The Importance of Environmental Education:

Incorporating Sustainability into the Gen-Ed Curriculum at UR

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Abstract

Climate change and its effects are increasingly salient issues in our world today, and with these issues, is the imperative of adequate environmental education. As an institution of higher learning, University of Richmond (UR) has the unique potential to equip students with the knowledge and tools to combat the imminent climate crisis. The purpose of this study was to explore the possibility of incorporating sustainability into the General Education Curriculum at UR. To accomplish this, three sources of data were analyzed. The core of this study was based on an examination of the ongoing reformation of the General Education curriculum at UR, which is being performed by the General Education Curriculum Improvement Committee (GECIC). Admitted student survey results from 2018, 2019, and 2020, from both matriculated and nonmatriculated students, were analyzed to determine trends, if any, of students' interest in sustainability, indicating potential evidence to support this study's purpose. An analysis of the past related literature developed by former UR environmental studies senior seminar course participants was conducted to supplement this inquiry and abridge research on proposed university-specific environmental education initiatives. Results indicated that with the proposed restructuring of the General Education curriculum at UR, sustainability education has the potential to become a mandatory part of UR students' program of study. Results from the analysis of student survey results supported that there is some interest amongst Richmond students in environmental studies courses, and that sustainability in general is important to students. Bolstering these findings is a compilation of literature that supported sustainability education initiatives at University of Richmond. The findings of this study have implications on the required course of study at UR and provide evidence that UR students are interested in sustainability, and that required sustainability education has a place at the university.

I. Introduction

Climate change is one of the greatest, if not the greatest ecological problem of the twenty-first century. It is a threat to life everywhere and has the potential to destroy our fragile ecosystems and disrupt life as we know it. The environmental crisis that we currently face stems from our human-centered worldview, and years of the misunderstanding that natural resources were limitless and inexhaustible (Lehtonen et al., 2019). Climate change will not only have ecological impacts, but it will also have social and economic impacts as well.

Addressing climate change necessitates action at all levels of society and requires the transfer of knowledge to decision-makers and their constituents (Ledley et al., 2017). With the increasing complexities and issues arising as a result of climate change comes the necessity of critical thinkers, dynamic problem solvers, and passionate leaders. While some interventions have been attempted, the climate crisis continues to persist without any promising mitigation efforts and no end in sight.

Enter the college student: a young, aspiring changemaker full of enthusiasm and hope. College students are receptive, malleable and able changemakers attaining a level of higher education that have a great potential to orient their personal habits and future careers towards environmental sustainability. Environmental issues demand sustainable solutions, which have the potential to be created by college students, if they are equipped with an adequate understanding of how and why climate change affects the world. Policies and technical solutions are essential in mitigating climate change but changing the behavior of individuals and organizations is also critical (Vaughter, 2016).

Sustainability education for college students is a way to ensure that our planet is habitable, and that Earth's ecosystems are flourishing for generations to come. It is a relentless pursuit to discover the best ways of teaching these multifaceted and critical issues to both present and future generations (Cincera et al., 2019). There is not one discipline that sustainability does not touch, which is why this kind of teaching is needed. There are many roles that universities can play in furthering education about environmental topics. These roles include "research and development of technology and human systems that work towards sustainability; training technicians in monitoring targets and detection of sustainability thresholds; and giving graduates the skills, knowledge and attitudes to make a sustainability contribution" (Pearson et al., 2005, p. 178).

Many of the ideas and attitudes that young people hold about the causes and nature of climate change are generated during school years (Skaemp et al., 2004). These viewpoints on the environment have the potential to remain the same as students enter college. Research show that in a sample of 375 surveyed college students at a medium-sized university in New England, the majority believe that climate change is real; however, some of these students also held misconceptions about the science behind and consequences of it (Wachholz et al., 2012). Knowledge and understanding of climate change vary across majors and schools as well.

College students, regardless of their chosen field of study, will ultimately encounter decisions in their careers that have environmental implications. University educators must understand the views of college students so that they can teach more effectively and promote greater levels of climate change literacy (Wachholz et al., 2012). An improved understanding of the development of students' ideas can lead to better instruction and ultimately enhance the public's understanding of science (Cordero et al., 2008).

