Preface

As an undergraduate I was fortunate to have teachers who challenged and inspired me. When I entered the classroom, I wanted to be those teachers. What I didn’t realize was the complexities involved! In speaking to like-minded colleagues, I realized that many of my colleagues were also wrestling with similar issues. Over the years I have continued a pursuit of better teaching, through both research and practice. This book represents a natural progression of my interests. Notwithstanding its title, the book is not a generational indictment, nor does it promote specific modes or techniques of teaching and learning; its goal is simply to promote better teaching through awareness and understanding.

Today no understanding of teaching and learning can occur in the absence of an understanding of technology. I am not advocating technology as the answer to all educational ills, nor am I dichotomizing technology as necessarily good or bad. As an early proponent of technorealism, I feel that educational discussions of technology generally fail to address its complexity. This book, then, represents an attempt to think “critically about the role that tools and interfaces play in human evolution and everyday life” (www.techneorealism.org). It tries to reach a middle ground between blindly following educational practices that have remain unchanged for centuries, and the more recent trend of throwing new technologies at students in hopes that they will embrace and learn from them.

Clearly our technological choices alone have not necessarily led to better learning environments. This book is one attempt to address this issue. The specific focus of this book is pedagogy addressing the Net Generation, or Millennials. Because of this, it is of primary importance to note that making generalizations about generations is dangerous. But, as Taylor (2005) notes, some generalizations can help in understanding generational cohorts. As such, sociologists have labeled the various generations of the twentieth century: the Silent Generation, born 1901-1924, age today 86 and older; Baby Boomers born 1946-1964, age today 45-66; Generation X, born 1965-1978, age today 33-47 and the Net Generation, born 1979-1994, age today 17-32 (Sweeney, 2008).

Although generational labels are used in this book, they are used in ways that are both realistic and critical - critical in that we acknowledge that existing conceptualizations of Net Gen learning exist, but can and should be challenged; realistic in that we acknowledge that the learning needs of digital learners may not be unique to this generation, and that there is as much variation within generations as between them.

Conceptualizations of the Net Generation as a unique generation exist, and exist in plenty. The generation has many labels: Millennials, Generation Y, Generation Next, Generation Me, M Generation, and Echo Boomers. (The Net Generation was selected as the label of choice in this book because of its associations with the Internet and the digital revolution.) There is a wide body of research focusing on this generation’s behaviors and characteristics, as the authors in this book will describe in some detail. Since you will read a great deal more about Net Generational behaviors and learning characteristics
in the chapters to come, I will not discuss the issue in any depth here. I will, however, note that many researchers have found that the Net Generation learns differently from previous generations; a finding that has been confirmed by organizations like Educause and the Pew Internet Project.

So this book is predicated on the premise that educators today are dealing with a large number of students who were born digital and live wired, and that these students learn in ways that are sometimes distinctively different from their predecessors. In spite of this, research shows that traditional teaching methods continue to dominate the classroom. This edited book will provide pedagogical resources for better understanding teaching and learning with digital learners.

Given the premise stated above, this book does not blindly advocate adapting teaching to the perceived needs of a generation of learners. Rather, it takes a realistic and critical approach. It does so in three ways. Firstly, this book recognizes that the learning needs of digital learners may not be unique. Well before this Net Generation, educators have complaints that sound only too familiar -- from the professor in 1855 who lamented his students having “an undisciplined mind, and an uncultivated heart, yet with exalted ideas of personal dignity, and a scowling contempt for lawful authority” (quoted in Hoover, 2009) to Marshall McLuhan’s (1957) statement about education and entertainment being synonymous. So it may be unrealistic to assume that this generation is any more unique than any previous generation. The Net Generation may have more in common with other generations than is popularly accepted, and the gap between Digital Natives and Digital Immigrants may be exaggerated.

Secondly, this book takes a realistic focus in acknowledging that existing conceptualizations of Net Gen learning can and should be challenged. Hoover’s (2009) perspective that notions of the Net Generation may be over-hyped, is supported by several authors in this book. DaCosta, Kinsell, and Nasah note that the data to support many of the assumptions put forth about the Net Generation is contradictory, and that empirical data is often lacking. Their research is supported by several other authors in this book, including Atkinson, Ellaway, and Tworek, and Muir.

