ABSTRACT OF CAPSTONE

Lucy E. Holman

The Graduate School

Morehead State University

April 20, 2021

CROSSING THE GENERATIONAL AND DIGITAL DIVIDE: ACCOMMODATING THE LEARNING EXPERIENCE OF GENERATION Z

Abstract of Capstone

A capstone submitted in partial fulfillment of the
Requirements for the degree of Doctor of Education in the
Ernst and Sara Lane Volgenau College of Education
At Morehead State University

By

Lucy E. Holman

Radford, Virginia

Committee Chair: Fujuan Tan, Associate Professor

Morehead, Kentucky

April 20, 2021

ABSTRACT OF CAPSTONE

CROSSING THE GENERATIONAL AND DIGITAL DIVIDE: ACCOMMODATING THE LEARNING EXPERIENCE OF GENERATION Z

The focus of this research was to examine the learning characteristics and perceptions of college freshmen and sophomores at a small liberal arts university who identify as Generation Z. Born between 1995 and 2012, research is inconclusive on how this cohort learns and whether the educational needs and expectations of this generation are being adequately and effectively addressed in the college classroom. The integration of technology in Generation Z's learning process is also inconclusive. Characterized as the first true digital natives, do educators understand how Generation Z processes information and how, or whether, technology has changed the way they think?

Currently, there are at least three generations of professors serving in the classroom – Baby Boomers, Generation X, and Generation Y, also known as Millennials. Collectively, their educational experiences and historical perspectives span more than five decades. This research will also consider the implications of generational theory relative to the learning experiences of college-age students who identify as Generation Z.

In this study, a qualitative research design was used for its interpretive and descriptive properties. As the primary instrument for data collection, field work was conducted in a natural setting through Zoom and telephone interviews with eight freshmen and sophomores in the Generation Z cohort. One-on-one recorded

interviews were conducted with students who identify as Generation Z and are enrolled in a general education course. Seven faculty members, who teach general education courses, also participated in this study by completing questionnaires online.

KEYWORDS: Generation Z, generational theory, digital natives, learner-centered, Baby Boomer, Generation X, and Generation Y, or Millennials.

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Date

CROSSING THE GENERATIONAL AND DIGITAL DIVIDE: ACCOMMODATING THE LEARNING EXPERIENCE OF GENERATION Z

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DEDICATION

“ Love bears all things, believes all things, hopes all things, endures all things,” 1 Corinthians 13:7. I dedicate this page to some of the people I love. To my husband John, you are my hero, my soldier, and the love of my life.
You never once complained at the cost of my undergraduate degrees, my master’s degree, and finally, my doctoral dream. You were by my side for the tears of frustration and of triumph, and never lost faith in me. Together, we are one.

To my son, Bruce, you are my heart and soul. Being your Mom is the best thing I will ever do. You love learning as much as I do. You spent most of your youth with a Mom who was too immersed in books, writing papers, going to class, and working, yet I am so proud of the fine young man, father, and professor you have become. I am making it all up to you now as Finn and Vivi’s Mimi. I love you more than my heart can hold. And Natasha, you are absolutely the best daughter-in-law. In the times I thought I could not make it through this doctoral program, I remembered how hard you worked on your doctorate while teaching every day, caring for a toddler, and a new baby on the way. You are amazing.

To my friend, Stephanie Stiltner, thank you for everything. I could not have done this work without you. We spent a lifetime together, making a difference in big and small ways, serving in body, mind, and spirit at the university we love. It is your turn next, my friend, to chase your doctoral dream.

ACKNOWLEDGEMENTS

It is with deepest gratitude that I acknowledge those who have fostered my journey throughout the doctoral program at Morehead State University. First, to Dr. Fujuan Tan, my capstone chair, you have been mentor and teacher, always patient, kind, and wise in your counsel. From my first class with you, I knew when the time came that I would ask you to be my chair. Your classes challenged me to envision leadership, embrace disruptive innovation in learning, and to view higher education from a more holistic and global perspective.

Dr. Lee Nabb, thank you for being a part of my capstone committee, for your advice, for the time you spent supporting my efforts, and the optimism in your analysis of my work. I always enjoyed your classes, and especially my favorite, the focus on legal issues in adult and higher education.

I would be remiss if I did not thank the MSU professors who also contributed to my education – Dr. Daryl Privott, Dr. Jeanne Justice, Dr. Shane Shope, and Dr. John Curry.

Finally, I would like to thank Dr. Howard Roberts for serving on my capstone committee. I truly value your friendship, your leadership, and have benefited greatly from your wisdom and experience. Most of all, I have been so blessed, and proud, to be a part of your faculty. In so many ways, you are exceptional. I will always be grateful for the opportunity and support that both you, and Dr. Lori Werth, gave me to pursue my love of teaching.

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Chapter I

Introduction

This qualitative study examined the learning characteristics and perceptions of current college freshmen and sophomores who identify as Generation Z, including how their learning needs are being accommodated in the classroom. Born between 1995 and 2012, Generation Z has been characterized as digital natives, a generation of learners who have always had technology in their lives. Prensky (2001) first defined the phrase digital native, in contrast to a digital immigrant which describes one who learned to use technology later in life. Prensky's theory is predicated on the belief that digital natives have always had access to technology, including computers, cell phones, the internet, virtual and augmented reality, and video games.

Born with a wealth of information at their fingertips, Prensky asserts, and many researchers agree, that Generation Z's prolific access to technology has enabled them to "think and process information fundamentally differently" than learners in prior generations (2001, p.1; Mosca et al., 2019; Seemiller & Grace, 2017: Muhammad et al., 2016; Worley 2011). In contrast, others have been critical of whether Generation Z has demonstrated an ability, beyond social media, gaming, and basic computer skills, to use technology effectively for problem solving, critical thinking, or exhibiting a higher level of digital literacy skills (Caverly et al., 2019; Scolari, 2019; Judd, 2018; Kirschner & Bruyckere, 2017; Ng, 2012).

Extending the digital native debate, research is inconclusive as to how the learning needs and expectations of Generation Z are being met in the college classroom. Currently, Generation Z's professors are Baby Boomers, Generation X, and Generation Y, also known as Millennials, who collectively represent a generational gap spanning half a century. Research suggests the need to examine whether higher education's approach to teaching this generation is effective, what the path to learning should like for Generation Z, and whether they expect a curriculum that is immersive, collaborative, and classrooms that are technology rich. As educators continue to examine and evaluate the research, technology is dramatically changing the learning landscape. If, as Prensky suggests, Generation Z's use of technology affects the way they process information, it is imperative that educators continue to evolve in their approach to teaching, learning, and communicating.

Student perspective will enhance the continuing debate around learning and technology. For this study, it was important to ask college-age students who identify as Generation Z what *they* think about their learning preferences and expectations in the classroom, including how they use technology to process information. The students who participated in this study were the first of Generation Z to attend college and included freshmen and sophomores. As the first, they are setting the benchmarks for the thousands of digital natives who will follow in their footsteps. Therefore, it is important for educators to understand how technology impacts learning and how to help these students make the most of their

college experience *before* they graduate. The youngest of this cohort were born in 2012. Long term, the challenges of educating Generation Z are not going away for the foreseeable future. The time will also come when the next cohort of digital natives – Generation Alpha – find their way to college. Born between 2010-2024, Generation Alpha is on track to become the largest generation in history, projected to number nearly two billion by 2025 (Understanding Generation Alpha, n.d.). Conceivably more technologically savvy than Generation Z, the children of Generation Alpha already understand how to ask virtual assistants "Alexa" and "Siri" to tell them a joke or play their favorite song. From infancy, their toys have been digital games and puzzles, and even the youngest can seamlessly navigate their parent's cell phone or iPad.

My research interest in Generation Z follows a twenty-year career in higher education marketing, branding, and public relations. Recruiting prospective students requires marketing and public relations strategies informed by an understanding of the wants, needs, and aspirations of distinctive cohorts, including the consumer-centric expectations of Generation Z. Currently, I am an assistant professor of business at a private liberal arts university. My students represent several generational cohorts, with Generation Z now replacing Millennials as the majority. From a business education perspective, I am fascinated by my students' views on marketing, advertising, consumption habits, brand influencers, and spending relative to their age groups.

Generational cohorts have distinctive preferences, life experiences, and use technology differently (Seemiller & Grace, 2019; Trevino, 2018; Tinto, 2017). These factors influence marketing, research and development, and business success, but do the same distinctive preferences have an influence on learning? A general observation of the students in my classes suggests that generational differences exist, beyond the marketing implications. If there is merit in the idea that Generation Z learns differently than the cohorts before them, due in part to the influence of technology in their lives, then higher education will best serve students by seeking answers to questions about their learning preferences and expectations.

From Baby Boomer to Generation Z, it is time to demystify the generational theories and misconceptions we have about one another by opening the lines of communication, merging conventional and student-centered learning styles, and addressing digital literacy and technology. For educators, it is time to look beyond all the surface-level distractions that may prevent Generation Z from realizing their full potential and learning to thrive in *their* world as the makers, creators, and doers they were born to be. After all, we are sending Generation Z into a world they may not be ready for but are about to change.

Statement of the Issue

Current research is inconclusive as to whether Generation Z learns differently than prior generational cohorts, whether their educational needs and expectations are being met, and if different approaches to teaching this cohort are warranted. In a recent study, Mosca et al., (2019) posit that college educators are

not adapting teaching and learning strategies quickly enough considering the impact of technology on the lives of Generation Z. They admit, however, that research lacks the empirical data to back up their assertion. Bennett et al., (2008) take a critical view of the educational and generational debate, citing a lack of empirical evidence that digital natives have demonstrated a significant use of digital technology beyond word processing.

While Generation Z shares some characteristics with Generation Y, also known as Millennials, differences exist in their learning habits, interests, personal aspirations, world views, perspectives, and level of engagement (Seemiller & Grace, 2017). With the oldest of Generation Z progressing toward their third year of college, institutions of higher education will find it increasingly difficult to recruit, retain, and educate a generation whose approach to learning is dramatically different from prior cohorts (2017).

Purpose of the Study

This qualitative study investigated the learning characteristics, expectations, and perceptions of freshmen and sophomores who identify as Generation Z and attend a small liberal arts university. The significance of this study was to provide a qualitative, holistic view of the learning needs and expectations of college students who identify as Generation Z. Findings may be useful in developing learner-centered strategies, increasing student engagement, and meeting Generation Z's learning expectations. This research may also complement existing literature or inspire larger studies of this cohort.

Generation Z was born between 1997 and 2012 (Gupta, 2018). Research is inconclusive on how this cohort learns and whether the educational needs and expectations of this generation are being adequately and effectively addressed in the college classroom. It is also suggested that misconceptions about Generation Z's inclinations toward using technology for learning may have been influenced by the rhetoric around the digital native and digital immigrant debate (Waycott et al., 2010). Critics of the digital native concept also assert there is a "considerable variation in the level of technology adoption across student populations" (Judd, 2018, p. 99). The integration of technology in Generation Z's learning process is also inconclusive. Despite access to an abundance of digital technology, students spent more than four hours daily using technology for personal and social activities outside the classroom, including texting, music, watching videos, and playing games (Lai & Hong, 2015). Hampton et al., note that the student "is the primary agent of learning" (2020, p.164). Ultimately, understanding student preferences for instruction is key to engagement, which promotes learning. Unlike prior generations, educators contend that Generation Z's immersion in technology makes them more inclined to be self-directed learners (Mosca et al., 2019; Dabbagh et al., 2019; Narayan et al., 2012). Embracing progressive ideas to complement Generation Z's learning preferences often includes incorporating digital tools that were previously viewed as a distraction.

It is not just a "cell phone" to Gen Zers, it's a computer and a lifeline.

Additionally, touching a phone meets the needs of kinesthetic learners. By

> adopting diverse learning strategies (such as visual, auditory, and kinesthetic), professors increase the ability to connect students to course content. Providing information, stimulation, and connection is the key to reaching Generation Z students (Cameron & Pagnattaro, 2017, p. 324).