As climate change has become more and more salient, sustainability education has increased in prevalence. Since the mid-1970s, various international declarations that make the connection between sustainability and institutions of higher education have been endorsed and signed by universities all over the world (Koehn and Uitto, 2014). One such declaration, the Talloires Declaration, was the first official statement made by university presidents regarding a commitment to environmental sustainability in higher education and was signed by over 500 university leaders in 50 countries ("Talloires Declaration"). At present, it is not uncommon for

universities to offer a university-wide sustainability requirement (Hill and Wang, 2018). The growing recognition of the importance of sustainability education at higher institutions calls for comprehensive reform of the ways in which universities educate their students.

The transdisciplinary and far-reaching nature of sustainability makes it ideal to integrate it into education. The realm of sustainability should not be left for one field or discipline to implement; sustainability suggests movement towards changes in knowing and being at a university (Moore, 2005). With its pervasive subject matter, sustainability can be seamlessly integrated into current courses. A study by Biasutti et al. found that at two Jordanian universities, professors demonstrated strong capability of incorporating sustainability in their syllabi from both from a theoretical perspective and an applied point of view, since many courses already incorporated ethics and provided motivations for sustainable behavior (Biasutti et al., 2016). Professors are ready to include and capable of including sustainability into their curriculums, and it is necessary for them to do so given the severity and urgency of the climate crisis.

Universities have a duty to act as agents of change and should do this by promoting principles of sustainable development (Filho et al., 2016). By doing so, there are many benefits that arise as a result. Incorporating sustainability into curricula can bring employment opportunities, encourage sustainable resource usage, and promote a better quality of life, benefits that extend beyond a students' time on a university campus (Filho et al. 2016). Further, reform towards a strong sustainability identity can happen very quickly, if the right conditions are met (Vargas et al., 2019).

Educational interventions regarding climate change are found to be most successful when they are focused on the local, tangible, and actionable aspects of sustainable development, environmental education, and climate change (Anderson, 2013). Universities have the ability to make these interventions in a meaningful way through connecting and educating students on the ways in which they personally can take action against climate change. University of Richmond has the potential to be one of these universities.

The University of Richmond's sustainability plan is a long-term vision that aims to weave sustainability into the fabric of the University. University of Richmond defines sustainability as "the creation of environmental, social, and economic conditions that foster the health and wellbeing of people and the natural world in this generation and generations to come. At a minimum, our practices reduce harm on people and the environment; at best, our actions improve the wellbeing of both" (Sustainability Plan). The timeline for the Sustainability Plan is from 2019-2025.

Goal 1 of the Sustainability Plan is to integrate sustainability into the University of Richmond education. Sub goals include increasing the opportunity for Richmond students to complete sustainability coursework and strengthening cross-disciplinary connections with sustainability. Goal 1.1.2 states that the University will "Provide support for faculty, staff, and students who

seek to explore incorporation of sustainability into common learning experiences, including the general education curriculum" (Sustainability Plan). Goal 1.1.2 of the University of Richmond Sustainability Plan set the context for this study.

The purpose of this study was to assess the viability of incorporating sustainability into the General Education curriculum and to substantiate that there is student interest and a need for universal sustainability education at University of Richmond. Methods of inquiry included an exploration of the progress of the General Education Curriculum Improvement Committee, an analysis of survey results administered by UR Admissions, and an analysis of past sustainability education-related Environmental Studies capstone projects at UR.

I hypothesized that there is strong evidence to support the requirement of sustainability education at institutions of higher education, specifically at University of Richmond. Prior Richmondspecific environmental studies capstone research projects demonstrated various frameworks of sustainability-related programming that will further reinforce this idea. There is an interest in sustainability, environmental studies, and climate change amongst students at the University. This research will ultimately make a compelling case as to why sustainability should be incorporated into the General Education curriculum to University of Richmond's General Education Improvement Committee (GECIC) within their proposed reform framework.

II. Methodology

The location of this study was the University of Richmond. University of Richmond is a private, four-year, liberal arts institution in Richmond Virginia. There are five schools situated within the university: the School of Arts and Sciences, the Jepson School of Leadership Studies, the Robins School of Business, the Richmond School of Law, and the Richmond School of Professional and Continuing Studies. There are currently 3,161 undergraduate students that are enrolled, and 753 graduate students ("How Does").

There are a total of 62 majors, 52 minors and 19 concentrations at UR. In addition, there are courses required as a part of the University's General Education curriculum. The UR General Education curriculum consists of two First-Year Seminars, a second language, historical studies, literary studies, natural science, social analysis, symbolic reasoning, and visual and performing arts. Students must complete 35 units in order to complete their degree, with most classes counting for 0.5, 1 or 2 units.

