

TWELVE TIPS

Twelve tips for facilitating Millennials' learning

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Abstract

Background: The current, so-called “Millennial” generation of learners is frequently characterized as having deep understanding of, and appreciation for, technology and social connectedness. This generation of learners has also been molded by a unique set of cultural influences that are essential for medical educators to consider in all aspects of their teaching, including curriculum design, student assessment, and interactions between faculty and learners.

Aim: The following tips outline an approach to facilitating learning of our current generation of medical trainees.

Method: The method is based on the available literature and the authors' experiences with Millennial Learners in medical training.

Results: The 12 tips provide detailed approaches and specific strategies for understanding and engaging Millennial Learners and enhancing their learning.

Conclusion: With an increased understanding of the characteristics of the current generation of medical trainees, faculty will be better able to facilitate learning and optimize interactions with Millennial Learners.

Introduction

Successful teaching requires an understanding and appreciation of the learners' needs, backgrounds, interests, and learning styles. In medical education today, as in most academic settings, many faculty are selected to teach based on their years of experience and expertise. This often results in a cadre of senior educators who were born in earlier generations than their learners.

Based on age difference alone, there exists a significant likelihood of intergenerational tension between teachers and learners in medical education. Although this has held true for many years, the potential for generational difference in terms of teaching techniques and learning styles may be exaggerated today due to the rapid growth of new technologies and their incorporation into the daily fabric of society. Additionally, Millennial Learners, ranging from medical students to junior physicians in training and practice, have distinct perspectives on the world around them, their interactions with patients, and their learning needs.

As described in more detail in the first two tips, “Millennials” were first defined as those individuals who turned 18 in the year 2000 and entered college or the adult workforce (Howe & Strauss 2000). In this article, we identify 12 tips for teaching Millennial Learners to maximize the skills and impact of today's medical educators.

Tip 1

Educate yourself about the concept of generational differences

Over the past century, there have been several distinct cultural generations of individuals. A generation is defined as individuals of a particular age group who share common experiences, values, communities, and sense of identity, all of which are shaped by major national and/or world events or social trends. The last four “named” generations have been routinely identified as the Silents, the Baby Boomers, the Generation X, and the Millennials.

The Silent Generation encompasses those individuals born between 1928 and 1945. These individuals' lives were shaped by the Great Depression, the strength of the superpowers, and World War II. Following this, the Baby Boomer Generation includes those individuals born between approximately 1946 through 1964. During this time frame, individuals' lives were marked by significant political and social upheaval, including the civil rights and women's liberation movements and the Vietnam War. Individuals born between 1965 and 1982 are considered to be members of Generation X. This is a time period marked by relative growth and stability in the world economy and rise of numerous cultural freedoms. The Millennial Generation, comprising the students in our classes today, begins with those individuals born since 1982. The term “Millennial” was first applied to those who would reach age

eighteen and enter college or the adult workforce at the turn of the millennium.

Specific suggestions to learn about generational characteristics:

- Read popular culture books (Howe & Strauss 2000; Zemke et al. 2000) or medical education literature (Berk 2009; Twenge 2009; Borges et al. 2010) regarding generational descriptions
- Become aware of your own generation's characteristics and consider how they might impact your teaching style
- Spend part of a faculty meeting discussing generational differences
- Watch a short video online, "Who are the Millennials?" (Hamilton 2009)
- Take the Pew Research Center's (2011) online quiz "How Millennial Are You?"

Tip 2

Recognize the environmental and cultural forces that affect the Millennial Learner

The current generation of learners in medical school today, born between 1982 and 2000, is known by many names including the Millennial Generation, Net Generation, Generation Y, Generation Me, and the Digital Generation. Distinct from the prior generation, (Generation X), the Millennials have been subject to several strong environmental and cultural influences including the omnipresence of online technology since birth, novel modes of communication (cell phones, texting, email), the weakening of the global economy, the absence of strong "hero" figures, the tragedy of September 11, and several ongoing wars.

Members of this generation are generally felt to be technologically savvy, interested in fairness, attracted to teamwork and community building, and accepting of diversity. However, they are driven by self-interest, often prefer structured environments for learning, and are used to immediate satisfaction of needs. Evidence from large secondary and post-secondary education studies suggests Millennials demonstrate a tendency toward narcissism (Twenge 2009), and an interest in affiliation and achievement rather than the prior generation's interest in power (Borges et al. 2010).

