# Who is Represented? An Evaluation of Demographic Disparity Across Villanova University's Syllabi 

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#### Abstract

Two questions guided this research: who is on Villanova University's syllabi and why do the demographics of the Villanova syllabi authors fall the way they do? This study looks at contemporary issues of representation of minority and female authors in academia through the example of Villanova University's syllabi. It accomplishes this through a two-part examination of the disparity present across the demographics of Villanova University's four undergraduate colleges' syllabi. Two hypotheses are tested to explain this lack of representation; that this disparity is caused by the biases attributed to the demographics of the professors crafting the syllabi and that the disparity is dependent on the field of academia the syllabi fall within. This study found that there is a demographic disparity present across the four undergraduate colleges at Villanova, with $70 \%$ of the data's assigned authors being men and $24 \%$ of them women, $90 \%$ of those authors working within the Global North, and only $7 \%$ were Black scholars. The study also found that there were differences in demographic disparities across varying academic fields. The study aims to bring the lack of representation in academia to the attention of Villanova University.


## I. INTRODUCTION

If you had to name three papers you remember reading in a college course, what would they be? Who are the authors of those readings? These questions inspired this study, which analyzes the causes for the demographic disparity among the authors in Villanova University's syllabi, with the aim of bringing the lack of representation in academia to the attention of Villanova University. This study examines contemporary issues of representation of minority and female voices through a two-part examination of the demographics of Villanova's syllabi. First, this paper aims to examine demographic disparities in gender, race, and region among authors selected for syllabi readings. Next, two hypotheses are tested: (1) the demographic disparity is caused by the biases attributed to the demographics of the professors crafting the syllabi and (2) the disparity is dependent on the academic field the syllabi fall within.

After conducting a literature review and a survey of syllabi across Villanova college curriculums, the study revealed that the gender of the professor had an impact on the level of gender equality present in their syllabus. However, other hypothesized impacts on the demographic disparity, such as the patriarchal world of academia, were examined and shown to have an effect. The study found that there were differences in demographic disparities across different academic fields, but the fields who advanced in leveling out one demographic inequality failed in others. The impact of this research lies in how these larger discussions of exclusion are made concrete and obvious when investigated in a case study of Villanova's curriculum.

This research was approached through a layered set of questions: who is on Villanova University's syllabi and what is the cause of the authors' demographics in the Villanova syllabi? The study analyzed the syllabi of Villanova University's four undergraduate colleges, specifically, a sample of introductory first-year courses in the Engineering, Liberal Arts and Sciences, Nursing, \& Business Schools, as the cases for this study.

This article begins with a thorough review of the relevant literature on this topic to investigate demographic disparity and lack of diversity in collegelevel curriculums across the four colleges' subject matter. Next, the paper will outline the working hypotheses, explain the research design - including the case selection, then the analysis of data collected. A report is included from this collected data discussing the number of women and people from the Global South present as authors within the curriculum compared to males from the Global North, leading to a discussion of the paper's findings and conclusions.

## II. REVIEW OF LITERATURE

Existing research on curriculum theory and publishing in academia can often highlight demographic disparity of authors represented in college syllabi. This research points to three main explanations for why this disparity exists: a lack of women and minorities publishing work or being published, a bias in instructors when crafting their syllabi, and a lack of existing citations of women and minorities' published work.

The first explanation examines how the lack of research published by female and minority scholars
causes a lack of female and minority authors represented on college syllabi.

When looking specifically at the presence of female scholars within eight political science journals, it was found that:

> Neither women's presence in the discipline nor their conference presentations are good predictors of their propensity to submit their work...[but] these eight journals overwhelmingly publish authors $\sim$ women and men! who are affiliated with research institutions" (4).

Since women are less likely to be hired at these schools, with a smaller chance of achieving tenure, they are less represented in these prestigious journals. What might seem like an incidental disparity can segway into a much graver result. For example, "women are less likely to publish in the discipline's most visible journals," at first seems more of a choice until it becomes evident that this "is likely to have an impact on their advancement to the more senior ranks" (4). Gatekeeping of academic journals for female and minority authors has also been shown to occur within the liberal arts field of political science, more specifically international relations (12).