Research methods at this site included a multi-faceted approach. The activity of the GECIC was reviewed and further contextualized within the framework of this research. Survey data from

2018, 2019, and 2020 was obtained from UR Admissions and analyzed. An analysis of past projects related to the implementation of sustainability education at UR was completed.

GECIC Progress

The General Education Curriculum Improvement Committee (GECIC) is currently on its fourth year of working towards reforming the General Education curriculum at UR. There has been a total of three committees since the start of the reform in 2017.

Current voting faculty members of the GECIC include: Timothy Hamilton, Associate Professor of Economics, Jennifer Cable, Professor of Music, Elisabeth Gruner, Associate Professor of English, Christopher R. von Rueden, Associate Professor of Leadership Studies, Heather M. Russell, Assistant Professor of Mathematics, Armond Towns, Assistant Professor of Rhetoric and Communications Studies, and Adam Marquardt, Associate Professor of Marketing. Current Ex-Officio Members include: Sydney Watts, Associate Professor of History and WGSS, Alec Greven, Leadership Studies student, Dowha Karar, Healthcare Studies student, Kristen Ball, Sr. Associate Registrar, and Carol Parish, Associate Provost for Academic Integration.

Each Friday of the Fall 2020 semester, the GECIC met to take into account student and faculty input on their recommendations as to how to improve the Gen-Ed curriculum. A weekly GECIC meeting was attended on October 9, 2020. Questions asked included: "How much student feedback does the GECIC take into account?" and "Is there a possibility of incorporating sustainability into the General Education curriculum?". Feedback for the committee was solicited and the purpose of this research was communicated.

An online form with which students, faculty, and staff could submit anonymous feedback for the GECIC was completed with the recommendation that sustainability should be incorporated into the General Education curriculum. Past GECIC reports, the General Education Curriculum Process Committee (2017-2018) Final Report and the General Education Curriculum Review Committee (2018-2019) Final Report were reviewed, in addition to the Draft Proposal, the Curriculum FAQ, and the Core Competencies and Learning Outcomes. The GECIC open forum was attended on November 19, 2020 to gain further information.

Data accumulated from the GECIC was compiled and organized to understand the progress of the GECIC and assess the viability of incorporating sustainability into the General Education curriculum.

Admissions Surveys

To obtain the survey data, Stephanie DuPaul from the UR Admissions Office was contacted, and she sent all relevant graphs and associated data.

Surveys were conducted by the Human Capital Research Corporation (HCRC). HCRC is a company hired by UR to administer the surveys. The surveys were completed by admitted students, both matriculated and non-matriculated. Questions asked included information on where the individuals applied to schools, what schools they were admitted to, and general interest topics. The surveys were electronic. Each survey was conducted in May of the years 2018 (Figure 1), 2019 (Figure 2), and 2020 (Figures 3 and 4). In 2020, 71.5% of the 3,664 high school seniors surveyed responded.

In 2020, the data is unique because the survey asked different questions than in previous years. These questions were "Regardless of you intended field of study, are you interested in taking courses in the following areas?" and "How important are the following to your personal life?" with options to rank religious practices and beliefs, spirituality, environmental sustainability, and social justice and equality (Figures 3 and 4).

The data from each year was converted into percentages, and then converted into graph form by HCRC. To calculate the percentage of respondents that were most interested in environmental studies as their secondary major, the percent of students interested in environmental studies as their primary major was subtracted from the total percent of students interested in environmental studies as their primary and secondary majors combined.

Graphs and data were analyzed, and patterns were identified. Admissions survey data were used to determine student interest in environmental studies and sustainability.

Analysis of Past Projects

Previous UR Environmental Senior Seminar projects were located using the UR Scholarship Repository. Abstracts of each project were read, and sustainability education-related projects were identified.

In 2017, Janet Goldbach Ehmer and Minyao Li's research project focused on the creation of a sustainability-related first-year experience. As a part of their research, they did a student and faculty survey, and researched sustainability programs at UVA, VCU, and Oberlin College (Ehmer and Li, 2017). Ehmer and Li's project was chosen for the analysis of past projects.

In 2018, UR student Quinn Egner proposed a minor in sustainability, citing that young people are increasingly prioritizing sustainable thinking and addressing climate change, and demonstrating that a sustainability minor would be of great benefit to University of Richmond and its students (Egner, 2018). To obtain the full research project, Egner was emailed and asked to send her paper. Egner responded with a Word Document of her research. Egner's project was also chosen for the analysis of past projects.

