that academic librarians are available to teach them how to do research.

### 4. Prefer online sources, short articles, and "screen reading"

Many students avoid using books and want to use only articles, despite the fact that most academic articles are too narrow in scope to be of much help to someone who is writing a paper for a lower-level university course or who is just beginning to study an advanced topic. This strong preference for articles comes from the desire to read less (books are too long) and to be able to access the resources from

## RESEARCH AND INFORMATION BEHAVIOURS OF MILLENNIAL STUDENTS (CONTINUED)

BY DAVID RIPLEY ROSS - LIBRARY

home. To make matters worse, people who spend a lot of time reading emails, blog posts, status updates, and short articles on the Internet tend to develop the habit of "screen reading," which is characterized by skimming content in an attempt to find interesting or essential "nuggets" of information rather than reading linearly and thinking deeply about what one is reading. Screen reading can be a helpful skill at times, but the Centre for Information Behaviour and the Evaluation of Research suggests that many millennial students actually "go online to avoid reading in the traditional sense" (10). And, as Mark Bauerlein has observed, students are carrying these reading habits over into school and, as a result, "even the better students [are] struggling with 'slow reading' tasks."

Educators can help their students by encouraging them to read books as well as articles and to think deeply about important concepts. Teachers can also require their students to use a certain number of books, articles, encyclopedias, and other types of resources for each assignment.

**5. Satisficing (satisfy + suffice)**

"When individuals satisfice they compare the benefits of obtaining 'more information' against the additional cost and effort of continuing to search" (Prabha et al., 76). There is only so much time in the day, so we have to set priorities, and we all sometimes have to satisfice. Unfortunately, a lot of students satisfice a little too much when it comes to doing research.

Mandy Lupton equates satisficing with surface learning, which, she explains, is the opposite of deep learning and which occurs in the following instances: when students see an assignment as an end in itself rather than an opportunity to learn about a topic and build a knowledge base; when students choose to research topics that are familiar rather than research problems they want to learn about, raise awareness of, and help solve; when they decide on their argument and then look for evidence to support it rather than developing an argument as they conduct research; and when they seek only to answer questions posed by teachers rather than to answer those they pose for themselves.

Educators can help students engage in deep rather than surface learning in many ways, including by requiring students to study topics with which they are unfamiliar, by helping them see the relevance and importance of their research topics, and by insisting that their students answer questions that they themselves pose.

As educators help their students engage in deep learning, and as they work to improve their students' information behaviours in other areas, they will help to instill in their students the abilities to find and evaluate information effectively. These abilities, coof learning, are essential to lifelong learning and to succeeding in today's competitive, information-rich environment. This is why educators must go beyond teaching course content to helping their students become information literate.

**References**

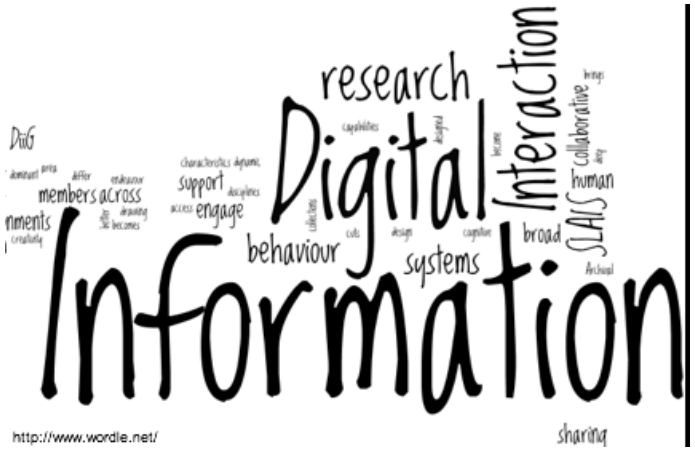
Bauerlein, Mark. "Online literacy is a lesser kind." The Chronicle of Higher Education. 19 Sep 2008. http://chronicle.com/free/v55/i04/04b01001.htm

Centre for Information Behaviour and the Evaluation of Research (CIBER). "Information behaviour of the researcher of the future." University College London. 11 Jan 2008. <http://www.bl.uk/news/pdf/googlegen.pdf>

Law, Derek. "Convenience trumps quality: how digital natives use information." fumsi. Jun 2008. <http://web.fumsi.com/go/article/use/2971>

Lupton, Mandy. "Evidence, argument and social responsibility: first-year students' experiences of information literacy when researching an essay." Higher Education Research & Development. 27.4 (Dec 2008), 399-414.

Prabha, Chandra, Lynn Silipigni Connaway, Larry Olszewski and Lillie Jenkins. "What Is Enough? Satisficing Information Needs." Journal of Documentation. 63.1 (2007), 74-89.upled with a love



# 10 THINGS TO KNOW ABOUT WEB 2.0

## BY MARY ASTORINO—UNBSJ, AND SUE DAVIS—NBCC

**1. Web 2.0**

The term Web 2.0 first appeared in the media around 2004. Indeed, the WWW has evolved from a mostly "read-only Web" to the interactive and collaborative "read-write Web" that we are all familiar with today. A multitude of Web 2.0 tools (like blogs and wikis) have been designed to make the World Wide Web "the" place to visit to interact and collaborate with others. Because of the collaborative nature of many Web 2.0 tools, they have become a popular way for educators to integrate technology into the classroom.

**2. Blogs**

Web + Log = Blog. A blog is a diary or log that is posted on the internet. Generally speaking, it is written by one person though some blogs have guest writers. Blogs are written on a particular topic: education, photography, current events, gardening, literature, mathematics, travel, personal diaries - the list could go on for pages! Blogs are text-based but often have images, charts, videos and other media. What makes a blog a Web 2.0 tool is the opportunity for interaction; people can leave comments on blogs or subscribe to a blog via an RSS reader. Blogs can be used for educational purposes in the following ways:

Students who engage in blogging can be engaged in reflective or constructivist learning, e.g. 5th grade science journal http://www.thethinkingstick.com/socialize-your-science-data

Blogs can be a teaching and/or learning tool. Edublog describes 10 ways to use blogs: http://edublogs.org/10-ways-to-use-your-edublog-to-teach/

Mary Astorino and Sue Davis facilitated a 10 week program on Web 2.0 using blogs for program delivery and participants used blogs to reflect on their learning: http://www.blogscope.net/

You can search for blogs on Technorati http://technorati.com or on Blogscope http://www.blogscope.net/ (a research project at the University of Toronto).

