GENERAL EDUCATION CURRICULA IN THE RESEARCH UNIVERSITY: A CASE STUDY EXAMINATION OF EMPLOYABILITY AS A FORMATIONAL INFLUENCE

A Capstone Project

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By

Travis Dustin Boyd

B.A., Albion College, 2003

M.Ed., Springfield College, 2005

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Abstract

Brian Pusser, Advisor & Capstone Committee Chair

The skills gap is a relatively widely accepted claim among employers in virtually all job sectors which states that new college graduates are frequently deficient in skills that are expected to be present for success in entry-level work (Archer & Davison, 2008; Cunningham & Villasenor, 2016; Finch et al., 2013; Hart Research Associates, 2013; Robles, 2012). Within this, employers contend that the skills most essential for new professionals to possess are universal and broad-based in nature as opposed to being relegated to subject-specific knowledge pertaining directly to the industries they represent (Cunningham & Villasenor, 2016; Finch et al., 2013; Hart Research Associates, 2013; Robles, 2012). It was viewed that the examination herein should focus upon the efforts incurred by the upper echelon of higher education towards meeting these labor market needs. A case study approach was implemented to examine the differential approaches taken in multiple academic departments within a single highly selective research university in gearing curriculum towards the desires of the workforce at large. Specific attention was paid to the general education aspects of the programs under the belief that the skills in greatest demand are non-discipline specific and should therefore be programmed into the one area of the undergraduate degree that is relatively common to all programs. Eighteen semi-structured interviews were conducted with faculty and staff spread across six different undergraduate schools, with each possessing active roles related to curricular planning and revision. The interviews sought to explore questions related to the curricular structure and efforts made within it associated with skills development to meet workforce demands in order to better understand the different

influences that impact curricular formation. Within this inquiry, five major themes emerged: (1) Graduates are perceived to have a high level of preparedness for entry-level employment, (2) there are varying understandings of and perceived purposes of general education, (3) articulating employability skills to students through the curriculum and instruction can be a significant tool in helping students connect classroom learning to employment, (4) there were many differences in faculty perceptions of what skills were most important for students to master for employment, varying by school and major of enrollment, and (5) there are a wide variety of strong influences on the development of curriculum that can prepare students for the labor market. Recommendations towards enhancing the cohesiveness of general education within the degree, building alignment between the individuals crafting curriculum and those instructing it, and embracing programming efforts that support greater workforce preparation within the undergraduate curriculum are all offered. Furthermore, the applicability of the skills gap narrative to elite universities and the approaches they take towards building employability are also discussed.

Department of Leadership, Foundations, and Policy
School of Education & Human Development
University of Virginia
Charlottesville, Virginia

APPROVAL OF THE CAPSTONE PROJECT

This capstone project, General education curricula in the research university: A case study examination of employability as a formational influence, has been approved by the Graduate Faculty of the University of Virginia School of Education and Human Development in partial fulfillment of the requirements for the degree of Doctor of Education.

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Brian Pusser, Chair

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Christian Steinmetz, Committee member

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Justin Thompson, Committee member

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Date

Dedication

The dedication of this work is twofold:

To my grandparents, Betty and Smokey.

You were always among my greatest models, coaches, and cheerleaders. We miss you like crazy and wish you were here to celebrate this with. Nevertheless, I know you are looking down with pride. Sparty on!

To my family, Audrey, Eric, and Liz.

I never could have imagined how challenging this would be for our entire family. Still, you have always supported me. This has truly been a team effort. I can only hope and pray that all this hard work will pay off in the ways we have envisioned and well beyond. Thank you for hanging in there with me when it seemed like this would never end. I love you all dearly and so appreciate you!

Acknowledgements

Tommy: You know, a lot of people go to college for seven years.
Richard: I know. They're called doctors.
-Tommy Boy

"I think we could use an egghead in the group."

Never could I ever have imagined what the following 8 years would bring to my life after our University Registrar, Stash Stanley, uttered this fateful quip during a Leadership Team meeting voicing her support for me to pursue a doctoral degree. My successive educational story would have been dead on arrival if it had not been for Stash's unwavering commitment to supporting continuing education above and beyond the university's commitment, especially at a time when such professional development has fallen out of favor with so many employers. Her insistence on ensuring that such endeavors were supported within the unit budget required fortitude in times when budgets were being slashed. I am truly appreciative for all that Stash did to hold this difficult line to put me in a better place educationally and professionally.

While Stash may have charted the path ahead, I cannot imagine that I would have even gotten the wheels off the ground and kept them there long enough to be where I am today if it wasn't for my direct supervisor, Sheila Tolley. From the beginning of my time at UVA, Sheila saw potential in me that I am not sure anyone else recognized, perhaps even myself at times. She pushed me to take on higher order responsibilities, while always having my back to ensure I could be successful. She was fiercely committed to my development by always including me in whatever the project and regardless of the players. The confidence I developed as a result, fostered a belief that I could operate successfully among the most influential minds at an internationally regarded university, which made a huge difference in my overall development.

Transitioning from UREG to the school level in the School of Nursing has brought with it a different perspective from which I have been able to learn a tremendous amount about the development and management of curriculum, which have naturally been extremely valuable experiences as I have navigated my way through this project. My two supervisors in Nursing, Theresa Carroll and Abby Self, have provided endless support towards both my professional and educational endeavors. I have been immensely grateful of the opportunities they have provided me and for their friendship along the way. There are countless others in the school as well who have always made me feel as a welcome and valuable part of the school, for which I am equally grateful.

I would be remiss if I did not also mention the many school registrars that I have had the pleasure of working with during my time at UVA. I have learned a tremendous amount from each of them about the operational intricacies and differing priorities that make each school unique at a place like UVA. There are countless times throughout this project that my work was informed by all that I learned from these folks. I'm not sure that there is another group at the University that is more overworked, underappreciated, and supremely valuable. Tracy, Tracey, Janelle, Jesse, Barbara, Jayne, Judy, Amanda, and of course, Sheilah and Nadia all deserve specific mention.

Naturally, I am indebted to all the participants in this study who were willing to spend their time meeting with me to pull back the curtain on the curricular process within their area. Their openness usually made my job as interviewer so much easier and often enjoyable as well. The knowledge I gained through these interactions really does transcend what can be gathered from reading through the following pages of text, and I am grateful for the candor and trust that these individuals were willing to exercise in speaking with me.