Another important aspect of understanding how Generation Z learns is the question of whether a generational divide exists in the student-teacher dynamic (Waycott et al., 2010). There is a perception that older professors are not comfortable with or proficient in using technology in the classroom and a belief by some educators that students primarily use technology for personal activities, such as surfing the internet, playing games, social media, and watching YouTube (Caverly et al., 2019; Sorgo et al., 2017; Buskirk-Cohen, 2016; Ng, 2012). These assumptions lend credence to the idea of a digital divide between digital native students and their digital immigrant teachers (Judd, 2018; Hart, 2017; Mohr & Mohr, 2017). In higher education today, research suggests the need for teachers to develop a more sophisticated understanding about the role technologies play in the lives of students (Seward & Nguyen, 2019; Waycott et al., 2010, p.1202).

Currently, at least three generations of professors are serving in the classroom, including Baby Boomers, Generation X, and Generation Y. Collectively, their educational experiences and historical perspectives span nearly five decades. This research considers the implications of generational theory and its impact on the learning experiences of college-age students who identify as Generation Z. Professional development for educators, inspired by an

understanding of the learning needs and expectations of Generation Z, may be achieved by enhancing teaching methods, incorporating digital strategies, and fostering a mutual understanding and collaborative experience in the multi-generational classroom (Chicca & Shellenbarger, 2018).

Research Question

The focus of inquiry in this research centers on understanding the learning needs and expectations of college freshmen and sophomores who identify as Generation Z. The research question in this study will consider:

1. What are the learning characteristics and expectations of college-age students who identify as Generation Z?
2. How are the learning needs of Generation Z being accommodated in the classroom?

This study identifies the learning needs and expectations of Generation Z in the college classroom, the role of technology, and communication between generations. Peer-reviewed research primarily considers the educators' viewpoint. In going directly to the source – Generation Z – their feedback provides a clearer understanding of what they believe, and why, and their perspectives on how they learn.

Definition of Terms

- Baby Boomer Generation – Born 1946 to 1964 (Pew Research Center, 2019).
- Generation X – Born 1965 to 1980 (2019).

- Generation Y / Millennial / Net Generation – Born after 1980 (2019).
- Generation Z / iGeneration – Born 1997-2012 (2019).
- Generational theory – The study of how different generations develop value systems which drive behaviors and attitudes (Codrington, 2008).

Chapter II

Review of Literature

The purpose of this study was to explore the learning characteristics of college-age students who identify as Generation Z. It also focuses on how, and whether, their learning expectations are being met in the college classroom. Generation Z began arriving on college campuses in the fall of 2018. Research suggests the need to assess whether current higher education teaching methods and learning outcomes for this demographic are effective. This literature review identifies the characteristics of college-age students who identify as Generation Z and examines their learning preferences and expectations. Known as digital natives, the role of technology in their learning experiences is also considered.

Introducing Generation Z

Born between 1997 and 2012, interest in Generation Z is beginning to eclipse the media's hyper-focus on Generation Y, who were born after 1980 (Gupta, 2018). Characteristically, Generation Z has been portrayed as individualistic, socially insecure, racially and ethnically diverse, entrepreneurial, multi-taskers, and collaborative. Digital technology has also shaped Generation Z's cultural, global, social, and political awareness (Seemiller & Grace, 2017). Generation Z associates playing with learning, including gamification, and prefers a learner-centered approach, immersive experiences, and learning by doing rather than the traditional teacher-centered method of instruction (Byers, 2009; Gupta, 2018; Swanzen, 2018).

Generation Z represents an era where technology provides instant access to information, education, and global communication through the internet (Swanzen, 2018). Since birth, they have only known a world in which digital technology exists. Quick learners and independent thinkers, Generation Z thrives in learning environments where information is visual and dynamic, which enables them to process information fundamentally differently than their predecessors (Bennett et al., 2008, as cited in Prensky 2001a). In contrast, research is divided on whether Generation Z prefers, is adept at, or effectively uses their digital knowledge and skills for learning.

With Generation Z's arrival on college campuses, there are questions as to whether current teaching and learning strategies in higher education adequately address the challenges and expectations of Generation Z. Likewise, a perceived breakdown in communication and differences in learning styles may also have a negative effect on college retention (Trevino, 2017). As such, a greater understanding of Generation Z's learning habits and preferences, their use of technology, and academic needs should be considered (Trevino, 2017; Buskirk, 2015; Worley, 2011).

Other researchers call for educational reform amidst claims that higher education is unprepared to meet the needs of this generation.

> The picture beginning to emerge from research on young people's relationships with technology is much more complex than the digital native characterization suggests. While technology is embedded in their lives,

> young people's use and skills are not uniform. There is no evidence of widespread and universal disaffection, or of a distinctly different learning style the like of which has never been seen before. We may live in a highly technologized world, but it is conceivable that it has become so through evolution, rather than revolution. Young people may do things differently, but there are no grounds to consider them alien to us. Education may be under challenge to change, but it is not clear that it is being rejected (Bennett et al., 2008, p.783).

Generational Characteristics

Previous groups who have been identified by generational characterizations include the Silent Generation, the Greatest Generation, Baby Boomers, and Generations X, Y, and Z (Boyle et al., 2018). Generational characterizations are determined based on the ages of people born during a specific span of time, typically a period of 15 to 30 years. Significant events, such as wars, economic downturns, and political or social change figure prominently in determining generational characteristics (Holyoke & Larson, 2009).

Twenge asserts that the differences in generations are primarily rooted in cultural and societal changes and perceptions, and questions whether the characteristics of younger generations, such as Generation Z, "differ in ways that impact education" (2009, p. 399). Twenge explains that as educators come to understand the social and cultural characteristics of a generation, including their intellectual abilities, their approach to teaching will more effectively meet student

needs and expectations. As digital natives, technology has always been a part of Generation Z's lives, socially and educationally. Having an abundance of technology is an integral part of their generational character. Based on that assumption, does it mean educators should, as Twenge suggests, seek a greater understanding of Generation Z's technology use in order to better meet their learning needs and expectations? Lia and Hong (2015) argue that while today's college students spend a lot of time using technology the scope of that use is limited.

> There were also no practical generational differences in the technology use pattern and learning characteristics found in this study. The results of this study suggest that generation is not a determining factor in students' use of digital technologies for learning nor has generation had a radical impact on learning characteristics of higher education students (p. 725).

Central to this research, but outside the scope of this study, is a determination as to whether generational characteristics and labels are grounded in theory or serve as a study in human behavior that informs branding and marketing strategies in the business environment. An examination of generational theory and higher education suggests that there is an abundance of teaching and learning research for K-12 students, but additional holistic research is needed as these students matriculate to college (Buskirk-Cohen et al., 2015). Addressing generational differences in higher education, in both teaching and learning, "contribute to the wellbeing of organizations, the learning styles, values, and

preferences of each generation" (Holyoke & Larson 2009, p. 13). Considered another way, generational differences or student generalization can be perceived as stereotypical or discriminatory and are best avoided by recognizing diversity in the classroom (Agati, 2011).

In addition to the higher education community, understanding and bridging generational divides also has implications beyond the classroom. With five generations in the workplace, healthcare leaders and educators are looking for ways to enhance communication, teamwork, and technology use in patient care (Hart, 2017). "Educators need to meet students where they are without compromising standards" (2017, p. 254). Meeting students "where they are" requires an understanding of how they learn, process information, and communicate.

To understand the complexity of multi-generations in the classroom comparisons can be made between Generations Y, Z, (digital natives) and Baby Boomers (digital immigrants). For both Generations Y and Z, digital technology has been a constant in their lives, including smart phones, personal computers, email, the internet, social media, and video games (Baker et al., 2007). Baby Boomers' experiences were simpler and slower, marked by typewriters, television, and landline telephones.

Generation Z's learning process and use of technology differs significantly from past generations (Worley, 2011). There are also critics who assert that a generational digital divide has not been "substantiated empirically" (Lai & Hong 2015, p. 726). However, the debate over differences in generational learning and

technology is not new and dates back to the late 90s and early 2000s when Generation Y was first characterized as digital natives (Smith 2012). Much like Generation Z today, the narrative then described Generation Y as technology savvy multi-taskers who think and act differently. It also called for a higher education transformation (2012).

In their research, Lai and Hong (2015) considered the frequency and use of technology by students at a research university in New Zealand. They looked for patterns based on age, noting few differences. An examination of Generation Z's learning characteristics demonstrated a limited use of digital technology. While the researchers agreed that access to technology and technological support should be considered, they also recommended that educational policy changes should not be formed on the basis generational theory.

In a critical review of the debate on generational differences and technology use, Bennett et al., (2008) assert that the "sense of impending crisis," amounted to an "academic form of a 'moral panic,'" (p. 775). The authors cite a lack of empirical evidence that digital natives have demonstrated a significant use of digital technology beyond word processing. They also discount the effective use of gamification in the learning process and note a disproportionate use of gaming between male and female students. While there is value in their assertions on generational differences and learning, their strong rhetoric and analysis does not meet the empirical test either.

While Twenge, Lai, and Hong make valid points, their assertions do not go far enough to provide answers to the research questions in this study, including how Generation Z learns, their expectations in the college classroom, and whether or how those expectations are being met. Technology plays a central role in this study. More than any generation before them, it is impossible to separate Generation Z from the influence and impact technology has on their lives, which is why this study, and others like it, will advance the search for answers.

Engaging Generation Z in the Classroom

Portrayed as doers, rather than knowers, Generation Z are visual learners destined to transform society as drivers of the digital revolution. They favor a keyboard over handwriting, and as multi-taskers, are conditioned to be consumers of information, going between devices, such as smart phones and iPads, while watching YouTube or surfing the Internet. Popular opinion, based on news, media articles, and pop culture, portrays this generation as well informed through digital devices. As the beneficiaries of considerable data at their fingertips, future research is needed to understand on how these students synthesize information and develop critical thinking skills using these vast resources.

Generation Z has grown up learning to code, playing with portable gaming devices, earning digital badges, and engaging in e-learning activities outside of the classroom. There is an argument to be made that these hyper-connected students are on information overload, yet research indicates they prefer, and excel, in learning environments that feature virtual and other immersive experiences.

Harnessing these qualities in the classroom will be key to engaging Generation Z, problem solvers who thrive in a learner-centered environment. Strategies may include course content that allows students to control their learning situations while setting clear goals and objectives, developing study skills, and evaluating student-centered teaching methods. A key characteristic of Generation Z's learning process is self-directed learning. From internet searches and e-books, to digital apps, YouTube, wikis, and virtual assistants, students have curated their own method of searching for answers (Mosca et al., 2019; Dabbagh et al., 2019; Chicca & Shellenbarger, 2018). Mosca et al., (2019) suggest educators should "reinforce critical thinking skills and modify their instructional approach to maximize the engagement of these students" (p. 66). Chicca and Shellenbarger (2019) recommend that educators focus on learning that is "self-directed, individualized, or project based" (p. 181). Design thinking concepts that are focused on solutions rather than problems can provide a creative, modern approach to outdated teaching concepts and resources (Razzouk & Shute, 2012; Henriksen, Richardson, & Mehta, 2017).

Buskirk-Cohen et al., (2015) write that traditional educational theories "do not address developmental needs of emerging adults," and further assert that linking pedagogy with learning needs increases student engagement (p. 27). As problem-solvers and entrepreneurial collaborators, the flipped instruction approach is appealing to Generation Z. Likewise, experiential learning comes naturally to a generation who has tapped into the "watch and learn" features of Google and

YouTube. The use of technology to enhance experiential and service-learning environments appeals to Generation Z's preference for community engagement (Muhammad et al., 2016).