**3. Wikis - What I Know Is (backronym)**

Wikis are collaborative websites with many authors (as opposed to a Blog, which typically has one author) that provide a very effective way to build and exchange information. The most famous wiki of all is Wikipedia, which is touted as "the free encyclopedia which anyone can edit." It is one of the most visited websites in the world as most educators can attest. There is a huge controversy over the trustworthiness of a site like Wikipedia, but no matter which side of the debate you are on, there can be no doubt that Wikipedia is an outstanding example of worldwide collaboration.

You can create a wiki for free; the two most common applications are: Wikispaces.com (my personal favourite), and wetpaint.com. Sue and I created a wikispace to share our Web 2.0 journey, and we invite you to join us at http://tenthingstoknow.wikispaces.com.

**4. RSS Feeds**

Have you ever seen this symbol on a website? Did you wonder what it was for? This symbol tells you that an RSS feed is available from the website. RSS stands for Really Simple Syndication, and by using the feed you can subscribe to the content and have it delivered to an RSS reader such as Google Reader www.google.com/reader, or Bloglines http://www.bloglines.com/ (web based readers). If you have Microsoft Outlook 2007 you can even have the sites delivered via email! It is all about convenience: no more bookmarking or searching is required when your feed is automatically delivered to your reader. For more information on readers watch the video titled RSS in Plain English: http://www.youtube.com/watch?v=0klgLsSxGsU

**5. Delicious**

There are more than 10 billion pages of information on the Web, with more pages being added every day. Internet users can easily feel overwhelmed! Even though RSS feeds help you keep track of your favourite websites, there still can be an overwhelming amount of information coming into your reader. Online bookmarking services like Delicious can help with this. Delicious allows you not only to save a link, but to also apply keywords or "tags". These tags then allow you to categorize your websites into more manageable groupings. What makes this exciting for educators is that Delicious will take all the entries that are tagged in the same way and connect them and then connect all the people who posted these links. All of a sudden you have found other educators with the same interests as you! This is a great way for a class to assemble resources simply by using a code that would be unique to them, such as a course code.

# 10 THINGS TO KNOW ABOUT WEB 2.0 (CONTINUED)

## BY MARY ASTORINO—UNBSJ, AND SUE DAVIS—NBCC

**6. Twitter**

Twitter is a tool used for microblogging. Each message must be 140 characters or less; these messages are known as tweets. When one sets up a Twitter account, one looks for people to "follow" in order to subscribe to their tweets. Twitter can be used educationally in a number of ways:

- University students can use Twitter to make comments or post questions during a lecture.
- ESL students can practice English via Twitter.
- Students can conduct research and build a network using Twitter.

Faculty members can network with colleagues from around the globe to share websites or resources, ask questions, discover free online learning opportunities, or conduct research.

Common Craft has produced a video, Twitter in Plain English, which can be found on YouTube. http://www.youtube.com/watch?v=ddO9idmax0o
Want to learn more? Look at these resources:
Mashable's Twitter Guidebook http://mashable.com/guidebook/twitter/
Teacher Training Videos http://www.teachertrainingvideos.com/general.html

**7. Doodle**

Have you been doodled lately? Doodle is an online, free, easy-to-use scheduling system, and you do not need to register to use it. It is worthy of a mention because it has become a very popular Web 2.0 tool, and if you have never used it before, you will probably start doing so now! I have seen it most often used for scheduling meetings, but some instructors use it for scheduling appointments with their students.
Check out: Scheduling 101:Using Doodle to schedule appointments with students.

**8. Videos**

At one time most of the videos available were professionally produced and costly to buy or rent. Today you can produce your own video and share it on the internet at no cost. You can download videos, embed them in wikis, blogs and Ning sites, or put them on your flashdrive and show them in your classroom. Most people know about YouTube www.youtube.com, which is a great resource, but there are many other video sites that educators can use:

Ted Talks http://www.ted.com/
Forum Network http://forum-network.org/
TeacherTube http://www.teachertube.com/
PBS Video http://video.pbs.org/
iTunes U http://www.apple.com/education/guidedtours/itunesu.html
SchoolTube http://www.schooltube.com/
5 min http://www.5min.com/
BlipTV http://blip.tv/
Fora TV http://fora.tv/
Academic Earth http://academicearth.org/
Scholar Spot http://scholarspot.com/
Vimeo http://vimeo.com/

**9. 100 Tools**

The Centre for Learning Technologies has created a Learning Tools Compendium with a list of the Top 100 Learning Tools for 2009. The website has a ranked list of 100 tools that provides the name of the tool, a short description and a link to the tool, the type of platform required and its cost.
You can find the list at http://www.c4lpt.co.uk/recommended/

**10. PLN**

An important part of learning is to build your own Personal Learning Network (PLN) of friends and colleagues who help guide your learning by asking questions and pointing you to learning opportunities. Web 2.0 tools like Twitter, blogs, RSS feeds, wikispaces can help you develop a much larger network. You can network and share with colleagues around the world with a mouse click. Never before has such an opportunity for learning existed at no cost (other than time and interest).
Here are some resources for developing your PLN:
YouTube - Personal Learning Networks http://www.youtube.com/watch?v=RDxK0OSvKEU&feature=youtu.be&a
Sue Waters Wikispace - PLN Yourself http://suewaters.wikispaces.com/
The Educator's PLN - The personal learning network for educators http://edupln.ning.com/
Tech & Learn - The PLN Spirograph http://techlearning.com/blogs/26352

# HELP! MY CLASSROOM IS FULL OF GADGETS AND I DON'T HAVE ONE

## BY RAY SMALL— INFORMATION SERVICES AND SYSTEMS

The use in the classroom of gadgets such as ipods, laptops, and cell phones presents a challenge for both teachers and students. The purpose of this session is to discuss the issues teaching professionals have encountered in their own classrooms and solutions that may be implemented to ensure it's the appropriate use of technology in the classroom is understood by all.

There are a number of examples of issues with technology in the classroom, including laptops being used for browsing while a lecture is occurring, cell phones ringing during class, the clicking of keyboard keys while typing notes, ipods being used to cheat on a test, or the recording of a lecture and the posting of it on You Tube or similar sites without permission.