Specific suggestions to better understand how today's technological and social influences affect your Millennial students' learning styles:

- Invite students to describe their learning activities on a "typical" day
- Ask students to list the technologies they use either to keep in touch with friends or to collaborate with fellow students on team projects
- Survey students as to how they studied for an exam or which resources they used to complete an assignment

Tip 3

Understand how potential intergenerational tension may impact learning

Teachers must avoid assuming that current learners will share the same learning styles, goals, and interests they themselves had as learners a generation earlier. In medical education, as in most academia, there is often a sense of glory about the faculty "giants" who come before the current cohort of learners to convey their wisdom and knowledge.

Frequent comparisons to "the way I was taught" or prior educational experiences may prevent a focus on the current generation and their own unique learning needs and special capabilities, which tends to put the students on the defensive. All learning is contextual and teachers need to be aware of how their own generational biases could inhibit interactions and negatively impact learning.

Specific suggestions to limit intergenerational tension in terms of learning approaches and expectations:

- Highlight areas of overlap and similarity, rather than difference, between prior and current learners
- Avoid references to prior learning environments or requirements that may have little relevance for current learners
- Avoid assumptions about current learners' motivations. Consistently encourage curiosity and discovery, however, it may manifest (i.e., conducting online literature searches versus spending time in the stacks of a library).

Tip 4

Millennials need guidance and focus in their learning

Millennial Learners have the power of the Internet at their fingertips and literally "with" them via smartphones and other devices 24 h a day. The power of this technology is infinite and often overwhelming.

Millennial Learners need help wending their way through the vast, modern learning landscape. For example, when a first-year medical student "Googles" the word "anemia" or looks up this term on a medical information website the student must sift through several million potential web hits or numerous webpages of only potentially relevant data to find the information originally sought.

In this situation, teachers can provide key support by emphasizing relevance and helping learners prioritize and identify context for their learning. Today's learners will always be able to provide "content-based" answers simply by regurgitating information from the Internet. In contrast, tasks that require synthesis, application, analysis, reasoning, interpretation, and other more complex thinking and processing engage students in deeper learning and enhance critical thinking skills.

Specific examples of how educators can guide, focus, or redirect learning for Millennials:

- Remind learners to focus on the "why, how, and in what context"

- Avoid asking students to list or identify specifics (answers easily found with an Internet search), and encourage students to apply knowledge through problems that require critical thinking

Tip 5

Identify your teaching or life philosophy

To enhance your impact on Millennial Learners, they need to understand more about who you are, how you got to where you are, and what choices and decisions led to the path you have taken. The more you can describe how you balance work and life, the more your learners will feel a connection to you and understand the relevance of your teaching.

To demonstrate your interest in their education and your awareness of how the material you are teaching can be practically applied, share your philosophy of teaching, why you chose a particular reading, or how you use a clinical skill in your practice. In contrast to a web-based service that provides solely factual answers or content, you as a “live” teacher have the opportunity to interact and connect with learners through shared experiences and opportunities to model how to prioritize learning tasks, apply information to solve problems, and balance work interests and family life. Millennials thrive on social networking; it is best if you can connect with them on a personal as well as a professional level. Sharing your own or your family’s experiences of disease or loss has a tremendous impact on students not only for that particular discussion but for those that follow.

Specific suggestions to connect with Millennial Learners and enhance your teaching impact:

- Always introduce yourself to your learners and provide details on your background and path to your current role
- Share details of why you enjoy your position and the rewards you receive from your work
- Provide examples of how you link or balance work and home life and interests

Tip 6

Learn how to utilize current eLearning technologies

Good teaching is not replaced by technology, but rather enhanced by it. Much of the language of today’s learners evolves from rapidly changing technology, and it is important to keep abreast of how your students are learning and communicating.

While specific content of our teaching may remain stable (the physiology of blood flowing from the heart through the aorta has remained unchanged), how we organize, present, or disseminate that content continually evolves. Some content remains in books or texts, but other forms, such as blogs, Podcasts, and free streaming videos, provide unlimited access to medical knowledge and viewpoints. Becoming aware of available new technologies and how they are being used in medical education is key to understanding how current

learners are interacting with content (Ruiz et al. 2006; Cook et al. 2010). There are also new means of collaborating with fellow learners on projects and disseminating that content through web-based resources, so-called “webinars,” or social networking services like Facebook.com and Twitter.com. Computer-based animations and simulations may assist students as they struggle to understand difficult concepts and apply their knowledge to solve problems.