Generation Z's belief in the "power to change the world" has been demonstrated through the use of digital technology to promote social justice and climate issues and political activism, such as "Black Lives Matter," gun violence in the U.S., and the "Me Too" movement (Seemiller & Grace, 2017, p. 22). In an article on student persistence, Tinto (2017) notes that helping students pursue their goals gives them a sense of belonging, fosters engagement, and supports retention. The motivation to persist, Tinto writes, is also determined by students' perceptions on the value of what they're learning and how it will help them in the future.

Technology and Digital Natives

From instant access to information, mobile connectivity, and global reach, Generation Z's point of view is shaped by visual rather than written information that can be accessed anytime and from almost anywhere. They have curated a distinctive approach to expressing themselves communicating through digital platforms such as texting, using emotional icons or emoticons, looped animations known Graphic Interchange Formats (GIF), and internet memes, which are images or words that go viral, and acronyms such as FOMO (fear of missing out), PATVG (parents are tracking via GPS), and TLDR (too long, didn't read). The creativity of Generation Z has researchers asking if higher education can meet the challenges of providing twenty-first century learning experiences through innovative classrooms

and engaging pedagogies. Further, are educators preparing today's youth and tomorrow's leaders to be competitive and innovative in a global, multi-generational workplace? Moore et al., (2017) assert that Generation Z has more access to digital resources than past generations but would benefit from learning how to utilize those resources in college and beyond.

Millennial Research as a Segue to Generation Z

Millennials, or Generation Y, are finishing their college journey just as Generation Z's undergraduate education begins. It may be useful to examine patterns in the college learning experiences and technology habits of Generation Y, in order to inform research on Generation Z. Both generations are considered to be digital natives, or members of the Net Generation, who think and process information differently than their digital immigrant teachers (Muhammad et al., 2016; Worley 2011).

Worley describes the Net Generation as "more knowledgeable than previous generations" (2011, p. 34). She points to several factors in support of her assessment, including that the Net Generation is more informed that their peers and has always been able to access to an abundance of technology that they can navigate easily. While her findings are positive, Worley's claim of parental support as a factor in the Net Generation's success is not a clear indication of why this group is "more knowledgeable" than other generations. She does, however, offer significant information as to the impact of having an abundance of technology in their lives. Worley also notes that the Net Generation, by the age of 21, averages

"10,000 hours playing video games, 2,000 hours watching television, 10,000 hours on the cell phone, and have sent or read 200,000 emails" (2011, p. 3).

Cameron and Pagnattaro (2017) found the visual, auditory, and kinesthetic learning styles of Generation Z to be highly evolved given their attention spans of eight seconds. Another connection shared by the Net Generation is that they are being taught in the classroom by Baby Boomers with vastly different life experiences and are several generations removed from traditional college-age students. As digital immigrants, Baby Boomers are slower to adapt to technology or include it in their teaching methods and also make up nearly half of higher education faculty and administrators (Worley, 2011).

Interestingly, some researchers argue that empirical evidence on the existence of a digital divide between Baby Boomers (teachers) and the Net Generation (students), has not been definitive or considerable. Swanzen (2018) suggests demystifying the perceptions about generational differences in the classroom. Further, he recommends teaching strategies, including blended-learning, and collaborative and cooperative learning to bridge the generational gap. Mosca et al., advise that "educational methods and technological development are never stagnant and should not be treated as such" (2019, p. 73).

Where Do Educators Go From Here?

It is still unclear that research on Millennials, or the Net Generation collective, is adequate in understanding Generation Z, their learning habits, or educational needs. Professional development for teachers is critical to addressing

the problem, according to Beyers (2009), who proposed a conceptual five-dimensional model that would empower teachers to empower learners by integrating technology into classroom. Byers writes that teachers would be assisted in their task because Generation Z values education. Research also suggested these students respond positively to real-world content, personalized learning, and creative, teaching-learning challenges (Hart, 2017).

Adding to the generational debate is that Millennials, the oldest now in their late 30s, are beginning to teach at the college level. It is still too early to determine whether generational considerations or teaching and student-centered learning strategies will be addressed by professors who are Millennials. Resolutions may require multiple strategies that focus on the individual, "not generational labels" (Hart, 2017, p. 256).

Design thinking could be a worthwhile objective because of the flexible structure it provides. In a creative approach to teaching, Henriksen, Richardson, and Mehta (2017) define the issues educators face as complex and diverse. Though not specific to higher education, these include curriculum development and student motivation. Ultimately, design thinking skills may provide "habits of mind that benefit teachers in creative problem navigating" (p. 140). Design thinking works by providing educators with a framework, tools, and the administrative support to achieve success (Henriksen et al., 2017). Helping students think like curriculum designers may provide them with problem-solving skills and the ability to solve

complex problems in college and thorough out their lives (Razzouk & Shute, 2012).

Communication, which has not been directly addressed in the research in this literature review, may be key to helping Generation Z succeed. Worley (2011) notes that many educators believe that the emphasis is in the wrong place, on technology, rather than communication. "Facing the generational chasm involves recognition of the power of transformative interactions between learner and teacher" (Swanzen, 2018, p. 137).

This study focuses on understanding how Generation Z learns. The research questions provide the foundation for discovery: "What are the learning characteristics and expectations of college-age students who identify as Generation Z? How are the learning needs of Generation Z being accommodated in the classroom?" Professional development that is both pedagogical and technology based can be effective. As educators and researchers contemplate the best ways to shape Generation Z's learning experience, opening the lines of communication and fostering understanding within the student-teacher dynamic is the central theme of this study.

Chapter III

Methodology

A qualitative research design was chosen for this study. Bloomberg and Volpe write that the research approach should complement the research problem and purpose. "Qualitative research addresses the question of 'what.' Knowing what something is entails a conceptualization of its 'how' – that is, its process and unfolding" (2019, p. 38). As researchers and educators contemplate the educational journey of Generation Z, it is important to understand *what* their learning expectations will encompass, which leads to the question of *how* to achieve the desired outcome. For this study, continuously asking the question *why* is key to understanding the learning expectations of Generation Z and how those needs are being accommodated . . . from their perspective. In this qualitative study, the researcher, serving as instrument, "seeks to discover and understand meaning" in order to elicit a "thick, rich description" from the data (2019, p.40-41).

Research Design

The method of data collection for this study were one-on-one interviews with students and an online questionnaire for faculty. In qualitative interviews, the researcher should avoid making assumptions about the subject matter and collect descriptive rather than analytic data (Bauman & Adair, 1992). A descriptive rather than analytic focus for this research was intended in order to discover the experiences and behaviors that are inherent in understanding the personality, culture, perspectives, values, and community of Generation Z (1992). Qualitative

research allows for exploration, understanding, and finding meaning in the data (Creswell & Creswell, 2018).

Academic research on how Generation Z learns is divided, and inconclusive, as this study will show. Their story thus far has been expressed primarily from the perspectives of researchers and educators. If the learning characteristics and expectations of college-age students who identify as Generation Z are to be understood, including how their needs are being accommodated in the classroom, it is important to go directly to the source for answers.

"Qualitative methods permit inquiry into selected issues in great depth with careful attention to detail, context, and nuance; that data collection need not be constrained by predetermined analytical categories contributes to the potential breadth of qualitative inquiry" (Patton, 2015, p. 257). Qualitative inquiry is collaborative and allows the researcher to look deeper, seek answers, and pursue discovery in order to gain a greater understanding of the human condition. Bloomberg and Volpe (2019) write that qualitative research studies "how people and groups construct meaning" (p. 5). Qualitative research provides a conduit to meaning making, achieving understanding through the analysis of interviews, documents, and observation (Patton, 2015, p. 5). A distinctive understanding of Generation Z's learning expectations, including the influence of technology, will require a closer, more holistic examination of their "social interactions, perceptions, and behaviors," (Reeves et al., 2008, p.512).

Consider Generation Z through the lens of a social organization. They have been defined in a number of ways, influenced by the time period in which they were born, and the collective events that have happened throughout their lives. The oldest of Generation Z are in their late teens or early 20s, just getting started in life, but much has transpired in this short time. Nearly two decades have passed and America's war on terror continues. Social and civil unrest, amplified by a contentious political landscape, continues to divide the country. Gun violence in schools, which remains a national challenge, has harmed Generation Z on a personal level. Currently, Generation Z is navigating their way through a deadly global pandemic that has upended their lives.

The most racially and ethnically diverse generation to date, Generation Z is entrepreneurial, creative, and interested in civic engagement and social change (Seemiller & Grace, 2019). Optimistically, from the perspective of social change, their generational experiences include positive developments, such as the election of the first U.S. African American president, Barack Obama, and the first African American and Indian American woman to serve as vice president, Kamala Harris. Entrepreneurially, creatively, and technologically, Generation Z is witnessing remarkable developments, such as self-driving vehicles, cloud computing, facial recognition, smart technology that aids and enhances daily living, and the race amongst some of America's billionaires to establish civilian space travel.

Perhaps the most striking characteristic shared by Generation Z is their distinction as the first true digital natives. As a group, they have only known a

world where technology has existed. They embrace the use of technology in their daily lives through apps and smart technology, such as virtual assistants, smart devices in their homes, streaming services, and social media. Their learning experiences include smart boards in the classroom, computers, tablets, mobile devices, gaming, and virtual and augmented reality.

Research Site and Participants

This study was conducted at a small, liberal arts university. Eight freshmen and sophomores who were enrolled in general education and freshman studies classes participated in one-on-one, open-ended interviews via Zoom. Seven faculty members who taught general education and freshman studies classes participated in an online questionnaire via Google forms.

Research Changes Due to Covid-19

Initially, this research plan was intended to conduct one-on-one, in-person interviews with eight to 10 freshman and sophomore students on campus. The plan also included fieldwork in a natural setting through multiple on-site classroom observations of 15 freshman and 15 sophomores. The original research plan was created before the full scope of Covid-19 issues were known. These unforeseen restrictions created challenges to conducting the interview and fieldwork process. Conventional academic activities, such as in-class learning, were also interrupted due to quarantines and actual Covid-19 cases.

At the university where this study took place, many changes were necessary in order to accommodate student learning and meet Covid-19 safety protocols.

Students returned in the fall of 2020 to a strategic mix of instructional methods created to ensure flexibility should Covid-19 related challenges occur. This included in-class instruction, hybrid courses, and online courses using Zoom and faculty lectures by video. At one point, the university pivoted to online classes in the undergraduate college for two weeks when Covid-related quarantines and case numbers increased. All undergraduate classes reverted to online learning again after the Thanksgiving break until the semester ended.

Other changes due to Covid-19 also occurred. During the summer of 2020, the traditional undergraduate 16-week semester was restructured, converting to two eight-week sessions, Fall I and II, and Spring I and II. Classes on Zoom did not always require student attendance. Students also had the option to view class Zoom meetings and lectures on their own time, which created inconsistencies in field research opportunities. Additionally, due to personal health reasons, the researcher, who had always taught classes in-person, shifted to online classes and could not physically be on campus. To put this in context, the changes brought about by Covid-19 were not insurmountable, but it was a period of adjustment for students and faculty, as this research will show going forward.

In lieu of class observations, the researcher proposed a plan for an online questionnaire that could be sent to 10-12 faculty, across academic disciplines, who had taught general education or first-year courses to freshmen and sophomores who identify as Generation Z. The idea was to create the questionnaire in Google Forms and email directly to faculty. Further, faculty could write their answers to the

questions and submit online. In as much as possible, the faculty's 10 questions were modeled after the 10 questions used in Zoom interviews with students.

With the Capstone Committee's approval, a change of status application was submitted to Morehead State University's Institutional Review Board. It was approved, with the stipulation that the researcher complete the Collaborative Institutional Training Initiative (CITI Program) Internet-Based Research module. A request to do this study with Generation Z freshmen and sophomores was submitted to the university where the research occurred. The researcher was granted a "Relied-Upon" agreement by the university's Institutional Review Board /Independent Ethics Committee based on the requirements established by Morehead State University with one exception, that student interviews would be audio only.

Research Design

The research design section begins with Generation Z, and includes categories for data collection and student demographics, followed by sections on the faculty demographics, and data collection process.

