

Teaching Today's (Digital) Learners

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This handout is intended to supplement Dr. Taylor's program at the SACS-COC Summer Institute. It is not intended to be a "stand-alone" document, so should it be distributed to non-attendees without permission. Dr. Taylor's published articles are available on his website www.taylorprograms.com and may be shared under standard protocols for academic and educational materials.

Generation NeXt/ Digital Learners

- How do our instructional practices contribute to our current cohort of students successfully
Reaching learning outcomes?
Persisting through graduation?
Entering the professional workforce?
- We should strive to do that which offers the greatest likelihood of success to the highest percentage of students.
- This is generally not the "same old, same old" instructional practices, but instead the applications of academic "best practices".
- While the model described here, and active, tech based techniques, are most indicated for our younger digital learners from Generation NeXt, they represent the most effective approach for learners from all generational cohorts.

Cohort Traits of Generation NeXt

Gen NeXt students often look like educational **consumers or customers** and may evidence the following, which may interfere with their academic engagement and success.

- Entitlement- the expectation of academic success with little effort.
- Commodity model- their goals may be to "complete this class" or "get a degree", as opposed to richer developmental goals.
- Often intellectually disengaged, preferring to stay at a "regurgitation of factoids" level of learning.
- Expect fun and entertainment
- Limited "compliance"- there may be a limited expectation that they will ever have to do anything other than exactly what they want to do.
- Efficacy/ responsibility issues especially for their own learning. They may not accept responsibility for their own learning or understand they they need to be active agents to reach learning goals or receive learning benefits.

Self-esteem programming. Many young people from Gen NeXt have been subjected to relentless efforts to help them feel good about themselves.

They tend to be

Positive- they believe/assume that they will be academically successful and assume that they have the requisite skills and talents to succeed. This includes

Overrating skills

Underrating effort required to be academically successful

Defensiveness to criticism

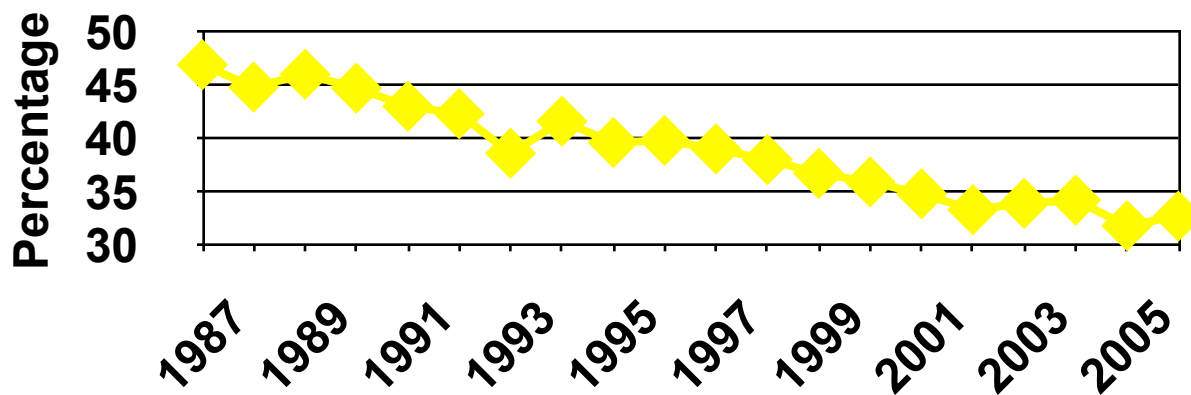
Valuing talent over effort- expect to succeed based on their abilities instead of hard work

Feeling that they are good enough already and have little need to change/ learn/ develop.

According to Psychology Today “parents are going to ludicrous lengths to take the lumps and bumps out of life for their children. However, well intentioned, parental hyperconcern and microscrutiny have the net effect of making kids more fragile. That may be why they are breaking down in record numbers.” *A Nation of Wimps*. Marano, H. E. 2004. Psychology Today. November/ December. pp. 58-103.

There is evidence of increasing frequency and severity of **mental health problems** in college students today. One reason may be that study time for high school seniors continues to decline (according to the Higher Education Research Institute; see chart below) so many students are not prepared for the academic rigor and expectations of college. (College of the Overwhelmed; The campus mental health crisis and what to do about it. Kadison, R. 2004. Josey Bass.)

Students Studying 6+ Hours a Week as High School Seniors



Workplace readiness issues

According to a TIME magazine “*Most colleges are seriously out of step with the real world in getting students ready to become workers in the postcollege world*”. (January 24, 2005)

According to Mel Levine in Ready on not, here life comes, there is “*a pandemic of workplace unreadiness as today’s graduates are unable to think long term, handle details or delay gratification*”. (2005; Simon Schuster)

According to Richard Arum and Josipa Roksa in Academically Adrift, *growing numbers of students are sent to college at increasingly higher costs, but for a large proportion of them the gains in critical thinking, complex reasoning, and written communication are either exceedingly small or empirically nonexistent. They might graduate, but they are failing to develop the higher-order cognitive skills that it is widely assumed college students should master*. (2011; Chicago)

Even PBS has produced Declining by Degrees in both book and video form; a collection of sixteen essays on “*the inadequate quality of college and university education*”. (Hersh and Merrow; 2005).

