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Relevance of Generational Cohorts in the Analysis of Academic Library Usage

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Abstract

The literature surrounding student usage of academic libraries often relies upon generational cohort classifications when discussing patterns and preferences. We analyzed the most recent data available at [University] Libraries to determine whether any statistical significance could be attributed to these generational cohort classifications. We found that no significance could be attributed to generational cohorts that could not also be accounted for by other factors, bringing into question the importance of alleged generational differences when making decisions within academic library practice and policy.

Keywords

Generation; Generational Cohort; Generation X; Generation Z; Millennials; Boomers; Silent Generation; Academic Libraries; Library Users

Introduction

Generational cohorts – the Silent Generation, Baby Boomers, Generation X, Millennials/Generation Y, and Generation Z, are identity constructs that are frequently used in Library and Information Sciences (LIS) as categories for classifying subsets of a larger population, and also to understand and potentially predict behaviors of user groups. The Pew Research Center, whose definitions and boundaries of the generational cohorts are used throughout this research, explains that generational

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cohorts “...provide the opportunity to look at Americans both by their place in the life cycle – whether a young adult, a middle-aged parent or a retiree – by their membership in a cohort of individuals who were born at the same time” (Dimock, 2019). The Pew Research Center employs generational cohorts as a lens through which evolving public attitudes towards certain issues can be understood (Id.).

The purpose of this study was to review the existing data at the [University] Libraries to determine if a focus on generational cohort usage behaviors is supported by the data. The limitations of the available data resulted in a high-level analysis that succeeded in uncovering additional questions that require significant changes in future data collection methods and analysis in order to more fully understand the importance, if any, of generational cohorts. This study was exploratory in nature, and its findings suggest that the use of generational cohorts in LIS literature may be overstated or, at a minimum, more dependent upon other characteristics than previously understood.

Literature Review

The research literature within LIS demonstrates adoption of the concept of generational cohorts similar to that of the social sciences in general. Research is often focused on the users of academic libraries with specific use of generational cohorts as a means of identifying patterns of behavior and opportunities for change. Jameson, Natal, and Napp (2019) surveyed 235 graduate and undergraduate students (predominantly Millennials at the time of the survey in 2012) at the University of Toledo, while Campbell and Adebbonjo (2014) discussed their experience with Baby Boomers at East Tennessee State University and the unique needs expressed by that particular user

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group. Walker (2006) suggested approaches for academic libraries to take when planning services for the Millennial generation; Kipnis and Childs (2004) do the same for Generations X and Y. Costello, Lenholt, and Stryker (2004) examined the learning styles of Generations X and Y and how library instruction efforts using course management software (CMS) could be used to meet those needs. Sheesley (2002, p. 27) questioned whether academic librarians should “be doing things differently to reach [Generations X and Y] effectively,” and Curtis (2000) addressed the library usage issues expressed by students born after 1961.

Despite the frequency with which generational cohorts are used in LIS literature, there is not a clear consensus on the definitions and boundaries of generational cohorts. Twenge, Carter, and Campbell (2015) theorize, “These generational birth year cutoffs are arbitrary and are not necessarily justified by empirical evidence, but are common labels for those born in certain era” (p. 385). It’s argued that it can be “difficult to determine generational differences in college students’ views from perceptions or observations alone,” even though generational cohorts can be useful, the divisions are still age approximate social constructs and apply to social and behavioral sciences (Twenge and Donnelly, 2016, p. 621; Campbell *et al*, 2015). Campbell and Adebajo (2014) use the term “Boomers” to indicate all students over the age of 40, regardless of when they were born, identifying them as having needs different than those of “younger students” (p. 2). Mi and Nesta (2006) use the term “Net Generation” as “people born after the early 1980s, who are now entering university,” a term that is considered synonymous for Generation Y or Millennials (p. 415). Curtis (2000) uses the term “Generation X” for all undergraduate students born after 1961 in her focus group-based

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study of 33 undergraduate students at the University of Georgia (p. 123). Variations in the usage of terminology and boundaries add an additional layer of difficulty in analyzing data based on student age at the time of data collection.

