



Connecting with Generation Z: Approaches in Nursing Education^{1,2}



Jennifer Chicca, MS, RN^{*,3}, Teresa Shellenbarger, PhD, RN, CNE, ANEF

Indiana University of Pennsylvania, Indiana, PA, 15705, USA

ARTICLE INFO

Article history:

Accepted 19 March 2018

Keywords:

Generation Z
Teaching–learning design strategies
Students
College
Nursing workplace

ABSTRACT

Generation Z, a unique and truly digital native generation, is now entering college and the workplace. This article identifies generational influences and distinctive characteristics of this group, which may challenge nurse educators and require changes in teaching–learning design strategies and approaches. Specific educational suggestions and ways to support members of Generation Z in higher education and the workplace are offered.

© 2018 Organization for Associate Degree Nursing. Published by Elsevier Inc. All rights reserved.

Introduction

Nursing literature frequently describes the attributes and characteristics of Millennial students, the generation born in the early 1980s through the mid-1990s (Seemiller & Grace, 2016; Shatto & Erwin, 2016). Faculty often turn to this information as a guide to direct teaching and learning approaches or to provide suggestions for how to interact and effectively lead this generation of students. However, a new generation of students, Generation Z, born between the mid-1990s and ending around 2012 (Seemiller & Grace, 2016; Shatto & Erwin, 2016; Turner, 2015; Twenge, 2017) are entering nursing programs and the workplace. This emerging generation brings some of the same characteristics as Millennials, the previous generation of students, but they also possess some differences. Generation Z students have a unique combination of attitudes, beliefs, social norms, and behaviors that will impact education and practice for many years. Nurse educators must understand how this new generation of learners think, what they are concerned with and care about, and how they prefer to interact so that they can determine how to most effectively engage and guide these students and nurses (Seemiller & Grace, 2016; Shatto & Erwin, 2016; Turner, 2015; Twenge, 2017).

The dates used to define a generation are somewhat arbitrary (Twenge, 2017). Usually common economic, social, and cultural conditions and contextual factors define a generation and influence the

generational culture (Rickes, 2016; Seemiller & Grace, 2016). Generation Z is influenced by technology related events, such as the public availability of the World Wide Web in the early 1990s, the explosion of handheld technologies, including smartphones, cyber attacks, and cyber bullying. They have also been impacted by the attacks and aftermath of September 11, public violence, an increase in unemployment, the economy crash, and the world at war (Seemiller & Grace, 2016; Shatto & Erwin, 2016, 2017; Twenge, 2017). These factors, along with being raised by skeptical Generation X parents (Wiedmer, 2015), have created a new cautious generation. The purpose of this article is to describe common attributes of Generation Z, discuss how Generation Z characteristics influence nursing education programs and nursing workplace practices, and offer possible supportive teaching–learning design strategies that can be used by educators to replace some current approaches that are not attractive to the Generation Z student.

Characterizing Generation Z

Attributes of Generation Z

Who exactly is Generation Z? Literature regarding this generation is still emerging (Twenge, 2017), and some authors disagree on the exact dates defining this generation; however, in general, Generation Z includes those born beginning in 1995. Coincidentally, this date aligns with the approximate time when the World Wide Web became publicly available. Ending dates for this generation are usually reported through the early 2010s (Seemiller & Grace, 2016; Twenge, 2017). Generation Z represents a sizable group comprising approximately 24% of the United States population (Twenge, 2017).

¹ Acknowledgement of financial support. None.

² Presentation information. None.

* Corresponding author. Tel.: +1 410 608 4944.

E-mail addresses: j.chicca@iup.edu (J. Chicca), tshell@iup.edu (T. Shellenbarger).

³ Permanent address: 8600 Pine Meadows Drive, Odenton, MD, 21113 (USA).