Generation Z

Discerning why, or whether, Generation Z believed their learning needs and expectations were being met in the classroom was appropriate for a qualitative research design. The interpretive and descriptive properties of qualitative inquiry was the primary instrument for data collection. Research methods included dialogue reconstruction, and the reflexive notes of the researcher. One-on-one

recorded interviews were conducted with freshman and sophomores who identify as Generation Z, specifically those who had taken, or were in the process of taking, a general education course.

The open-ended student interview questions were based on both the literature and the research questions in this study:

1. What are the learning characteristics and expectations of college-age students who identify as Generation Z?
2. How are the learning needs of this cohort being accommodated in the classroom?"

The interview questions also examined the integration of technology in Generation Z's learning process, the types of technology conducive to learning, and whether technology was being used effectively in the college experience. Other questions focused on pedagogy and student-centered learning, the implications of generational theory and the learning experiences of Generation Z, whether a generational divide exists in the student-teacher dynamic, and if Generation Z learns differently than peers in prior generations. Open-ended interview questions allowed students to share their beliefs and perceptions about learning, technology, generational relationships, and what it means to be a member of and to teach Generation Z.

In addition to questions on demographics, students were asked about the most effective ways professors support their learning experiences, their thoughts on interactive and collaborative learning, and their definition of a teacher-centered

versus learner-centered approach in class. Students were asked to define what the words "technology" and "digital native" meant to them. There were also questions on the types of technology students use for learning, how professors incorporate technology in their learning experiences, and how often they use technology in the classroom. Students shared their thoughts on the characteristics, learning needs, and expectations of their generation and how they thought Covid-19 would impact their college learning experience.

The decision to interview freshmen and sophomores enrolled in a general education course ensured a diverse pool of participants and a random sample of students majoring in academic programs across the curriculum. The academic majors of the students were unknown to the researcher until the time of the interviews. The decision to conduct research with freshmen and sophomores was intentional because they were the first of Generation Z to enter college.

Selecting participants provides an opportunity to target an "information-rich" group that would be "unique in its own mix of people and contextual factors" (Bloomberg & Volpe, 2019, p. 186). Qualitative sampling can be used to select participants with specific characteristics, such as those exhibited by Generation Z. Limited research exists from a faculty point of view generally, and even less is available from the standpoint of Generation Z. Seeking input from college-age members of Generation Z, and the faculty who teach them, provides balance, and perspective to the research question.

Semi-structured student interviews were conducted on Zoom from October 28 to December 3, 2020. Email invitations explaining the study, along with participant consent forms, were sent by the researcher via email to 33 freshmen and sophomores who were enrolled in first-year studies and general education classes. A list of student names was provided by an instructor who was teaching both first-year studies and a general education course.

The use of open-ended questions allowed participants to share thoughts about their college experiences, learning expectations and preferences, use of technology, interpersonal communication across generations, and generally what it means to be a member of the Generation Z cohort. Patton (2015) writes that open-ended questions provide insight into the experiences and stories of those being interviewed. Of the 33 students contacted, eight agreed to be a part of the research. All were ensured anonymity in their participation and responses. "The credibility of a researcher's findings and interpretations depends on your careful attention of establishing trustworthiness" (Patton, 2015, p.685). Equally important was a commitment by the researcher, as one who teaches Generation Z, to be neutral and remain objective, unbiased, and open-minded throughout the process (2015).

Data Collection

Morehead State University's Institutional Review Board (IRB) approved the study on September 4, 2020, followed by the approval of the IRB / Independent Ethics Committee at the participating university on September 11, 2020. The change of status request to interview faculty due to Covid-19 restrictions was

approved by Morehead State University's IRB on November 14, 2020. The student interview process began in October 2020. Individual interviews were approximately forty-five minutes in length and conducted with eight freshmen and sophomores who identify as Generation Z. Before each interview was recorded, the researcher spoke briefly with participants by video on Zoom to make introductions and to help them feel more comfortable with the process and with the researcher, who also served as interviewer. The researcher made notes during the interviews, and later during the transcription process. Generally, the students were enthusiastic about participating in the interviews. Their answers were thoughtful, humorous at times, and sincere. There were a few questions where the terminology was new to some of them, such as teacher centered and learner centered, and surprisingly, the term digital native. In each instance, the researcher offered a brief and accurate definition so the students could share their thoughts.

Throughout the interview process, the students "like," said the word "like" many, many times. One of the participants, after reading a transcription of the interview, noted his surprise at learning that he had said "like" throughout the conversation. Each of these references were included in the transcriptions, along with special emphasis on words or utterances, such as "um" and "you know." Saldana (2016) refers to these types of expressions as part of the "search for routines and rituals of human life." As Zoom interviews commenced, the video on each person's computer was turned off and audio only was recorded. To ensure anonymity, recorded audio was not saved in the cloud, but locally on the

researcher's computer. Two of the eight students who live in rural communities experienced expected problems with their internet connectivity and chose to finish their interviews by phone. One of the eight students, who did not have internet at their home, requested to do the entire interview by phone.

Student Demographics

Demographically, five females and three males were interviewed. Two of the participants were student-athletes. The majority were age 19, with two students age 18, and one age 20. Four of the students were from counties located across Eastern Kentucky. Two others were from Central and Western Kentucky, and one was from Virginia. The students' majors included biology and chemistry, education, and nursing. One student is majoring in criminal justice and social work, and another majoring in English, religion, and social studies. The students' plans after earning their bachelor's degrees include attending graduate school programs in social work, anthropology, medical school, and pharmacy school. Professionally, the students are working to become nurses, teachers, and physicians.

Faculty Participants

An online questionnaire was developed for faculty who had taught general education or freshman studies courses. Questionnaires were emailed only to the 19 faculty who teach first-year studies and general education courses. The email invitation explained the research, and that participation would be anonymous. A participant consent form and link to the questionnaire via Google Forms was

attached to the email. The faculty questionnaire created on Google Forms met two goals. First, submitting the questionnaire online ensured that Covid-19 restrictions would not be a barrier to participation. Second, faculty had an opportunity to think through their answers, express how they felt, and what they've experienced and learned about educating and communicating with Generation Z.

The 10 questions sent to faculty were similar in context to the questions asked during student interviews but from the educator's point of view. As with the students, the interview questions in the faculty questionnaire were based on the literature and the research questions in this study: "What are the learning characteristics and expectations of college-age students who identify as Generation Z and how are the learning needs of this cohort being accommodated in the classroom?"

The interview questions included demographic information. Faculty were asked to define the words "technology" and "digital native," describe how they integrated technology in Generation Z's learning process, the types of technology conducive to learning, and whether technology was being used effectively in the college experience. There were questions on pedagogy and student-centered learning, the implications of generational theory, the learning experiences of Generation Z, whether a generational divide exists in the student-teacher dynamic, and if they believe Generation Z learns differently than prior generations. Finally, faculty were asked about the impact of Covid-19 on the college experience.

Faculty Demographics

The faculty who participated in the study included seven females and one male. Faculty self-identified as Baby Boomers, Generation X, and Millennials. Three of the participants have always taught college, the remainder previously worked in higher education administration, and in various professional roles. Collectively, the faculty had more than 150 years of experience in teaching, the longest serving 43 years and the newest to the classroom three years.

Data Collection

Morehead State University's Institutional Review Board (IRB) approved the study on September 4, 2020, followed by the approval of the IRB / Independent Ethics Committee at the participating university on September 11, 2020. The change of status request due to Covid-19 restrictions was approved by Morehead State University's IRB on November 14, 2020. An email invitation to participate in the study was sent to faculty on December 1, 2020, with a deadline of December 14, 2020, to return the questionnaire. Seven out of 19 faculty participated in the study. Similar to the students, all faculty had taught first-year studies or general education courses.

The decision to conduct research with freshmen and sophomores was intentional because they were the first of Generation Z to enter college. Selecting participants provides an opportunity to target an "information-rich" group that would be "unique in its own mix of people and contextual factors" (Bloomberg & Volpe, 2019, p. 186). While limited research exists from a faculty point of view

generally, seeking input from college-age members of Generation Z, and the faculty who teach them, provides balance, and perspective to the research question.

Data Analysis – Generation Z and Faculty

"Analysis begins with immersion in the details and specifics of the inquiry to discover important patterns, themes, and interrelationships" (Patton, 2015, p. 47). Further, Patton notes that the details that qualitative research provides leads to exploration, discovery, and inductive logic (2015). The researcher, in analyzing the data, begins with detailed information that emerges into broad patterns, categories and themes, with the goal of discovering theories or generalizations (Creswell & Creswell, 2018). As part of the inductive process, the researcher builds patterns, categories, and organizes the data and themes until conclusions emerge (2018). The eight student interviews were approximately 45 minutes each. The interviews took approximately six hours, and the transcriptions eight hours. The researcher took field notes during every conversation, writing memos on how students responded, if they seemed nervous or excited, if there were indications that the interviews were too long or the questions unclear.

Reflexive questions can help the researcher consider any pre-conceived notions and ideas on a subject in light of actual outcomes of the research. "Voice, language, and participant portrayal are among the aspects to consider when writing up qualitative research" (Bloomberg & Volpe, 2019, p. 257.) In this study, the researcher read through the field notes before transcribing verbatim interviews. The transcription process took several hours longer than the interviews due to

rewinding sections to ensure the transcript was correct. The first analysis of the completed transcripts was intended to mainly absorb the information as a whole document. On the second analysis, the researcher underlined and highlighted particular words and passages looking for categories that might emerge. The third analysis included highlighting and underlining information that emerged, such as specific words and passages, answers to questions where all the students seemed to be in agreement, and words or passages that could be outliers.

A fourth analysis of the transcripts included only the highlighted and underlined passages, the point at which categories began to emerge. Student transcripts were then cut into strips, then coded manually and compiled. Those included technology use for entertainment and for learning, teaching and learning styles, experiential learning, group work, communicating, connecting, and collaborating, generational differences, political and social issues, the influence of social media in their lives, and Covid-19. Before creating themes, the researcher analyzed the transcripts again, this time reading a copy with no markings, highlights, or notes, for a holistic view of the information, especially after being so immersed in trying to identify patterns and categories.

The faculty data from the questionnaires was easier to analyze. Google Forms aggregated each response by person, by question, and in an Excel spreadsheet. Categories from the faculty responses included teaching methods and processes, technology use, experiential learning, teaching and learning styles,

communicating, connecting, and collaborating, engaging students, and generational differences, and Covid-19.

To understand how Generation Z learns, concept coding was selected for this study. Saldana (2016) defines concept coding as analytic coding. "Concept codes assign meso or macro levels of meaning to data or to analytic work in progress. A concept suggests an idea rather than an object or observable behavior" (p. 119). Further, concept coding "bypasses the detail and nuance of other coding methods to transcend the particular participants of your fieldwork and to progress to the ideas of suggested by the study (p. 120). Saldana's idea of concept coding connected with the researcher's thinking on Generation Z – that maybe their approach to learning is not so different from the way other generational cohorts learn. Considering Generation Z through the lens of the typical college student experience, it is feasible that generational characteristics do not necessarily define or become more important than one's values, attitudes, beliefs, or relationships.

Validity

The literature is clear about the difficult nature of validity and credibility in qualitative studies. Bloomberg and Volpe note that reflexivity, thick description, peer debriefing, and member checks can be effective strategies (2019). In this study, the researcher consulted with the Capstone Committee, especially the Committee Chair, on constructing interview questions. The pivotal theme in those discussions was to always be asking "why?" Equally important was the guidance to exhaust peer-reviewed research. Additionally, two peers who have doctorates in

education, and an instructor who works closely with Generation Z on a daily basis, were instrumental in the process. The focus of their feedback was different with each person, which helped provide balance and different ways of thinking in forming the research questions and choice of instruments.