The significant findings from Ehmer and Li's research and Egner's research were summarized for the analysis of past projects. Data was used to inform and add to this research to further its purpose.

III. Results

GECIC Progress

At the GECIC meeting on October 9, 2020, Dr. Timothy Hamilton stated that sustainability is a topic that is on the GECIC's radar (T. Hamilton, personal communication, October 9, 2020).

The three objectives of the General Education Curriculum are to:

- "Engage students in thoughtful self-reflection and exploration of their place in relation to a dynamic and diverse community.
- Introduce students to modes of academic inquiry that lead to thoughtful, critical analysis and provide a foundation for lifelong learning.
- Challenge students to integrate and synthesize knowledge in order to ask questions, solve problems, gain perspectives, and apply learning." ("General Education", 2020).

The GECIC has proposed to the UR community a potential framework for the revised General Education curriculum. There are three components of this proposed curriculum: Big Questions, Core Competencies and Understandings, and Foundations. This proposal was presented at the GECIC Open Forum on November 19, 2020.

The purpose of the Big Questions component is to "provide an opportunity for students to engage with pressing and enduring questions ... These questions challenge thought, shake up disciplinary boundaries, and engage students to bring their diverse perspectives to bear on enduring as well as emerging issues" ("General Education", 2020). At any given time, there will be 4-5 Big Questions as part of the curriculum, and students must take 2 courses that are designated as Big Questions.

The Core Competencies and Understandings "build a foundation for student growth and provide students with what they need to ask questions and solve problems across an array of disciplines" ("General Education", 2020). As part of the Core Competencies, students must take 1 Deep Reading course, 2 Diversity, Equity, and Inclusivity courses, 1 Oral Communication course, 1 Quantitative Data Literacy course, and 2 Written Communication courses ("General Education", 2020).

The Foundations component "provides[s] students with the methods of the traditional academic disciplines and contemporary correctives to those disciplines, in order to 'prepare students to contribute to, and succeed in, a complex, interconnected world'" ("General Education", 2020). For the Foundations requirement, students must take a 1-unit First-Year Seminar course, take a Second Language Proficiency course, complete at 0.25-unit Wellness course, and complete an Integrative Learning course which involves an e-portfolio or other type of reflective capstone aspect determined by major ("General Education", 2020). Students will also take one unit in each: Arts, Humanities, Mathematical and Logical Analysis, Natural and Physical Sciences, and Social Sciences ("General Education", 2020).

The General Education Curriculum Improvement Committee will be continuing their work into Spring 2021 to further flesh out the details of the new proposed curriculum.

Admissions Surveys

Four survey question responses from 2018, 2019, and 2020 were obtained from Stephanie DuPaul from the University of Richmond Office of Admissions.

In 2018, 2.1% of responding matriculated students indicated that they were most interested in pursuing environmental studies as their primary major, and 2.2% of responding matriculated students indicated that they were most interested in pursuing environmental studies as a secondary major (Figure 1). 1.5% of non-matriculated responding students indicated that they were most interested in pursuing environmental studies as their primary major, and 1.5% of non-matriculated responding students indicated that they were interested in pursuing environmental studies as their primary major, and 1.5% of non-matriculated responding students indicated that they were interested in pursuing environmental studies as their primary major, and 1.5% of non-matriculated responding students indicated that they were interested in pursuing environmental studies as their primary major, and 1.5% of non-matriculated responding students indicated that they were interested in pursuing environmental studies as their primary major.

In 2019, 1% of responding matriculated students indicated that they were most interested in pursuing environmental studies as their primary major, and 1.7% of responding matriculated students indicated that they were most interested in pursuing environmental studies as a secondary major (Figure 2). 1.7% of non-matriculated responding students indicated that they were most interested in pursuing environmental studies as their primary major, and 1.6% of non-matriculated responding students indicated that they were interested in pursuing environmental studies as their primary major, and 1.6% of non-matriculated responding students indicated that they were interested in pursuing environmental studies as their secondary major (Figure 2).

In 2020, 18% of responding matriculated students indicated that they would be interested in taking environmental studies courses regardless of their field of study (Figure 3). 17% of non-matriculated students indicated that they would be interested in taking environmental studies courses regardless of their field of study (Figure 3).