There is a growing body of research within LIS that examines the use of generational cohort definitions and their behavioral assumptions within the academic library setting. Jameson, Natal, and Napp (2019) found that while their results indicated that their participants who were 18 to 24 years of age at the time of the study demonstrated traits commonly associated with Generation Z, there were traits that endured from other generations, including library anxiety (pp. 381-382). Tomlin, Tewell, Mullins, and Dent's (2017) multi-year ethnographic study of student research and study behaviors in the academic library using the lens of culture, rather than generational cohort. Variations in student behavior related more to a student's level in their academic program. Salisbury and Karasmanis (2013) focused on student information literacy skills based on their progression through their studies, surveying incoming first year students, regardless of their generational cohort. Becker (2012), surveying 16 faculty members at Pima Community College (PCC) in Tucson, Arizona, emphasizes that "adherence to generational differences as an underlying cause hinders educational pedagogy principally because we are all part of the current consumer-driven technology bubble" (p. 493). By focusing on all library users as "the Connected Generation" based on our immersion in technology rather than our generational cohort status, libraries are able to "plan and accommodate for all groups well into the future" (Id.) Mi and Nesta (2006) acknowledge that the term "Net Generation" includes characteristics that might also apply to their parents, bridging the generation gap (p. 415).

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Suzanne deLong (2007) wrote, “[using generational cohort labels] all seems very innocuous at first, but the habit of name-calling can develop into something that is not good for us or those we serve” (p. 51). More than a decade later, we find ourselves echoing her sentiments. The lack of consistency within LIS literature relating to the definitions and boundaries of generational cohorts, as well as assertions that generational cohorts might not play as significant or reliable role in understanding and predicting user behavior, led us to question whether or not library usage data would demonstrate any substantial variations based on generational cohort status.

Materials and Methods

We used quantitative data from their libraries’ 2019 LibQual+® survey to analyze whether there are observable trends in relation to generational age groups and library use. LibQual+®, which dates back to 1999, is a survey tool commonly used in libraries to investigate how library users perceive services and resources. Its creation was an effort to apply and tailor SERVQUAL, a survey tool to measure service quality primarily used by business organizations, to libraries (Edgar, 2006; Thompson, Cook & Thompson, 2002). In 2000, Association of Research Libraries (ARL) and university researchers embarked upon the development and launch of this new survey tool that eventually would be used by 1,300 libraries (Cook and Maciel, 2010; LibQual+®, 2014a). The LibQual+® survey consists of twenty two core questions and a comment box that are meant to “solicit, track, understand, and act upon users’ opinions of service quality” (Cristobal, 2018, p. 5). The core survey measures user perceptions of service quality in three areas: Effect of Service – *how users perceive staff and customer*

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service, Information Control – *users accessibility of library collections*, and Library as Place – *how users perceive library spaces* (McCaffrey, 2019; LibQual+®, 2014b). This instrument is ideal for benchmarking survey results against peer institutions, revealing library users' minimum, desired, and perceived levels of service, and comparing one's institutional response data over time (Thompson *et al*, 2009).

We initially intended to pursue evaluation of the foundational twenty two core questions, but opted to review the findings of four questions supplementing the university Libraries' survey in 2019. In regards to generational differences, these questions took into account fundamental activities and behaviors demonstrated by our library users. We focused on the following questions for our research:

1. *Have you ever had a tour or orientation of the library or has a librarian ever visited you in a class?*
2. *How often do you access library resources through a library Web page?*
3. *How often do you use resources on library premises?*
4. *How often do you use Yahoo™, Google™, or non-library gateways for information?*

Additional survey questions pertained to the quality of the library, its resources, and its staff, which fall outside the scope of this project. Our goal was to understand the usage habits of the respondents and to determine how, if at all, the concept of a “generational cohort” was represented in the data. In other words, when looking at the usage habits of the respondents, were there any patterns that appeared to support the idea of generational cohorts behaving differently? Could any differences in behavior be accounted for by other means of categorization?

Background

[University] is an R1 doctoral degree-granting university whose main campus is located in central Texas near three major metropolitan cities – Austin, Dallas, and Houston. The university enrolled a total population of 64,882 students in Spring 2019. This number accounted for undergraduate and graduate students, including international and first generation students.

Results

The LibQual+® surveys were completed between March 19, 2019 and May 13, 2019. A total of 769 respondents completed the survey, consisting of both undergraduate and graduate students. Two respondents were excluded from our analysis because the students were under the age of 18, bringing the final number of respondents in this study to 767.

