

Make learning matter for the multitasking generation

Teachers must implement strategies to help multitasking teens slow down and think critically.

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Technological advances have created amazing opportunities for people throughout the world to access and share information (Friedman, 2005). These opportunities have perhaps helped to create a generation of young adolescents who want to make the most of each minute of the day, seizing opportunities to seek information and communicate at the same time. We now have middle level students who talk on the phone, text friends, play games, download music, watch videos, and write papers for school—and many of these students believe they are adept at doing all of these things at the same time, or *multitasking*.

Meet GenM, or the “multitasking generation” (Wallis, Cole, Steptoe, & Dale, 2006, p. 48). Now more than ever, students are electronically “tuned in”; and some students are (or perhaps want to be) tuned in during their middle level classes. As research on this phenomenon begins to emerge, it is clear that educators must consider the implications of these GenM practices for their classrooms and help their students slow down and think critically about the things they read and write.

This article focuses on current literature related to multitasking, including information on the characteristics of GenM learners. Pedagogical considerations for reading and writing instruction in the middle level classroom are explored, and suggestions are offered for translating traditional instructional methodologies into more multimedia-rich learning experiences for students. These strategies challenge

students to learn when to slow down and critically examine the text or task at hand.

Today’s multitasking teens

Researchers have begun to explore the nature of multitasking and its effects. GenM students are generally “tuned in” and tech savvy. According to the Pew Internet and American Life Project, 82% of students are online by the seventh grade (Lenart, Madden, & Hitlin, 2005). Additionally, students spend 6.5 hours per day using electronic media but condense 8.5 hours of activity into that time by multitasking (Wallis et al., 2006, p. 51). Foehr (2006) drew the following conclusions about multitasking:

- Most young people multitask at least some of the time, but others do not do it at all.
- Many young people use media while doing homework, especially if they are on the computer.
- Computer activities (instant messaging, computer games, perusing websites) are the most multitasked activities, while watching television and other media are the least multitasked activities.
- Girls are more likely to multitask than boys.

Although multitaskers appear to save time, researchers note that multitasking can lead to a decline in quality of work.

Decades of research (not to mention common sense) indicate the quality of one’s output and

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depth of thought deteriorates as one attends to ever more tasks. ... There's substantial literature on how the brain handles multitasking. And, basically, it doesn't." (Wallis et al., 2006, p. 51)

Instead, the brain practices "rapid toggling" in which it switches gears with each new activity, sequencing events in order of importance instead of processing them simultaneously.

The impact of multitasking on teenagers is not yet clear. Russell Poldrack, associate professor of psychology at the University of California Los Angeles, noted, "Given that kids have grown up always doing this, it may turn out that they are more skilled at it. We just don't know yet" (Aratani, 2007a, para. 17).

Teenagers may be more skilled at multitasking because they practice it so often. David Meyer, director of the University of Michigan's Brain, Cognition, and Action Laboratory, suggests today's teens are trying to

Do lots of multitasking because they think it's cool and less boring ... they have lots of gadgets that help them be more successful at this. ... The belief is that they're getting good at this and that they're much better than the older generation at it and that there's no cost to their efficiency. (Aratani, 2007a, para. 13)

There may be some drawbacks to the practice of multitasking. Meyer noted that if certain parts of the brain are less active than others, multitasking might impair development of the ability to think and analyze information: "[Multitaskers] develop a more superficial style of study and may not learn material as well. What they get out of their study might be less deep" (Meyer, as cited in Aratani, 2007b, para. 19–20).

According to Meyer, however, stimulation of the brain by multitasking may improve initial performance, but if there are too many stimuli, the activity becomes too taxing and creates a considerable decline in performance. Young adolescents should be wary of filling every minute with stimuli because the brain requires rest and recovery for it to combine thoughts and recollections (Aratani, 2007b).