Combining multiple methods for gathering data "strengthens a study" and enhances the quality of data by "illuminating different facets of situations and experiences" (Bloomberg & Volpe, 2019, p. 192). In this study, participant reviews and responses to the transcripts provided triangulation since the interviews were anonymous. Similarly, the questionnaires were filled out by the faculty and the researcher had no influence on their answers. In a review of the book *Total Quality Framework* (TQF), Boros (2018) describes four elements of the concept that guide standards for qualitative research, including being creditable, analyzable, transparent, and useful (2018, p. 47). Creswell & Poth (2018) note the value in using multiple forms of data, including interviews and observations. Using Google Forms for the questionnaire lends dependability and that the process was "documented, logical, and traceable" (Bloomberg & Volpe, 2019, p. 204). Bloomberg and Volpe also make a connection between validity and transferability, noting that details, including background and findings, can provide context for other studies (2019, p. 205).

Credibility "refers to whether the participants' perceptions match up with the researcher's portrayal of them" (2019, p. 202). All eight of the students were sent copies of their interview transcripts for review or revision. Four of the eight

students replied to the request. Comments included, “Everything looks good to me. Thank you for letting me be a part of your research,” “I read over the interview and think it looks good,” and “I read over the transcript and I wish to extend my gratitude to you for the opportunity to read over it. In its current state, I could not find anything that I believed needed changed.” One student requested a change to clarify something said during the interview: “I think on the second paragraph after question 9, the paragraph talking about how passionate our generation is, I think it worth adding this sentence: ‘Even though I can appreciate the heart behind most of our generations movements, I tend to disagree with most of our plans or the ethics of our ideals.’ That should lead into the next paragraph smoothly enough.”

Ethical Considerations

Creswell (2018) notes the need to clarify the bias a researcher brings to the study. In this study of Generation Z, member checking, peer review, thick description, triangulation, and qualitative reliability through documentation have all been implemented. Although the researcher teaches at the university where the study was conducted, none of the students interviewed have ever taken the researcher’s courses or were majoring in academic programs in which the researcher is involved. Further, beyond knowing that the students and faculty shared a connection to general education and first-year studies courses, the researcher did not know their identities until both groups were asked to participate in the study.

Both the students and the faculty were assured that their identities would remain anonymous and confidential. Bloomberg and Volpe (2019) note that a study should not link participants' responses to their identities and keeping confidentiality as agreed is an ethical duty and matter of trust. For the researcher, who is the writer, data collector, and is responsible for data analysis, "transparency is key to ensuring trustworthiness" (2019. p. 47). Lastly, the researcher plays a role and does have an interest in generational studies, including Millennials, followed by Generation Z. The researcher's interest is more aligned with consumer habits, technology use, and politics, but throughout this process a new appreciation for student learning preferences and classroom experiences developed.

Internal threats to validity included selection bias and triangulation, which was addressed through the varied data collection methods, such as student interviews and a faculty questionnaire. Diffusion treatment can be a threat to validity, so groups were kept separate with students doing one-on-one interviews on Zoom and by phone. Faculty questionnaires were created in Google Forms and sent individually to each participant. External threats to validity addressed selection bias between the freshmen and sophomore groups and volunteer bias. As a qualitative study, the student population size of eight individual interviews were sufficient; however, the sample size of survey respondents may represent a threat to the data.

Researcher Bias

Reflexivity is defined as a core characteristic of qualitative research (Creswell & Creswell, 2018). After twenty years as an employee at the university used in the study, the researcher has a longstanding relationship and intimate knowledge of the organization. As an instructor, the researcher also has established relationships with students both in and out of the classroom. The researcher, who served as primary instrument for data collection, was judicious in the reporting and interpretation of data, including interview questions, notetaking, and the identification of emerging themes, narratives, or assumptions (2018).

With such diversity, innovation, originality, and opportunity, Generation Z deserves to have their voices heard, their ideas considered, and to be understood in such a way that a qualitative study can achieve. The research design of this study allowed students and faculty to fully express their opinions and ideas. One-on-one interviews provided an opportunity for Generation Z to share their thoughts on learning, the characteristics and diversity of their cohort, historical, political, and social change, generational differences, and as true digital natives, their views on technology. Online questionnaires provided faculty with an opportunity to discuss their ideas on pedagogy and preferred teaching strategies. From Baby Boomers to Generation X, faculty shared their thoughts on generational differences in the classroom and provided insight on personal generational characteristics. Faculty discussed their perceptions of how students use technology to learn and how Covid-19 will change the educational landscape. The validity and credibility of qualitative studies was discussed, along with ethical considerations and researcher

bias. The next chapter will present findings, emerging themes, and a deeper understanding of study participants . . . in their own words.

Chapter IV

Findings

The focus of this study was to examine the learning characteristics and expectations of college freshmen and sophomores who identify as Generation Z, including how their needs are being met in the classroom. A qualitative study was conducted at a private liberal arts university and included one-on-one Zoom interviews with students and a questionnaire created through Google Forms for faculty. The significance of this study is to provide a qualitative, holistic view of the learning needs and expectations of college students who identify as Generation Z. Research is divided on how these students learn and the role technology plays in their learning experience.

With several generations currently teaching and learning in the college classroom, there is also a question as to whether generational differences affect the educational process. Findings may be useful in meeting Generation Z's learning expectations and developing learner-centered strategies to increase student engagement and communication between student and faculty. This research may also complement existing literature or inspire larger studies of this cohort.

Following a lengthy and methodical transcription and review process, faculty questionnaire responses included these categories: teaching methods and processes, technology use, experiential learning, teaching and learning styles, communicating, connecting, and collaborating, engaging students, and generational differences, and Covid-19. Student interview categories included: technology use

for entertainment and for learning, teaching and learning styles, experiential learning, group work, communicating, connecting, and collaborating, generational differences, political and social issues, the influence of social media in their lives, and Covid-19. Bloomberg and Volpe (2019) advise that in order to formulate strong findings statements, researchers must study the data and ask themselves what they see, and what they understand about the data. From student interviews and faculty questionnaires, the following themes emerged: Technology, teaching and learning, generational differences, and Covid-19.

Research Themes

Perspectives on Technology

Students. Student interview questions with a technology focus were designed to discover the types of technology students use, how often and how effectively technology is used in the classroom, and the students' definitions of technology and digital native. Students see the value of using technology in their daily lives, and as a tool for learning in college and beyond. Educators from across the disciplines are evaluating and reshaping their curriculum to prepare digital natives for a rapidly changing technology-based workforce (Al-Htaybat et al., 2018). Technology has created a "paradigm shift" in higher education with the goal of helping students go beyond the creation of knowledge in order to apply, adapt, and innovate what they learn (2018).

Generation Z has only known a world in which technology has existed and have been "inundated since grade school with YouTube, e-learning, smartboards

and smartphones" (Nicholas, 2020, p.2). "It's not so much I was born with it, but as it has advanced I with it" GenZ-G explained. Not only is there an abundance of technology available, GenZ-C described using technology in class as a "seamless experience."

The online and hybrid courses implemented due to Covid-19 restrictions appeal to some students, while others miss the traditional in-class learning experiences. Still, they indicated that the university's learning management system (LMS) is easily navigated, including features such as Zoom meetings and using Panopto for recorded lectures. Short YouTube videos that explain concepts, inform, and entertain are also popular. Laptops, iPads, and cell phones are used regularly for notetaking, looking up information, and taking phone polls in class. In addition to the traditional PowerPoint presentations and online discussions, students regularly use apps such as "iNaturalist" for organic chemistry or biology labs.

Generation Z is drawn to game-based learning platforms online and through apps, such as Kahoot, Quizlet, Wordscapes, and Numberzilla, which use puzzles, trivia quizzes, and brain teasers. The university's transition in 2020 to using open educational resources has also been embraced by some in Generation Z who find e-books easy to use and a cost-saving measure. Postolov et al., (2017) posit that using e-learning as a teaching tool has become widely accepted in higher education.

While a few of the students interviewed in this study decided to put their video game habits on pause during college – noting it could be too much of a

distraction – others enjoy gaming, using augmented and virtual reality, and wouldn't mind having access to both in classes. Virtual reality, explained GenZ-A, "makes understanding microscopic concepts easier to visualize." GenZ-D uses gaming for entertainment, but also believes it enhances the learning experience. "I play video games 24-7. I think video games can be really educational. I know a lot of nursing students who use simulation. I also think virtual reality can be really educational."

Perspectives on Technology

Faculty. Like the students, faculty in this study use many forms of technology in their teaching daily, including online textbooks, computers, iPads, cell phones, PowerPoint, apps, Facetime, Zoom, and Panopto for meetings and lectures, streaming, design software, databases, v-logs, blogs, games, and Google docs for class notes and collaborative learning. Faculty note that using technology inspires creativity, helps students to feel engaged, and provides options to both access and process information. In today's learning environment, the combination of technology and traditional learning methods can enhance the blended-learning experience with more possibilities, including independent study, synchronous and asynchronous activities (Postolov et al., 2017).

Professor #7: Technology is welcome in my classroom. I encourage students to bring their laptops and tablets to class so they can follow along as I walk through Canvas or review materials online. For many first-year students, it's their first time using Canvas, our learning management system, and I think it's

helpful for them to log in and access the pages rather than watching me review course pages on the screens in the classroom. For the students we teach today, technology in the classroom is the same as having pen and paper . . . it's essential.

Teaching and Learning

Student Views. Student answers addressing the theme of teaching and learning spanned the topics of several interview questions, including how professors support the student learning experience and incorporate technology, what students think about interactive learning and collaborative activities, and how they define teacher-centered versus learner-centered methods.

GenZ-F did not have a specific suggestion but would like to see professors move away from PowerPoint presentations and regular lectures and "learn a little bit more" about technology. GenZ-D agreed saying, "I think it's really beneficial. A straight lecture … just listen to me talk … then come take a test … not helpful." GenZ-E said professors did not need to use more technology than they already do but believes that gaming activities in class would be fun adding, "I'm a visual learner. I can't read things and learn."

GenZ-H indicated there was not a specific technology they needed in the classroom explaining, "I'm the kind of person, in general though, who would rather read from a book than an iPad. I'm sure there's some kind of amazing technology that I'm familiar with that would be amazing for the classroom. I don't know, I don't feel like I'm missing out on anything."

GenZ-C offered a similar answer:

> If I don't use technology for learning, it's fine. I don't take my notes electronically. I have to do handwritten notes. I have to repeat it in my head then I write it down. You have that repetition; you start thinking about how it can be applied in other scenarios. Writing something like that helps me learn better.

Other students suggested that it would be good if professors were Google certified so they could use applications such as Google docs, Google Meets, and Google Hangouts. GenZ-D appreciates when professors put their lectures and PowerPoint presentations on the LMS for students who could not attend class or needed to review materials. "I think making that effort with technology, even though it's small, has been really helpful," said GenZ-D. "People my age react really well to technology when it's in the classroom because that's just what we're so use to."

It might surprise educators to learn that despite Generation Z's access to technology, and the ability to seamlessly maneuver from one type of technology to another, some still prefer in-person learning methods over online learning. Some like using technology in class, especially videos, but prefer using pen and paper for notetaking.

> GenZ-A: In-person is good for learning, online is good for reinforcement. I understand why people would use a computer rather than writing. When I was little, I learned how to write in cursive . . . and a lot of people don't do it anymore. It was a skill they lost over time.

GenZ-G adopted a formalized notetaking technique in high school that includes organizing and writing notes by hand. If professors post PowerPoints on the LMS early, GenZ-G writes notes ahead of time and can "actively listen" in class. GenZ-B likes using apps for learning, is active on social media, and watches YouTube and other streaming services. When it comes to using technology for an in-class an activity or assignment, it feels like more of a distraction. "I'm old school; I like pen and paper."

The diversity of learning styles and preferences that GenZ expressed in their answers suggest that these digital natives understand how *they* learn best, even when technology is not at the center of their experience. This points to the advantages of inclusive teaching, having an awareness of how students learn best based on their personalities and preferences. Students thrive when professors support their "sense of belonging, competence, and interest in the course" (Dewsbury & Brame, 2019, p.1).