The LibQual+® data does not provide the age of each respondent at the time of their response. Rather, the respondents select an age category to which they belong from among the following ranges: 18-22; 23-30; 31-45; 46-65; and Over 65. *Figure 1* shows the breakdown of the 767 respondents by these previously selected age groups.

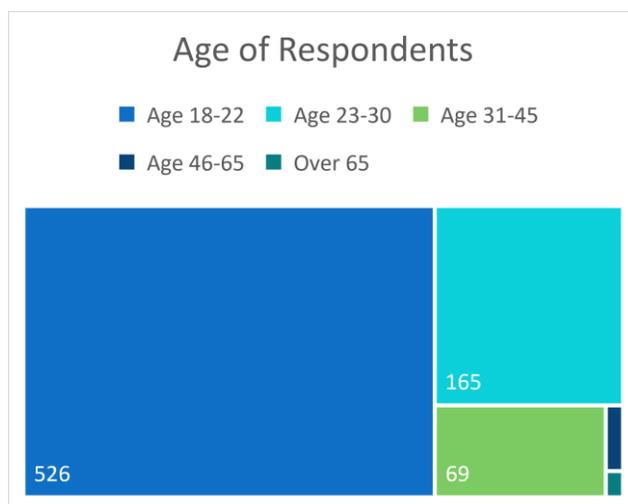


Figure 1: Age of Respondents.

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The LibQual+® demographic data was divided into two main user groups: undergraduate students (537 respondents) and graduate students (230 respondents). Undergraduate students were subdivided based on their progress through their programs: Undergrad: 1st year; Undergrad: 2nd year; Undergrad: 3rd year; Undergrad: 4th year; Undergrad: 5th+ year; and Undergrad: Undecided/Other. Graduate students were subdivided based on the type of degree being pursued: Grad: Masters; Grad: PhD; Grad: Professional Degree; and Grad: Other. *Figures 2 and 3* show the number of respondents in each subcategory, respectively.