Although a universally adopted name for this group has yet to be agreed upon, there are various names currently used in the literature, including Generation Z, iGen, digital natives, net Generation, iGeneration, Gen Next, I Gen, Gen Tech, Gen Wii, Post Gen, and Plurals (Igel & Urquhart, 2012; Seemiller & Grace, 2016; Turner, 2015; Twenge, 2017; Wiedmer, 2015). For ease of reading, the term *Generation Z* will be used in this article to refer to this generation.

Various characteristics of Generation Z were identified in the literature (Igel & Urquhart, 2012; Loveland, 2017; Rickes, 2016; Seemiller & Grace, 2016; Shatto & Erwin, 2016, 2017; Spears, Zobac, Spillane, & Thomas, 2015; Turner, 2015; Twenge, 2017). Members of this group are avid consumers of technology and cravers of the digital world. As true digital natives and the only generation raised exclusively with a technology influence, Generation Z is highly accustomed to interacting, sometimes solely, in the digital world. Because of their frequent technology use, they have underdeveloped social and relationship skills and are at increased risk for isolation, insecurity, and mental health issues, such as anxiety and depression. Their technology habits lead them to demonstrate a limited attention span, and they bore easily when they perceive monotony and repetition. Generation Z desires convenience and immediacy. Members of Generation Z are also pragmatic. Having grown up in times of social, political, and economic uncertainty, this generation is cautious and concerned with emotional, physical, and financial safety. Although Generation Z are racially and ethnically diverse and open-minded, they generally do not take an active role in social issues instead preferring to engage in sedentary activism. Table 1 outlines the nine Generation Z characteristics identified from the literature (Igel & Urquhart, 2012; Loveland, 2017; Rickes, 2016; Seemiller & Grace, 2016; Shatto & Erwin, 2016, 2017; Spears et al., 2015; Turner, 2015; Twenge, 2017).

Although Millennials are skilled with technology, members of Generation Z are the true digital natives who do not know the world without the Internet (Seemiller & Grace, 2016; Twenge, 2017). Their daily lives are completely saturated with the digital environment. Shatto and Erwin (2016) report that Generation Z spends an average of 9 hour per day on their cell phones. In addition, research suggests that the common events and contextual factors experienced by Generation Z have led to more practical, cautious, and skeptical youths (Twenge, 2017). Unlike the confident, achieving Millennials, Generation Z are not sure they will succeed, take fewer risks, and are likely to have a back-up plan in case things do not work out (Twenge, 2017). Nurse educators need to recognize and consider the differences in these generations to successfully engage and guide students and nurses.

Cautions

As this group enters college, educators are still learning about these students with data regarding Generation Z still emerging (Twenge, 2017). It is additionally important to recognize the stereotypical nature of generational conversations. In other words, not all learners will align with these generalizations as the information presented is based on averages, not absolutes (Philip & Garcia, 2013; Seemiller & Grace, 2016; Twenge, 2017). It is important to recognize and validate differences in Generation Z. These generational labels provide context for understanding these groups and beginning conversations. In addition, these generational differences can be the foundation from which to develop appropriate interventions and approaches for interaction. However, they may need to be tailored for classroom, clinical, or individual needs. Moreover, educators must remember that learners, especially in associate degree programs, will come from many generations. A variety of teaching–learning design strategies and approaches are advised to meet all student needs.

Teaching–Learning Suggestions to Support Generation Z

Traditionally, nursing programs schedule classroom and clinical time in very structured ways. Even though some faculty are incorporating some active learning strategies, higher education is still typically dominated by a rigid curriculum that employs teacher-centered, passive teaching–learning strategies, such as lecture and textbook reading, to convey information (Rickes, 2016; Shatto & Erwin, 2016). Students are often expected to complete large amounts of readings, class content may be presented using PowerPoint, and evaluation frequently consists of multiple-choice tests. Clinical learning experiences occur in the health care environment and may involve students working with patients under the supervision of a faculty mentor. Simulation may augment and/or replace clinical time. Considering the identified characteristics of Generation Z, these traditional nursing education program approaches and delivery methods are not optimal in meeting the needs of this upcoming generation. If educators continue delivery as done in the past, they may encounter challenges in aligning with the new generation needs (Carter, Creedy, & Sidebotham, 2016; Rickes, 2016; Shatto & Erwin, 2016, 2017).