Moreover, the lack of women and minority authors in college curriculums can be attributed to the scholarship practices of the journal articles used as required reading in college courses, specifically the possibility of authors' bias when citing within their own work. According to research specifically looking at the field of international relations using an economics methodology, by Mitchell, et al., 2013, male authors are "less likely to cite work by female scholars in comparison with female authors" (7).

Finally, it has been found that the gender of the instructor of a course has a significant impact on what makes it into the syllabus. When looking explicitly at gender as a variable in international relations graduate studies, Colgan found that in the field of International Relations, female authors are assigned more when a female instructor crafts the syllabus (4). He writes that "Some but not all of the difference between male- and female-taught courses might be explained by differences in course composition." But a notable caveat is that this bias doesn't extend to assigning their own research. In fact, women are less likely than men to assign their own scholarship in their syllabi (4).

## III. HYPOTHESES

For the first research question, this study hypothesized that there is a significant difference in the number of male and Global North authors present across Villanova's syllabi. The study's second research
question, which builds off the first hypothesis, questions why significant difference occurs. There are three potential answers to address this disparity and this paper tests one empirically. The first is that there is less research published by female and minority scholars because of existing patriarchal standards of living and how those cause women, both white women and women of color, to be passed over for tenure positions at institutions of higher education (9). Unfortunately, this answer cannot be tested empirically because the identified issue is a constant that cannot be isolated: the patriarchal nature of academia (10). The second answer evaluates if there is a bias present across disciplines when authors cite within their own published articles. This hypothesis says that this bias in citation practices is explained by the trend of male researchers being less likely to cite women. This cannot be tested using the assembled data set. The third hypothesis responding to the existing explanations is that personal biases among professors crafting the curriculum cause the disparity. This study will look specifically and see if the gender, national origin, or race of the professor impacts their selections of authors for their syllabi.

The fourth hypothesis is that different fields within academia have different levels of diversity present in their syllabi. For example, an engineering introductory syllabus may not have the same level of scholars from the Global South or female scholars as a liberal arts course. There has been research published on this general hypothesis within the field of curriculum theory, but this study will look at the issue specifically across Villanova University professors and authors.

The last hypothesis in this study that answers the second research question is that there is a disparity in the demographics of scholars present across assigned course readings because of the identity of Villanova as an institution. The Catholic nature of the institution changes what is taught in introductory courses. Because this variable does not vary across the data set, it will not be tested in this study but will be included in the future research section.

Of the hypotheses discussed in this section, three will be tested, across both questions asked in this study. The first question, exploring if there is a disparity in the demographics of the authors present across the syllabi, is more descriptive and the second question, exploring why that disparity occurs, is more causal. The first hypothesis, in answer to the first question, hypothesizes that there will be a disparity between genders and global origins in the authors present across Villanova's syllabi. For the second question the study will be evaluating the two testable hypotheses, the first being the biases present in the professors crafting the syllabi and the second is that there is a difference in diversity levels
depending on the academic field.

## IV. RESEARCH DESIGN

Concepts relevant to the understanding of this research include the idea of college course syllabi as well as demographic disparity. When discussing the lack of diversity across syllabi authors, this study specifically refers to the authors of papers, assigned by professors on their syllabi, that guide the learning of the course. This was chosen as a focus of the study because it is studied less than similar demographic-centric research on schools like professors themselves. Additionally, recording the authors of syllabi readings is a way to quantify the study of what is being taught across a wide spread of courses which can be so varied and specific that evaluating it can be difficult. Demographic disparity is a term used in this paper to describe the concept of the differences in the demographics of a population, including demographics of gender, race, and nationality. The term is inclusive of different measures of demographics as well. The disparity does not indicate the range of differences, simply that those differences exist.