After many interactive discussion sessions, it has been determined that technology such as ipods, laptops, cell phones and other personal electronic devices can be a distraction in the classroom for both students and professors. Even when these devices are being used responsibly, they can still draw attention away from the topic being discussed. Suggestions to reduce the impact of such technology on classroom proceedings that have come from these sessions include the following:

1. Set guidelines regarding the use of technology in your classroom and clearly state why these guidelines are being enforced. Examples of reasons for not using technology in class were the protection of privacy and limiting classroom disruption. Students can be included in the creation of these guidelines if you are comfortable doing so.

2. Make sure there is a published acceptable use policy available to the students so they know what you consider appropriate and inappropriate use of technology. Examples given were, allow or forbid recording of lectures or the posting of class proceedings on YouTube, MySpace, FaceBook etc., to respect privacy of participants.

3. Do not use technology in your class unless it has an identifiable teaching or learning benefit. Remember the class extends beyond the classroom. Examples given included extra assignments posted on Blackboard, tutorials posted online for students to use for review, instructor-created/monitored chat rooms for classmate discussions, and instructor– created, non- monitored chat space for student discussions.

4. Toni Roberts Educational Technology Consultant at the Purdy Crawford Teaching Centre, Mount Allison University suggested a laptop policy guideline document which he submitted to me (post-workshop). For a copy of this policy please contact me at rsmall@unbsj.ca.

Please remember the reason for doing these sessions is to generate discussion amongst teaching professionals and students about how to deal with technology issues you are facing in the classroom. If you have a suggestion that you would like to share, we would love to include it in the next session. Please forward your suggestions for dealing with technology issues in the classroom to our teaching and learning center at sjteach@unbsj.ca . Submitting a suggestion will be considered your intent to share the suggestion with others, and at our discretion we will share your suggestions freely.

# ACTIVE LEARNING GROUPS: FORMING, USING, AND TROUBLESHOOTING GROUPS AND TEAMS

BY DAVID CREELMAN — DEPT OF HUMANITIES & LANGUAGES

Twenty years ago, when professors began using group work and team projects to deliver their course material, they often did so simply to provide their students with a little variety - a break from the routine of lectures. Years later the studies are in and pedagogical research has convincingly demonstrated that having students work together in a learning environment, whether we call it group work, collaborative learning, or co-operative learning, has long term positive benefits (Johnson, Johnson and Stanne, 2000). And using teams in the millennial classroom is neither risky nor hard to manage. Indeed, forming, using, and managing groups can be a rewarding experience for both professor and student.

The benefits of using teams are well-known. When students work with each other to complete an activity, their academic performance improves in a variety of ways. Students come to class better prepared and, compared to more passive learning processes, they engage with the material more deeply (Oakley et al., 2004). Well designed activities afford students the opportunity to develop their problem solving abilities and critical thinking skills, and as a natural result they retain the information longer (Deeter-Schmertz et al., 2002). It should not be surprising, then, that the group's collective outputs are often better than individual projects (Zeff et al., 2002), and that ultimately students "often learn more effectively from other classmates or peers than from instructors" (Stein and Hurd, 2000).

The academic advantages of using groups or teams are considerable, but collective experience provides additional personal benefits for our students. Working in groups allows students the chance to socialize in an intellectual setting; this "broadens student participation" (Zeff et al., 2006), allows them to acquire greater communication and teamwork skills (Oakley et al., 2004), and in some cases allows students to develop leadership skills (Deeter-Schmertz et al., 2002). When students engage more fully as people in the academic setting, they naturally connect more deeply to the university, and as they form deeper relationships with their fellow students, they are less likely to drop out of school (Oakley et al., 2004). The advantages of using active learning techniques with groups are multiple and persistent. Active learning strategies are those course activities which emphasize student participation, the development of targeted skills, and the completion of specific tasks which involve students in high order thinking including analysis, synthesis and evaluation (Bonwell, Eison, 1991). I have had teams in my courses participate in debates, games, discussion groups, and group quizzes, and repeatedly have founded that the students recall most easily and have learned most deeply, that material which they explored with others in their groups. Indeed, all of these benefits increase if the students get to work in permanent teams throughout the term, rather than in ad-hoc or temporary groups which are constantly shifted or reformed (Zeff, Higby, and Bossman, 2006).

Employing long-term student teams in the classroom can be a bit risky, especially if it increases the chances of inter-student conflict. Even so, the benefits of using teams outweigh the risks. Morgan (2002) suggests that "the optimal size for group is four," but in practice this number is a little low. To help groups adapt to any changes in the class list, that is, to help them absorb the loss of a team member, I have found that permanent teams of five or six function more effectively. Permanent teams work more efficiently than ad-hoc groups because the students do not require an "acquaintance" experience as the activity begins. Already familiar with their team members, students are able to get right to work. Teams are also able to work more effectively because the students themselves share the roles and responsibilities, and thus they can more easily keep themselves on task and cut out diversions (Nahavandi and Aranda, 1994). Of course, like groups, teams can be used in a variety of ways according to the comfort level of the professor and the subject matter of the discipline. Team activities can be used on an occasional ad-hoc basis to bring variety into the classroom or to deliver key course material; in some disciplines, such as engineering and business, teams can even be used to develop major course objectives (Zeff, Higby, and Bossman, 2006). However, if they are to be employed, a long-term, permanent team works best if the students within the group have diverse backgrounds and experiences and are heterogeneous in terms of their abilities (Oakley, et al., 2004). And oddly enough, although students do not initially think so, teams or groups work best if they are formed by the teacher (Oakley, et al., 2004). This may be because the students feel relieved of the responsibility, and the make-up of the team becomes someone else's fault.

Once the professor has committed to using active learning strategies and formed the teams to undertake the class, the principles which ensure successful collective experiences are fairly straightforward. Effective teams require clear

## ACTIVE LEARNING GROUPS: FORMING, USING, AND TROUBLWSHOOTING GROUPS AND TEAMS (CONTINUED)

BY DAVID CREELMAN — DEPT OF HUMANITIES & LANGUAGES

norms to guide their behaviour, engaging and appropriate activities, and the opportunity to assess their peers when the activity is complete.