My capstone committee has had the special task of trying to reign in all of my crazy and scattered ideas throughout this journey towards eventually creating a cohesive final product, which has been no small task, and for that I am indebted. It has not always been easy, and they have challenged me substantially in ways that sometimes seemed to push me beyond my limits, but I know that it is because of the value they see in this work and my capabilities in carrying it out. Their encouragement has been essential to keeping me going when it was most difficult to envision an end. It has truly been a team effort and I am grateful to Brian, Christian, and Justin for all their guidance along the way.

There are so many countless educators – both formally and informally – that have shaped my lifetime's educational journey in profound ways, such that it is impossible to capture all of those individuals and their impact in this space. Suffice to say that my teachers at St. Thomas Aquinas, Nouvel Catholic Central, Albion College, and Springfield College have all shaped the person I am today, and I would not be here without them.

Of course, I would not be where I am today without my close friends. It is impossible to overstate the importance of my lifelong and newly developed friends and colleagues in helping to maintain my sanity through the course of this project and the coursework that preceded it by providing an outlet that did not involve sitting in front of a computer screen. To this end, my golf and ski crew members were among the most valuable members of this venture. I wish I could say that I got better at each, but at least I have had fun trying. The annual Pinehurst debacle has undoubtedly turned into one of the best parts of my year. Sloth, Murph, Parks, new guy Doug, Uncle Ben, and the Langworthy's have all have all helped create an extended weekend worth driving towards year-round. Likewise, the never-ending search for knee-deep powder has always been the most epic with the lifelong ski bros, G-Money and Gorn. In both cases, these have been the legendary times that remind me that there is life beyond writing papers and better times are ahead.

A very special thanks to all of the other doctoral students that I have shared beers and commiserated with over the past several years. A special shout out here is due to my

friend Brian van Gronigen. When this research was stuck in neutral in the midst of the pandemic and personal struggles, he was a tremendous sounding board to help shape what this work ultimately became. Although I did not appreciate the emergency beacon being set off at the time, the support I received thereafter set the path for the many months of work ahead. BVG – thanks for answering the calls and all your help along the way.

Lastly, I surely would not be here today without my family. My parents, grandparents, and other close relatives fostered in me from an early age a reverence around hard-work and education. These are aspects of my life that have always been present. The support I have received from my parents along the way has been absolutely essential to establishing a stable life for myself and my family. Over the years, extended family have supported these same endeavors as well. Even small things, such as progress inquiries, have provided me with an avenue to refine my approaches to think about ways to reach my ultimate project goals.

Naturally though, there are three people above all other that mean everything in the world to me and I could not have done this without their support. Of course, I am talking about Team Boyd (or Derecho) – Eric, Audrey, and Liz. For Eric, he has never known a day when I was not a student during his lifetime – realistically, Audrey probably cannot remember a day like that either. The day when I cease to be a student and I can just be a dad and a husband are long overdue and a source of tremendous anticipation and elation for both myself and this crazy crew. The sacrifices in this household for the pursuit of this accomplishment have been felt immensely along the way and will be celebrated together with the same fervor. My children have felt the brunt of this tremendous time-investment most intensely, and I will do all I can going forward to be there for them in ways that I have been unable over the past series of years. All the while, I hope that they are one day able to understand that the sacrifices have been largely aimed towards the good of theirs and our family's future.

That said, none of this would have been possible without the support of my amazing wife and the rock of this operation, Liz. Reflecting back to our time as baby-faced 18-year old freshmen at Albion, it is hard to envision that this many years later we would find ourselves here. Drive and educational aspiration have never been much of an issue for either of us, but life is life, and it is hard to imagine how we reached this point with the never-ending chaos around us. In short, I was blessed with an amazing partner that has stood by my side through some really difficult times, and ready to come out of it together with the rest (best?) of our lives in front of us. Thanks for everything, love!

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CHAPTER ONE

INTRODUCTION

Problem Statement

In a recent survey of first-time college students conducted by New America (Fishman, 2015), students overwhelmingly indicated that their top three reasons for deciding to attend college were all related to their job prospects (to improve employment opportunities, make more money, and get a good job). The 2018 UCLA survey of incoming college students, likewise, found that for a majority (59.0%) considered job prospects as a very important aspect in choosing their ultimate college destination – second behind only academic reputation of the college (Stolzenberg et al., 2019). However, research has consistently revealed that employers believe today's four-year college graduates enter the job market with significant skills-related deficits (Archer & Davison, 2008; Casner-Lotto & Barrington, 2006; Finley, 2021; Fischer, 2013; Hart Research Associates, 2010; McLester & McIntire, 2006; Ray et al., 2012). To further underscore the scope of this issue, the employers identifying this phenomenon represent all sectors and prioritize the possession of universal, transferable skills over job-specific, technical knowledge (Cunningham & Villasenor, 2016; Finch et al., 2013; Hart Research Associates, 2013; Robles, 2012). Specifically, employers have indicated that their most sought after 21st-century skills consist of such general abilities as oral and written communication, teamwork, critical thinking/analytical reasoning, problem solving, and creativity/innovation (Ahonen & Kinnunen, 2015; Finley, 2021; Hart Research

Associates, 2010, 2018; van Laar et al., 2017). According to employers (Finley, 2021; Fischer, 2013), the skills deficit has led to difficulties in consistently filling entry-level jobs with recent college graduates who are qualified to perform the typical job duties expected of new hires.

This "skills gap" phenomenon is set against the backdrop of an ever-increasingly more expensive proposition for students who are looking to enhance their marketability for employment. The average in-state cost of a four-year degree from a public, non-profit university was recently estimated to total nearly $88,000 (Bustamante, 2019), with the cost of attendance rising by an average of approximately two percent each year (inflation adjusted; Ma et al., 2019). Student loan debt is frequently raised as an issue adjacent to rising college costs in both the scholarly literature (Houle & Berger, 2015; Nica & Mirica, 2017; Greenestone & Looney, 2013) and public commentary due to the total student debt in the United States rising from $772 billion to $1.6 trillion over the past decade (Federal Reserve, 2020) and from $481 billion in 2006, which is as far back as Federal Reserve statistics exist (2021). For graduates in the class of 2020, the average debt per student accumulated while pursuing an undergraduate degree amounted to approximately $37,000 (Hanson, 2021), with 64% of all college graduates starting their post-college lives with a loan balance (Kerr & Wood, 2021). 2018 survey data for first-time college freshman further confirms cost as a concern with 81% indicating cost of attendance as a factor in college choice and 64% voicing concerns about the ability to finance their education (Stolzenberg et al., 2019).