For this analysis of the demographic diversity across syllabi authors, this study looked at Villanova University's four undergraduate colleges, the Engineering, Liberal Arts and Sciences, Nursing, and Business schools. It specifically looked at a sample of introductory and first-year courses, taken from the Villanova University website as proposed courses for freshmen in each college surveyed. Not every course taught within the colleges was used, but instead a representative sample. This was because these courses were more likely to be required for all students in these colleges to take and therefore would include a selection of authors that all students would have read and are likely considered acceptable across the entire college curriculum since they are not the selection of solely one professor but the agreed-upon basic readings in a required course that may have dozens of iterations in a single semester. The four colleges were selected because they contain all the undergraduate students at this university and therefore have a unifying aspect of the population. This case selection is representative and cross-sectional because it represents the entire undergraduate population of Villanova University across multiple academic fields. Control factors across the cases include only using courses that were recommended by each school on their website, and only using the first year of recommended courses which are courses that most students will engage with.

The dependent variable in this study is the authors chosen for Villanova's syllabi, specifically, the gender,
national origin, and racial demographics of these authors. The independent variable for the secondary hypotheses is the underlying factors impacting the demographics of the authors chosen for the syllabi. The independent variables include the gender of the professor writing the syllabus, the identity of the institutions, the disciplines of each recorded course, and the patriarchal world that academia exists within.

The first part of this study was measured and operationalized through descriptive statistics. Data collection of random sample classes at the introductory level, selected from recommended or required curriculums presented by the Villanova colleges was completed. This was accomplished by finding each undergraduate school's core curriculum and reviewing those courses, then taking the supplied sample curriculum for either the first semester or first year for a major in each college and writing down all the courses recommended. For each course in the core curriculum, the syllabi from the Villanova Syllabi Archive were taken from the most recent iteration of that class and the first section of that course. From the syllabi, all the required reading authors were recorded into an Excel spreadsheet. For readings with multiple authors, all authors were listed in the data set. Next, using social and cultural understandings of naming, the author recorded how many were men and how many were women. Then, finding historical records of more famous authors or through the biographies of contemporary academics, we found where the author completed the majority of their education and where they worked to gain an understanding of what ideas could have shaped their education and scholarship. These divisions classified an author as from the 'Global North' or 'Global South'. Lastly, because race was often self-reported, the author took down how many of the assigned authors were Black, compiled from whether they were part of a Black Academics association or cultural professional group.

There were multiple methodological limitations to this data collection. Firstly, the small sample size is caused from limited time constraints of the study; however, the representativeness and randomness of the sample were maintained. When evaluating gender demographics there were other limitations, for example, when a gender wasn't self-reported via a professional bio, cultural associations of specific names were used, which is not a fool-proof method of gender association. Another issue was how to determine demographics past gender, which was solved by being as literal with reported information as possible. This meant not including extensive racial or ethnic demographics, besides for Black as a racial category, because that data is not readily available. The last limitation was that there were texts assigned that did not have known
authors, such as ancient Buddhist discourses, the author dealt with these by eliminating them from the data collection.

The second part of this study was completed through process tracing of different possible answers to the answer of why the demographic disparity is present. This was completed by identifying patterns in the collected sample set that the author coded and then looking for correlational patterns. The first hypothesis testing method will look at the demographics of professors creating the syllabi to evaluate biases affecting syllabi creation and the second will break down the differences across academic fields, through breaking down the coded data set among the four colleges.

## V. DATA ANALYSIS

A. Is there a disparity in the demographics of Villanova syllabi authors?

Hypothesis One's survey data resulted in a demographic disparity among the collected authors of Villanova's syllabi. For Business, there were 13 courses and 13 syllabi evaluated, with 50 total authors found within those courses' syllabi. For Liberal Arts and Sciences, there were five courses and five syllabi evaluated, with 38 total authors found within those courses' syllabi. For Engineering, five courses and five syllabi were evaluated, with 17 total authors found within those courses' syllabi. For Nursing, five courses and five syllabi were evaluated, with 22 authors found within those courses' syllabi.