What teens say

Teens have their own ideas about the effects of multitasking on their homework. In a study of students' perceptions of the effects of instant messaging on writing, students noted that multitasking did hinder their writing and other homework. This did not dissuade them

from continuing to multitask, however. Additionally, a few of the study participants noted that they sometimes wrote academic papers by hand instead of composing them on the computer so that they could focus more on writing. One student noted, "[Multitasking] affects the paper a ton. If I'm writing on the computer and talking to people, I tend not to care. And, they're not worrying about writing a paper (but are focused on talking)" (Adams, 2007, para. 29). Other students agreed with the statement, including one who noted, "My homework isn't as good when I'm doing something else at the same time. ... Well, I don't put as much thought into it, probably. Because I'm doing so many other things. My focus isn't just on it" (para. 29).



Today's multitasking teens feel the need to communicate and stay connected.

New literacies at the middle level

There is a debate about what reading means to today's teens (Rich, 2008, para. 5). Does text messaging involve reading? What about scanning Google results? While there are no clear answers to these questions, it appears that many teens with access to technology spend a great deal of time reading online. The future of reading in school might change with the popularity of reading devices like the Kindle. Such devices allow readers to subscribe to and download publications without being

limited to “hot spots,” much like a cell phone (Huckans, 2008). As formats change, students’ reading changes too:

Today’s media-savvy students compose and read texts that include alphabetic- and character-based print, still images, video, and sound. They listen to podcasts, watch animations on the Internet, film their own videos, and compose visual arguments on paper and online. These rich, multilayered texts demand multimodal literacy skills of their readers, who must navigate the different, intersecting media. (Gallo, 2007, p. 93)

The ways students read electronic forms of text may not be linear, but it is a unique process and is worthy of further investigation. One way to address these new literacies—including virtual reality experiences, blogs and wikis, and online discussions—is to infuse them into classroom instruction.

Virtual reality

Role-playing in virtual worlds is becoming increasingly popular and has been featured on television shows such as *CSI: New York*. The *New York Times* has a virtual reporter on a news beat in *Second Life*, a virtual reality space, and this medium is now being used for literary study at the secondary and collegiate levels (Arver, 2007; Rozema, 2007). Virtual reality is a “text-based virtual environment, a sort of sophisticated chat room complete with its own architecture and interconnected rooms, stockpile of manipulable objects, and a cast of interesting characters” (Arver, p. 33). Teachers can infuse course goals and topics into these virtual worlds. Arver required her students to use vocabulary terms in conversation in certain rooms of the *Lord of the Flies* virtual world. Students also created poetry based on events in the book. Arver noted the following benefits to the activity: enhanced student knowledge of the text (in a safe online environment), new perspectives on literature, and the ability to express themselves “imaginatively through characters” (Arver, p. 42).

Rozema (2007) developed *Thoughtcrime*, a virtual space where students take on such roles as Thought Police, Brotherhood, and Party Members from the text *1984*. According to Rozema, the game was designed to “help students get into the novel—almost literally. ... *Thoughtcrime* draws students into literature through thoughtful interaction and gameplay in a world paralleling the novel” (p. 83). Other virtual environments are available at www.literaryworlds.org,

an EnCore environment designed by students and faculty at Western Michigan University. Although many of Western Michigan’s designs are for high school reading, the ideas can be easily adapted to the middle level. Virtual reality may engage students in real situations that keep them busy toggling with virtual choices as they become immersed in a different, virtual world.

Blogs and wikis

The terms *blog* and *wiki* have become commonplace over the past five years, and these online tools have become increasingly used in education as teachers discover how to apply these technologies in the classroom. The term *blog* stands for “web log,” an online journaling tool that puts the most recent activity at the top of the web page. News shows and television programs encourage viewers to visit their blogs. A *wiki* (derived from the Hawaiian word meaning “quick”) is similar to a blog because it is an online publication; but unlike a blog, a wiki involves collaboration, and numerous people can add to or change its content. The most well-known wiki is the online encyclopedia *Wikipedia*.