Overall college student enrollment decreased each year for the eight years preceding 2020, with a starting point exceeding 20 million enrolled students to bottoming

out during the Fall 2019 semester where it dipped below 18 million (National Student Clearinghouse Research Center, 2018, 2019). Student enrollment has further declined an additional eight percent during the past two academic years (National Student Clearinghouse Research Center, 2021), although the COVID-19 global pandemic is believed to be the chief catalyst towards the more recent trend. At 4-year, Bachelor's-offering institutions, year-to-year statistics also show an enrollment decrease in three out of four years from 2015-2019. Concurrent to these enrollment trends, the number of jobs requiring at least some college as a qualification has continued to increase. In 2013, the Georgetown Center on Education and the Workforce (Carnevale et al., 2013) predicted that 63% of jobs would require some college by 2020. In 2010, the number of jobs held by such workers was 59%, but by 2018, the proportion had actually overshot the original prediction. By that time, 70% of employees had completed as least some college (Blumenstyk, 2020). When the Georgetown Center released their latest prediction (Blumenstyk, 2020), their revised expectation was that by 2027, the number of jobs available to workers with only some college and no degree would continue to decrease from 21% to 17%.

Taken altogether, enrollment decreases, rising costs, and greater demand for properly skilled college graduates make it all the more imperative that higher education institutions (HEI's) structure requirements geared towards meeting the current and future needs of its students. The aforementioned trends observed over the past decade could create a stark reality for the future of higher education if a course correction is not taken. One thing that appears to be clear is that if higher education chooses not to respond purposefully to the rapidly changing industrial landscape that requires a constantly

evolving level of expertise, the skills gap will continue to grow while graduates may find themselves in ever more precarious situations.

The Skills Gap in a Highly Selective Institution

Although the skills gap narrative is generally based on employer perspectives viewed across higher education as a whole as opposed to being viewed within narrow pockets among various institutional types, with the level of influence that elite research institutions possess among other types of HEI's, understanding the application of the skills gap within highly selective institutions would add a specialized perspective to the existing body of knowledge of this generalized phenomenon.

At elite, highly selective institutions, the student profile generally exceeds that of any other institutional type relative to academic preparation level prior to postsecondary enrollment. Students at this level have often come from significant family means, academically strong secondary schools, and completed a significant concentration of advanced placement (AP), International Baccalaureate (IB), or dual enrollment credits prior to their postsecondary enrollment. Although it is difficult to quantify exactly how much more academic credit students bring with them entering the most selective institutions, versus those attending less selective institutions, there is evidence to suggest that selective institutions generally receive applications from students who have completed multiple AP classes as part of their admissions criteria (Mathews, 2014). Ewing, Jagesic, and Wyatt (2018) found that students who obtain a 3 or higher on an AP exam are more likely to double major than students who do not earn a 3 or higher on any AP exam. Following this logic where a significant portion of the student body at highly selective institutions bring in AP credit and then subsequently double major, the tradeoff

in credits taken in residence at the postsecondary institution typically creates a scenario where they do not need to enroll for as many general education courses due to the previously earned credit.

With incoming students at highly selective institutions possessing such a high degree of prior academic preparation, the question is whether that preparation level also reflects the possession of a greater skills foundation in competency areas most valued within the workplace. Though it is likely the case that students at highly selective institutions do already possess upon matriculation some of the skills that will enable them to eventually transition successfully into the workforce, it is still imperative that institutions are further developing students for future pursuits, even if they are beginning the college experience at an advanced level. The current study therefore aims to examine the dynamics around preparing students for gainful employment within the constructs of a single public, highly selective institution given these student body characteristics as additional considerations.

Purpose and Significance

The purpose of this research study was to learn more about the responsiveness of HEI's – specifically highly selective research universities – in gearing curriculum towards the desires of the workforce at large. The employer-identified skills gap has been associated with virtually all sectors of the employment world and the skills that are in greatest demand tend to be non-discipline specific. As such, if HEI's were structuring curriculum in an optimal way to prepare all graduates for gainful employment, then the skills that industry is seeking would be refined through course content that all students are expected to complete. Furthermore, regardless of the academic profile that students

bring with them to their postsecondary education or their attractiveness as a graduate from an elite university, these basic competency areas should not be glossed over in higher education based on a perception of their ability to obtain gainful employment regardless of their existing skillfulness in these competency areas. In institutions where a true core curriculum for all students is not present, general education course requirements are the closest thing to a shared learning experience for all students. With accrediting agencies requiring at least some form of general education within the undergraduate degree, this is the one place within an undergraduate curriculum where commonality can be built into overall expectations for every student.

Research on this topic of inquiry has generally been built through third-party advocacy work, often including market surveys of employers or large swaths of HEI's (Association of American Colleges & Universities, 2011; Finley, 2021; Hart Research Associates, 2009, 2010, 2013, 2016, 2018; Hoke et al., 2013; Humberg et al., 2013; Jaschik & Lederman, 2020; Maguire Associates, Inc., 2013; Mrig, 2013). A good portion of the existing literature base serves mainly to assess the positions of industry on the dearth of skills it experiences when trying to plug college graduates into entry-level positions, yet the connections to curriculum are significantly scarcer. Not only that, but these environmental scans are typically directed industry-wide, to specific geographic areas, or narrowed to a particular profession or field of study. With a lack of attention paid to how both sides of the skills gap play out within the upper reaches of higher education, a case study examining how these dynamics apply to a highly selective research university has the opportunity to reveal a different aspect to this ongoing conversation. Most often, when connections are drawn between industry and

employment preparation by HEI's, the focus is discipline-specific and aimed what is being taught in the major (Anthony & Garner, 2016; Bridgstock, 2011; Brooks & Simpson, 2014; Katz et al., 2020; Pacific Policy Research Center, 2010; Paranto & Kelkar, 1999; Stevens, 2005) or which high impact practices students engage in (Adams Becker et al., 2017; Miller et al., 2018; Silva et al., 2016), rather than general education. One notable exception to this rule of thumb is the work that has been performed by the American Association of Colleges and Universities (AAC&U) over the past few decades. It has endeavored to examine the state of general/liberal education and the success of its outcomes in preparing graduates for the global economy of today and tomorrow (Association of American Colleges & Universities, n.d.-a, 2007). The current study aimed to draw heavily from the themes explored by AAC&U and to apply them across different disciplines with unique approaches towards general education.