Specific suggestions for learning about the current eLearning technologies:

- Ask your children or your learners to show you how to maximize the use of your smartphone or computer
- Speak with your school or hospital’s Information Technology (IT) department about what education technology tools are available for you to use
- Survey students on how they use current curricular materials
- Identify new ways to disseminate content for students to use and review

Tip 7

Recognize that Millennials value (and expect) aesthetically appealing educational presentations

Modern learners are used to fun, game-like, interactive, and engaging materials that often have an appealing look and feel. Current software and technology to create and disseminate content enable materials to appear attractive in a way that a short while ago could only have been achieved by professional designers.

One consequence of this revolution in content design is that Millennial Learners have higher standards and expectations of how material is presented. You may need to update and improve the PowerPoint slides that were once state of the art but are now outdated.

Specific suggestions for medical educators seeking to improve their presentation material include:

- Tap into local expertise or take a faculty development course to learn how to embed video, surveys, and graphics into your presentations
- Utilize free web-based resources (such as videos on YouTube) on how to practically apply new presentation technologies
- Ask colleagues or invite students to review your slides or curricular materials and provide feedback and suggestions

Tip 8

Emphasize opportunities for additional help and support

Many Millennial Learners were raised by so-called “helicopter” parents who hovered nearby, making themselves available to assist with any type of need or challenge. As a result, some Millennials may arrive at graduate and professional schools more comfortable asking for or expecting support when faced

with difficulties or challenges rather than solving problems on their own. Data also suggests Millennial Learners are more anxious in new learning situations, which may result in a preference for more structured learning environments (Twenge 2009).

These students have availed themselves of help before and, when offered again, will accept guidance and assistance without a sense of stigma. In addition to being more open to feedback than prior generations of learners, current learners may actually crave more structure, more attention to their whereabouts (these are students who are frequently posting "status updates" on their Facebook pages), and more direct observation of their own skills and development.

Modern learners also have less patience with delays or resources and support that are difficult to obtain. This may manifest as an inherent expectation that you will be available as their teacher and guide 24/7 or welcome late night calls, emails, or pages. In order to best reduce anxiety and frustration, students need to establish structure in their learning environment, be taught reasonable ways to obtain help and understand any limits you set on access to that help.

Specific suggestions for teachers who wish to offer help and guidance more successfully:

- Post directions, reading assignments, and a list of available resources on a website that students can easily access
- Establish "office hours" when a student can drop by to discuss a concern
- Directly observe student performance and provide specific feedback
- Provide structure to learning activities and set specific achievable targets for learners (e.g., "By the end of this 3-month internal medicine block, you will be able to perform a complete history and physical on 2 new patients per session.")

Tip 9

Encourage modern forms of curiosity and exploration

Although current Millennial Learners may not dig through dusty volumes in medical library basements, many of them are curious, motivated to learn, and interested in seeking novel answers to difficult questions. Our current learners may be sleuths on the Internet or savvy about utilizing social networking to find the answer to a thorny challenge.

It is important to encourage all forms of creative thinking and exploration, even if it is not exactly how we would have engaged in learning when placed in similar educational situations. Sharing your own sense of curiosity as well as the rewards you receive through discovery and learning are likely to be appreciated by your Millennial Learners. While the correct solution is important, the process by which one gets there is equally of interest and worthy of attention.

Specific suggestions for encouraging curiosity and exploration include:

- Provide challenges or problems for which answers cannot be found with simple online searches
- Avoid setting limits on exactly how a task must be completed
- Share challenges or problems you are currently researching and rewards you have obtained from prior explorations and discoveries

Tip 10

Recognize the importance of team dynamics and encourage collaboration

Millennials are generally considered to be successful team players and are often more comfortable working in groups than on their own. Intellectually, they are less limited by preconceived notions about roles or social barriers, and are open to new ideas. As a result, teamwork and team dynamics become an important element of more successful learning environments.

If medical students are working together in teams on the clinical wards, it is vital to establish an opportunity for them to discuss their experiences. Furthermore, if they are to be successful in the clinical environment, we must enable them to have opportunities for training that fosters the development of team skills and the tools necessary to address interpersonal conflicts. Equally important, education technology can be harnessed to enable learners to work together at great physical distances or when separated by time zones.

Millennials may struggle on teams in which their role is limited due to a rigid hierarchy that accentuates their low stature. For example, a medical student on a surgical subspecialty team may only be able to play a limited role due to the technical nature of the work. To maintain engagement with current learners, teams need to work toward inclusiveness and ensure that students have a sense of purpose and clear learning objectives appropriate to their level of training.