Of the 127 authors recorded from the introductory semester's worth of courses of each undergraduate college, $70 \%$ of them were men and $24 \%$ of them were women. $90 \%$ of the authors worked within/originated from the Global North, with a minimal $10 \%$ of the authors having worked within/originated from the Global South. Of these scholars, 7\% of them were Black academic authors (Table 1, Fig. 1 \& 2). These totals were further analyzed along the lines of each individual college.
B. Why is there a disparity in the demographics of Villanova Syllabi authors?

Specifically, the fourth hypothesis, that different academic fields might have different levels of demographic diversity, is proven through the brokendown analysis of each college along the three variables tested. The data was broken down into four large academic groups: Nursing, Business, Arts and Sciences, and Engineering. Ultimately, there was a consistent trend among these different fields. With percentages

| Villanova University | Percentages |  |
| :--- | :--- | :---: |
| Total Authors Recorded $=127$ |  |  |
| Male Authors |  | $70 \%$ |
| Female Authors |  | $24 \%$ |
| Authors from the Global North |  | $90 \%$ |
| Authors from the Global South | $10 \%$ |  |
| Black Authors |  | $7 \%$ |

Table 1. Breakdown of Authors Across All Four Colleges.


Figure 1. Authors Recorded by Gender.


Figure 2. Authors Recorded by Region.
ranging from $59 \%$ to $78 \%$ male dominance across all authors, there was a majority of male authors represented within the syllabi. The Nursing curriculum had the lowest disparity among the variable of gender in the authors compiled, then the Engineering, Arts and Sciences, and Business curricula respectively. Along the variable of global region, there was an $80 \%$ to $100 \%$ dominance of the Global North in authors, with Business, then Liberal Arts and Sciences, and then Nursing and Engineering respectively having the lowest disparity along the variable to global hemispheres. But compared to gender, this was an even more dramatic disparity. Within the last variable of race, specifically Black, there was a somewhat larger disparity among the fields, with Liberal Arts and Sciences having 13\% of authors who were Black, compared to Nursing, Engineering, and Business who had single digit percentages along this variable. Ultimately, while there were small differences among academic fields, none stood out to be an outlier in the larger trends of disparity along the demographic
variables.

## i. Business

For the Business school, 50 authors were recorded, with 39 of them men and 8 women, equaling a split of $78 \%$ and $16 \%$ between men and women. The countries where the recorded authors completed their education and their work were the United States, France, French Algeria, Italy, Greece, Persia, Austria-Hungary, England, France, Netherlands, Germany, and Uruguay. These countries span the continents of North America, Europe, South America, and Colonized Africa. This resulted in a split of scholars between the Global North and the Global South, with 8 of their vocation countries in the North and 2 in the South; 80\% and 20\% (Table 2, Fig. 3 \& 4). Of these authors, two were Black, equaling $4 \%$ of all authors being Black.

| Business | Number of | Percentages |
| :--- | ---: | ---: |
| Courses Evaluated | 13 |  |
| Authors Recorded | 50 |  |
| Male Authors | 39 | $78 \%$ |
| Female Authors | 8 | $16 \%$ |
| Authors from the Global North | 8 | $80 \%$ |
| Authors from the Global South | 2 | $20 \%$ |
| Black Authors | 2 | $4 \%$ |

Table 2. Breakdown of Authors across Business College.
Business: Gender


Figure 3. Breakdown of Authors across Gender within the Business College.

Business: Global Origin


Global Oigh
Figure 4. Breakdown of Authors across Region within the Business College.