Like many adult learners, Generation Z students want practical and relevant information. However, Generation Z students also desire learning that is individualized, immediate, exciting, engaging, technologically advanced, and visually based. Table 1 suggests specific teaching–learning design strategies and approaches to support Generation Z by identified generational characteristic (Carter et al., 2016; Holtschneider, 2017; Igel & Urquhart, 2012; Lang, 2016; Merriam & Bierema, 2014; Phillips, 2016; Rickes, 2016; Seemiller & Grace, 2016; Shatto & Erwin, 2016, 2017; Spears et al., 2015; Turner, 2015; Twenge, 2017). Not all suggestions must be employed, instead the teaching–learning design strategies provided in Table 1 offer options for altering nursing education approaches. Faculty could consider replacing a traditional approach with a suggested alternative and evaluating the effectiveness of these new strategies. Faculty are not expected to use all of these activities but could select items that best address learning needs, tackle problem learning areas, or help to more effectively engage these students.

Given the reliance on technology by this wired generation, faculty need to consider how to harness technology to enhance and supplement education. It will not replace good pedagogical practices but can be used to augment teaching. Use of available software, electronic learning materials, and Internet-guided learning activities are some strategies that may help to engage these students. They will learn by viewing digital images and not solely by reading text. Therefore, educators may want to embed visually based content along with their traditional teaching materials. Trying new delivery approaches, such as an infographic syllabus addendum, conveying information through digital storytelling with pictures or videos, or the use of emojis to gather feedback may be attractive options to consider that capture the attention of this group of students. For example, items usually presented on a syllabus in text format could be replaced with visual diagrams or images that convey the same information, or, a simple one- or two-page infographic syllabus addendum can be added to existing syllabi to visually represent important class expectations, assignments, grading, or course schedule (Mocek, 2017). Research has shown that infographic syllabi addendums can help improve student retention of key information and increase student engagement (Mocek, 2017).

Classrooms may need to shift from teacher dissemination of information to a focus on more learning that is self-directed, individualized, or project based so that students engage in relevant learning activities. To capture the attention of Generation Z students, faculty must use active, learner-centered, immersive, multidimensional approaches to ensure optimal learning achievement (Philip & Garcia,

Table 1
Generation Z characteristics and teaching–learning design strategies and approaches to support Generation Z