Also in 2020, 42% of responding matriculated students ranked environmental sustainability as "very important" to their personal lives (Figure 4). 51% of responding matriculated students stated that environmental sustainability is "somewhat important" to their personal lives (Figure 4). 8% of responding matriculated students stated that environmental sustainability is "not at all" important to their personal lives. 42% of responding non-matriculated students ranked environmental sustainability as "very important" to their personal lives (Figure 4). 50% of responding non-matriculated students stated that environmental sustainability is "somewhat important" to their personal lives (Figure 4). 50% of responding non-matriculated students stated that environmental sustainability is "somewhat important" to their personal lives (Figure 4). 8% of responding non-matriculated students stated that environmental sustainability is "somewhat important" to their personal lives (Figure 4). 8% of responding non-matriculated students stated that environmental sustainability is "somewhat important" to their personal lives (Figure 4). 8% of responding non-matriculated students stated that environmental sustainability is "somewhat important" to their personal lives (Figure 4). 8% of responding non-matriculated students stated that environmental sustainability is "somewhat important" to their personal lives (Figure 4). 8% of responding non-matriculated students stated that environmental sustainability is "not at all" important to their personal lives.

The data obtained from these surveys were used to assess student interest in environmental studies courses and sustainability.

Analysis of Past Projects

In "Environmental Education at the University of Richmond and Proposal for a Stewardship/Sustainability Themed First Year Experience" Janet Goldbach Ehmer and Minyao Li contended that environmental education can "greatly contribute to the goal of achieving campus sustainability and creating responsible environmental stewardship in a rapidly changing world" (Ehmer and Li, 2017, p. 2). Their research demonstrated the importance of a course curriculum that encourages students to think critically and problem solve across disciplines (Ehmer and Li, 2017). Ehmer and Li found that at the time of their study, 97.9% of the 221 undergraduates surveyed believed that human accelerated climate change is a threat (Ehmer and Li, 2017). They found that 81 classes offered at the Undergraduate level out of a total of 769 classes had a sustainability component (Ehmer and Li, 2017). The authors concluded that a sustainability first-year experience is necessary at UR, and that there is infrastructure to support it (Ehmer and Li, 2017).

In "A Proposal for a Minor in Sustainability" Quinn Egner provided rationale and evidence for the implementation of a sustainability minor at UR (Egner, 2018). The proposed minor focuses on the three pillars of sustainability: economic, social, and environmental. By adding a sustainability minor, University of Richmond could improve their AASHE STARS rating, which would increase the University's appeal to prospective students and be a source of pride for the University (Egner, 2018). Additionally, the sustainability minor would be cost-effective, and

would require only two additional faculty and the extending of current faculty (Egner, 2018). Egner concluded that adding a sustainability minor would ultimately be a symbol that University of Richmond recognizes the importance of sustainability (Egner 2018).

The main findings from these research projects informed and contextualized my hypothesis that sustainability education is valued by UR students and should be implemented as a requirement.

IV. Discussion

As natural disasters become more damaging and frequent, climate change gains more political attention, and the imminent global warming level limit is set at 1.5 degrees Celsius above preindustrial levels, it is time for drastic climate action ("Global Warming"). There are many governments, nonprofits, corporations, and individuals working towards combatting the climate crisis through various methods; but many people continue to remain unaware or ignorant of the extent to which the planet will change with warming, and the economic, social, and ecological ramifications. University of Richmond, with its renowned academic programs and passionate student body, is an ideal university to foster the next generation of sustainability professionals.

Sustainability education is necessary in order to ensure that we have a habitable planet to live on for years to come. Climate change must be addressed by all fields, but universities have a special role in being tasked with educating emerging sustainability leaders. Despite this call to action, universities are not taking this duty seriously. The likelihood of a student taking a climate change-related course via the core curriculum is estimated at 0.17 across the top 100 universities and liberal-arts colleges in the US (Hess and Collins, 2018). This statistic can and should be changed.

There are many universities that already have sustainability implemented into their general education curriculum, and that have developed robust programming along with it. Most notably, Northern Arizona University's Ponderosa Project. The project began in 1995, and since its inception, over 100 faculty have been involved and over 120 course curriculums have been affected (Dmochowski et al., 2016). The Ponderosa Project is viewed as a model for integrating sustainability into higher education curriculum.