## ii. Liberal Arts and Sciences

For the College of Liberal Arts and Sciences, 38 authors were recorded. 28 of these authors were men and 7 were women, equaling a $74 \%$ and $18 \%$ split between men and women. The countries that the recorded authors completed their education and worked within were India, Greece, Rome, England, the United States, France, Germany, Denmark, Australia, Argentina, and Albania. These countries spanned the continents of North America, Europe, Southeast Asia, and South America. This resulted in a split among the authors between the Global North and Global South with 9 countries of vocation in the North and 2 in the South, equaling $81 \%$ and $18 \%$. Of the 38 authors, there were 5 Black scholars, equaling 13\% (Table 3, Fig. 5 \& 6).

| Arts and Sciences | Number of | Percentages |
| :--- | ---: | :--- |
| Courses Evaluated | 5 |  |
| Authors Recorded | 38 |  |
| Male Authors | 28 | $74 \%$ |
| Female Authors | 7 | $18 \%$ |
| Authors from the Global North | 9 | $81 \%$ |
| Authors from the Global South | 2 | $18 \%$ |
| Black Authors | 5 | $13 \%$ |

Table 3. Breakdown of Authors across Arts and Sciences


Figure 5. Breakdown of Authors by Gender across Arts and Sciences College. College.

Arts and Sciences: Global Origin


Figure 6. Breakdown of Authors by Region across Arts and Sciences College.

## iii. Engineering

For the Engineering school, 17 authors were recorded, with 12 men and 4 women, equaling a split of $71 \%$ and $24 \%$ between men and women. The countries where the recorded authors completed their education, and their work were the United States, Germany, Canada, and England. These countries span the continents of North America and Europe. This resulted in no split of the authors between the Global North and the Global South, with 10 of the countries of vocation in the North and none in the South, equaling 100\% from the Global North. Of these authors, 1 was Black, equaling $6 \%$ of all authors being Black (Table 4, Fig. 7 \& 8).

| Engineering | Number of | Percentages |
| :--- | ---: | :--- | ---: |
| Courses Evaluated | $\mathbf{5}$ |  |
| Authors Recorded | 17 |  |
| Male Authors | 12 | $71 \%$ |
| Female Authors | 4 | $24 \%$ |
| Authors from the Global North | 10 | $100 \%$ |
| Authors trom the Global South | 0 | $0 \%$ |
| Black Autnors | 1 | $6 \%$ |

Table 4. Breakdown of Authors across Engineering College.


Figure 7. Breakdown of Authors by Gender across Engineering College.


Figure 8. Breakdown of Authors by Region across Engineering College.

## iv. Nursing

For the Nursing school, 22 authors were recorded, with 13 of them being men and 8 being women, resulting in a $59 \%$ and $36 \%$ split. The authors were educated and worked within either the United States or Germany, spanning the continents of North America and Europe. This meant that there was no split of the authors between the Global North and the Global South, with 2 of their countries of vocation existing within the Global North, meaning $100 \%$ of authors worked within the Global North. Of these 22 scholars, 1 of them was Black, equaling 5\% of all authors being Black (Table 5, Fig. 9 \& 10).

| Nursing | Number of | Percentages |
| :--- | ---: | ---: |
| Courses Evaluated | 5 |  |
| Authors Recorded | 22 |  |
| Male Authors | 13 | $59 \%$ |
| Female Authors | 8 | $36 \%$ |
| Authors from the Global North | 10 | $100 \%$ |
| Authors from the Global South | 0 | $0 \%$ |
| Black Authors | 1 | $5 \%$ |

Table 5. Breakdown of Authors across Nursing College.


Figure 9. Breakdown of Authors by Gender across Nursing College.


Figure 10. Breakdown of Authors by Region across Nursing College.

One initial explanation for these evident disparities included a look back on what the assigned readings in these syllabi were. Many foundational texts were based within the classical foundation of Western thought (6). Because the classical era was based in Europe and drew from monolithic demographics, it makes sense that this would replicate in the foundational texts of an American Western institution of education. This led to a larger exploration of the reasons why this disparity could exist and subsequently to the analysis responding to the second hypothesis.