Characteristic	Teaching–learning design strategies and approaches to support Generation Z
High consumers of technology and cravers of the digital world	<p>Instruct how to assess the credibility, relevance, and accuracy of digital sources and how to research and cite properly</p> <ul style="list-style-type: none"> • Use online tutorials or videos to demonstrate information literacy concepts <p>Explain the ethical responsibilities related to confidentiality and social media use</p> <p>Select a few technology platforms for use in instruction</p> <ul style="list-style-type: none"> • Facebook for class updates • Twitter updates and use of class hashtags • Faculty-created YouTube channel • Virtual group work • Remind app for class reminders, such as assignment due dates • Readings that can be completed on tablets and or smartphones • Use available online learning resources, such as Kahn Academy or CrashCourse • Review course materials with electronic flashcards using apps, such as Quizlet or StudyBlue • Create interactive whiteboard screencasts using apps, such as Doceri, Explain Everything, or Educreations <p>Consider innovative approaches to learning</p> <ul style="list-style-type: none"> • Hybrid or blended courses • Cocurricular formats, such as free online courses offered through massive open online courses or platforms, such as Coursera • Interactive gaming, such as Jeopardy, Kahoot!, and Socrative • Virtual learning environments • Electronic audience response systems, such as Poll Everywhere or I > Clicker <p>Adopt interactive e-textbooks where possible</p> <p>Encourage students to use their own technology when engaging in class activities</p>
Pragmatic	<p>Employ experiential learning</p> <ul style="list-style-type: none"> • Internships • Service learning <p>Incorporate real-life experiences into course content and clearly connect theory content to real-life experiences</p> <ul style="list-style-type: none"> • Tell a clinical story • Link classroom learning to clinical experiences <p>Be transparent and explain rationale for teaching decisions</p> <p>Feedback, feedback, feedback</p>
Underdeveloped social and relationship skills	<p>Offer convenient faculty office hours or electronic office hours</p> <p>Show up early and or stay late after class to engage students in discussions</p> <p>Explain and demonstrate group processing and interpersonal skills, such as active listening, providing constructive criticisms, and respecting others' perspectives</p> <ul style="list-style-type: none"> • Videotape nurses giving report, have students practice taking report, and have students videotape themselves giving report; ask students to reflect on the experiences, evaluating their communication, listening, and presentation skills <p>Provide simulations, including laboratory practices and creative standardized patient use for professional and social interactions under the guidance of a faculty coach</p> <ul style="list-style-type: none"> • Simulating social discussions with patients, including proper discussion topics <p>Revise group and cooperative learning assignments</p> <ul style="list-style-type: none"> • Assign group roles • Focusing the group to help edit and refine the project • Provide guidelines for group work
Cautious and concerned with emotional, physical, and financial safety	<p>Emphasize safety, but not unpreparedness</p> <p>Help students engage in dialogical conversations (Merriam & Bierema, 2014), that is, respectful, open conversations with someone with whom they disagree, especially regarding controversial and or sensitive topics</p> <p>Require learners to gain responsibility</p> <ul style="list-style-type: none"> • Consider using learning contracts, especially for practicum experiences • Provide choices in assignment topics when possible • Spread out assignment portions to curb assignment binging and procrastination (Lang, 2016; Seemiller & Grace, 2016)
Individualistic	<p>When appropriate, allow students to work independently and at their own pace</p> <ul style="list-style-type: none"> • Self-study online modules <p>As possible, flexibility in curriculum and/or coursework is advisable</p> <ul style="list-style-type: none"> • Electives, course sequencing options • Select from menu of course assignments
Increased risk for isolation, anxiety, insecurity, and depression	<p>Reassure students and nurture participation in class</p> <p>Encourage healthy behaviors, such as a healthy diet, getting outside, in-person interactions in and out of the classroom, and limiting online time</p> <p>Recognize changes in student behavior and early warning signs, such as suddenly missing class</p> <p>Refer students to appropriate resources</p> <p>Advocate for student therapy services, including frequent offerings and accessible, on-campus hours</p> <p>Student identify classmate and record contact information for a class peer</p> <p>Set realistic expectations for students in terms of faculty availability</p>
Lack of attention span, desiring convenience and immediacy	<p>Help focus attention with short bursts of teaching</p> <p>Regularly switch between teaching–learning modalities during a class session</p> <ul style="list-style-type: none"> • To engage students with short attention spans, use various modalities, such as lecture, discussion, videos, demonstration <p>Aim for depth versus breath of information</p> <p>Carefully select readings to include only necessary information</p> <p>Use active teaching–learning techniques</p> <ul style="list-style-type: none"> • Concept mapping • Flipped classroom • Case studies • Problem-based learning

Table 1 (continued)

Characteristic	Teaching–learning design strategies and approaches to support Generation Z
Open-minded, diverse, and comfortable with diversity	Facilitate class discussions on inclusiveness and tolerance Focus group work on varied viewpoints with heterogeneous groups of students Use narratives and storytelling to teach students from diverse backgrounds Nurture a creative spirit in students, encouraging innovation, creativity, and growth Use varied methods to teach and assess learning
Sedentary activism	Incorporate service learning experiences throughout, focusing on social change and current issues <ul style="list-style-type: none"> • Allow students to select experiences as appropriate Encourage involvement in local community or campus advocacy issues that impact nursing, social problems, or education Structure activism activities that use the Internet or social media

Note. References: Carter et al., 2016; Holtschneider, 2017; Igel & Urquhart, 2012; Lang, 2016; Merriam & Bierema, 2014; Phillips, 2016; Rickes, 2016; Seemiller & Grace, 2016; Shatto & Erwin, 2016, 2017; Spears et al., 2015; Turner, 2015; Twenge, 2017.