With faculty generally serving as the gatekeepers to the curriculum, their perceptions and actions towards addressing the skills gap were thought to be valuable to understanding the current approach on curriculum building. To fully form the picture of the curriculum, one must start with the mission and desired learning objectives to know what it aims to accomplish. By examining the execution of curriculum with respect to the perceived goals, one can begin to understand the amount of emphasis placed on various influences affecting its development. A qualitative approach where faculty were engaged in interviews was intended to allow for rich data gathering adding to the understanding of not only the final state of curriculum, but also the attitudes contributing to ongoing assessment and responsiveness to outside influences. For faculty and administrators alike, this knowledge could be crucial in future curricular actions as it may

yield insights into the derivation of curriculum in practice as compared to intent, as well as signaling potential best practices to pattern action after from within the same university structure.

Research Questions

This research study aimed to identify how highly selective research institutions view their role in building students' skills in preparation for the labor market. Given the universal nature of the most desired skills as independent of any one specific field of study, the focus was upon understanding general education (GE) curriculum within the context of building students' skills for the labor market. As faculty within schools/programs are generally responsible for the development and revision of curriculum, learning about the perceptions of those faculty with direct responsibilities relative to curriculum was an essential aspect to the research. With some disciplines aligned in a more linear way to specific employment opportunities, it was believed that employment considerations would be more likely to enter into curricular considerations in such instances. Within the curricular development and revision process, it was important to understand how much influence the skills gap and employer preferences might impact the final product. Viewed within the unique institutional constructs of the university under examination, the research questions for this study were as follows:

1. In what ways do faculty from different schools in a highly selective research university view the role of general education courses to develop skills as preparation for the workforce?

2. In what ways, if at all, do different undergraduate schools in a highly selective research university aim to develop employability skills within the curricular design, specifically within the general education requirements?
3. What are the internal and external influences that impact the inclusion (or exclusion) in the undergraduate schools of a highly selective research university of employability skills training within its general education?

Conceptual Framework

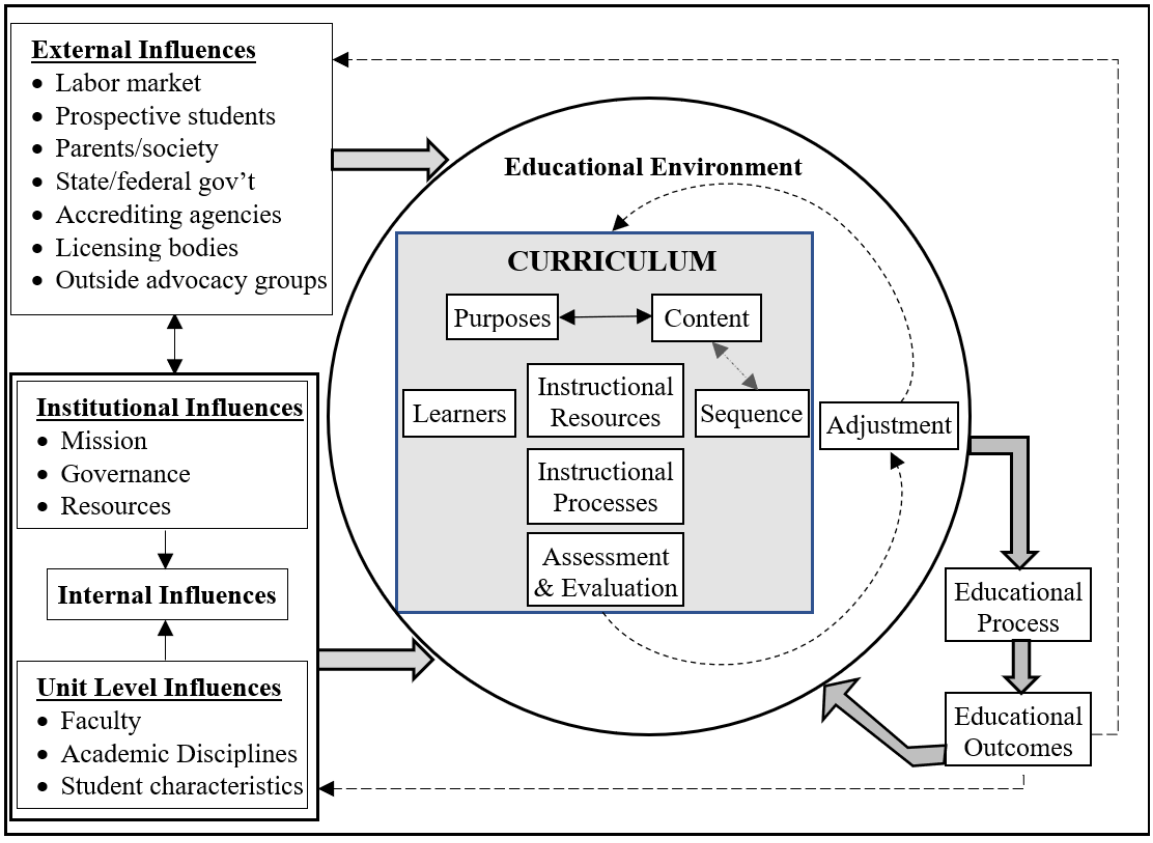
The conceptual framework for this study was based upon how curriculum, or an "academic plan" in their terms, is developed as per Lattuca and Stark (2009). "Academic plan" is used in their vernacular in place of "curriculum" based on the assertion that the term "curriculum" has not been comprehensively defined in the literature preceding their own, and "plans," by concept, are based upon desired end states. As a result, "curriculum" and "academic plan" within the Lattuca and Stark framework are considered synonymous with one another. For the purposes of this writing, however, "curriculum" will be the preferred term.