The first hypothesis; that a disparity in demographics of syllabi authors comes from lack of publication access for affected groups could be proven true. A reason for this explanation is that historically, women have been passed over for tenure positions at institutions of higher education. One stated reason was that there was a misconception that investing school funds and time into women was a bad investment, in that they would work towards a degree but leave academia to become wives and mothers and not use that degree through publishing or teaching (8).

This level of overt gender discrimination in the workplace has dramatically decreased, but because education is built on what was learned in previous iterations of each field, the errors of the past do influence present-day teaching and curricula. This is supported by research into specifically the STEM (Science, Technology, Engineering and Mathematics) field, with, "Growing numbers of women have earned undergraduate, graduate, and professional degrees... However, although women have risen to the challenge of scientific, medical, and technical study and research, the nation's academic institutions have not hired them for their faculties" (8) and "Women faculty gain promotion more slowly than men and are less likely to reach the highest academic rank, especially in the Research I universities." (8). But this lack of professional opportunities looks plentiful when compared to the accessibility of academic publications. It has been found that women are more present in the academic profession than in academic journals (13).

Nzinga explains that the larger systems of exploitation and economic inequality that women of color, particularly Black women, face while learning and working in higher education prohibit them from publishing at the same numbers as their white male counterparts. She specifically points out that it is not a lack of Black women graduating with degrees, acknowledging that this upward trend of degree achievement should be leading to more professional opportunities but hasn't been (9) . Citing "worsening economic, material, and labor conditions in graduate school and along their academic career trajectory"
along with the fact that "Black women are less likely to be funded as graduate students, are disproportionally hired as contingent faculty, are trained and hired within undervalued disciplines, and incur the highest levels of educational debt" as the main reason for why there is a lack of professional opportunities for this minority group of women, which of course leads to lacking publication (9). Nzinga sees the root of this problem as residing within the university itself, specifically the university as a corporatized entity that "systematically in debts and disposes of Black women's bodies, their intellectual contributions, and their potential en masse" (9). Adding more empirical evidence to Nzinga's findings, academia as a profession is formed through connections promoting those institutions and scholars within those institutions that are already at the top of the field, excluding new ideas and approaches from acclaim and reception (10).

This first explanation of a lack of publication from disparaged groups has its own issues though, with studies that revealed a clear gap along gender lines in academic publishing not finding the cause of that gap to be a gender bias in the publication itself (11). This article evaluated the submission data for a Peace Studies academic journal over the course of a twenty-five-year period and found multiple reasons for this disparity in publication across gender lines. The article discusses possible reasons for the gap in the previous research, such as the fact that women tend to specialize less than men and lose out on publication opportunities, that they tend to spend more time teaching than their male peers, and that there could be a lack of a network for female researchers (11).

The second hypothesis; that disparities could be explained through a bias in citation patterns could also be proven true. This school of thought is directly tied to individual decision-making and implicit bias but also largely to the work environments of academics. Since scholars are likely to be influenced by who they interact with in their own field, the social and corporate network strategies can influence citation patterns. This is empirically supported by a multi-disciplinary analysis which found a correlation between increased prestige and an influential professional network, concluding that this meant that ideas that originated by more connected and prestigious-seeming academics were more widely spread and accepted (1).

The third hypothesis; referring to the biases associated with professors when creating their syllabi, is connected to the previously discussed hypothesis and can be likewise proven true. The author evaluated this hypothesis by going back into the data set and recording the demographic variables that were tested on the authors of the syllabi: gender, global hemisphere, and race, onto the professors who crafted the syllabi.

Ultimately, it was not possible to record the race of the professors consistently and accurately, so the study compared the variables of gender, location of the professors, and their syllabi authors.