2013; Rickes, 2016), or for select assignments, faculty may even want to consider offering some customized learning that allows students to select from a menu of possible learning activities, all of which enable achievement of learning outcomes. For example, students could pick the assignment activity that best meets their learning needs and complete a concept map, oral presentation, case study, or write a short paper on a course relevant topic. Students would be expected to convey the same information in each learning activity, although flexibility in the assignment format could help meet individual learner needs, facilitate learner creativity and, through assignment engagement, promote critical thinking. This may be an especially appealing approach for classrooms that contain multiple generations of learners. Multigenerational students can select from a menu of learning activities that offer alternative learning approaches, thereby choosing activities that are most aligned with their learning needs.

Teaching strategies are not the only thing that colleges must examine as they prepare to meet the growing needs of this upcoming generation. Educators may need to advocate for expanded, nontraditional college facilities, learning spaces, creative delivery approaches, and course/program offerings that target generational needs. Supportive resources that are easily available in a variety of formats, including those that are technology based, will be highly desirable for Generation Z students. These students have been educated through their prior K-12 educational experiences with electronic books, video lessons, digital media, and teaching materials that incorporate visual materials. Relying solely on text-based materials and classroom lectures will probably not be appealing to this group of students. Given Generation Z's desire to connect virtually, nurse educators should envision new ways to engage and interact with students in the classroom and during usual out of class contacts. Traditional in-person office hours, face-to-face content review, and remediation activities may need to be reimaged, that is, substituted, with technology assistance so that it is appealing to this group of students. Faculty may want to replace some in-person office hours with virtual office hours, use texting or other social media for sharing course announcements and reminders instead of e-mails, and provide some tutoring and remediation activities in an electronic format or in an engaging approach, such as digital gaming. Programs are available to help automate these processes, such as the Remind application, which helps to schedule and send text message reminders. These applications can also help to identify when faculty are available so that students easily identify when they can be reached. Use of familiar and possibly preferred technologies can help motivate students and reach these students who are already using their phones to direct their activities and interactions. These approaches eliminate the need for students to log in to course management software or check e-mails, which they may find slow, cumbersome, and unresponsive. Many Generation Z students learn by watching, so relying on media, such as YouTube, Netflix, or other video clips, may also help to engage these students, or educators may want to consider

allowing students to use their technology skills to create learning videos for the class.

Given the extensive screen time by Generation Z students, these students may be lacking in basic social and oral communication skills. Faculty may need to consider how to develop these essential interpersonal interaction skills needed by nurses. Practice activities, role modeling, computer simulation, gaming, or other creative strategies developed in an electronic format may help in developing these skills, or students can begin refining communication skills by using electronic blogs or discussion groups that help advance interaction skills beyond short messages. If requiring face-to-face group activities, provide guidelines and tips for interactions, offer constructive feedback and critique of their social skills, and teach students how to demonstrate respect for other group members. Keep group size small until teamwork skills develop.

With the emphasis on technology and declining personal connection, Generation Z nursing students may feel isolated and prone to mental health concerns, such as anxiety and depression. National trended data suggests this alarming increase in anxiety and depression among college students. In a recent survey, more than 60% of college students felt very sad or experienced overwhelming anxiety in the past 12 months (American College Health Association, 2017). Given this growing problem, it is imperative that college students know how to recognize these problems, quickly gain access to supportive services for help, and get assistance to prevent escalation of issues. Because Generation Z is likely to turn to technology when faced with problems, institutions may need to consider online mental health chat services or call in hotlines. They may also want to ensure that mental health services can easily be located via college websites and that mental health resources are readily available.