**Establishing Clear Norms:**
Each group will have a variety of individuals: some will be experienced and bright, and others will be less experienced or even struggling. The quality of a group member, however, is not always determined by their intellectual prowess or their grade point average. Good team members are those individuals who adhere to a common code of conduct. Clear norms of behavior should be outlined by the professor, but can be modified and personalized to fit each group's needs (Oakley, et al., 2004). Providing the teams with clear norms sets behavioral expectations from the outset and helps avoid conflict (Oakley, et al., 2004). While codes of conduct can vary, I have reminded my students, that good team members attend regularly and make an effort to participate; concentrate on the question or the assignment at hand; share the responsibility of helping the team achieve its best results; come to class prepared and listen to others; do not distract others in the group; and, if they are unable to participate, inform members that they are unable to attend a group meeting and find other ways to contribute. Indeed, groups are encouraged to personalize their own code of conduct and some professors have even had their students sign off on a common set of expectations to help build a sense of team commitment (Oakley, et al., 2004)

**Six Principles for Developing Team Activities:**
Well-formed and well-functioning teams also need effectively structured activities to work on if they are going to succeed and learn. There are six core principles which, if adopted, help ensure that the collective learning experience is successful.
1) Whatever the activity the team undertakes, the task has to be both challenging and do-able. If a task is too simple or easy the group will resent devoting time and effort to a task with little intellectual payoff. Conversely, if the task is too complex or too large the groups may become discouraged and feel they are being set up to fail.

2) Team activities should address material or issues which are central to the course. If the activity is going to be the part of the course the students remember best, it makes sense to put the most important material at the heart of it. This may feel a bit risky to professors who would rather lecture on central concepts in order to ensure that the students get it right, but conventional pedagogies may not ensure that deep learning is occurring.

3) Activities should have multiple parts or components which allow the individuals to employ their diverse set of skills in order for the team to succeed. The best activities are those which promote learning and team building simultaneously.

4) The activities and outcomes need to be very clearly defined. If formal debates require typed opening statements, specify how long they need to be and exactly when they need to be submitted. If a group case study is developed, indicate exactly what kind of report will need to be handed in.

5) As anyone who has ever served on a committee knows, team work takes time, and students, with their busy work and class schedules, need a lot of advance notice to ensure that meetings can be scheduled, research completed, reports drafted, and revisions polished.

6) Lastly, be sure that team activities are worth a significant chunk of the final mark. Few students are content if they work weeks on a project which is worth only ten percent of their mark.

Many conventional (and unconventional activities) function well as team projects, and with a little research into the literature of cooperative learning, teachers can soon find models to create engaging team projects. Formal debates / impromptu debates, team quizzes, discussion groups, case studies, seminars, role-playing exercises, research projects, or internship activities have all been tackled by teams who emerge having mastered a variety of skills associated with their discipline (Creelman, 2006; Michaelsen, 2008)

**Peer-Assessment:**
Once the team activities have been completed, team members should be given an opportunity to evaluate each other's efforts and contributions. Individualized peer assessments, especially in those circumstances when all the members of the team are receiving a collective mark for the activity, are essential if the team is going to remain healthy and happy. Students do not mind doing more than their share if they know their efforts are going to be recognized and rewarded. There are numerous mechanisms for discerning an individual's value within a team. Professors have used inventories of questions and asked students to rate

## ACTIVE LEARNING GROUPS: FORMING, USING, AND TROUBLWSHOOTING GROUPS AND TEAMS (CONTINUED)

BY DAVID CREELMAN — DEPT OF HUMANITIES & LANGUAGES

their peers using a five point Likert scale, had students allocate a bank of points to team-members according to merit, and used peer comparison or ranking systems which allow the students to provide some details about their peers' work (Baker 2008). In some particularly large projects, professors have had teams keep a diary documenting the evolving nature of the work to ensure that students receive appropriate reward for their effort.

As a rule, teams of students generally get along well and function in a collegial manner. If students know that a peer assessment process is in place they will endure having a "slacker" on the team, knowing that the marking system will balance out in the end. I have formed over 250 teams of students, and on only two occasions have personality conflicts disrupted the group's performance. In the wake of the first instance I instituted a reporting mechanism whereby groups in conflict can ask the professor to intervene and help the group resolve their troubles. The benefits of using teams are increasingly confirmed by researchers, but there are minor difficulties which can arise, and professors should remain flexible and be able to accommodate student needs within reason (Laiken, 1998).

People are social, collectivist, communal beings. A university degree is a mark of individual achievement and merit, but the learning process leading to this accomplishment can include cooperative experiences. Especially for millennial students, the learning process is enhanced by collective activities; with some careful planning, professors can bring a sense of play and adventure into the classroom.

### References

Baker, Diane. "Peer Assessment in Small Groups: A Comparison of Methods." *Journal of Management Education* 32,2 (April 2008): 183-209.

Bonwell, C.; Eison, J. *Active Learning: Creating Excitement in the Classroom AEHE-ERIC Higher Education Report No.1. Washington, D.C.: Jossey-Bass, 1991.*

Burdett, Jane. "Degrees of Seperation – Balancing Intervention and Independence in Group Work Assignments." *The Australian Educational Researcher.* 31, 1 (April 2007): 55-71.

Creelman, David. "Formal Debates as a Class Activity." *Teaching Matters.* Jan. 2006. http://www.unbsj.ca/vpetc/documents/TMJan2006.pdf

Deeter-Schmertz, D., Kennedy, K, and Ramsey R. "Enriching our understanding of Student Team Effectiveness." *Journal of Marketing Education.* 24, 2 (2002): 528-541.

Felder, Richard and Rebecca Brent. "Effective Strategies for Cooperative Learning." *Cooperation and Collaboration in College Teaching* 10,2 (2001): 69-75.

Johnson, D.W, Johnson, R.T, and Stanne, M.E. *Cooperative Learning Methods: A Meta-analysis.* Minneapolis, University of Minnesota Press, 2000.

Kriflik, Lynda and Judy Mullan. "Strategies to Improve Student Reaction to Group Work." *Journal of University Teaching and Learning Practise* 4, 1 (2007):13-27.

Laiken, M. *The anatomy of high-performing teams: A leader's handbook* (3rd ed.).Toronto: University of Toronto Press, (1998).

Michaelsen, Larry. *Team Based Learning: The Power of Teams for Powerful Learning.*

Accessed 24/09/2008. http://www.ou.edu/pii/teamlearning/index.htm

Morgan, Adam. "Forming Effective Groups." University of Technology Sydney. [accessed 20/2/2010] http://www.iml.uts.edu.au/learnteach/groupwork/unit3.html

Nahavandi, A and Aranda E. "Restructuring the Teams for the Re-engineered Organization." *Academy of Management Executive.* 8, 4:58-68.

Oakley, Barbara, Richard Felder, Rebecca Brent and Imad Elhajj. "Turning Student Groups into Effective Teams." *Journal of Student Centered Learning.* 2, 1 (2004): 9-34.