For the Business school, of the eleven courses evaluated, there were eight whose syllabi were created by male professors and three whose syllabus was created by women professors, $73 \%$ and $27 \%$ split along the demographic of gender. All eleven professors completed most of their education and work in the Global North (Table 6 \& Figure 11). When comparing the genders of the professors to the genders of the authors they assigned in their syllabi, every professor assigned a majority or entirely male required readings. The three female professors aligned with their male colleagues and assigned a majority of male authors in their syllabi. The only exception was one male professor who assigned and equal number of male and female authors in his syllabus. On average, male professors had $20 \%$ of their assigned readings include women authors. Compared to the $0 \%$ of female authors assigned by female professors.

| Business Professors | Number of | Percentages |
| :--- | ---: | :--- |
| Courses Evaluated | 11 |  |
| Professors Recorded | 11 |  |
| Male Professors | 8 | $73 \%$ |
| Female Professors | 3 | $27 \%$ |
| Professors from the Global North | 11 | $100 \%$ |
| Professors from the Global South | 0 | $0 \%$ |

Figure 11. Breakdown of Professors by Gender within the Business College.


Table 6. Breakdown of Professors within the Business College.

Within the Liberal Arts and Science college, of the five courses evaluated, there were four whose syllabi were created by a male professor and one whose syllabus was created by women, $80 \%$ and $20 \%$ split along the demographic of gender. All five professors completed most of their education and work in the Global North (Table 7 \& Figure 12). When comparing the genders of the professors recorded to the genders of the authors they assigned, every professor assigned either a majority
or entirely male-authored required readings. The three male professors assigned an average of $15 \%$ female authors. This is shocking until the fact that the female professor assigned 0\% female authors is revealed.

| Arts and Sciences Professors | Number of | Percentages |
| :--- | :--- | :--- |
| Courses Evaluated | 5 |  |
| Professors Recorded | 5 |  |
| Male Professors | 4 | $80 \%$ |
| Female Professors | 1 | $20 \%$ |
| Professors from the Global North | 5 | $100 \%$ |
| Professors from the Global South | 0 | $0 \%$ |

Table 7. Breakdown of Professors within the Arts and Sciences College.


Figure 12. Breakdown of Professors by Gender within the Arts and Sciences College.

For the Engineering college, of the five courses evaluated, there were three whose syllabi were created by a male professor and one whose syllabus was created by women, $75 \%$ and $25 \%$ split along the demographic of gender (Table $8 \&$ Figure 13). All four professors completed most of their education and work in the Global North. For this college, though there were five courses evaluated, one of them had no required readings at all so that syllabus was not recorded. When comparing the genders of the professors recorded to the genders of the authors they required, every professor assigned a majority of male authors, except one female professor who assigned an equal number of male and female authors. The two male professors assigned on average $8 \%$ female authors while female professors assigned on average $40 \%$ female authors.

| Engineering Professors | Number of | Percentages |
| :--- | :--- | :--- |
| Courses Evaluated | 5 |  |
| Professors Recorded | 4 |  |
| Male Professors | 3 | $75 \%$ |
| Female Professors | 1 | $25 \%$ |
| Professors from the Global North | 4 | $100 \%$ |
| Professors from the Global South | 0 | $0 \%$ |

Table 8. Breakdown of Professors within the Engineering College.


Figure 13. Breakdown of Professors by Gender across the Engineering College.

For the Nursing school of the five courses evaluated, there was one whose syllabus was created by a male professor and four syllabi created by women, $20 \%$ and $80 \%$, split along the demographic of gender. All five professors completed most of their education and work in the Global North (Table 9 \& Figure 14). When comparing the genders of the professors collected to the genders of the authors they assigned, the four female professors on average assigned $52 \%$ female authors while the one male professor created a syllabus with $17 \%$ of authors who were female. This was the only academic field to have a syllabus with a majority of female authors present and it was only one syllabus.

| Nursing Professors | Number of | Percentages |
| :--- | :--- | :--- |
| Courses Evaluated | 5 |  |
| Professors Recorded | 5 |  |
| Male Professors | 1 | $20 \%$ |
| Female Professors | 4 | $80 \%$ |
| Professors from the Global North | 5 | $100 \%$ |
| Professors from the Global South | 0 | $0 \%$ |

Table 9. Breakdown of Professors within the Nursing College.


Figure 14. Breakdown of Professors by Gender within the Nursing College.