In Lattuca and Stark's view, the influences on curriculum development are multi-faceted (see Figure 1). Within the planning process, they argue that curriculum takes initial shape based upon the questions of what the purpose of the curriculum is and what the content is that supports it. In other words, what are the skills and knowledge that are to be learned within the curriculum and what are the approaches towards conveying that information to students. Purpose can be likened to both mission and philosophy as well, and a number of authors have similarly offered that the curriculum development process starts with the consideration of purpose or philosophy (O'Neill, 2010, 2015; Stark, 2000;

Toohey, 2000). Other decision-points factoring into curriculum development in the Lattuca and Stark (2009) model include sequencing, consideration of the learners, instructional processes, resources, evaluation, and adjustment. They note that while purpose and content are interrelated and come first in the process, the remaining considerations vary in when they occur sequentially since the process is often iterative in nature. Assessing and revising are obviously key factors to keeping curriculum current in the context of the interrelated demands. However, for the sake of this study, assessment measures remained largely limited to faculty reports about such reviews given the extremely detailed process of assessing program outcomes which could carry a study on its own.

Figure 1

Conceptual Framework



Note. Adapted and modified from the academic plan model in *Shaping the college curriculum: Academic plans in context (2nd ed.),* by L.R. Lattuca and J.S. Stark, 2009, p. 5. Copyright 2009 by John Wiley & Sons, Inc.

In the Lattuca and Stark (2009) model, both internal and external influences impact the formulation of the plan. Internal influences are broken down into multiple levels. Inside the school, there are influences specific to the organizational unit that can include such things as instructors' backgrounds, educational beliefs, program goals, and disciplinary perspectives. Institution-level influences include institutional missions, resources, and academic governance over the school (e.g. the Chief Academic Officer or Faculty Senate). Externally, outside forces such as accreditors, licensing bodies, state and federal governing agencies, market forces, and society also impact programmatic responses in the development of curriculum. Notably, students are a unique consideration within the model as they appear in multiple locations, demonstrating their multifaceted influence on curriculum. Lattuca and Stark reason that the purpose of academic plans is to foster students' academic development. Thus, they stress that the program design should be focused upon the desired learning objectives. Within this, the abilities and prior preparation level of students also needs to be a consideration, just as with students' educational goals. For the curriculum to then be effective, it needs to reflect the unique characteristics of the students, regardless of the institutional type or individual programs within the institution. Suffice to say, the curriculum should therefore look different in a highly selective institution than a less selective institution based upon the elevated levels of academic preparation and long-term aspirations present within the highest reaches of institutions.

For the purposes of this study, Lattuca and Stark's model provides a framework to help explain the many concurrent forces playing roles of varying degrees within the construction of curriculum. With so many interrelated factors, all with varying levels of importance and impact by institution and unit, gaining a greater insight into how these influences affect curricular development within the programs to be studied will help in gaining a greater understanding of the curricular ecosystem and how curricular decisions may take place in disparate manners dependent upon the conditions specific to the program. As applied herein, the prominent focus was on how general education curricula takes shape based upon the many contributing factors. As a subset of the overall curriculum, it was expected that general education would presumably be susceptible to the same forces influencing the formatting of the overall curriculum. Purpose and content constructs were gauged based upon print materials at the institutional and programmatic levels and supplemented by the perceptions of faculty members within the various programs to gain a fuller picture of the process and influences. Lattuca and Stark posit that some instructors may already be more attentive to external influences than they realize, so gaining their perspective as to how much weight each type of influence carries was viewed as potentially revealing. As this study was interested in understanding the relationship between general education and preparing students with the necessary skills for employment, external influences and internal response were points of emphasis drawn from the Lattuca and Stark model.

Limitations and Delimiters

A number of limitations of the current study were decided upon deliberately in order to stay within a reasonable scope, while yielding rich data from one specific location where learning takes place.

First, utilizing a case study approach, the observations in this study were from a single university setting. Though comparing curricular approaches at different institutions with disparate missions could be quite informative, the university being studied does serve as a microcosm representative of similar dynamics across other institutions given the fact that the university is decentralized in nature and its academic schools determine their missions and curricula relatively independent of one another. Just as different institutions serve their own unique populations and take a variety of approaches towards professional preparation, each of the academic schools represented in the current study are likely to demonstrate different attitudes and approaches towards preparing students for future employment. Likewise, in the same manner that vocational and professional programs are designed to prepare students for employment opportunities, some disciplines at the university view their work in a pre-professional light. The Carnegie classification system supports this as well by classifying a number of programs under examination as "professional" in nature (The Carnegie Classification of Institutions of Higher Education, n.d.). For such programs, it was anticipated that their stated emphasis on building employability skills would be greater than more traditional liberal arts fields.

The researcher endeavored to conduct interviews with faculty currently possessing roles on their school's curriculum committee. Some of the built-in

assumptions within this approach were that those faculty possess an understanding of the goals, makeup, and theory behind the development of their programs' curricula. However, some of these faculty may have had only limited perspectives on the current state of the curriculum, which could be for myriad reasons. Nevertheless, if these faculty had a limited involvement in developing the current curriculum and failed to possess actionable background knowledge about it, their perspective could have lacked in value as compared with a more knowledgeable faculty member on such matters. Since curriculum should be under consistent examination in an idealized state, it was the researcher's hope that the interview sample would still possess substantial knowledge through their role on the curriculum committee. Additional insights could have been gained by adapting the survey population to include past committee members, particularly those that were in place during periods of significant curriculum transitions, but the information on this population was not readily available and there would have surely been cases where those faculty were no longer at the university, thus creating additional variation between sample groups.

Definition of relevant terms

Academic program – A curriculum or course of study in a discipline or interdisciplinary area that leads to a degree or certificate. Groups of programs combine to make up "schools."

Academic school – A grouping of, in most cases, multiple academic programs in similar disciplines. At the university under examination, this translates to the Schools of Architecture, Arts & Sciences ("The Undergraduate College"), Business Administration,

Continuing and Professional Education, Education, Engineering, Nursing, and Public Affairs. At some universities, these are instead referred to as "colleges."

Arts & sciences program – Program of study that generally requires further education beyond the baccalaureate in order to obtain employment (The Carnegie Classification of Institutions of Higher Education, n.d.). Generally synonymous with the liberal arts and encompasses disciplines falling under the headings of arts, humanities, sciences, and social sciences.