Repetition is a key element of sustainability education. By requiring a sustainability-related class, students will have more exposure to environmental issues and how to solve them, and in a more formal way. Students may hear about sustainability on the news or on social media, but by discussing it in a classroom as well, their understanding will be heightened. This further supports the implementation of sustainability into the General Education curriculum because repetition of sustainability topics allows for a transformative learning experience (Michel, 2020).

There are some limitations to the implementation of any new subject into a core curriculum. For many colleges and universities, it is politically difficult to add in additional courses or change around degree requirements (Rowe, 2002). However, sustainability topics can always be integrated throughout existing courses (Rowe, 2002). With the reformation of the General Education Curriculum, finding a way to incorporate sustainability may not be a limitation for UR.

Being an institution of higher learning, UR not only has an obligation to teach students about foundational academic subjects such as math and science, but it has a duty to inform students about the complex challenges that we face today as a society, so that students can work towards becoming better people and citizens. Further, a knowledge of sustainability issues could be an advantage in the job market, and even increase employability (Robinson, 2015). The time is now to create meaningful change and require sustainability as a core component of the university experience. With the right framework and rationale, this could be a reality for the University of Richmond. Based on my research, I was able to uncover evidence that has the potential to support the incorporation of sustainability into the General Education Curriculum at UR through an exploration of GECIC progress, an analysis of student survey data, and an analysis of two past UR Environmental Senior Seminar research projects.

GECIC Progress

The current General Education curriculum does not provide equal opportunity for students to learn about the challenges that the human race faces that will affect the ability of future generations to live on this planet. The University of Richmond General Education curriculum is deficient in requiring students to take courses that have direct relevance to the current state that our society is in, nor does it equip students with a call to action to lead enriching, fulfilling lives.

The proposed General Education framework is a step in the right direction in encouraging and fostering dynamic, transdisciplinary learners. Components like Big Questions will allow students to connect their work to a greater purpose, and explore contemporary issues facing society today. Big Questions is my recommended component to include sustainability, given that it grapples with pressing and enduring questions. What better pressing and enduring question than the ongoing presence of climate change?

The GECIC is still working on the reform, so there is a potential for the framework to be changed. At this stage, there is no evidence that sustainability will be incorporated into the Gen-Ed curriculum and/or that it will be a Big Question. This suggestion will be brought forth to the GECIC.

Admissions Surveys

Student interest in the environmental studies major at UR did not change by much from 2018 to 2019. In fact, there was a decrease in interest in environmental studies for matriculated students as both a primary and secondary major. These results do not support my hypothesis that student interest in environmental studies and sustainability has increased. There was a slight increase in interest in environmental studies majors, both primary and secondary, amongst non-matriculated survey respondents.

One potential explanation for this is that environmental studies is not a popular major at University of Richmond. Students may have an interest in environmental issues but choose to pursue a different major.

The change of questions in 2020 revealed strong indications that UR students care about and are interested in sustainability. Many students would consider taking an environmental studies class even though it is not in their major. Additionally, environmental sustainability was considered important or somewhat important to the personal lives of the majority of students.

These surveys could have been more useful if the same questions were asked over a longer period of time. Additionally, the number of respondents in 2018 and 2019 are unknown, which could contribute to incomplete data. However, within the time frame and scope of this research, it was logical to obtain comprehensive data from another source.

Analysis of Past Projects

Ehmer and Li's, and Egner's research was useful in looking at the benefits of increasing sustainability education at UR, and also the infrastructure that already exists. They show that UR has the potential to implement a sustainability-themed first-year experience and sustainability minor, respectively. Ultimately these projects provide a foundation from which a more comprehensive sustainability requirement can be developed.

This research could be strengthened by a deep search into universities that have successfully made sustainability a requirement of their general education curriculum and the benefits that have come about as result. It also could have been supplemented entails researching awards, certifications, and/or recognitions that UR may receive by adding sustainability-related courses to the general education curriculum.

Concluding Remarks

This study used three methods of analysis to assess the viability of incorporating sustainability education into the General Education curriculum. First, GECIC progress was evaluated. Next, survey data results that indicated student interest in sustainability were obtained and analyzed. Finally, an analysis of previous Environmental Senior Seminar projects was executed. Results suggest, along with relevant literature, that a sustainability education requirement is beneficial to the university. Environmental issues will most likely be encountered by all UR students at some point in their lives, so it is imperative that they have all the tools necessary to combat them and become more responsible citizens. With the revision of the General Education Curriculum, UR has the unique opportunity to solidify the incorporation of sustainability into each students' course of study. Data show that environmental sustainability is either very or somewhat important to UR students (Figure 4). A sustainability education requirement will enhance students' understanding of the natural world and their role in it and will lead students to live enriching lives.