Thirdly, this book acknowledges that no generational overview can ever effectively reflect the range and diversity of the individuals within that generation. That there is as much variation within generations as between them is clearly recognized and emphasized in this book, as discussed by Muir. As well, DaCosta, Kinsell, and Nasah provide clear evidence to show there is as much variation within the Net Generation as between generations. Not all members of the Net Generation share their commonly accepted characteristics of being wired, connected, and digitally literate!

Taking all the above factors into consideration, generation labels remain a convenient way to consider the pedagogical needs of students, but these needs remain important no matter what the generation. Higher education still needs to focus more fully on pedagogical practices, and to allocate more resources to the understanding and improvement of teaching. This book provides one such resource. It is important to remember that as a resource it does not blindly advocate tailoring our teaching to the needs of any students, whether a new generation or not. Nor does it advocate ignoring students’ learning needs. The authors in the book do acknowledge the realities of a wired world and promote the ever-important need for improved pedagogy. This over-arching focus on pedagogy is the pervasive theme of the book, as can be seen in the chapter previews that follow.

The book begins with a Foreword, written by Richard Sweeney. Affectionately nicknamed “the Millennial Man,” Sweeney has conducted focus groups in front of live audiences at 60 colleges and universities across the U.S. His knowledge of this generation places him in a unique position to explain the contribution of this book to the field.
The book is then divided into four sections: theories and concepts, theory and practice, social media for digital learners, and pedagogies for today’s classroom.

Section 1 addresses the dearth of pedagogical theory by examining theories and concepts through the lens of educators, administrators, and students. Taking the position that theories are at the heart of practice, this section provides theories, concepts, and models to help us in teaching, planning, research, and practice.

In Chapter 1, Simon Atkinson proposes a model to help educators effectively meet the challenges of new generations of learners. He proposes a Student-Owned Learning-Engagement (SOLE) model as a customized and customizable model to help educators, trained in one epistemological universe, to adapt their skills to a new one.

In Chapter 2, Star Muir considers the tensions arising from the broad characterization of a generation of students as Digital Natives. In discussing contradictory research findings, he provides a larger picture of the Net Generation. Star’s broad focus is the articulation of a responsive pedagogy of classroom practices that could be equally effective for what he terms “digital and analog” environments, addressing persistent skill gaps between students.

In Chapter 3, Charles Reigeluth, William Watson, and Sunnie Lee Watson examine the role of technology in higher education. They propose a model for a comprehensive and integrated application of technology to the learning process. This model addresses four primary roles for student learning: record keeping, planning, instruction, and assessment, and such secondary roles as communication and general data administration.

In Chapter 4, Josh Compton offers Inoculation theory as a device which can guide educators as they work with Net Generational students on digital learning projects. Inoculation theory is a classic theory of social influence, describing how exposure to weakened versions of challenges motivates a process of resistance to protect against future, stronger challenges. He demonstrates how discussions guided by Inoculation theory have the potential to impact both the content and the processes of students’ thinking.

Finally, in Chapter 5, Charles Aust discusses the benefits of face-to-face interactions in fostering student development. Without belittling technology’s role in advancing academic progress, Aust reminds us that digital learners are also human beings who can benefit from the transformational processes brought about in the physical presence of others. He considers the many ways face-to-face learning experiences contribute to students’ growth and adaptation.

Section 2 develops the previous section by addressing theory and practice. While theory helps us understand and improve our teaching, without a link to classroom practice theories do not achieve their potential. The chapters in this section present research that has a strong theoretical focus, demonstrating the effectiveness of examining theory through empirical research.

In Chapter 6, Boaventura DaCosta, Carolyn Kinsell, and Angelique Nasah question the concept of digital propensity applied to the Net Generation. They present the findings of an empirical study in which 580 postsecondary students were surveyed to investigate the differences between digital natives and digital immigrants. Their findings revealed that of the ten traits investigated, only two showed significant difference, and of these two traits, only one favored the digital native notion, shedding doubt on the strong digital propensity claims made about the Net Generation.