Career readiness – "A foundation from which to demonstrate requisite core competencies that broadly prepare the college educated for success in the workplace and lifelong career management" (National Association of Colleges and Employers, 2021).

Curriculum – An organized set of courses that comprise a plan of study leading to the fulfillment of degree requirements. These can vary by school or program.

Decentralized – University structure where the majority of decision making occurs at the unit-level, as opposed to a central authority. At the university in this study, this includes curricular decisions for students in the school.

External transfer – Gaining enrollment into a school at the university by transferring in from another institution.

Employability skills – "General skills that are necessary for success in the labor market at all employment levels and in all sectors" (Division of Academic and Technical Education, n.d.-a).

General education – As part of an undergraduate degree program, a substantial component of overall course requirements based on coherent rationale that ensures breadth of knowledge. Credits are typically drawn from humanities/fine arts,

social/behavioral sciences, and natural sciences/mathematics (Southern Association of Colleges and Schools Commission on Colleges, 2018). It provides to all students a broad exposure to multiple disciplines and forms the basis for developing important intellectual, civic, and practical capacities (Association of American Colleges & Universities, 2011).

Gainful employment – Used in two ways throughout this paper. First, in areas where it is covered explicitly, gainful employment refers to the federal legislation of the same name and the guidelines attached to it. Outside of specific references to the federal legislation, gainful employment is used in a more general sense to refer to a state where an individual is employed in a job or occupation where they earn a fair wage roughly in line with credentials and expertise.

Internal transfer **–** Gaining enrollment to a school at the university by moving from another school at the university.

Professional program – Program of study designed to provide a degree recipient with the credential necessary for immediate employment within that field (The Carnegie Classification of Institutions of Higher Education, n.d.).

Skill – "The ability to do something that comes from training, experience, or practice; The ability to use one's knowledge effectively and readily in execution or performance" (Merriam-Webster, n.d.). Used fairly interchangeably in context with related terms such as competencies, abilities, capabilities, etc.

Skills gap **–** The general phenomenon where industry-identified skills capability needs are not being met by the new college graduates entering into the workforce.

Upper-division or *upper-level* – Usually used to describe an academic program that students are admitted into after spending their first two years at the institution

completing general and prerequisite coursework in the College of Arts and Sciences. More generally, these terms describe a state associated with the final two years of an undergraduate program.

CHAPTER TWO

LITERATURE REVIEW

Historical Connections between General Education and Societal Needs

Over the centuries that higher education has existed in the United States, its purposes and mission have ebbed and flowed along with the state of society at a given point in time. From the earliest days in America with its primary aims geared towards preparing young men for the ministry, moving to present day where the modes of instruction are as multiple as its countless goals, the prevailing cultural needs and desires have consistently infiltrated higher education and impacted how institutions have chosen to operate. Rudolph (1977) argues that American history is akin to curricular history in that colleges and universities adapt curriculum to the needs of society and ultimately play a role in shaping those needs. As a result, he estimates that the content of undergraduate curricula is completely revised every 22 years, with old courses cycled out at a rate of 5 percent per year and replacements created at 9 percent a year.

European Influence and Vocationalism

The roots of vocationalism in higher education can certainly be traced back to the days when education was training for the ministry. Subsequent shifts over time found higher education institutions vacillating between the needs of society versus educating for knowledge's sake. The earliest shifts saw European influence swing curriculum towards the classics with a focus placed upon contemporary subjects, such as Greek, Latin, mathematics, logic, rhetoric, and moral truths. All students followed the same

curriculum. Education in this form was intended to be a finishing school for privileged young white men. While not presented as such, these centuries old approaches essentially amounted to the origins of liberal education at the post-secondary level.

Structural shifts of the 1800's set the stage in many ways for today's curriculum with its separation between general education and specialized study. Initially, specialization and course selectivity were not present within higher education. Thomas Jefferson's founding of the University of Virginia as a secular institution marked one of the earliest efforts towards introducing student choice in course selection. Eight professorships – each representative of a "school" in today's more common university structure – in the areas of ancient languages, modern languages, mathematics, natural philosophy, natural history, anatomy and medicine, moral philosophy, and law, comprised the earliest iteration of Jefferson's university (Geiger, 2014; Hofstadter & Smith, 1961; Miller, 1988; Ragosta et al., 2019). His Enlightenment desires to provide students with breadth of knowledge, standing in contrast of movements of the time to provide more specialized scholarship and professional training in line with the approach of German universities, required a supremely skilled faculty that could teach to their discipline, while still achieving Jefferson's broader goals. Instead of a standardized curriculum for all students, each student was given the choice to enroll in the disciplines for which they found the most interest. Ultimately, the goal of this particular approach was to create an educated citizenry within the Commonwealth with values placed upon literacy and the ability to self-govern (Ragosta et al., 2019).

The Elective System

George Ticknor was a faculty member at Harvard College at roughly the same point in time that the University of Virginia was being founded. He had been one of the earliest Americans to receive a Ph.D. from a German university and had maintained correspondence with Jefferson regarding their views on education (Brubacher & Rudy, 1958; Geiger, 2014; Miller, 1988). Based on these influences, Ticknor favored reform at Harvard that would provide practical training by eliminating prescribed courses in favor of a free elective system. Similarly, Francis Wayland at Brown University was another early proponent in support of a more practical approach towards curriculum, which helped to set the tone for the utilitarian movement that followed during the 19th century (Miller, 1988).

Though Ticknor's efforts at achieving his ideal proved initially to be unsuccessful, his vision was realized years later when his nephew, Charles Eliot, became president of Harvard in 1869 and ultimately instituted the elective system. With Harvard serving as a model, many institutions followed in also adopting the elective system (Boning, 2007). In touting the advantages of individualization, Eliot (1898) said, "The elective system fosters scholarship because it gives free play to natural preferences and inborn aptitudes, makes possible enthusiasm for a chosen work" (p. 14). In essence, elements of a vocationalist approach and support for overall breadth of knowledge were both seen as intended outcomes of this elective system.

The elective system and student choice continued to grow in its impact as more and more students were exposed to higher education following the passage of the Morrill Act. With a greater level of curricular flexibility through free electives and differential

departmental structures becoming the new normal state, colleges and universities began to serve the masses with a greater emphasis on meeting societal needs by providing practical, applied education (Rudolph, 1962).