Digital Natives, Digital Immigrants

By Marc Prensky

From *On the Horizon* (NCB University Press, Vol. 9 No. 5, October 2001)
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It is amazing to me how in all the hoopla and debate these days about the decline of education in the US we ignore the most fundamental of its causes. *Our students have changed radically. Today's students are no longer the people our educational system was designed to teach.*

See also **Grown up digital**. Tapscott, D. 2009. New York. McGraw Hill.

Prensky, Tapscott and others describe today's young people as Digital Natives/ Digital Learners, who have grown up immersed in technology. Even as very small children they spent large amounts of time with video entertainment, moving into video games, and a social life revolving around text messaging and social networking sites (as opposed to the face to face contact of earlier generations).

Their development has also been different from other generations in they have

- Spent more time inside (with media)
- Been less physically active with predictable physical consequences

According to Prensky, their *thinking skills enhanced by repeated exposure to computer games and other digital media* include

- *reading visual images as representations of three-dimensional space (representational competence)*
- *multidimensional visual-spatial skills, mental maps*
- *"mental paper folding" (i.e. picturing the results of various origami-like folds in your mind without actually doing them)*
- *"inductive discovery" (i.e. making observations, formulating hypotheses and figuring out the rules governing the behavior of a dynamic representation)*
- *strategic "attentional deployment" (such as monitoring multiple locations simultaneously)*
- *twitch speed- responding faster to expected and unexpected stimuli.*

Digital Lives and Preferences of College Students- An Emerging Profile.

Compared to other generations, Gen NeXt may be more likely to

- Value being **Connected** via phones, digital communication, and social networking sites as opposed to really being present (especially in class).
- They may **blur the Virtual and the real**, with social networking interaction replacing more traditional "live" and face to face (or even real time telephone conversations).

- Prefer “**hyperlinked**” navigation (moving from source to source) or “**hyperthink**” (moving from idea to idea) over more traditional linear thinking (which might be a precursor to critical thinking and problem solving).
- Prefer **visual** representations/ instructions/ demonstrations to word based (either spoken words or written words). They would rather **watch a video** than read. printed material (though show some willingness to read digital text)
- **Interactivity**. Expect to influence, opine on and interact with media, and in class, as opposed to the traditional passivity of students in lecture based classes.
- Similar to shopping on-line, students may expect **infinite choice**, and may expect some choice in how they learn; not a good fit with traditional higher education based on lecture and textbooks as the only options.
- Similar to the immediate feedback of video games, they may expect **immediate, rapid response/ reward/ feedback**, especially around formative assessments designed to improve learning vs. traditional, delayed, grading to assign grades without the option of a “do-over”.
- May manage issues and problems though **experimentation**; acting and seeing what happens, vs. traditional problem solving (planning behavior based on a prediction of the outcome.)
- May believe that they can **find information on-line** vs. needing to actually know (carry in their heads) information
- May believe that if they have completed a task once they have it in their repertoire, and don’t need subsequent practice to develop mastery.
- May **value their own experience** vs. what they are told..
- Just as information, entertainment and contact are available on-line all the time, they may expect the **instantaneity** of “anytime” education vs. later or on someone else’s schedule.
- May offer an **immediate opinion** vs. reflecting and coming up with a more thoughtful response.
- Are deluged with **vast volumes of information** vs. the scarcity of information in the pre-digital age. Their needs are to **filter** through all the information available, vs. mining out enough information as earlier generations did.
- They may expect technology, and learning, to be **user friendly** that they can intuit their way through vs. being expected to following complex instructions.
- May not respect the **authority, expertise** or credentials of faculty, giving more credibility to other popular figures.
- May expect **open access/ free access** to information vs. paying for books, classes or content.

According to Bob Pletka in Educating the Net Generation; How to Engage Students in the 21st Century (2007; Santa Monica Press) the solution to issues of drop-out/ persistence failures in high school and failures in student engagement are to better leverage technology with “Generation Net”.

Teaching Today’s Learners

There is abundant evidence for the need to shift from

- A **teacher-oriented system** featuring lectures to passive students
- A **learner-centered process** in which students become more actively involved in their own education

These changes have been recommended for many years, best introduced by Robert Barr and John Tagg in 1995. *From teaching to learning: A new paradigm for undergraduate education*. Change 27 (November/ December): 12–25.

The recently published *Improved Learning in a Large-Enrollment Physics Class* demonstrated the efficacy of “research based instruction” in “increased student attendance, higher engagement and more than twice the learning.” (Deslauriers, Schelew, Wieman in Science May, 13, 2011, Vol. 332)

These “research-based instruction” practices included

- Increasing student responsibility
 - Pre-class reading assignments
 - Pre-class reading quizzes
- Engaging- in-class clicker questions followed by student discussion
- Increasing activity- small-group active learning tasks
- Targeted, quick in-class instructor feedback
- No formal lecturing.