In Chapter 7, Robert Zheng investigates the influence of multi-modal presentation and multi-tasking on Net Generation students’ performance in complex problem solving. His findings show that participants performed best with multi-modal presentation as evidenced in their reduced cognitive load, improved
self-efficacy and performance in multiple rule-based problem solving. The findings also revealed that multi-tasking could block learners’ learning pathway due to an increase in cognitive load.

In Chapter 8, James Gleason and Laura Beth Daws study the nature and impact of interactivity as a discrete element within an instructional setting. They empirically explore whether the recognition of interactivity by students measurably contributes to actual cognitive learning and in what ways. Their results did not support the positive impact of interactivity on measurable student knowledge acquisition, but the recognition of interactivity did influence student satisfaction positively.

In Chapter 9, Scott D’Urso and Craig Scott examine the use of specific communication technologies as influencing classroom performance, key learning outcomes, and other measures of course satisfaction. Comparing communication in the technology-enhanced classroom education and in technology-enhanced online education, the authors found no significant difference between the two courses. Results also indicated that prior experiences lead students to gravitate towards their preferred learning environments, and that when used appropriately, the benefits of communication technology use in education outweigh many of the drawbacks.

Section 3 addresses uses of social media for digital learners. Social media use is the single most defining characteristic of the Net Generation. But while widely embraced by many, across the generations, social media are only cautiously utilized by educators. This section offers ways in which social media can be utilized effectively to expand our pedagogical toolbox.

In Chapter 10, Maureen Ebben, Russell Kivatisky, and Daniel Panici use a case study and survey data to explore three issues: students’ perceptions of technology in teaching and learning, students’ perceptions of wiki technology in teaching and learning, and students’ attitudes about group work and collaboration. Their results suggest three contradictions in student behaviors and perceptions regarding group work and collaboration. They also offer five critical insights as to best practices for teaching and learning with wikis.

In Chapter 11, Susanne Croasdaile and her students Rachel Angel, Erin Carr, Lucy Hudson, & Carin Ursey analyze blogs created by Net Generation students enrolled in a Master’s level research methods course designed according to the principles of Universal Design for Learning. The authors’ blog postings demonstrate the possibilities inherent in the use of blogs in the classroom. They discuss the importance of formative assessment, particularly through the use of student self-assessment and instructor feedback to close the gap between current performance and learning goals, and provide best practices for blog use.

In Chapter 12, Hilary Wilder, Geraldine Mongillo, and Carrie Eunyoung Hong describe a pilot study using Twitter to afford anytime/anywhere writing by first-year students. Students tweeted weekly ideas, thoughts, and reflections on their first-year experience throughout the semester, with the goal of compiling all tweets into a formally written text (a “Freshman Survival Guide”) to see if they could use a “new literacy” skill to promote traditional writing. Results indicated that Twitter use was not as high as expected, and that students were not overwhelmingly positive about using new technologies in the classroom, but many seemed open to that possibility.

In Chapter 13, Marsha Huber, Jean Kelly, and Shirine Mafi discuss their experiences integrating blogs and wikis into their courses, using assignments based on Fink’s Paradigm of Significant Learning. Their results varied: even though students did improve in organizing and presenting data, their critical thinking skills did not; collaborative learning was enhanced, and Fink’s Paradigm of Significant Learning was successful; student attitudes about using the technology were mostly positive. The authors concluded that even inexperienced faculty can adopt social media tools as long as there is a clear connection between the courses’ learning objectives and the particular technology being used.
In Chapter 14, Shannan Butler and Corinne Weisgerber explore ways that Personal Learning Networks can be incorporated into everyday pedagogical practice. They consider ways students can use social media platforms (such as Twitter, blogs and social bookmarking, and others) to identify and connect with communities of experts. The authors suggest designing an independent learning project, and provide a model.

In Chapter 15, Keri Stephens, Melissa Murphy, and Kerk Kee provide a case study of a Communications course highlighting the role of instructional communication, multicomunication practices, and interactivity research in creating a participatory classroom environment. The authors utilize web conferencing to engage disconnected students. They conclude that web conferencing media is effective in improving participation, and in creating a more inclusive, communicative, and interactive community of learners.