Stein, R.F and S. Hurd. *Using Student Teams in the Classroom.* Bolton, M.A. : Anker Publishing Co., 2000.

Zeff, L.E. and Higby, M.A. "Teach More Than You Know." *Academic Exchange Quarterly*, 6,3 (2002): 155 -160.

Zeff, L.E., Higby, M.A. and Bossman, L.J. "Permanent of Temporary Classroom Groups: A Field Study. *Journal of Management Education.* 30, 4 (August 2006): 528-541.

# GIVING FEEDBACK—ELIMINATING THE 'OUCH!' FACTOR

BY JUDY BUCHANAN — COORDINATOR, TEACHING & LEARNING CENTRE

*"I think that many of my colleagues think that their chief responsibility is to find ability rather than encourage its development" (Bain, 2006, p 152).*

Using formative feedback as a learning strategy plays a vital role in engaging and retaining millennial learners. It has a powerful effect on learning, one which can be positive or negative (ergo the 'ouch!' factor). In order for feedback to be assistive and useful it must be needed, timely and specific and given in such a way that the learner both understands and is able to use it. In this brief essay I will describe formative feedback and note a few feedback practices that I have found useful with millennial learners.


I set about to explore this issue after teaching a first year nursing course two years ago, the average age in the class of 52 being about 18 years. Up to that point I had always taught upper-level courses. Would I need to find different strategies because the students were in the first term of their first year? If so, what should be different? In post-course reflection I came to understand reasons why some of my tried and true feedback practices backfired and why some of the new strategies that I attempted were so well received. It was in this reflection that I began reading more about millennial learners, noting that the often-quoted generational characteristics did come into play, and realizing in retrospect where I should have 'switched gears' when it came to assessment feedback. This experience led to my desire to join the *ME to Wii* team as a means of delving deeper into the issue of good formative feedback practices for millennial learners.

Before proceeding, I'd like you to take a moment to think about a high point in which you felt that your feedback made a positive difference in student learning. This would be an experience in which the information you provided to students helped them to improve or change something about their learning. What key words or phrases would describe the experience?

**What is formative feedback?**

"Formative feedback flows from assessment activities with the exclusive aim of providing information that allows [students] to learn something about their knowledge, skills, or attitudes and to make a change and ultimately improve learning" (Piccinin, 2006, p. 17). Using Piccinin's definition, one could say that formative feedback is assessment feedback, and in order to promote and advance learning our focus should not be on grading, but rather on learners' growth (Rae & Cochrane, 2008). If formative feedback is not intended to be evaluative (implied in both statements above) then it should not be counted toward the final grade. Do you agree? In surveys conducted prior to the *ME to Wii* workshops to date, many respondents indicated that they do not hold that view. I believe that there is a place to meet in the middle on this.

When providing formative feedback, primary considerations should include content, function and presentation (Schute, 2008). I've added my own spin (with the help of others) on these three elements.

*Content*

Feedback that is both specific and brief is most helpful. Long-winded feedback proves to be a waste of time. A learner might need feedback on a number of points, but to be most assistive feedback should address one or two points. Further feedback can be given at a later time, the rule of thumb being do not overload a student with too much feedback at one time (adapted from Egan, 2002). Too much feedback can lead to cognitive overload, which perhaps in the end is just as damaging as too little (or no) feedback.

*Function*

Based on a synthesis of research literature on formative feedback, Nicol and Dick (2006) constructed essential principles of good feedback practice. According to the authors, good feedback practice:

## GIVING FEEDBACK—ELIMINATING THE 'OUCH!' FACTOR (CONTINUED)

BY JUDY BUCHANAN — COORDINATOR, TEACHING & LEARNING CENTRE

1. helps clarify what good performance is (goals, criteria, expected standards);
2. facilitates the development of self-assessment (reflection) in learning;
3. delivers high quality information to students about their learning;
4. encourages teacher and peer dialogue around learning;
5. encourages positive motivational beliefs and self-esteem;
6. provides opportunities to close the gap between current and desired performance;
7. provides information to teachers that can be used to help shape teaching. p.205

*Presentation*

The timing of the feedback is of paramount importance. Timing can vary, depending on the level and need of the student. One must be sensitive about the way in which feedback is given – is it to be descriptive, interpretive or evaluative? Piccinin (2006) warns about the latter: "evaluative feedback is synonymous with criticism. Thus all criticism is a type of feedback, though not all feedback is criticism" (p.18).

**Formative Feedback and Millennial Learners**

Before moving into this section, I'd like to emphasize that characteristics of any group cannot be expected to accurately describe an individual learner. All generations have brought challenges, strengths and the history of their time to our campuses. That being said, there are widely accepted characteristics of this generation that I will use. For purposes of this essay, I will only highlight a few of the classifications. These are taken from Pattengale's (2008) list.

*Special*

Being special requires that reinforcement be frequent, positive and that problems be dealt with quickly. Millennials welcome feedback and structure. What works are frequent quizzes and small assignments. These help reduce the anxiety of students who might otherwise view that their success or failure rests on capstone projects or heavily weighted exams. As instructors we can develop a 'toolkit" of various assessment strategies in order to draw out the strengths of different learning styles and to broaden the scope of academic skills of the learner group. Giving assessment feedback in short bursts is also beneficial for those students who have set high expectations for themselves (Wilson, 2004).

*Sheltered*

There is an increased scrutiny of what goes on in the classroom (by students as well as their parents), and the number of complaints over grades and assessments that have been perceived as unfair is rising. Many students will challenge the instructor if less than perfect marks have been awarded. They may be very willing to say "**Your** pedagogical technique is not working for me, and I need **you** to alter the way that **you** teach, or the way that **you** supervise or the way that **you**r program is set up to better meet **MY** needs" (Lewis, 2009, p. 25).

In order to provide feedback in the face of this, it is essential that clear, reasonable and measurable objectives/outcomes be set within the syllabus and that there is an unambiguous description of how these outcomes will be both met and measured. Rubrics work especially well in laying out the specific expectations for assignments and encouraging discussion about ways to improve as opposed to arguing over the grade. Sample rubrics are available at various sites such as *Rubrics for Assessment* (http://www.uwstout.edu/soe/profdev/rubrics.shtml). When used well, rubrics can move a student-teacher interaction from one of argument over a grade to one of authentic dialogue.