A Model for Today’s Learners

Instructors recognize that instruction should be designed to influence students in three general areas.

- Knowledge- the content of the class, information, Bloom’s knowledge and comprehension levels
- Skills- uses of the content, applications and skills development
- Values- the affective level of what they see as worthwhile and meaningful, influencing what students care about

The shift is from

- delivering knowledge level content to passive students in class and expecting self-directed application out of class to
- move the content out of class and help with application in active classes.

In *Teaching Generation NeXt: A Pedagogy for Today’s Learners* (2010) and *Teaching Generation NeXt; Methods and Techniques for Today’s Learners* (2011) available at www.taylorprograms.com I promote the following model for instructional improvement designed to leverage available technologies, improve learning outcomes, persistence and completion, and improve workplace readiness.

1. Improve student’s future orientation
2. Identify class goals/ link to student’s goals
3. Improve student understanding of class expectations
4. Move content learning out of class, especially through the use of technology
5. Create the necessity of preparing for and attending class
6. Increase classroom activity and engagement
7. Improve assessments and accountability.

Leveraging Technology in Teaching

Uses of technology in instruction.

- **Content**
 - In #4 above, **content moves out of class** to free class time to work on retention, higher level skills, and values at the affective level through activity.
 - Found content- already existing content, some of which is on-line library resources, web aggregators, professional sites, etc.
 - Created content- faculty can capture their own content student's can then access before class
 - podcasts, webcasts, voice-over slides, etc
 - Clickers can be used to check if they have completed assignment before class.
- **Practice** skills out of class
 - Simulations, web-labs, etc
- Improve **interaction** out of class
 - Wikis, blogs, posting, web-chat, web meetings
- Increase **engagement** in class
 - Audience response systems like Turning Technology; <http://www.turningtechnologies.com/>
 - Live stream like Todays Meet; <http://todaysmeet.com/>

How Technology in Teaching Improves Learning

Instructors are not encouraged to adopt technology for the sake of using technology- though some technology is necessary for credibility with today's digital learner.

Technology can be used to

- Improve overall instructional efficacy
 - Efficacy of class time
 - Efficacy of instructor time
- Humanizes the classroom
 - More meaningful "teacher- student" time
- Improve engagement in and out of class
- Improve persistence as students are more engaged in their learning and with their faculty and classmates.
- Improve academic success (as demonstrated in the the large physics class experiment)
- Improve workplace readiness- as course activities, classrooms, and in-class activities look more like the technology rich workplace, than does the traditional lecture classroom.

Meeting the Digital Learner

Where is "the middle"? How should we adapt to the digital learner, and how should they become more like "us"?

We of the faculty and administration should value their

- Digital resources- ability to access and leverage on-line and tech resources
- Digital connections- ability to link with each individually and en masse via the web, tweets and on-line networking
- "Hyperthink"- ability to move quickly from site to site, source to source, and idea to idea
- Utility imperative- expectation that their learning will be of use to them
- Interactivity- expectation that they can impact their world and that their learning will involve them, not just be delivered to them

Digital learners from Generation NeXt should learn to value our

- Good thinking- problem solving and analysis that is critical, scientific, linear and evidence (not opinion) based
- Responsibility- they should learn to accept responsibility for their behavior, the consequences of behaviors, and for their learning
- Interpersonal skills- since people who have spent great amounts of time with digital media and communication might have alternate communication skills they may need help learning our interpersonal skills and ability to read subtle non-verbal communication cues.

Digital learners from Generation NeXt might give up their

- Opinions- less valuing their own opinions, especially as these opinions are not evidence based
- Immediacy/ distractions- in favor of learning to focus and concentrate
- Belief in “external storage”- not everything they need to know can be accessed in a timely fashion; there are some things they do need to carry in their heads
- Projections- give up blaming others in favor of accepting responsibility for their actions, choices and the consequences

We of the faculty and administration should give up our

- Overintellectualization- we academics might have a tendency to over think, at the expense of identifying utility for the content
- Delivery model- we should give up our reliance on the lecture based, delivery model
- “Us vs. them” ism- students are not the enemy, and their resistance to our instruction might be based on the old-school, non-tech lecture model we are using (which confuses and distresses them).

Digital learners from Generation NeXt can learn!

- Students want to learn. They do want to get ready for adult life and work.
- Faculty want students to learn. Faculty are people of good will and are mostly doing the best they know to do to help student to learn. Faculty development is so uneven, many have never been taught methods of effective instruction.

They can and will learn if instruction

1. Leverages technology rich resources to deliver content, facilitate interaction, and develop credibility
2. Is interactive- “no passive learners”
3. Recognizes utility imperative- Students need help identifying applications that will be of benefit to them in the future.

My referenced articles, and other articles and resources on teaching and learning, are available on my website. If you have specific questions about the ideas in this handout, questions about specific references or information about bringing programs to your school, please contact me via the links below.

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