Generation Z expressed mixed feelings about collaboration and group work. Some believed they learn better in a traditional classroom setting where they can interact with others, having an opportunity to explain their thoughts, problem-solve as a group, ask questions, bounce ideas off each other, and interact with others. However, the majority of students agreed that it depends on the class whether they like collaborating with others. Some prefer to work on their own because they are shy or understand the subject better. GenZ-H shared the following on why the

greatest challenge of working in a group is understanding the personalities of their peers:

> Like, in any group project, there might be a leader. There might be a brainiac. There might be an outgoing planner. There's different roles and sometimes you might get super lucky when you have a group project and everyone fits into one of those roles. It pushes you outside your comfort zone and into different kinds of leadership roles. It's uncomfortable sometimes, but I feel like a better student because of it.

In a study on 21st Century learners, Swanzen (2018) offers three strategies to encourage collaboration and cooperative learning for Generation Z, advising educators to teach interpersonal and small group skills through problem solving activities. He also suggests establishing goals within groups to encourage interdependence, engagement, and individual accountability.

Generation Z had varied, but meaningful feedback on how they defined teacher centered versus learner centered. Some had never heard the terms. Others did not have a preference between the two methods or said that it depended on the class.

> GenZ-H: I think there's a time and place for both of them (teacher-centered versus learner-centered). Whenever I go into a chemistry class, like, I imagine that is teacher centered but I wouldn't really have it any other way. I'm there to learn chemistry. There's going to be other classes, maybe like a writing class, where there is a whole lot more brainstorming, or creativity.

It's not a rock-hard math and science class. It's a creative free-thinking class. Those classes, I found, they were much more learner centered and we benefited from that. There were class discussions, hearing different ideas. Just brainstorming. I think there's a time and place for both of them.

GenY-A: I imagine learner centered is based on the Socratic style of learning. Teacher-centered is focused more on lecture style of learning. It depends on how instructor handles it. Some subjects are easier when it's explained – science course versus introspective, anthropology versus first-year studies.

GenZ-F: I think my Mom has talked about it with her teaching. I think it would depend on the class, honestly, and the needs of the students. Teaching a math class one way is definitely not going to be the same approach as teaching an English course. I guess I don't really have a preference. It just depends on the class and the needs of the students. I think, too, a student-teacher relationship is really important. The student needs to be able to trust the teacher and vice versa. If the student is more comfortable with having the more student-centered teaching, that will probably help. Some students are more comfortable with the teacher standing at the podium. I haven't really run across anybody that's, like, 'Oh yeah, we want to listen to the teacher stand on the podium and talk all day.' We don't learn like that. Nobody can learn like that, but I'm sure there's going to be those classes or those days when that's sadly how it's got to be.

GenZ-D: I have professors 'talk at me,' but halfway through I'm going to get bored. When you involve students more, it's really helpful. Teacher-centered might be okay in 100- and 200-level classes if students don't know a lot about a subject. I do think you should try to involve students in their education.

GenZ-C: I don't think I've learned those terms before, not yet at least. Teacher centered would be, like, what the teacher feels most comfortable and most confident to ensure students learn what they're teaching. Like, they know the right strategies and techniques that they're most comfortable with and they've experienced the most success when teaching students with the type of style they use. Learner centered (means) you would accommodate to how that learner learns most effectively. I see a path for both of them. I feel teacher-centered is, like, I can take good enough notes if I don't understand what they're doing I can come home and figure out my notes. I'd rather the teacher feel comfortable and confident in what they're teaching cause I'm not the only one in the classroom who has to learn.

Teaching and Learning

Faculty Views. Professor responses in this category mirrored students' comments. Some preferred a learner centered approach. "I find my students retain and embrace more of the topic if they are driving the learning," said Professor #1. A learner centered approach puts freshmen and sophomores at the center of

learning, explained Professor #5. "When students feel valued and they feel the material is valuable, learning is easier." Other professors take a different approach in teaching freshmen and sophomores, citing the importance of establishing academic foundations to help them succeed, set expectations, and provide guidance and support to students who are transitioning from high school to college.

In the questionnaires, faculty were asked about their teaching technique or process. Teaching practices included guided discovery, practical experiences that benefit students in careers and life, backward design, teaching/learning and student agency, and a process of discovery and learning that allows students to learn while developing skills to align curriculum with their lives. Student engagement, communication, and establishing connections was deemed important, along with Socratic and incarnational for the aim of liberative praxis. Discussions, interactive learning, group assignments, and collaboration in the traditional and virtual classroom rank high on professors' thoughts about collaboration and experiential learning. This included facilitating communication between students and the content, incorporating social media, student presentations, written assignments, field trips, and self-reflections on readings or videos.

The faculty in this study demonstrate that a single approach does not fit the needs of every student or every course. Krahenbuhl (2016) offers an interesting perspective on the teacher centered and learner centered debate from a constructivist viewpoint. He writes that students in a constructivist-based class are "treated like experts who investigate, discover, and construct their own meaning (p.

101). Krahenbuhl also argues that there are differences between novices and experts. The expert student can make many discoveries, but they may encounter more misconception than fact. Krahenbuhl also challenges the notion that educators are either teacher centered, or learner centered, with the latter being the preferred option. "This presents both a *false dilemma* and a *strawman* argument in which the positions in opposition to constructivist pedagogy are caricatured into a simplistic style the vast majority simply would not endorse" (p. 100).

Generational Differences

Students. "Millennials were the Adam and Eve of digital natives," said GenZ-A. (As Generation Z) We're not seeing anything radical that we haven't seen before. I grew up in a generation of people familiar with the rise of interconnected, and streaming services, and video games. We knew it more than we didn't know it."

With three generations of professors currently serving in the classroom – Baby Boomers, Generation X, and Generation Y, also known as Millennials, it was important in this study to consider how, or whether, generational differences impact Generation Z's learning experiences, particularly with the influence of technology. Mosca et al. (2019) write that the impact of technology on Generation Z's learning experience will make them part of a "knowledge economy" whose education will require a reimagined version of the three R's (p.68). However, Kirschner and De Bruyckere question the idea that Generation Z has the knowledge and skills to be

digital natives or that they will require an "educational approach radically different from that of previous generations" (2017, p.135).

Still, Generation Z has only known a life in which technology exists. They are considered the first true digital natives, and some of their professors are considered digital immigrants. Generation Z has an awareness that their relationship with, and understanding of technology, differs from other generations. They can seamlessly go from one digital device to another and, unlike older generations, are eager to try new technology. In the interviews for this study, students were asked what the words "technology" and "digital native" mean to them. Technology is one of those words that people understand generally, but their definitions differ depending on the context or the person. The students in this study shared a common understanding of the meaning of technology, describing it as electronic devices, something that provides entertainment, is man-made, and a beneficial tool to help humans be more efficient and make life easier. In the paragraph below, GenZ-H defines technology as an innovative application of science:

> "At a base level, as we learn things, there's a difference in knowing science and knowing how to apply the science. Whenever I think about 'what is tech," I just think about it as applied science or a tool to make science applicable."

Generation Z also associates technology with social media, as a way to communicate, as both a comfort and a distraction, and something that has always been a part of their lives.

> GenZ-D: I'm one of those people who cannot be away from technology. I am always on my phone. I have some apps on my phone. I cannot go, like, an hour without checking. It's a generational thing. Technology is super-important, like, in my life. I'm always on some form of technology. I have all my schoolwork on there, entertainment, I talk to all my people on there. A hundred percent, it's one of the most important things in my life.

Surprisingly, some of the students interviewed were not sure how to define the term digital native, as described by GenZ-C:

> Digital native? I really don't know what that means. It's my first time ever hearing that term. For me personally, technology is like electronic devices. It helps you or gives you other forms of entertainment. It's like man-made and helps humans be more efficient in what they're doing. Digital native, um, I do not really know what that means but I can, like, take a guess. Someone's more like technology inclined. That's my first time ever hearing that term and that's what my mind comes to. I don't feel most of us (Gen Z) could live without it (technology). I think I'm pretty good using technology. I can't code or do any of that stuff but, like, I feel like I'm pretty good at using my definition.

Generations are characterized by the time period in which they were born and the major events that influenced their lives, such as war, economic crisis, politics and social change. Currently, there are five generations living and working together, including Baby Boomers, Generation X, Millennials, and Generation Z, four of whom are interacting in the college classroom. Each are believed to have distinctive learning styles, life experiences, and use technology differently. As members of Generation Z, the students interviewed were asked whether there are particular learning needs, life expectations, and characteristics that distinguish them from prior generations.

They believe that using technology is natural for them and that the knowledge they have grown up with is good for the world. As college and high school students, Generation Z is embracing the impact of social media and making their voices heard. In their brief lives, they have witnessed political and social unrest, gun violence in their schools, movements such as Black Lives Matter, the #MeToo movement against sexual assault and harassment, violent protests at the U.S. Capitol and in state governments, and the devastation resulting from climate change, including raging wildfires, massive flooding, and deadly hurricanes and tornados.

The power and reach of social media has given Generation Z a voice unlike any others before them.

GenZ-E: My generation is like, in some ways, especially with what's happening right now, taking a stand on what we believe in and using technology to

spread the word. Police, Covid, people not wearing masks … we stand up for us and we're not afraid to say it. I think it made us stronger. The older generation wants to tell people they can't speak up. As a generation we stand up for what we believe.

> GenZ-F: I think some major events have influenced things. I guess a big one, while we were little, was 9-11, if that counts. While we don't really remember it, we know where our parents were, we know what they were doing. We know why we do certain thingswe do now because of that. Another big event that I remember was in second grade when it was election time and former president Barrack Obama was elected. That was a huge thing for me because he was the first African American, ever. I remember my Mom going, 'You're living through a monumental time in history.' Columbine (school shooting) didn't happen in our time, but everybody knows about Columbine. A lot since that has happened with school shootings. I think the way we handle things has completely changed. For me, we did drills (in school), we did internal lock-down drills, we did external lock-down drills. For the intruder drills, it evolved. We used to just turn the lights off and go to a wall where people couldn't see in the door and we'd turn the lights off, moving the desks in front. We were closing the windows, turning our cell phones off. It's gotten more intense. For me, I'm more observant when I'm in a school or a public

> place. I go, 'How can I get out? What's my exit plan?' I know a lot of people are scared to go to school because of it.

Not every student in the interview group characterized their generational experiences in such dire terms, and the differences of opinion here, contextually, are not unlike the answers in most of the interview questions.

> GenZ-G: I think a lot of people think our generation is dumb. Honestly, I'm with them on that, but that's not everybody. There's a lot of people my age that scream about politics, abortion, gun control. I honestly think a lot of issues we're dealing with has a lot to do with how you're raised.
>
> GenZ-H: I probably haven't gone through the same experiences as those other generations. Besides the strides in tech, I can't really think of major event that really affected us. As far as, like, school shootings go, I personally never felt endangered. When I hear about it, that's a tragic event. I always felt safe going to school. We had been locked down for a school shooting. I remember, like one day in high school at football practice our coaches had to do training. Even though I can appreciate the heart behind most of our generation's movements, I tend to disagree with most of our plans or the ethics of our ideals.

Generation Z's communication preferences reflect their relationship with technology, including their belief that it is easier to have a conversation by text than face-to-face. Unlike some generations before them, they have the ability to connect digitally, globally, and instantaneously.

GenZ-D: It's so much easier to communicate over technology. People talk about how Generation Z has a lack of communication skills. It shows up in the classroom. When my internet goes out, I lose my brain. We're reliant on technology. We learn with it. When you have a whole generation used to technology you should embrace tech rather than reject it.

GenZ-G: A lot of kids, as soon as they're old enough, they have, like, a tablet in their hand. I got my first phone in the seventh grade. I've had a phone for the majority of my life. I don't think about digital natives except for when my Mom comes to me to use my phone and I have to help her unlock it.