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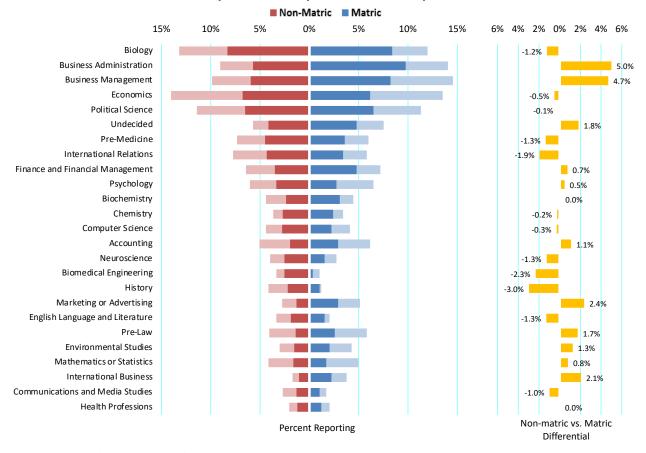
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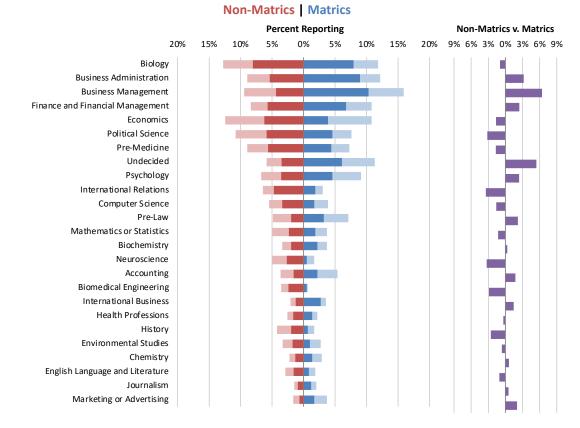
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Tables and Figures



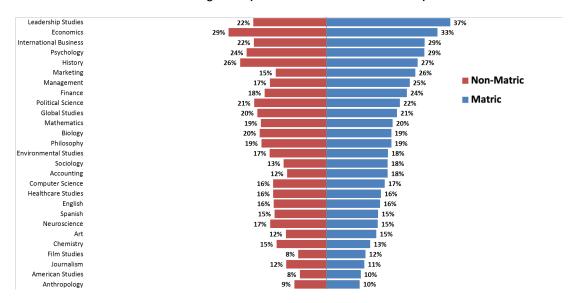
2018 Primary and Secondary Fields of Interest by Matric Status

Figure 1: Field of study interests of admitted students by percentage in 2018, arranged by primary and secondary interests and matriculated and non-matriculated students with differential shown (HCRC, 2018).



2019 Primary and Secondary Fields of Study by Matric Status

Figure 2: Field of study interests of admitted students by percentage in 2019, arranged by primary and secondary interests and matriculated and non-matriculated students with differential shown (HCRC, 2019).



2020 Regardless of your intended field of study, are you interested in taking courses in the following areas? (Please select all that are of Interest)

Figure 3: Field of study interests of admitted students by percentage in 2020, arranged by primary and secondary interests and matriculated and non-matriculated students (HCRC, 2020a).

How important are the following to your personal life?

Matrics:

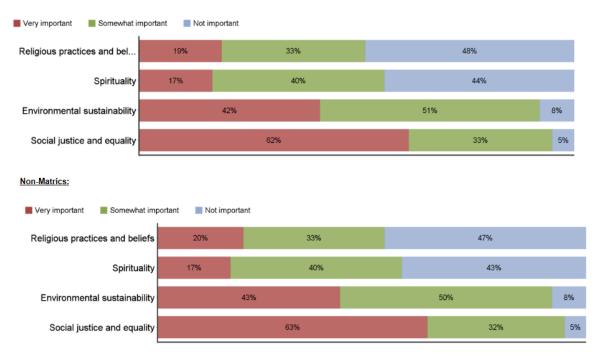


Figure 4: Importance of religious practices and beliefs, spirituality, environmental sustainability, and social justice and equality to admitted students by percentage in 2020 (HCRC, 2020b).