A final consideration for nurse educators involves the developmental level of college students. Generation Z students enter college having had a slower entry into adulthood with many students delaying driving, employment, and having parents oversee student responsibilities, such as scheduling and money management (Twenge, 2017). Generation Z students are accustomed to parents supervising or even managing many of these responsibilities (Twenge, 2017). They may enter higher education lacking knowledge in how to perform some traditional adult activities and may even expect those in higher education to assume a parent-like role (Twenge, 2017), or they may allow parents to continue to direct their development. Faculty, advisors, and administrators may need to suggest ways for students to build these executive functioning and personal management skills. Making suggestions to students during normal interactions with them may be all that is needed. For example, encouraging students to use their cell phone calendar or alarm application to remind them about important course deadlines may be useful. Prompt students to use easily accessible campus resources that can help them learn how to manage their time, course activities, and assignments. During recruitment visits, encouraging potential students

to take advantage of incoming preparatory or transition programs offered by the college may be one way to help students develop these skills that will facilitate their college and nursing success.

Generation Z and the Nursing Workplace

In addition to supporting Generation Z students, nurse educators will also be engaging with Generation Z nurses in the workplace. When considering Generation Z characteristics, several workplace recommendations are presented. First, Generation Z's cautious, concerned nature means that they are not sure they will succeed and may take fewer risks than previous generations (Twenge, 2017). Generation Z nurses want a stable job and may be more loyal and demonstrate a better work ethic than their Millennial counterparts (Seemiller & Grace, 2016; Twenge, 2017). Nurse leaders and others who work with this generation of nurses will need to provide nurturance, guidance, and support to Generation Z nurses (Seemiller & Grace, 2016; Twenge, 2017). These workers will need reassurance about their contributions and effectiveness. When interacting with these Generation Z nurses, faculty may want to use words and phrases that provide encouragement, such as "I want you to succeed" (Twenge, 2017). Generation Z members are eager to prove themselves, but frequent feedback should be offered to help build their confidence and comfort (Seemiller & Grace, 2016; Twenge, 2017). Short, succinct, and prompt feedback is preferred (Seemiller & Grace, 2016; Twenge, 2017) as Generation Z has a short attention span and a desire for immediacy. Acting as a preceptor for nursing students may also strengthen and provide reinforcement of Generation Z nursing staff's nursing knowledge and allow for small career leaps (Twenge, 2017).

Generation Z members respect authority and adhere to hierarchies that are in place (Seemiller & Grace, 2016). However, as Generation Z is influenced by their skeptical, cautious, and pragmatic Generation X parents (Rickes, 2016; Wiedmer, 2015), they will also want leaders and possibly nursing faculty they work with to listen, consider their ideas, value their perspectives, and involve them in decision-making (Seemiller & Grace, 2016). Involving Generation Z workers in workplace and educational decision-making will also benefit Generation Z's underdeveloped social and relationship skills and help decrease their risk for mental health concerns and increase activism. With careful attention to generational considerations, nurse educators can appropriately support and guide Generation Z nurses so that they can further contribute to nursing and nursing education.

Conclusion

In examining the literature, nine characteristics of Generation Z were identified: (a) high consumers of technology and cravers of the digital world; (b) pragmatic; (c) underdeveloped social and relationship skills; (d) cautious and concerned with emotional, physical, and financial safety; (e) individualistic; (f) increased risk for isolation, anxiety, insecurity, and depression; (g) lack of attention span, desiring convenience and immediacy; (h) open-minded, diverse, and comfortable with diversity; and (i) sedentary activism (Igel & Urquhart, 2012; Loveland, 2017; Rickes, 2016; Seemiller &

Grace, 2016; Shatto & Erwin, 2016, 2017; Spears et al., 2015; Turner, 2015; Twenge, 2017). Unifying events, contextual factors, and parental interactions influence this generation. These generational characteristics will impact nurse educators, nursing programs and, ultimately, the workplace.