*Team-Oriented*

Millennials have strong team skills and peer bonds; relationships are important, and technology can be used to support this value. Thus learning to teach in ways that combine teamwork and technology is highly successful. An example is one that comes out of a course that I am currently team-teaching. The course structure is built on the practices inherent in Team-Based Learning (TBL) and includes having the students use a team wiki as a major component of the capstone project. In the span of this term students complete weekly assignments, first independently and then with team collaboration. While the teams are working on the assignment, the individual responses are graded; once the teams have completed the assignment these are graded (it takes about 3 minutes). Feedback is then given on the overall responses to the assignment, with discussion on incorrect responses. This fits in with Price's (2009) conclusion, based on a qualitative analysis of 100 millennial students' narratives, that millennial students want **all** assignments graded and thus incorporated into the course grading system.

## GIVING FEEDBACK—ELIMINATING THE 'OUCH!' FACTOR (CONTINUED)

BY JUDY BUCHANAN — COORDINATOR, TEACHING & LEARNING CENTRE

In TBL, having student teams develop their team norms is another strategy to ultimately teach individual students how to provide realistic self-assessment as a member of a learning team and peer-assessment to team members. This exercise can occur at points throughout the course so that improvements can be made if required

*Confident*

Millennials may express more of a collective confidence (safety in numbers) than a desire to risk standing out on their own. As an aside, Lewis (2009, p. 14) makes a point that being self-confident doesn't necessarily mean having a reason to be self-confident; in other words, we may actually be witnessing a faulty (ungrounded) sense of confidence. I have found that the old standby, the minute paper is a great way to gauge individual learning and then to give (in real time) feedback to the class on points well understood and points requiring further clarification. Since these are anonymous, no student is singled out for 'getting it wrong'. Michael Zeilik provides a clear overview of the minute paper (including description, purpose and limitations) at http://www.flaguide.org/cat/minutepapers/minutepapers1.php

Although we do not want to shatter any student's self-confidence, corrective feedback should not be avoided. If students are to learn from their mistakes, they need to know what they are. When given in a humane way, corrective feedback is a powerful tool for learning. Part of a humane delivery is specificity – what specifically did the student do or fail to do? General statements are not helpful (adapted from Egan, 2002).

In conclusion I'll refer us back to the seminal work of Chickering and Gamson (1987). Based on fifty years of research on teaching, the researchers identified seven good practices for undergraduate education. These practices are as relevant today as they were more than two decades ago: (1) encouraging contact between students and faculty, (2) developing reciprocity and cooperation among students, (3) encouraging active learning, (4) giving prompt feedback, (5) emphasizing time on task, (6) communicating high expectations, and (7) respecting diverse talents and ways of knowing. Therefore, the secret to motivating Millennials is actually no secret after all. Give them feedback frequently and constructively, and in a supportive way that challenges them to exceed even their own expectations.

**References**


Bain, K. (2004). *What the best college teachers do*. Cambridge, MA: Harvard University Press.

Chickering, A. W., & Gamson, Z. F. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin, 39* (7), 3–7.

Egan, G. (2002). *Exercises in helping skills: A training manual to accompany 'The Skilled Helper'* (7th ed.). Pacific Grove, CA: Brooks/Cole, pp.3 - 4.

Hill, C. (2009) Assessment for the millennial generation In R. Kelly (Ed.). *Put to the test: making sense of educational assessment* . Magna Publications, pp. 7-8 (found at http://www.facultyfocus.com/).

Lewis, W. S. (2009, July 14). *A perfect storm: Understanding & managing millennial students*. Magna Online Seminars.

Michaelsen, L. & Sweet, M. (2008, Winter). The essential elements of team-based learning. *New Directions for Teaching and Learning,* (116), 7-27. doi:10.1002/tl.331

Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: a model and seven principles of good feedback practice. *Studies in Higher Education*, *31*(2), 199-218.

Pattengale, J. (2008, May 29). *Motivating millennials & digital natives*. Magna Online Seminars.

Piccinin, S. (2006). *Feedback: Key to learning* (4th printing). McMaster University, Hamilton, ON : Society for Teaching and Learning in Higher Education.

Price, C. (2009). Why don't my students think I'm groovy? The new "R"s for engaging millennial learners. *The Teaching Professor*, *23*(7), 7-8. An expanded version of this article is found at www.drtomlifvendahl.com/Millennial%20Characturistics.pdf

Rae, A., & Cochrane, D. (2008). Listening to students: How to make written assessment feedback useful. *Active Learning in Higher Education, 9*(3), 217-230.

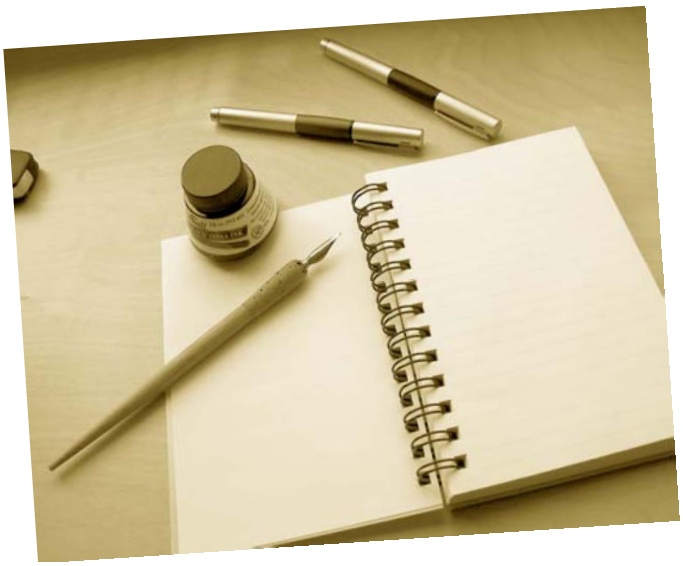
Shute, V. (2008). Focus on formative feedback. *Review of Educational Research, 78*(1),
153-189.

Wilson, M. (2004, Summer). Teaching, learning, and millennial students. *New Directions for Student Services, 106*, 59-71.

# WRITING AND THE MILLENNIALS

## BY SANDRA BELL — DEPT OF HUMANITIES & LANGUAGES

An ability to write clear, persuasive, well-organized prose is probably one of the most important practical skills students receive from a liberal arts education. Writing is certainly one of the skills employers repeatedly claim is essential. The National Commission on Writing of 2008 states that "Individuals with poor writing skills frequently face limited career options and lower earnings potential, and society as a whole pays a significant cost when growing numbers of students need additional writing remediation to succeed in the workforce" (1).