GenZ-H: I remember being young, like eight-years-old, when the iPad first came out. It's not so much I was born with it (technology), but as it advanced, I advanced with it. Since I've had it from such a young age, I'm able to adapt, I think, much quicker than people older than me. I was always shocked as a kid whenever, like, my parents couldn't play video games. They didn't have the hand-eye coordination. It is mind boggling to me. What I'm doing in college right now is on a computer. I don't even know what college was like twenty years ago.

GenZ-A: Interconnectedness defines Gen Z. We don't know what it means to unplug. My great grandfather is in his 80s. He once went fishing for a month. That's alien to us, not to know where everyone is. We can't fathom not being able to find someone. Gen Z, we're all connected, '24-7, 365.'

> We're connected even when we aren't trying to be . . . on our phone. I know the internet is the wild west of the modern world. Our generation is more exposed to world and other people because of the internet. A lot less of (the generational differences) isn't as intense as they say it is. At the end of the day, a good story sells better . . . Gen Z, Boomer, it's mostly true … but it's not true.

Professors' definitions on technology did not vary significantly from students. Their views on generational differences, however, were as diverse as the generations in which the professors were born, which included Baby Boomer, Generation X, and Millennials. Several professors agreed that immediacy and a lack of patience are among the distinguishing traits shared by Generation Z. They point out distinct differences in media selection, expectations of having technology, and want instant access to information and instructors. Generation Z prefers to communicate via social media, they are consumed with their phones and often defer to "text speak," even in formal writing, homework, and emails. Professors also shared thoughts on diversity and inclusion as it relates to generational theory.

> Professor #4: Generational markers are important, yet not as important as social class. I see social class as a key driver in learning and social class is triumphant over generational markers. Social class even informs generational markers. For example, a wealthy Boomer is more likely to be tech savvy than a poor Gen Z student.

> Professor #5: Like any label, I think it is dangerous to rely too much on standard descriptions of generations so we can appreciate and account for each person's unique abilities and gifts. Like with learning styles, I fear that if we place a label on a person and a prescribed set of 'qualities,' we may create inequities based on boundaries we place with those assumptions.

Covid-19

Student Perspectives. In their final survey question Generation Z was asked what they think about the impact of Covid-19 on their college learning experience during their freshman and sophomore experience. The responses do not reflect the thoughts and memories of students who enjoyed a traditional college experience but must be filtered through the lens of COVID-19. Consider that in the fall of 2019 and spring 2020 the students in this study, who are currently college freshmen, were still in high school. Those who were college freshmen during that same period in the fall of 2019, and are now classified as sophomores, spent their first semester living in dorms, attending classes in-person, and generally engaging in a typical campus life.

In March of 2020, hundreds of colleges across the United States abruptly shifted to online learning in order to mitigate the spread of COVID-19, a public health crisis deemed a global pandemic by the World Health Organization (WHO, 2020). At the university in this study, students were on spring break and did not return to campus or in-person classes for the remainder of the semester. In the fall of 2020, students moved back on campus. Face-to-face and hybrid classes resumed

according to the Center for Disease Control's safety guidelines for Covid-19, such as routine testing, masks, social distancing. In cooperation with state guidelines, the university briefly returned to online learning in late November 2020 until the spring semester of 2021.

For Generation Z, the transition has been a time of uncertainty, fear, and loneliness. The learning environment had to be converted to a mix of in-person classes, online, and hybrid. Students feel stressed about the economy, the loss of jobs, and being able to afford college. Friendships have been difficult to maintain with quarantines in the dorm or living back at home. Athletic activities have been curtailed or canceled altogether. They praise professors for their quick actions to transition classes online yet worry about being successful in college.

> GenZ-C: In March, it will be a year we've been doing this all online. I've kinda made the transition well. I feel like being more technologically inclined helps with that. For basically this entire year, being six feet apart, wearing masks, I've been adjusting. Starting in high school, I just realized, like, I can't let this affect me. I felt like I just had to get through it. I have to just adjust my learning to it and become good at it. My first online class was different. It was odd not being face-to-face with a teacher to talk to . . . kinda lonely. Now that we're all online, there's higher expectations.
>
> GenZ-A: I feel like, in some ways, online class is harder. If you're uncertain, it's harder to get that person-to-person interaction. We need that connection with other people. The long-term effect on the college

> experience (will be) fairly neutral. I don't think it will change my (experience) all that much as a biology and chemistry major. We kinda get thrown in the deep end.

The majority of students interviewed for this study believe people will want to go back to the traditional college experience once the pandemic is under control. They also believe the experience has opened the door to more online classes for future students and more familiarity with technology for professors.

Covid-19

Faculty Perspectives. Professors also acknowledged students' struggles with having dependable access to technology and the internet have made learning challenging. Like the students, faculty discussed technology and the fear, anxiety, and uncertainty that came with Covid-19. Some professors believe the effects of the pandemic will be long lasting in higher education. Professor #6 noted how the pandemic forced colleges and universities to "zero in on the way in which they integrate technology into the classroom and university as a whole," including student engagement and recruitment. Other comments relayed the frustration, and the lack of motivation and socialization that students are experiencing. There have also been positive aspects, like the bonds they have formed with students on a personal level, and classes that have become more individualized. "Not knowing from day-to-day whether or not we would be together in class or moving to fully virtual was always in the back of students' minds which caused anxiety," wrote

Professor #7. "Covid-19 was a horrible dark cloud that loomed over both instructors and students."

Chapter V

Conclusions, Limitations, Implications

Qualitative interpretation begins with elucidating meanings. The analyst examines a story, a case study, a set of interviews, or a collection of field notes and asks, 'What does this mean? What does this tell me about the nature of the phenomenon of interest?' (Patton, 2015, p. 570).

This purpose of this qualitative study was to understand the learning experiences and expectations of college freshmen and sophomores through the context of the following research questions:

1. What are the learning characteristics and expectations of college-age students who identify as Generation Z?
2. How are the learning needs of Generation Z being accommodated in the classroom?

Summary of Findings

This study examined the learning experiences and expectations of eight college freshmen and sophomores at a private liberal arts university. Initially, 33 students enrolled in general education and freshman studies courses were invited to participate. One-on-one Zoom interviews included questions on technology, including how and what types they use for learning. Questions covered students'

learning preferences and expectations, how they view group collaboration and experiential activities, and what they thought about teacher centered and learner centered instruction. As members of Generation Z, students were asked how they defined technology and their thoughts on being characterized as digital natives. Questions also focused on the students' generational characteristics and ideas and how Covid-19 may change the traditional college experience.

A group of seven faculty members, out of 19 invited, participated in an online questionnaire submitted through Google Forms. All had taught general education or freshman studies courses. The questionnaires were structured similarly to the students' interview questions, focusing on technology use, individual teaching approaches, and learning activities. Faculty also shared ideas on how they define technology, and their thoughts on a learner centered versus teacher centered approach. Like the students, faculty responded to questions about the characteristics of Generation Z and their impressions of how Covid-19 may change the traditional college experience.

Existing research is divided on whether Generation Z, as digital natives, learn differently than prior cohorts given that technology has always been a part of their lives. If this is true, then educators should adapt their teaching strategies in order to meet the learning expectations and of Generation Z (Mosca et al., 2019; Dabbagh et al., 2019; Seward & Nguyen, 2019). In this study, the findings were inconsistent between two main schools of thought. First, as digital natives, Generation Z has used technology throughout their lives and therefore think and

learn differently (Prensky, 2001, p. 1). Some research posits that claims of Generation Z learning differently based on their use of technology, is part of a debate on digital natives versus digital immigrants. Others argue that while students spend a lot of time using technology, it is more for personal and social activities rather than learning, meaning there is no need to recreate the higher education structure to accommodate a new generation (Judd, 2018; Lai & Hong, 2015; Waycott et al., 2010; Bennett et al., 2008).

Generation Z Findings

Generational cohorts are determined by life experiences and significant occurrences that influence generational attitudes, characteristics, and beliefs (Seemiller & Grace, 2019; Trevino, 2018; Tinto, 2017). For Generation Z, the first true digital natives, the overarching exception in their background is their lifelong access to and use of technology. However, a number of ambiguities emerged during the student interviews. All of the participants expressed the ways in which technology was important in their lives, for learning, fun, and social connections. Students said they were adept at moving seamlessly from one technology to another, sometimes using multiple devices at the same time, although some still preferred to take handwritten notes in class, rather than on a mobile device. Digital apps were widely used for learning, entertainment, managing day-to-day activities, and school. Students favored in-person learning versus online, viewed technology as a tool, but most had never heard the terms digital native or digital immigrant. This was interesting given the research in this study on the digital divide.

Most of the students see their personal characteristics as representative of the collective Generation Z cohort. They understand that social media has given them a strong voice in political, social, and environmental matters, and have an awareness of the national and global events and circumstances that have shaped their lives. Discussions on student preferences for learner centered versus teacher centered experiences were also noteworthy. Some clearly preferred a learner centered approach; however, the majority thought it would depend on the class or subject. In biology, science, or intro-level courses, students agreed that a teacher centered approach was best. In classes that are more of an entrepreneurial nature, where personal expression and creative ideas are encouraged, students overwhelmingly chose learner centered instruction. A few were adamant in their dislike of lecture-only classes, preferring discussions, collaborative activities, and experiential learning. Other students left the decision of how to teach up to their professors, trusting that they had the experience and wisdom to choose the best approach.

Faculty Findings

Communication and student engagement were key in the way faculty teach Generation Z. This included guided discovery, explicit instruction, backward design, active teaching and learning, and student agency. Providing practical career and life experiences, a preference for Generation Z, were also important to faculty. In terms of technology, faculty mostly agreed with students that technology was a tool used daily in classes, for hybrid learning, discussion boards, lecture capture,

PowerPoint, cell phones, laptops, blogs, social media apps, Google Documents and forms, design software, e-books, video and YouTube. Most agreed that interactive learning and collaboration fostered student communication and engagement. Overwhelmingly, the professors who participated in the study preferred a learner centered approach in class, which can help students become more confident and feel valued. Similar to student the responses, the majority of professors believed that in some of their 100- and 200-level courses a teacher centered approach was necessary. Similarly, lectures or readings encourage independent thinking, problem-solving, and helping students navigate the transition from high school to the rigors of college academics.

Characteristically, faculty view Generation Z as having their own distinguishing traits, such as the desire for instant access to information, resources, and professors. Generation Z would rather communicate via technology, preferring to use social media and texting rather than talking on the phone. Faculty also indicated that texting and social media have changed Generation Z's written and oral communication skills. Learning must be entertaining, mainly gaming, video, and audio formats and students do not see the need to memorize information they can easily look up online. Interestingly, a few faculty members viewed generational characterizations as labels that may create inequities based on assumptions about personal qualities and social classes. For example, social class could negate generational markers in that a wealthy Baby Boomer is more likely to

be technology savvy than an economically disadvantaged student who identifies as Generation Z.

Limitations

This study may be limited in scope due to the small number of participants; however, it would have been difficult to capture such an intimate qualitative focus or construct a narrative around a larger number of interviews. This study also took place at a private liberal arts university. Perhaps a larger, public university in an urban setting would attract Generation Z students with different perceptions on learning, technology use, and generational characteristics. The most prominent limitation of this study was the Covid-19 pandemic. The circumstances a year ago resulted in colleges and universities across the country transitioning all in-person classes to online learning overnight. At the university in this study, several extensive changes were made to mitigate the disruption caused by the pandemic, including hybrid learning, the adoption of open educational resources to make college more affordable for students, and the conversion of classes from 16-week semesters to two eight-week sessions. Quarantines, illness, and rising Covid numbers disrupted individual class participation, making the researcher's original plan to observe classes difficult.