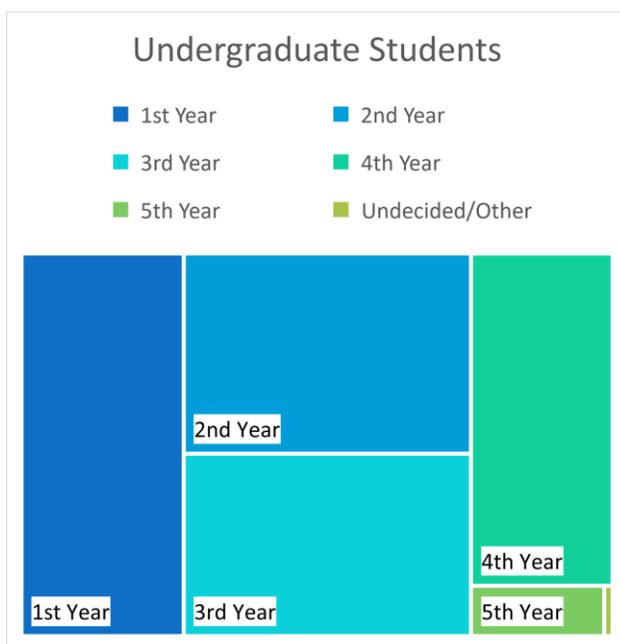


Figure 2: Undergraduate Student Status

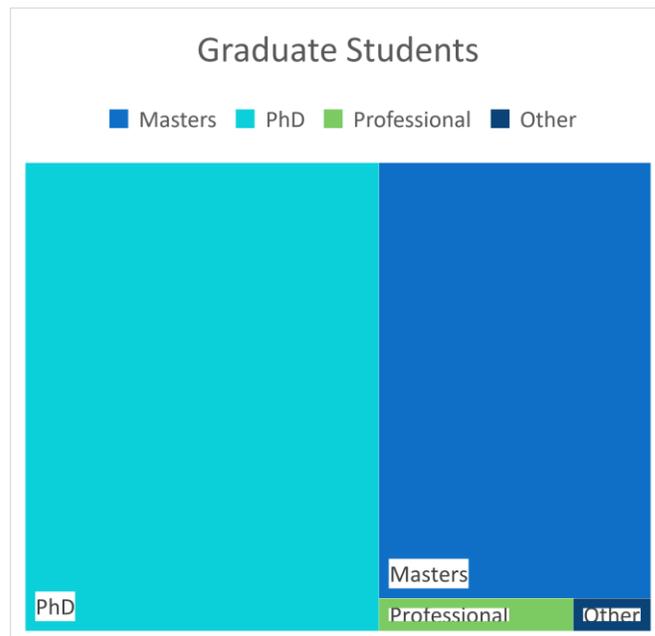


Figure 3: Graduate Student Status

Determining behavioral trends based on generational cohort within this data set as previously defined was instantly problematic. The boundaries of each generational cohort are not clearly or consistently defined within the literature. For the purposes of this study, we used the following generation definitions from Pew Research Center (Dimock, 2019), using a "+" sign to signify the lack of cutoff year for Generation Z:

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Silent Generation:	Born 1928-45
Boomers:	Born 1946-1964
Generation X:	Born 1965-1980
Millennials/Generation Y:	Born 1981-1996
Generation Z:	Born 1997-2012+

The structure of the demographic survey, however, does not allow for clean alignment with the Pew Research Center generational cohort boundaries. While the 18-22 age group uniformly belongs to the Generation Z cohort, they were the only age group that aligned cleanly with the previously discussed generational cohorts.

Millennials/Generation Y appear in both the 23-30 and 31-45 age groups, and Generation X respondents could appear in both the 31-45 and the 46-65 age groups, and so on (see *Table 1* below). We were unable to determine the generational cohort of respondents beyond the age of 30 because their actual age at the time of the survey is not provided and their demographic data straddled two generational cohorts. At best, a comparison can be made between the youngest generational cohort – Generation Z – and all the other generational cohorts. This was the approach we took in examining the results of the LibQual+® survey demographic data compared to the four supplemental questions for generational cohort importance.

LibQual+® Age Groups	Years Born	Generational Cohort(s)
18-22	1997-2001	Generation Z
23-30	1989-1996	Millennials
31-45	1974-1988	Millennials, Generation X
46-65	1954-1973	Generation X, Boomers
Over 65	Before 1953	Boomers, Silent

Table 1: LibQual+® Age Groups and Generational Cohorts

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Comparing the Generation Z respondents to the respondents from all the other generational cohorts in each of the four questions previously mentioned, we found that with the exception of Question 2, there was little difference between the responses of Generation Z and Non-Generation Z respondents. When it came to usage of the library's Web page (Question 2), Generation Z respondents were far less likely to access library resources on a daily or weekly basis through the library's Web page than their older counterparts, and more than 12% of Generation Z respondents indicated that they never accessed library resources through the library's Web page. The results of this comparison are shown in *Table 2*.

Question 1: Have you ever had a tour or orientation of the library or has a librarian ever visited you in a class?		Yes		No		
Generation Z (526 respondents)		276 (52.47%)		250 (47.53%)		
Non-Generation Z (241 respondents)		131 (54.36%)		110 (45.64%)		
Question 2: How often do you access library resources through a library Web page?		Daily	Weekly	Monthly	Quarterly	Never
Generation Z (526 respondents)		41 (7.79%)	157 (29.85%)	178 (33.84%)	85 (16.16%)	65 (12.36%)
Non-Generation Z (241 respondents)		86 (35.68%)	102 (42.32%)	30 (12.45%)	19 (7.88%)	4 (1.66%)
Question 3: How often do you use resources on library premises?		Daily	Weekly	Monthly	Quarterly	Never
Generation Z (526 respondents)		107 (20.34%)	199 (37.83%)	125 (23.76%)	69 (13.12%)	26 (4.94%)
Non-Generation Z (241 respondents)		57 (23.65%)	65 (26.97%)	69 (28.63%)	36 (14.94%)	14 (5.81%)
Question 4: How often do you use Yahoo™, Google™, or non-library gateways for information?		Daily	Weekly	Monthly	Quarterly	Never
Generation Z (526 respondents)		452 (85.93%)	47 (8.94%)	19 (3.61%)	3 (0.57%)	5 (0.95%)
Non-Generation Z (241 respondents)		183 (75.93%)	42 (17.43%)	7 (2.90%)	2 (0.83%)	7 (2.90%)