When asked what constitutes "good writing," teachers at post-secondary institutions in all disciplines frequently mention such attributes as "conciseness," "clarity" and "organization," as well as an awareness of grammar and punctuation; a hopeful "stylistically interesting" or even "creative" is sometimes added. However, teachers also complain that it is not easy to get students to produce such writing, and we sometimes, without perhaps giving it much thought, lay the blame on the increasingly electronic world inhabited by millennial students.

Millennial students' approach to writing is often thought of as being shaped by their digital habits. On facebook or on blogs, or while txting, they produce shorter 'bursts' of writing, and while they might produce lots of it, teachers worry that this approach to writing often skims the surface and is colored by grammatical and linguistic short cuts. Also, while millennial students enjoy a large audience for their electronic writing, a sensitivity to how different audiences might read what is written does not always develop. And teachers fear that despite having editing programs and a world of information at their fingertips, millennial students do not use these tools wisely. Added to this is the concern that many students are not getting enough writing practice at the secondary school level. The National Commission on Writing of 2008 reported that "Most teens write something nearly every day for school" (iii), but 82% of teens report that their typical school writing assignment is a paragraph to one page in length. No wonder the transition to lengthy, researched and carefully argued assignments can be difficult.

It is easy to grumble, and I'm sure each generation of teachers complains of the woeful shortcomings of the students who come after them, but as teachers, we need to assess what is useful about the current writing practices of millennial students, and get creative about how we can employ these skills in teaching writing for our various disciplines. I would argue that no matter what the student label — Millennial, Gen X or Y, or Boomer — and no matter what the educational setting, writing projects should provide clear guidelines/ objectives / goals and an understanding of context and audience to help students situate themselves in relation to both the process and the product of writing. Before we can expect students to know what they're doing, we need to know what we're doing; we need to know what direction we are going in, and, to continue the metaphor, we need to give students a clear road map.

Most important is practice. I can read a hundred cookbooks and never be able to cook a meal. I might learn all the rules of soccer, but never be able to play the game.

## WRITING AND THE MILLENNIALS (CONTINUED)

## BY SANDRA BELL — DEPT OF HUMANITIES & LANGUAGES

Similarly, I can talk about writing with my students all I want, but if I don't give them the opportunity to practice the skill, it will never develop. This is perhaps the biggest quandary we as teachers face: how can we, with large classes and various demands on our time, respond to the writing that we should demand from our students? How can we provide formative feedback—and writing without feedback is not very useful--that will help them improve?

One method that I have employed, especially in my lower level courses when the writing skills are developing, is a Peer Editing Session. For every paper I assign (because I am an English prof, my students mainly write essays), I dedicate one 50-minute class to a Peer Editing Session: during this time, students exchange papers and work with a rubric that provides some clear guidance on organizational details. I then give the students a couple of days to revise their papers, and they hand in the edited paper, the revised good copy, and the Peer Editing sheet (that lets me know who participated).

This exercise accomplishes a number of goals: it provides students with clear directions, it develops expectations of a wider reading audience, and it allows students to practice their editing skills. If it's true that we learn something more deeply when we teach it, this exercise allows the students to become the teachers. It also appeals to many of the characteristics of the millennial student, especially a comfort level with interaction and a desire for immediate feedback.

The example provided below is tailored specifically for English papers, so I have divided my initial sections into the main sections of an essay, and asked about specific details of form and content related to this type of assignment (you can think about a type of writing assignment you give students, and how you might structure this 'check list' to ensure they are meeting the necessities of both form and content). You might note that I've left comments on content up to the discretion of the editor; while this might indicate that I value form above content (which is not the case), I have found it the easiest approach for student editors, who may be more tentative in addressing issues of argument. Many of the small details are corrected in the Peer Editing Session, which leaves me with more time to comment on content when I'm marking. The choice to include more specific questions on content is, of course, yours, as this is a very flexible outline (I've changed it many times, for different courses and different levels).

**Reference**

Lenhart, Amanda, Sousen Arafeh, Aaron Smith and Alexander Rankin Macgill. "Writing, Technology and Teens." Pew Internet and American Life Project / The National Commission on Writing. (24 April 2008). http://www.collegeboard.com/prod_downloads/prof/community/PIP_Writing_Report_FINAL.pdf

# WRITING AND THE MILLENNIALS (CONTINUED)

## BY SANDRA BELL — DEPT OF HUMANITIES & LANGUAGES

### Peer Editing

Note for Editors: Be as thorough and objective as you can be; the point is not to be nice, but to be helpful. N.B.: Print and sign your names at the bottom of this page.

Note for Writers:. Remember that this is your paper, and you are responsible for the final product. You do not need to agree with everything the peer editors say, but consider their efforts. Make sure you attach this sheet to your peer-edited draft, and attach both to your final good copy.

**Title**: Is it clear? Detailed enough?

**Introduction:**

Both the first and last names of the author(s) discussed are present. y___ n____

The titles of the texts discussed are included properly. y___ n____

There is a clear and detailed thesis statement. y___ n____

**Main Body Paragraphs:**

Each paragraph has a clear, focused topic sentence. y___ n____

Each paragraph remains true to that focus. y___ n____

Main ideas are supported with evidence from the texts. y___ n____

Ideas are presented in an effective order, with clear transitions. y___ n____

Each paragraph is fully developed ( 3 or more sentences). y___ n____

**Conclusion:**

The main ideas are confirmed, without a feeling of repetitiveness. y___ n____

**Assignment:**

The paper understands and addresses the requirements of the assignment. y___ n____

**Formatting:**

Quotations are formatted according to MLA requirements. y___ n____

All quotations, summaries, paraphrasings or borrowings from primary and secondary sources are properly documented. y___ n____

The Works Cited page includes all the texts referenced in the paper. y___ n____

The Works Cited page is formatted according to MLA requirements. y___ n____

Grammar, spelling and punctuation have been checked. y___ n____

**Ideas**

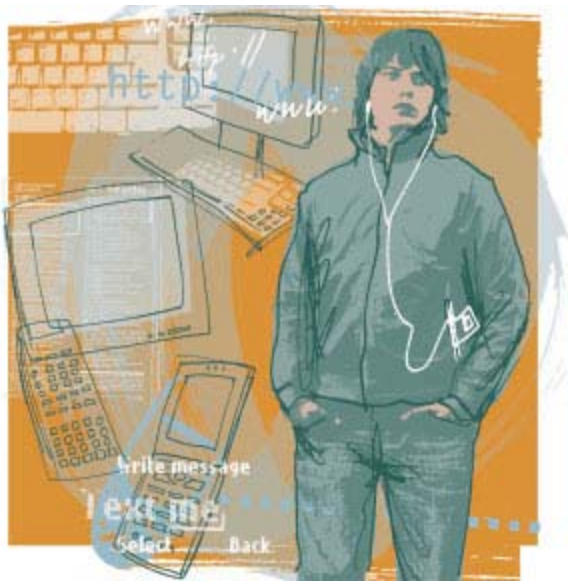
If you feel comfortable doing so, please indicate on the essay if there are ideas which are not clear or persuasive or adequately supported. The writer can then address these areas.