Separating the Liberal Arts from Vocational Studies

As an institution created through the Morrill Act, Cornell was particularly revolutionary in its structural design of divisions and departments. It created two divisions – one of special sciences and arts, which offered courses oriented towards specific vocations through the departments of agriculture, mechanical arts, civil engineering, commerce and trade, mining, medicine, law, education, and public service. The second division of science, literature, and the arts was comprised of courses of study that did not lead to a vocation (Miller, 1988; Rudolph, 1977; Veysey, 1965). The dual intentions of this design were made clear during Ezra Cornell's charter day address in saying that "we have laid the foundation of an institution which shall combine practical with liberal education, which shall fit the youth of our country for the professions…and for mastering all the practical questions of life" (Cornell, 1869, as cited in Levine, 1978, p. 560).

By the end of the 19th century, such divisions within the curriculum became commonplace across higher education. In comparing past approaches where institutions taught "general education" through the prescribed form of the classics against these newer curricular approaches, Harris (1970) explains that "the nature of general education itself changed and two new basic varieties of education entered: that concerned with vocational technique and that concerned with the expansion of the boundaries of man's

basic knowledge." Over a century later, this description still encompasses the basic structure of curriculum in most institutions today.

Birth of the Research University

Another key development in the higher education landscape during the latter part of the 19th century that significantly shaped the field as we know it today was the emergence of research universities. Johns Hopkins University (1876), Stanford University (1876), and the University of Chicago (1890) were among the earliest established research universities, with other prestigious liberal arts schools, such as Harvard and Yale, along with a smattering of public universities following in the years thereafter (Ford, 2017; Goldin & Katz, 1999). The American approach to research in the university was born out of German influence. The German concept of *Wissenschaft* emphasized both research and teaching, with a German professor's sole obligation being to pursue mastery of all subject-area knowledge. They were then to impart that knowledge upon students in the manner the instructor desired (Geiger, 2014). The American application of this concept instead revolved around increasing faculty freedoms to specialize efforts around discovering new, empirical knowledge, without the concomitant expectations of imparting this same knowledge upon students (Boning, 2007; Miller, 1988). Faculty largely viewed teaching as a means to support research goals, or worse, as a distraction from their primary focus (Miller, 1988; Veysey, 1965). Departmental specialization began to flourish, and the research ethos had the effect of fragmenting the curriculum as faculty became less interested in educating its students (Miller, 1988; Rudolph, 1977). At the same time, competition and isolation among disciplines increased, while cooperation decreased (Ford, 2017; Miller, 1988). Research

as an inward-facing approach stood at odds with the more utilitarian approaches of providing education as a preparation for civic life through liberal arts training and the more occupation-specific approaches borne out of land grant institutions for the benefit of those states (Bisesi, 1982; Harris, 1970; Metzger, 1961; Miller, 1988). Coupled together with the advent of the "major" at Indiana University in 1885, these developments set in motion the wheels of change moving from a singular curriculum for all students to an approach rife with student choice and curricular variations (Lattuca & Stark, 2009; Miller, 1988; Rudolph, 1977).

In Search of the Optimal General Education State

The years ahead helped to crystallize curricular structures in a manner more closely resembling those found within current day colleges and universities. The major system, devised as an alternative to the classical and elective curricular structures, became widespread around the turn of the century (Crooks, 1979; Lattuca & Stark, 2009; Miller, 1988; Rudolph, 1977). Administrators began to favor a focused major, combined with more general training in the natural sciences, social sciences, and humanities. This stood in stark contrast to the type of "intellectual agnosticism" and "intellectual bankruptcy," as described by Alexander Meicklejohn, that the academy had largely fallen prey to with the lack of curricular structure and consistent standards under the elective system (Geiger, 2014; Lattuca & Stark, 2009; Meicklejohn, 1922; Miller, 1988; Rudolph, 1977). The coherence that accompanied student choice within new structures often appeared as a set of "distribution requirements" to provide a strong general education rooted in the liberal arts and sciences and aimed at focusing upon issues of contemporary

society. These adaptations amounted to what came to be recognized as the "general education movement" (Bisesi, 1982; Boning, 2007; Lattuca & Stark, 2009; Miller, 1988).

Though the general education movement, with its separation of liberal arts courses from the major and contemporary approach to modern day thought, became widespread in the years ahead, the development was not unanimous. Among perhaps the most prominent dissenters to the incorporation of this approach were Robert Maynard Hutchins and Mortimer Adler, both of the University of Chicago. Hutchins became president in 1929, at a time when internal discussions had already been initiated by a dean named Chauncey Boucher to reform the curriculum (Crooks, 1979; Geiger, 2014). The New Plan, as it was called, was modeled off the approach that had taken hold in Columbia University's Contemporary Civilization program in the recent past which focused upon historical background of Western civilization and current world problems (Bisesi, 1982; Lattuca & Stark, 2009). The Chicago plan, likewise, was to introduce survey courses centered on covering general education during the first two years. These were to be free from the bias of graduate education and scaffolded towards the university's four divisions: biological sciences, physical sciences, humanities, and social sciences (Bisesi, 1982; Crooks, 1979; Geiger, 2014). Meanwhile, Hutchins' plan to create a common foundation of knowledge and skills in the form of his Great Books of the Western World curriculum stood in direct contrast to both movements at large and the discussions afoot at his own institution (Bisesi, 1982; Lattuca & Stark, 2009). Adler had been hand-picked by Hutchins to be given appointment at Chicago for the purpose of designing and shepherding in the Great Books curriculum, which took roots from a Great Books course at Columbia and then centered around Adler's philosophical based

approach of organizing the liberal arts based on metaphysical truths instead of accepted academic practice (Geiger, 2014). Ultimately, the New Plan won out at Chicago despite Hutchins's great objections.