Table 2: Generational Cohort Comparison Results

Given the similarity in the majority of responses between Generation Z and Non-Generation Z respondents, in combination with the lack of alignment between the demographic data and generational cohort boundaries, we performed a second analysis

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of the results of Questions 1-4 based on previously named subdivisions in the data. We attempted to determine if students' progression through their respective programs was a more relevant measure of library usage than generational cohort, which would allow the library to target specific areas of need that would go unnoticed if thinking of users in terms of generational cohort status. The results of this comparison at the undergraduate/graduate level appear in *Table 3* (results based on each individual year were analyzed but are not included here).

Question 1: Have you ever had a tour or orientation of the library or has a librarian ever visited you in a class?	Yes		No		
Undergraduate Students (537 respondents)	271 (50.47%)		260 (48.42%)		
Graduate Students (230 respondents)	130 (56.52%)		100 (43.48%)		
Question 2: How often do you access library resources through a library Web page?	Daily	Weekly	Monthly	Quarterly	Never
Undergraduate Students (537 respondents)	39 (7.26%)	158 (29.42%)	182 (33.89%)	92 (17.13%)	66 (12.29%)
Graduate Students (230 respondents)	88 (38.26%)	101 (43.91%)	26 (11.30%)	12 (5.22%)	3 (1.10%)
Question 3: How often do you use resources on library premises?	Daily	Weekly	Monthly	Quarterly	Never
Undergraduate Students (537 respondents)	113 (21.04%)	194 (36.13%)	134 (24.95%)	69 (12.85%)	27 (5.03%)
Graduate Students (230 respondents)	51 (22.17%)	70 (30.43%)	60 (26.09%)	36 (15.65%)	13 (5.65%)
Question 4: How often do you use Yahoo™, Google™, or non-library gateways for information?	Daily	Weekly	Monthly	Quarterly	Never
Undergraduate Students (537 respondents)	460 (85.66%)	51 (9.50%)	19 (3.54%)	3 (0.56%)	4 (0.74%)
Graduate Students (230 respondents)	175 (76.09%)	38 (16.52%)	7 (3.04%)	2 (0.87%)	8 (3.48%)

Table 3: Student Progress Comparison Results

As with the comparison of Generation Z respondents to the respondents from all the other generational cohorts in each of the four questions, we found that Question 2 was the exception, while the other questions showed little difference between the responses of undergraduate and graduate respondents. When it came to usage of the library's Web page (Question 2), undergraduate respondents were far less likely to

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access library resources on a daily or weekly basis through the library’s Web page than their more experienced counterparts, and slightly more than 12% of undergraduate respondents indicated that they never accessed library resources through the library’s Web page.

We made one additional comparison to determine whether student experience levels might be more indicative of behavioral patterns than generational cohort status. By comparing the percentage of variance between the two categories in each analysis – Generation Z vs. Non-Generation Z and undergraduate vs. graduate – we found that there was greater variation for Questions 1 and 2 between undergraduates and graduates than their respective generational cohorts. Conversely, there was more variation between Generation Z and Non-Generation Z respondents for Questions 3 and 4. The results of this comparison are represented in *Table 4*; higher percentages have been italicized.

		Variation Percentages			
Generational Cohort Comparison	Question 1	Question 2	Question 3	Question 4	
	Yes: 1.89%	Daily: 28.07%	<i>Daily: 3.31%</i>	<i>Daily: 10.00%</i>	
	No: 1.89%	Weekly: 12.47%	<i>Weekly: 10.86%</i>	<i>Weekly: 8.49%</i>	
		Monthly: 21.39%	<i>Monthly: 4.87%</i>	<i>Monthly: 0.71%</i>	
		Quarterly: 8.28%	Quarterly: 1.82%	Quarterly: 0.26%	
		Never: 10.70%	<i>Never: 0.87%</i>	Never: 1.95%	
Student Progression Comparison	Yes: 6.05%	<i>Daily: 31.00%</i>	Daily: 1.21%	Daily: 9.57%	
	No: 4.94%	<i>Weekly: 14.49%</i>	Weekly: 5.70%	<i>Weekly: 7.02%</i>	
		<i>Monthly: 22.59%</i>	Monthly: 1.14%	Monthly: 0.50%	
		<i>Quarterly: 11.91%</i>	<i>Quarterly: 2.80%</i>	<i>Quarterly: 0.31%</i>	
		<i>Never: 11.19%</i>	Never: 0.62%	<i>Never: 2.74%</i>	