# LAPTOPS AND THE SPECTRE OF MULTI-TASKING

## BY FRED DONNELLY — DEPT OF HISTORY & POLITICS

Another week and another fulmination against laptops in the classroom by a teacher. This time it's an American college professor writing in a professional educational bulletin. He has given up on these devilish devices in his classes. They are banned because they inhibit class discussion, allow students to disturb each other and who knows what they are looking at on those things.

As most teachers now look out on their charges they often see, not the beaming visages of those eager to learn, but the crowns of their heads as they lean over their keyboards, the flip-up covers of which partly block out their faces. It's a new learning environment and most instructors are not amused. The banning of electronic gizmos, [cellphones, iPods, laptops and even some types of calculators] has probably been considered at one time or other by most of us in the teaching professions.




The big pedagogical villain here is something called multi-tasking. Our students think they can send e-mails, do online banking or gaming, while taking lecture notes. Most instructors, especially older ones, disagree and are quick to point to studies proving that concentration is lost when multi-tasking.

Yet I wonder whether something else is also at issue here. Consider how people worked in the pre-industrial era. Labourers in agriculture and construction sang on the job. Weavers composed poetry to the rhythm of the loom and many skilled artisans employed a boy to read to them while they worked. Everyone talked on the job and took unscheduled breaks quite frequently. In short they laboured away in a multi-tasking environment.

Then two and a half centuries ago something called the industrial revolution began. Manufacturing increasingly was performed in factories for money wages. The employer purchased the worker's time and demanded a strict focus on the task at hand.

So factory workers came to be subjected to a new discipline. In addition to the expected prohibitions of drunkenness, assault, theft, and improper language in the workplace there was something else. Most early factories had a set of additional rules that had to be obeyed or risk a serious fine to be deducted from wages. Typically these included; no whistling or singing at work, no talking, no staring out the windows at the passing scene and no leaving the work bench without permission.

The early factory masters, overseers and bosses were no-nonsense, profit-driven capitalists determined to put an end to pre-industrial multi-tasking work patterns. Over the past two centuries they have been largely successful in driving out these "bad" habits of the workforce.

Moreover these same values have been inculcated by the comprehensive educational systems of modern societies. What did we learn in school besides the three "R's"? We learned to pay attention and sit in one place for long stretches of time. We learned to be punctual and to keep quiet when the teacher was speaking. The natural tendency to bother the other students and to stare out the window had to be curtailed. We became mono-taskers as we worked our way progressively through the school system. After six or seven generations of the industrial and school system experience most of us have so internalized the new work ethic we have forgotten that the traditional world of work was a multi-tasking environment.

## LAPTOPS AND THE SPECTRE OF MULTI-TASKING (CONTINUED)

## BY FRED DONNELLY — DEPT OF HISTORY & POLITICS

And so the lecture hall of the postsecondary institution became a place of mono-tasking by note taking in a book or on a clipboard. The world of industry had its analogue at the university or college.

Then along came the dreaded laptop, the sinister unanticipated machine which disrupted everything. Now the students have their own portable windows to stare into, they can listen to music, play games or communicate with others both in the classroom and outside it. Indeed there is a sense in which they can "virtually" leave and still be there. All the while they are seated at their work benches—oops sorry—their places in the classroom and presumably also taking notes from an instructor.

So now I'm having a re-think about my position on laptops in the learning process and the option to ban them. Is it a purely pedagogical issue or is there something else in play here? Is there a clash of cultures between two generations in our society? Perhaps there is a generation of successful mono-tasking geezers who know no other way of getting results and who have unwittingly internalized an industrial work ethic. Meanwhile a younger generation has started to revert to a pre-industrial multi-tasking work culture, one that largely was extinguished in the industrial revolution that began more than two centuries ago.

By all means we need rigorous studies to determine the quality of learning in a multi-tasking environment. At the same time such rigorous testing must include an awareness of deep-rooted and perhaps hidden cultural values such inquiries will involve.

## Effective Teaching Institute

## Creating Balance in Work, Life, and Play

## UNB Saint John – October 30, 2010

**Workshop Blurb**: Creating a balance between university, home, and leisure can be difficult. After all, teaching has a way of taking over a person's life. This workshop will provide the rationale for finding a more balanced way to live, and will offer some real-life practical guidance to finding and creating balance in your work, home, and leisure. Using a variety of interactive teaching/workshop techniques, topics covered within a healthy living framework include stress management, physical activity, and dietary intake. Participants will reflect on their own situation and will have opportunities to learn from and with one another.

**Bio**: Angie Thompson has been actively engaged in her teaching and research regarding healthy living since joining the Department of Human Kinetics at St. Francis Xavier University in 2001. An Outstanding Teaching Award recipient in 2005 (StFX), Distinguished Teaching Award winner (AAU) in 2007 and 3M National Teaching Fellow in 2010, Angie practices what she preaches. She is a frequent presenter at "teaching" conferences, seminars, and workshops (at StFX as well as provincially, nationally, and internationally) sharing her approach, enthusiasm, and style for teaching, particularly in regards to healthy living.

**To register contact Judy Buchanan at sjteach@unbsj.ca**

## New Webpage for the Teaching and Learning Center

The Teaching and Learning Centre at UNB Saint John is pleased to announce that it's new webpage is up and running. The webpage, at http://www.unb.ca/saintjohn/teachlearn/index.html, gives the teachers at UNB Saint John information about and easy access to the many resources of the TLC, including the centre's activities, personal services and programs, informational technology, helpful hints about teaching, and news about up-coming events. Have a look the new page! Think about how you'd like to be involved with UNB Saint John's rich teaching culture!