In Chapter 16, William Gibbs examines current principles of instruction, learning, instructional design, and learning theory and their relevance to the education of digital learners. The discussion is developed and illustrated through the description of a digital media course premised on these teaching and learning precepts. He concludes with a review of some of the challenges faced when instituting innovative instructional practices.

Section 4 considers a broader range of pedagogies for today’s classroom. The unique characteristics of the 21st century classroom are only in part due to the changes in students. A complex array of factors act on the classroom today, including increasing legislation directed at higher education, intensifying demands for accountability from both the general public and legislators, cost-cutting measures imposed by cash-strapped institutions, along with unprepared students, demands for graduates with better skills and knowledge than their predecessors, a rapidly changing workplace, and a rising faculty work load. In these circumstances, pedagogy often takes a back seat, but it is at just such times that pedagogy should assume greater importance. The chapters in this section offer a range of pedagogical resources.

In Chapter 17, Scott Roberts and Steven Buzinski discuss how Action Learning assignments can help Net Generation students learn by engaging relevant material using familiar media. The authors offer five component steps in Action Learning projects, which guide students through identifying, implementing, and evaluating an informed attempt to make a measurable impact on the world. In doing so they create purposeful scholarship, move beyond basic demonstrations of learning, and enhance information for future utilization.

In Chapter 18, Rachel Ellaway and Janet Tworek examine the influences of the Net Generation meme on professional education. They explore the interactions between the Net Generation meme and medical education and identify points of consonance and dissonance. In doing so they present a critical response to the idea of a Net Generation, as well as its specific manifestations and impacts on the development of healthcare professionals. They conclude by presenting a digital professionalism framework as a way to restore balance within medical education as well as situating it within an increasingly digital social milieu.

In Chapter 19, Jessica Fargnoli considers the rationale and benefits for the use of audio and video capture as a pedagogical tool for engaging and instructing the Net Generation. She examines means of incorporating audio and video technology to guide students in developing effective presentation skills, and provides examples of how to utilize audio and video capture technology in any discipline. She utilizes a case example, and data from self-report and surveys, to explore the utility of Echo 360 audio and video capture technology in engaging the Net Generation.

In Chapter 20, Sally Blomstrom focuses on service learning as a pedagogical approach for Net Generation learners, and presents a case study as an example. She discusses the case study assignment in a
speech class. She specifically considers the assignment’s design for Net Generation learners, ways in which the assignment followed principles of service-learning assignments, and how service-learning principles provide a complement to Net Generation learner characteristics.

In Chapter 21, Chris Gurrie and Brandy Fair consider students’ perceptions of their professors’ use, abuse, and success with PowerPoint presentation software. They found student perceptions ranged from highly critical to delightfully engaged. Their research and analyses highlight best practices of teaching and engagement while implementing PowerPoint as a way to help today’s learners better retain course materials.

In Chapter 22, Rukhsana Ahmed examines how technology-enhanced experiential learning methods, specifically the integration of personal experiences and course materials in an online course, can enhance Net Generation student learning. Drawing from undergraduate and graduate students’ perspectives on their learning experiences gathered through an evaluation survey in an online health communication course, her study demonstrates how learning can be incorporated into everyday practice to meet the unique needs of digital learners.

The Afterword is written by Ronald Jacobson, editor of the classic Communication and Cyberspace: Social Interaction in an Electronic Environment. His experience as an administrator, whose responsibilities include facilitating University initiatives in online learning and new program development, provide a unique perspective with which to close this book.

It is my hope that the wide range of issues and topics considered in this book will prove a solid resource for educators. Since technological change will continue to impact education, educators will need to continually think about pedagogies to more effectively prepare the young people who are our future. In doing so, this book accentuates the fine line educators must walk: we can not abdicate our role as authorities directing the learning experiences of our students, but we need to continually look at ways to maximize the skills they develop outside of class, without accommodating the poor learning habits sometimes promoted by technology.

As such, this book is a broad and inclusive pedagogical resource, offering sound learning theories, examples of practice, and a range of pedagogical ideas and resources. It should thus be of interest to anyone who seeks a deeper understanding of teaching and learning—academics and teachers, practitioners, and Net Geners.

REFERENCES