Reexamination of higher education and implementation of focused teaching–learning design strategies and approaches must be considered as Generation Z students rapidly infiltrate colleges. Faculty will need to employ active teaching–learning design strategies and experiential learning, integrate technology into instruction, and provide short, succinct, prompt, and frequent interactions with students. In addition, learners will need nurturing, support, and help to engage in dialogical conversations. The college environment and campus facilities may also need to be reconfigured to meet Generation Z learning needs. Although data regarding this generation is still emerging and generational stereotypes are not absolute, discussing Generation Z's characteristics and influences can assist nurse educators in successfully engaging and guiding students and nurses.

References

- American College Health Association (2017). *American College Health Association–National College Health Assessment II: Reference group executive summary spring 2017*. Hanover, MD: American College Health.
- Carter, A. G., Creedy, D. K., & Sidebotham, M. (2016). Efficacy of teaching methods used to develop critical thinking in nursing and midwifery undergraduate students: A systematic review of the literature. *Nurse Education Today*, 40, 209–218. <https://doi.org/10.1016/j.nedt.2016.03.010>.
- Holtzschneider, M. E. (2017). Expanding the fidelity of standardized patients by incorporating wearable technology. *Journal for Nurses in Professional Development*, 33(6), 320–321. <https://doi.org/10.1097/NND.0000000000000391>.
- Igel, C., & Urquhart, V. (2012). Generation Z, meet cooperative learning. *Middle School Journal*, 43(4), 16–21.
- Lang, J. M. (2016). *Small teaching: Everyday lessons from the science of learning*. San Francisco, CA: Jossey-Bass.
- Loveland, E. (2017). Instant generation. *The Journal of College Admission*, 235, 34–38.
- Merriam, S. B., & Bierema, L. L. (2014). *Adult learning: Linking theory and practice*. San Francisco, CA: Jossey-Bass.
- Mocek, E. A. (2017). The effects of syllabus design on information retention by at-risk first semester students. *Syllabus*, 6(2), 1–15 (Retrieved from <http://www.syllabusjournal.org/syllabus/article/view/222/Mocek>).
- Philip, T. M., & Garcia, A. D. (2013). The importance of still teaching the iGeneration: New technologies and the centrality of pedagogy. *Harvard Educational Review*, 83(2), 300–401.
- Phillips, J. M. (2016). Strategies to promote student engagement and active learning. In D. M. Billings, & J. A. Halstead (Eds.), *Teaching in nursing: A guide for faculty* (pp. 245–262) (5th ed.). St. Louis, MO: Elsevier.
- Rickes, P. S. (2016). Generation in flux: How Gen Z will continue to transform higher education space. *Planning for Higher Education Journal*, 44(4), 21–45.
- Seemiller, C., & Grace, M. (2016). *Generation Z goes to college*. San Francisco, CA: Jossey-Bass.
- Shatto, B., & Erwin, K. (2016). Moving on from Millennials: Preparing for Generation Z. *The Journal of Continuing Education in Nursing*, 47(6), 253–254. <https://doi.org/10.3928/00220124-20160518-05>.
- Shatto, B., & Erwin, K. (2017). Teaching Millennials and Generation Z: Bridging the generational divide. *Creative Nursing*, 23(1), 24–28. <https://doi.org/10.1891/1078-4535.23.1.24>.
- Spears, J., Zobac, S. R., Spillane, A., & Thomas, S. (2015). Marketing learning communities to Generation Z: The importance of face-to-face interaction in a digitally driven world. *Learning Communities Research and Practice*, 3(1), 1–10.
- Turner, A. (2015). Generation Z: Technology and social interest. *The Journal of Individual Psychology*, 71(2), 103–113.
- Twenge, J. M. (2017). *iGen: Why today's super-connected kids are growing up less rebellious, more tolerant, less happy- and completely unprepared for adulthood and what that means for the rest of us*. New York, NY: Atria Books.
- Wiedmer, T. (2015). Generations do differ: Best practices in leading Traditionalists, Boomers, and Generations X, Y, and Z. *Delta Kappa Gamma*, 82(1), 51–58.