Table 4: Variation in Response Percentages

The failure of the LibQual+® demographic data to align with generational cohort boundaries is a clear example of the challenges in making decisions about policies and

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resources based on research relating to the habits and needs of the various generational cohorts. The usage behavior of students (and other library patrons) is multi-faceted, and the examination of one factor, such as generational cohort, as being more predictive of future needs overlooks the complexity of users.

Discussion

Although there were no substantial differences in the data, it should be noted that Non-Generation Z students utilized resources through the library web page (Question 2) more frequently than Generation Z students. This appears to be an indicator that the latter generation may need more exposure to online library resources, but student classification should be taken into consideration to tailor library instruction and services to the user. Our data indicated that Generation Z was made up of 507 undergraduate students and 19 graduate students. As noted in Table 3, access to resources through the library's web page occurred more frequently with graduate students, which consisted of 19 Generation Z respondents and 211 Non-Generation Z respondents. This may be an indication of a need to continue the modification of library instruction and services primarily based on a student's progression through their respective academic programs.

In further support of identifying participants by their progression through their academic program rather than generational cohort, Tables 2 and 3 both indicate high daily percentages of use through Yahoo™, Google™, or other non-library gateways for information (Question 4). A participant's classification as undergraduate or graduate was a stronger indicator of their non-library web page usage. The variance in Table 4

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showed only a moderate difference between the four LibQual+® questions we examined, with the greatest difference falling under Question 3: *How often do you use resources on library premises?* This instance may be a useful indicator when analyzing the usage of resources within the library, but student progression through their academic program should also be taken into consideration.

The lack of correlation between the LibQual+® supplemental questions data and concepts of generational cohorts found within LIS literature does not mean that there is “nothing to” the idea of generations of users having unique qualities that need to be met. Rather, our research leads us to believe that a user or group of users’ generational cohort must be understood within a larger, multi-faceted identity. To make decisions based on the “tech-savviness” of one generation or the “e-book preferences” of another without consideration of other factors runs the risk of failing to meet the needs of all users.

As important as the lens through which we examine data is the way we collect the data itself. If we want to examine data for subtle differences within and among generational cohorts and/or any other data points, we need to modify our data collection tool(s) to enable such an examination while still protecting student privacy. The LibQual+® survey could be modified to allow for birth year or self-identification of generational cohort without capturing any other identifiable data.

Future Research

There are additional ways to examine the LibQual+® survey data that may yield a more detailed understanding of the complexities at play between and among the

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generational cohorts and other demographic factors. To truly study the significance of generational cohort, the LibQual+® survey would need to be modified to capture each participant's year of birth or provide clearly delineated generation identification options. Our study did indicate that, as we suspected, no one facet of a user's identity should be prioritized over the others.

Lyons and Kuron (2013) aptly discuss the significance of socio-historical aspect of identity in the use of generational cohort ("generational identity" in their terminology) when planning practice and policy within academic librarianship. We must allow our understanding of generation to evolve, as did "our understanding of gender and other demographic variables such as ethnicity and socioeconomic status ... to become more nuanced and complete" (Lyons *et al*, 2015, p. 351). The university had 5,590 international undergraduate and graduate students during data collection in Spring 2019 – students who might share a similar date of birth with their counterparts but who might have significantly different needs and preferences than the non-international members of their respective generational cohorts. This significance should not be overlooked.

Conclusion

Additional research, both within the University Libraries and across academic libraries in general, is needed to determine whether or not the findings of this study are significant. The relative lack of difference when comparing generational cohort variations to student level variations, even given the limitations of the data used, indicates that the significance of generational cohorts may be overstated in the literature. While generational cohort is arguably part of a user group's identity, it is one

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factor among many, including a student's level within their program. We must, as deLong offered, "try to treat each person as an individual, to give everyone the respect they deserve, and to serve each member of each group in the best possible manner" (2007, p. 51). To make assumptions based on patterns of identity, regardless of whether the data proves those assumptions correct, is to fail in our roles as academic librarians.

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