Figure 1 Standards of netiquette

Don't post what you wouldn't say face to face.
Respect others' time.
Spelling, grammar, and punctuation still count online.
Include a meaningful subject line.
Choose your wording carefully. Please avoid words such as "offends," "implies," "insults," "outrages," etc. Remember, the written word is far more permanent than the spoken word.
Use emoticons to represent humor, which is often lost in this medium. Please don't overuse them, however.
Refrain from posting anything that impedes the learning environment. Avoid profanity and blatant disrespect.

Blogs paved the way for the wiki, but the difference between the two technologies is quite clear: “Blogs are more personal in design, [while] wikis are more collaborative” (Godwin-Jones, as cited in McDowell, 2004, p. 4). Many educators believe that blogs and wikis not only acquaint students with current technologies but also connect the classroom to the outside world,

thereby “increasing the opportunities that students have to publish in meaningful ways for real and varied audiences” (Hunt & Hunt, 2006, p. 91).

Online discussions

While text and instant messages (IMs) tend to be brief, online conversations do not have to be shallow. Rich, academically-based discussion can provide an alternative to traditional teacher-lead discussion in middle level classrooms. In fact, discussions do not even have to be held during class time: “Online threaded discussion allows the teacher and students to expand the classroom beyond the school day and beyond the school walls so that more thoughtful exchanges can take place” (Wolsey, as cited in English, 2007, p. 56).

Before starting a discussion board, educators should first train students by establishing rules (Figure 1). Many districts have software to support online discussions, but educators will likely need to pursue information about, training for, or support for the resources available to them. Also, students may be accustomed to chatting online, but that does not mean they know how to have academic conversations online. Educators should practice constructing and evaluating original and reply posts with students before they actually post to the class discussion board. Students should have a sense of the caliber of writing expected of them, and educators should also consider threading as a way to keep the conversation organized.

Students may need time to feel comfortable with this type of class discussion. I have had great success with online discussions once students become acclimated to the idea. One student shared, “I like this system a lot,” noting the high quality of feedback from peers and the extended time allowed for thinking. Another student said, “I enjoyed this type of conversation. It was less intimidating to discuss online. It was nice to be able to type out what you wanted to say and then go back and edit it, to clarify your thoughts.” These online discussions enable students to switch between topics at will, and they often make judgments concerning the topics to which they can best contribute, the most effective way of communicating their point, and the best way to initiate true dialogue in the medium. Once they start, students may want to stick with this style of discussion: “We should have online discussions more often,” one student said, because “they are fascinating.”

Multitasking and middle level instruction

Multitasking behavior has implications for the classroom because “dividing one’s attention into many small slices has significant implications for the way young people learn, reason, socialize, do creative work, and understand the world” (Wallis et al., 2006, p. 51). Not only do GenM students multitask, they do it quickly. They know how to find information with ease; however, they often find information rapidly with little or no contemplation of process or quality of the resources used.

Providing all students access to technology helps to bridge the deepening chasm between haves and have-nots.

Because so many teenagers multitask with technology and media, it is imperative for educators to acquaint themselves with these mediums. As Gallo (2007) noted: “If you have never IM’d a friend, aren’t blogging, have no idea what CUL8R or LOL mean, and aren’t sure what an emoticon is, you are not living in the twenty-first century. Our teenage students are” (p. 93). Educators must infuse familiar technology into the middle level classroom if they are to give students the tools they need for success in an increasingly wired world. Moreover, providing all students access to technology helps to bridge the deepening chasm between haves and have-nots.

Multitasking need not cause educators distress. Currently, we expect students to contemplate different tasks in succession, or “toggle,” during some activities. For example, when students read, they are drawing inferences, asking questions, and making connections. Reading creates many opportunities for educators to address and perhaps maximize GenM’s multitasking tendencies in the classroom. They can do this by challenging students to spend time thinking critically about reading and writing in a variety of formats and through a variety of texts, literacies, and technologies.