Specific suggestions to enhance or teach about team dynamics and encourage collaboration:

- Utilize a simulation environment to have individuals play different roles
- Encourage students to work together utilizing social networking resources
- Ensure that students feel engaged and that their participation on a team is acknowledged
- The work product of students on teams (i.e., notes) must be reviewed, evaluated and recognized in some way as an important part of the overall work of the team

Tip 11

Be fair and straightforward

Millennial Learners have unfortunately been raised in a time when scandals are common, when many leaders have fallen

from grace, and when fear and anxiety about the stability of our global economy and environment are typically the norm. Hence, a sense of calm and security is elusive for many in our society today. Additionally, unlike prior generations who valued and idolized heroes, today's learners have fewer heroes and have suffered great disappointments from prominent figures in athletics, entertainment, politics, and business. Consequently, Millennials tend to have a strong sense of self-liking that can be viewed by others as narcissistic, and skepticism of hierarchy, which can be challenging for faculty.

Millennial Learners, therefore, benefit from consistency, reassurance, and reminders that they are learning within a framework that is fair and reasonable. Once the rules are set, they should not be changed midstream. Similarly, it is important to remain as impartial and unbiased as possible when faced with decisions affecting learning.

Environments in which grading may seem judgmental or subjective, such as clinical clerkships during third year, may be significantly more challenging for Millennial Learners to comprehend and accept.

Specific suggestions to enhance students' sense of a fair and honest learning environment:

- Learning objectives should be clearly identified with frequent reminders as to their location and importance
- Useful and meaningful feedback should be given in a timely and appropriate manner
- Factors that determine scores and grades should be transparent and available to students

Tip 12

Identify the limits of multi-tasking

Many Millennial Learners identify themselves as successful multi-taskers, and believe in the merits of their skills. Today's teachers can play an important role in debunking the myth that learning can be accomplished successfully while simultaneously juggling multiple other activities. Retention, recall, understanding, analysis, and engagement all fail when one is faced with multiple competing streams of information and stimulation. The attributes of successful learning – including focus, engagement and attention – in conjunction with critical evaluation of material, need to be emphasized and encouraged.

Technology is omnipresent and temptations for distraction inundate our current learners. Faculty can help learners avoid the temptation to shop on the Internet, send a few text messages, or read the latest headlines during their teaching or morning rounds. Specific suggestions to limit multi-tasking and encourage focus include:

- Limit your own use of email, texting, and other communication technologies during teaching sessions
- Ask students to complete *The New York Times* online test "How Fast You Juggle Tasks" (Ophir & Nass 2010) to measure how fast they can switch between tasks and discuss their results and how multitasking may affect patient care

Conclusion

Every generation of teachers faces challenges related to the inherent separation in age from their learners and from the consequent differences in social, environmental, and technological influences. While this challenge dates back to before the time of Socrates, our current Millennial generation poses a number of specific challenges for the modern medical educator. Through the specific tips and strategies detailed here, we believe that current medical educators can not only reach and teach these learners, but also have a profound impact on their learners' lives and achievement. Teaching Millennials also provides opportunities for educators to try new teaching methods, have fun, and interact and collaborate with their learners in interesting, dynamic ways.

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References

- Berk RA. 2009. Teaching strategies for the net generation. *Transformative dialogues: Teach Learn J* 3(2):1–24.
- Borges NJ, Manuel RS, Elam CL, Jones BJ. 2010. Differences in motives between Millennial and Generation X students. *Med Educ* 44(6):570–6.
- Cook DA, Garside S, Levinson AJ, Dupras DM, Montori VM. 2010. What do we mean by web-based learning? *Med Educ* 44(8):765–74.
- Hamilton K. 2009 July 22. Who are the Millennials? [Video file]. Available from: <http://www.youtube.com/watch?v=hzCBtsvtD8I>
- Howe N, Strauss W. 2000. *Millennials rising*. New York: Vintage.
- Ophir E, Nass C. 2010. Test how fast you juggle tasks. *The New York Times*. [Published 2010 June 6]. Available from: <http://www.nytimes.com/interactive/2010/06/07/technology/20100607-task-switching-demo.html>
- Pew Research Center 2011. How Millennial Are You? [Accessed 2011 February 23]. Available from <http://pewresearch.org/millennials/quiz/intro.php>
- Ruiz JG, Mintzer MJ, Leipzig RM. 2006. The impact of e-learning in medical education. *Acad Med* 81(3):207–12.
- Twenge JM. 2009. Generational changes and their impact in the classroom: Teaching Generation Me. *Med Educ* 43(5):398–405.
- Zemke R, Raines C, Filipczak B. 2000. *Generations at Work*. New York: AMACOM.

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