Implications

The focus of this research was to examine the learning characteristics and perceptions of college freshmen and sophomores who identify as Generation Z, including whether their educational needs and expectations were being met, and if

technology was being used to accommodate those needs in the classroom. What this researcher discovered was a network of thinkers, creators, and doers, generational contemporaries who are forging their own path to learning by building a bridge between digital and analog. The students in this study were instinctive in how they used technology, citing many examples of how they use it for learning and for personal enjoyment. Technology drives their curiosity, entertains and educates, manages their daily lives, and allows them to communicate instantaneously with world. And yet, some in Generation Z refer to themselves as "old school," preferring pen and paper over an iPad. They are visual learners who enjoy virtual reality and video games. Still, they thrive on personal interaction and communication with professors in class. But when it comes to learning, if their professors "talk at" them, students said they are going to be bored.

Building a bridge between analog and digital means that Generation Z does not have to choose between technology and "old school" learning methods. They have become aggregators of their own learning styles and how they process information. It is the same premise of an architect who designs a house based on regulations, best practices, and intuition. But ultimately, the house is lived in by other people – and people are different.

The same idea can apply to learning. Consider what students see when they look at a module in a learning management system. The professor uploads information they want students to learn. Students see the module as it appears in the "student view" mode. Where is the learner-centered interaction or the shared

experience between teacher the learner? The module provides two ways of looking at the same information, but it is a dichotomy that does not allow for interaction. These are not parallel experiences.

The professor's process is much like the architect's, but Generation Z will decide how to work within the content. The end-user has the final say in how a tool is applied, especially when that tool is technology. Generation Z has many tools for tools for learning, and access to at least four generations of collective knowledge. And yet, there should be a common language and understanding between the generations. Baby Boomers do not look at technology in the same way as Generation Z. Baby Boomers are digital immigrants because they had to learn how to use technology as adults. Because of that, is it possible that Baby Boomers compartmentalize how they use technology in a different way than how they process learning? Generation Z, however, has always had access to both options. Again, these are not parallel experiences.

Recommendations

Moving forward, this research could be used for further study, and with a larger population sample. Though small, the participants in this study represent the cultural perspectives, voices, and lived experiences of college age students who identify as Generation Z. Other research findings have value, but primarily focus on Generation Z from a teaching point of view or generational theory studies. This study, however, is deliberate in going directly to the heart of the higher education conversation to understand Generation Z.

There are two other points to make about how this research might be used for further study. First, it became evident that freshmen and sophomores who were the first of Generation Z to attend college, may have not been in school long enough to have a comprehensive frame of reference for the college experience. Second, when this study first began, there was no global pandemic to consider. Covid-19 has permeated every intersection of the college experience, including how students feel, learn, live, and think about the future.

Thousands of students who identify as Generation Z will continue to be in college durning the next several years. Within this period of time, and with the ongoing debate about who these students are, how they learn, and how best to educate them, it may not be possible to fully address the impact of technology on Generation Z's learning needs. However, this topic is worth further research because Generation Alpha, who were born between 2010 and 2024 (McCrindle, n.d.), are coming behind them, and their relationship with technology will be even more nuanced and advanced.

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Appendix A:

Generation Z Interview Questions

Capstone Research Question: What are the learning characteristics and expectations of college-age students who identify as Generation Z and how are the learning needs of this cohort being accommodated in the classroom?

1. Tell me about yourself.

    a) What is your age?
    b) Where were you born?
    c) Where did you live before starting college?
    d) What is your major?
    e) What year of college are you in currently?
    f) What is your expected profession after graduation?

2. What do you believe are some of the most effective ways in which professors support your college learning experience, including lectures, PowerPoint presentations, class discussions, experiential learning activities, and technology, and why so?

3. What do you think of interactive learning activities that require collaboration with your peers or do group work that encourages you to utilize your problem solving and analytical skills, and why so?

4. What do the words “technology” and “digital native” mean to you?

5. How often do you use technology in the classroom and describe what that experience is like and how it helps you learn?

6. What types of technology do you use as part of your learning experience and why? (Example: Cell phone, laptop, tablet, video games, virtual or augmented reality, blogs or video logs, Apps, streaming services, internet search engines).

7. How do you think your professors have incorporated technology in your learning experiences, and how – from your perspective – could technology best be used to accommodate your learning?

8. How do you define a “teacher-centered” versus a “learner-centered” approach to learning? Do you prefer one over the other? If so, why?

9. People are often described as being part of a specific generation. Generations are characterized by the time period in which they were born and the major events that influenced their lives, such as war, economic crisis, politics and social change. There are currently seven generations living and working together, including Gen Z, Baby Boomers and Millennials. Each are believed to have distinctive learning styles, life experiences, and use technology differently. You are considered a member of Generation Z, born between 1995 and 2012. Based on this, are there particular learning needs, life expectations, and characteristics that you believe distinguish your generation from prior generations, including the way you use technology? If so, can you elaborate? What are some of the characteristics and hopes for the future that you believe define your generation?

10. What do you think about the impact of Covid-19 on your college learning experience?

Appendix B

Student Email Invitation to Participate

Hello ,

My name is Lucy Holman and I teach in UPIKE's Coleman College of Business. Like you, I am in school. My studies include a research project on Generation Z, specifically students who are freshmen and sophomores.

Mrs. Stephanie Stiltner, who teaches your public speaking or freshmen studies classes, shared your name and email with me. I am interested in your perspectives on learning and the role technology plays in your educational experiences and lives.

Over the next few weeks, I will be conducting one-on-one Zoom interviews and hope you would agree to participate in my research. Specifically, there are interview 10 questions and would not take up much of your time. You would need to sign a release form, but your responses will be anonymous.

I believe Generation Z – your generation – has much to teach us. You are the first digital natives. Technology has *always* been a part of your daily lives. Gen Z has been described as progressive, independent thinkers, and tech-savvy. Your generation is expected to number more than 80 million in the U.S. alone, outpacing Millennials and Baby Boomers. In essence, *you* are our future creators, entrepreneurs, and leaders.

Your participation in my research would be greatly appreciated. Even more, you have an important story to share. Please respond to my email if you'd like to participate in an interview. I look forward to meeting you.

Sincerely,
Lucy Holman

Lucy E. Holman
Assistant Professor of Business
Coleman College of Business
University of Pikeville

Email: lucyholman@upike.edu
Cell: 865-322-1809

Appendix C

Student Interview Participant Consent Form

The purpose of this study is to examine the learning characteristics, perceptions, and expectations of college freshmen and sophomores at the University of Pikeville and who identify as Generation Z. The data gathered will be used to complete a research project entitled: "Crossing the Generational and Digital Divide: Accommodating the Learning Experience of Generation Z. This research is expected to provide further understanding of the learning needs and expectations of Generation Z.

The interview will take approximately 45 minutes. Your identity will remain confidential and only the researcher will have access to records of responses.

Participation is voluntary, refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled, and you may discontinue participation at any time.

The interview in which you will participate will be recorded audio.

Records of responses will be deleted six months after completion of the project.

Please indicate your consent to participate below by signing the statement below:

I understand the information expressed above. I consent to participate in an interview for this research project and to allow my interview data to be used in a research report. I understand that my responses will remain confidential. My name will not be used in any reporting or publication of research data. I also agree to allow my responses to be audio-recorded.

Participant printed name:

_____

Participant signature: _____ Date: _____

Contact information of the researcher:
Lucy Holman
lucyholman@upike.edu
606-218-5265
Morehead State University Institutional Review Board office:
606-783-2278

Appendix D

Generation Z Faculty Interviews

Capstone Research Question: What are the learning characteristics and expectations of college-age students who identify as Generation Z and how are the learning needs of this cohort being accommodated in the classroom?

11. Tell me about yourself.

    g) What is your age – do you identify as being a Millennial, Generation X, or a Baby Boomer?
    h) Where are you from?
    i) Have you always taught college students?
    j) Do you teach all student cohorts, including freshmen, sophomores, juniors, and seniors?
    k) What do you teach?
    l) How long have you been teaching?
    m) Briefly how would you define your teaching technique or process?

12. What do you believe are some of the most effective ways in which you, as a professor, support the college learning experience, including lectures, PowerPoint presentations, class discussions, experiential learning activities, and technology, and why so?

13. What are your thoughts on interactive learning activities that require collaboration between students?

14. What do the words “technology” and “digital native” mean to you?

15. What types of technology do you use as part of the teaching and learning experience and why? (Example: Cell phone, laptop, tablet, video games, virtual or augmented reality, blogs or video logs, Apps, streaming services, internet search engines).

16. How often do you use technology in the classroom and describe what that experience is like and how it helps your students learn?

17. How have you incorporated technology in your students’ learning experiences, and how, from your perspective, could technology best be used to accommodate student learning?

18. When you design or teach 100- and 200-level courses for freshmen and sophomores, as opposed to juniors and seniors, does a teacher-centered vs. learner-centered approach inform your thinking? Why or why not?

19. People are often described as being part of a specific generation. Generations are characterized by the time period in which they were born and the major events that influenced their lives, such as war, economic crisis, politics and social change. There are currently seven generations living and working together, including Gen Z, Baby Boomers and Millennials. Each are believed to have preferred learning styles, life experiences, and use technology differently. Do you believe there are particular learning needs, life expectations, characteristics, and ways of communicating that distinguish one generation from another, including the way different generations may use technology? If so, can you elaborate?

20. From both a learning and technology perspective, what do you think about the impact of Covid-19 on the college experience?

Appendix E

Interview Email – Invitation to Participate

Dear Colleague,

As you may know, I am in the research phase of a doctoral program in higher education leadership at Morehead State University.

I am interested in your perspectives on teaching students who identify as Generation Z and the role technology plays in their educational experiences and lives. The oldest of this generation were born between 1995 and 2012 and are currently freshmen and sophomores.

As the first true digital natives, I believe Generation Z has much to teach us. Gen Z has been described as progressive, independent thinkers, politically and socially aware, and tech-savvy. This generation is expected to number more than 80 million in the U.S. alone, outpacing Millennials and Baby Boomers. In essence, *they* are our future creators, entrepreneurs, and leaders.

I will be collecting data in the form of a questionnaire over the next two weeks, concluding on December 14. I love teaching and have learned so much from my colleagues here at UPIKE. Your knowledge and experiences would provide significant meaning and understanding to this research. There are 10 questions which would not take up much of your time. You would need to sign a release form, but your responses will be anonymous.

Over the next several years, you will be influential in the ongoing story of Generation Z. I hope you will consider participating in my research.

Sincerely,
Lucy Holman

Lucy E. Holman
Assistant Professor of Business
Coleman College of Business
University of Pikeville

Email: lucyholman@upike.edu
Cell: 865-322-1809

Appendix F

Faculty Interview Participant Consent Form

The purpose of this study is to examine the learning characteristics, perceptions, and expectations of college freshmen and sophomores at the University of Pikeville who identify as Generation Z. The data gathered will be used to complete a doctoral research project entitled: "Crossing the Generational and Digital Divide: Accommodating the Learning Experience of Generation Z." This research is expected to provide further understanding of the learning needs and expectations of Generation Z.

Your identity will remain confidential and only the researcher will have access to records of responses.

Participation is voluntary, refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled, and you may discontinue participation at any time.

Records of responses will be deleted six months after completion of the project.

Please indicate your consent to participate below by signing the statement below:

I understand the information expressed above. I consent to participate in a questionnaire for this research project and to allow my questionnaire data to be used in a research report. I understand that my responses will remain confidential. My name will not be used in any reporting or publication of research data.

Participant printed name: _____

Participant signature: _____

Date: _____

Contact information of the researcher:

Lucy Holman
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VITA

LUCY E. HOLMAN

EDUCATION

1989	Bachelor of Arts University of Pikeville Pikeville, Kentucky
1997	Bachelor of Arts Morehead State University Morehead, Kentucky
2015	Master of Professional Studies The George Washington University Washington, District of Columbia
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PROFESSIONAL EXPERIENCES

2020-2021	Assistant Professor of Business Coleman College of Business University of Pikeville Pikeville, Kentucky
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