Young adolescents display distinct characteristics (National Middle School Association, 2010) as they move from the concrete operational stage to the formal operational stage and develop abstract thinking skills that allow them to “reason about abstract propositions, objects, and concepts that they have not directly experienced” (Blasingame & Bushman, 2005, p. 17). Middle level educators should implement instructional practices that help students hone these abilities, possibly limiting potential drawbacks to: of multitasking and enhancing their critical thinking abilities in reading and writing.

Socratic seminars

Holding Socratic seminars is not a new concept. However, implementing Socratic seminars (also known as Socratic circles or fishbowls) in middle level schools is relatively new, considering the lengthy history of Socratic questioning. In Socratic seminars, participants are arranged in two circles: one inner and one outer. Participants on the inner circle begin the discussion of a text, and then those on the outer circle give feedback to the inner circle about the discussion. The roles are then reversed, as the outer circle becomes the inner circle and the process is repeated. The two circles allow for small-group discussion and evaluation of discourse topics and patterns, resulting in a discussion-feedback-reverse process that is essential for students to critique the dialogue and improve their own discussion skills (Copeland, 2005).

Many teachers have turned to the Socratic seminar as a method of classroom discussion because of the critical discourse they encourage. Socratic seminars force students to pause long enough to think and go beyond surface meaning, which usually does not occur to students as they multitask. As Keene and Zimmerman (2007) noted, the various ways GenM students access information “take less concentration, less active engagement, and less attention than reading” (p. 31).

Socratic seminars may help students pay closer attention to texts they read as they identify questions to ask (and perhaps answer) and pose additional queries as they dive deeper into a topic. As Copeland (2005) suggested:

We must push our students through this initial barrier of surface meaning, showing them that all thinking involves the asking of one question leading to the asking of further questions. It is the ongoing,

honest quest for information and understanding through the act of questioning that embodies the true ideal of democratic education. (p. 7)

Students must slow down and truly contemplate texts to do well with the seminar.

Graphic novels

Graphic novels are an increasingly popular genre that can present a unique way to get students to think about literature. The term “graphic novel” was originally coined by Will Eisner to describe his work. Generally, a graphic novel is an original, book-length manuscript that is published in comic book form and can be nonfiction or fiction. What makes graphic novels well suited for teens is that they can “offer value, variety, and a new medium for literacy that acknowledges the impact of visuals” (Schwarz, 2002, para. 3).

Contemplating the power of visuals is vitally important in an age when students quickly breeze through pages and pages of text online. Art Spiegelman, Pulitzer Prize-winning author of *Maus*, explained:

Of course, the comic book benefits from the fact that we live in a visual world, communicating as much through images as through words. But even as comics lend themselves so well to the digital age, they have an almost artisanal sensibility that appeals at a time when so much communication is virtual and ephemeral. (Feroohar, McNicoll, Acoymo, Russell, & Itoi, 2005, para. 12)

Use of graphic novels in the classroom is becoming more prevalent. Feroohar and associates explained, “The boom in graphic literature may stem, in part, from the need for fresh ways to comment on the increasingly complex political and social issues of the day” (para. 11). These complex themes include everything from war to oppression to terrorism to racism. As the topics become more complex, oftentimes the drawings do as well. Three notable examples are:

- Art Spiegelman’s (1986) *Maus*, a tale of survival during the Holocaust.
- Marjane Satrapi’s (2004) *Persepolis*, the story of a girl growing up in Iran during the Islamic Revolution and the outbreak of war in Iran-Iraq.
- Gene Luen Yang’s (2008) *American-Born Chinese*, a story of stereotypes, folklore, and acceptance, and the first graphic novel to be nominated for the National Book Award.

- Sid Jacobson and Ernie Colon's (2006) *The 9/11 Report: A Graphic Adaptation*, a graphic novel that takes information from the official 9/11 Commission and details it in art.

Students use several reading strategies as they dive into these texts. Although graphic novels may initially seem like easy reads, this is not necessarily the case. Graphic novels provide opportunities for students to develop critical thinking and visual literacy skills (Schwarz, 2002), including interacting with the text, making connections, exploring multiple perspectives, focusing on language and crafting text, and studying an author (Reid, 2007). In sum, graphic novels provide students rich opportunities to apply higher-order thinking skills to nontraditional challenging texts.