Overall, when evaluating the demographics of the professors who crafted the syllabi, more patterns emerge. To understand how gender played into the decisions professors made when crafting their syllabi, the study compared the gender of each professor within
each college to the list of authors they assigned for their syllabus, specifically the gender majority of that list of authors. The study found that only one professor of the 26 recorded had a majority of female authors on their syllabus, and that professor was a woman herself. But this did not make a trend across other female professors. Overall, on average male professors created syllabi with $15 \%$ female authors and female professors crafted syllabi with $23 \%$ female authors (Table 10).

| Academic Field | \% Female Authors Assigned by | \% Female Authors Assigned by |  |
| :--- | :--- | :--- | :--- |
|  | Male Professors |  | Female Professors |
| Business School: | $20 \%$ | $0 \%$ |  |
| Arts and Sciences: | $15 \%$ | $0 \%$ |  |
| Engineering: | $8 \%$ | $40 \%$ |  |
| Nursing: | $\mathbf{8}$ |  | $5 \%$ |
| Total Average: | $\mathbf{1 5 \%}$ |  | $52 \%$ |

Table 10. Breakdown of Female Authors Assigned by Professors across the University.

A way to combat this lack of women's perspectives in curriculums and instructor bias suggested by Allen in Gender, Methodology, and the Curriculum Process is through teaching the historical method, which aims to help students understand their own role in making and writing history, which in term will help positively edit the curriculum process. Including female publications in academic fields is not enough and instead teaching the 'historical method' will extend their impact further than solely representation. This method has the opportunity to achieve more enduring change in the curriculum writing process. Allen uses "history as being about the common players (teachers and students in the classroom, people in their communities, the person in the street) they are the makers of history" (2). This historical method and the placement of the educators in history as active participants in the making of history can be applied to other fields' curricula and the educators, and professors, who teach those fields. When a Chemical Engineering professor chooses to teach something and leave out a different topic, they are shaping engineering for their students, and when that topic might have been perceived as more of a 'women's topic' or soft science, then that distinction is discriminatory. Though trends exist in academia and influence curriculum decisions, this school of thought is difficult to study due to the lack of empirical data on this subjective and highly individual decision-making process.

## VI. FUTURE RESEARCH

Future iterations of this study can work to combat some of the limitations it encountered as well as test the hypotheses that were untestable at this point in time. One overall limitation to eliminate is the small sample size of the study; if replicated it should be exponentially
larger in size, for example examining all courses within one major. As for hypotheses this study was not able to test, the first addressing the idea that there is less research published by female and minority scholars because of existing patriarchal standards of living and how those cause women, both white women and women of color, to be passed over for tenure positions at institutions of higher education. This hypothesis was not tested because of the constant nature of that variable. Future research could also investigate the idea that the disparity in the demographics of scholars present across assigned course readings is influenced by Villanova's identity as an Augustinian Catholic institution. Since this variable does not vary across the data set, it could not be tested in this study. In a future study that cross examines Villanova against other institutions of higher education, this hypothesis could be tested.

## VII. CONCLUSIONS

This study found that there is a demographic disparity present across the four undergraduate colleges at Villanova University. Specifically, with men comprising $70 \%$ of the data's assigned authors and $24 \%$ of them women, $90 \%$ of authors work within the Global North, and only 7\% were Black scholars. Additionally, this study showed that the gender of the professor does affect the demographics of their syllabi, but not enough to be a significant finding. Lastly, this study found that while there was still a broad majority of male authors across all academic fields, there was a 19 percentagepoint difference in male dominance between Nursing and Business. This broad majority tracked alongside racial demographics, with Liberal Arts and Sciences pulling ahead by a small margin compared to the other colleges. Potential improvements to this study address the small sample size, the methodology of data collection, and the reality of aiming to fix ethical and moral monotony with simple numerical diversity and representation reform. This research has the potential to aid the Villanova educational population as a quantitative demonstration of the demographics and diversity of its curriculum (3).

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