Critiquing websites

Young adolescents are inundated with hundreds of online images each day, but many fail to critically examine them. Instead of actively analyzing what is being presented, many students simply absorb the material as if it is all true. One way to help students critique what they are seeing online is to give them the opportunity to demonstrate critical thinking with what they are seeing. Crovitz (2007) examined the way teens look at advertisements, aiming to “help young people learn about rhetorical analysis and the need to weigh messages that are immediately relevant to their lives” (p. 49). In the activity, students critically examined sites and contemplated choices made (i.e., language, graphics, sound, layout), the effects of those choices, the target audience, and what is not on the page and why. Critiquing websites is something all students should be doing. Teachers should encourage students to slow down and think critically about the texts coming their way.

Multigenre writing

While multitasking has clear implications for teaching reading, educators should also consider new ways of teaching writing. What and how students write in school often varies from the types of writing they do outside school. The added dimensions of the latter can create complex writings.

Composing in multimodal forms and with multimedia technologies includes important considerations of visual, design, and performance aspects since it is not limited to print text to

convey meaning. This creates opportunities to reinvent and enhance notions of audience, purpose, genre, form, and context. It also has important implications for mechanics, usage, grammar, style, and evaluation. (Swenson, Rozema, Young, McGrail, & Whitin, 2005, para. 41)

Teachers need to acknowledge and address these different modes of writing in the middle level classroom, and through multigenre assignments students can engage in both traditional and new modes of writing. Multigenre writing

Arises from research, experience, and imagination. It is not an uninterrupted, expository monolog nor a seamless narrative nor a collection of poems. A multigenre paper is composed of many genres and subgenres, each piece is self-contained, making a point of its own, yet connected by theme or topic and sometimes by language, images, and content. In addition to many genres, a multigenre paper may also contain many voices, not just the author's. The trick is to make such a paper hang together. (Romano, 2000, pp. xiii–xi)

While multigenre writing encourages critical thinking, Vacca and Vacca (1996) offer another rationale for this kind of assignment. They contend that students often write differently for themselves than they do for school. They take more time and put forth more effort on personal writing pieces than on mandatory school assignments and projects. In multigenre writing, however, composing the text becomes personal because of the number of choices students make about which genre to use and what information to include. In addition, students may choose to use multiple voices. They must think critically about the choices they make for each piece and how each text fits into the overall flow of the paper.

The multigenre paper also mirrors what students see each day online. According to Hunt and Hunt (2006), “The Internet itself is a pretty big multigenre project. You can find many voices, multiple perspectives, audio, video, text, still pictures, and just about any other form of content and opinion that is possible for a human being to have” (p. 90). Multigenre writing and multigenre assignments offer middle level students the opportunity to slow down and think critically about the pieces they are composing so that they can compose quality pieces in multiple genres that are unified yet can stand on their own.

Conclusion

The lack of understanding about how young adolescents use new technologies is a bit like the inability of adults to understand teens' messy rooms; adults have difficulty accepting and understanding some youth behaviors, while young people may feel comfortable and secure and cope adeptly. Like the persistently messy rooms in households with young adolescents, the phenomenon of youth multitasking is not going away. It is imperative for instruction to keep pace with GenM students who find new technologies fascinating and their emerging multitasking abilities exhilarating. Teachers have the opportunity to bring the outside world to students' fingertips and challenge them to critically contemplate the images, messages, and texts they encounter and produce. By doing this, students will "tune in" to what is happening in their classes, and we can ensure that their learning will continue to matter.

Extensions

To learn more about using Web 2.0 tools in the classroom, see Taranto, Dalbon, & Gaetno's article, "Academic Social Networking Brings Web 2.0 Technology to the Middle Grades Classroom," in the May 2011 issue of *Middle School Journal*.

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