Despite this early framework persisting to present, general education has still been the target of many assaults and calls for reform over the past hundred years. After World War II, a further solidification of shape and structure was brought about through the authoring of the widely recognized Harvard "Redbook" in 1945. *General Education in a Free Society* was produced under the direction of Harvard president James Conant in response to a prevailing sense that undergraduate education had become overspecialized and was again lacking a coherent approach aimed at developing the whole individual and the relationship with their place in society (Bisesi, 1982; Boning, 2007; Geiger, 2014; Harvard University Committee on the Objectives of a General Education in a Free Society, 1945). This latter concern was a point of emphasis for education in order to preserve the ideals of American democracy against the totalitarian regimes that led to World War II (Boning, 2007; Geiger, 2014; Levine, 1978; Ratcliff, 1997), much in the same way that higher education reintroduced core curricula in the humanities and social sciences after World War I in response to a renewed societal interest in nationalistic ideals (Lattuca & Stark, 2009; Miller, 1988). Similarly, a study commissioned by President Harry S Truman in 1947 on postsecondary education in America ultimately reinforced the principles of the Redbook in calling for "a body of common experiences and common knowledge" with the "right relationship between specialized training on one hand, aimed at a thousand different careers, and the transmission of common cultural heritage toward a common citizenship on the other" (United States President's

Commission on Higher Education, 1947, p. 49). While the curricular structure suggested in the Redbook was not adopted at Harvard, it still proved to be influential in solidifying general education as a dynamic part of the undergraduate curriculum at many other institutions over the coming years (Boning, 2007; Crooks, 1979; Ratcliff, 1997).

As the 20th century progressed, specialization endured – and as Ross professed, "an explosion of professionalism" among faculty had also taken hold (1978, as cited in Bisesi, 1982) – all of which stood at odds with institutions' ability to fully incorporate a deliberate general education curriculum (Boning, 2007; Rudolph, 1977). Movements of the 1960's and '70's – partially related to societal events during the time period – found students again demanding a higher level of individualism and student choice, while at the same time questioning the rationale behind the inclusion of several courses as distribution requirements (Boning, 2007; Gaff, 1983). Faculty held firm with the autonomy they had gained over time, particularly at research universities, and were resistant to working across departmental lines towards forging a more coherent interdisciplinary approach to general education (Boning, 2007; Lattuca & Stark, 2009). Faculty were able to pursue their own research interests and teach outside of general education, while students also had the ability to specialize based upon their own personal and career interests (Bisesi, 1982; Boning, 2007; Gaff, 1983). These positions ultimately aligned, at least in desire, as three-quarters of colleges and universities reduced their general education requirements and increased student choice between the years of 1967 and 1974 (Blackburn, Armstrong, Conrad, Didham, & McKune, 1976; Boning, 2007). Even with the reductions, general education courses were largely the equivalent of elective courses during this period (Crooks, 1979), while Conrad and Wyer described it as a "virtual free-for-all of the

distribution approach" (1980, p. 17). Even years later, students were found to lack motivation and interest in mastering liberal arts subject matter without a sense of why it belonged in the curriculum when loose distribution systems without a unifying philosophy were in place (Association of American Colleges, 1994; Warner & Koeppel, 2009). This lack of a cohesive curricular experience for students, combined with a general aversity to a liberal education, led to a state where "doctors could scarcely communicate with their patients, engineers who had no feeling for the arts-training of their wives, and psychologists who could not understand sociologists even in common conversation" (Mayhew, 1960, p. 5). Coincidentally, it was only a few decades prior during the Great Depression that many overly specialized professional workers, such as engineers, lawyers, and social workers, lamented the fact that their education lacked greater utility to provide the ability to more easily pivot into another profession (McGrath et al., 1939). In the years to come, as the job market began to tighten up in the 1970's and 1980's, students' tendencies were to select more structured programs with an eye towards the utility of obtaining employment in a particular field (Lattuca & Stark, 2009).

The combination of general education courses being increasingly turned over to young, inexperienced professors, along with the continuation of the aforementioned trends from previous decades, created a state of general education where it was labeled by the Carnegie Foundation for the Advancement of Teaching in 1977 as a "disaster area" (p. 11). It indicated that general education had become so "poorly defined and so diluted with options that it has no recognizable substance of its own" (p. 168). A series of subsequent reports followed that similarly bemoaned the sorry state of postsecondary curricula due to fragmentation, overspecialization, and incoherency within general

education (Gaff, 1983; Lattuca & Stark, 2009). It was believed that graduates were lacking in the ability to think and communicate effectively (Ratcliff, 1997) due to a predominant belief that students had become too focused on making course choices that benefited their professional and career preparation (Bloom, 1987; Ratcliff et al., 1992). A report by the American Association of Colleges (AAC) in 1985 summed up this state by echoing the sentiments of their predecessors in writing that "undergraduate education is in a state of crisis and disarray" in reaction (Ratcliff, Jones, & Hoffman, 1992, p. 3). During this same period of time, employers voiced their displeasure with college graduates claiming that they were lacking basic skills (Lattuca & Stark, 2009). As a result, these criticisms were generally accompanied by calls for reform.

Contemporary Approaches to General Education

Despite significant disparities from one institution to the next, Brint, Proctor, Murphy, Turk-Bicakci, & Hanneman (2009) provide analysis from examining a large cross-section of higher education institutions spanning the final 25 years of the 20th century and assert that general education structures began to evolve into one of four types, which they label as "core distribution areas," "traditional liberal arts," "culture and ethics," and "civic/utilitarian" models (p. 605). The first two categories represent structures that have generally been around for a century or more – the core distribution approach typically found more within public institutions, and the traditional liberal arts category dominating the liberal arts institutional sector. Whereas liberal arts institutions and accompanying general education curricula are quite traditional in the sense that they focus on the humanities but neglect to incorporate courses that stem from scientific process, core distribution schools slant towards natural science, social science, and,

increasingly, mathematics. The latter two categories are notable in this discourse, as they represent adaptation based on the influences of society at large. While the cultural ("culture and ethics") model grew out of a faculty recognition of the importance of educating beyond Western cultures, the utilitarian ("civic/utilitarian") model goes a step further in crafting curricula towards the desires of business and preparation for employment. The inclusion of required courses in mathematics, non-western and western world cultures, technology/applied science, critical thinking, business, and government might be relatively recent additions, but they are a reflection of a shifting society and institutional willingness to adapt to changing needs. While the authors of this work found no strong evidence of a relationship between institutional type and the type of general education structure adopted at the institution, there was a weak affinity drawn between schools with a greater proportion of its graduates pursuing occupational-professional majors and the civic/utilitarian model.

In a study of similar scope, Warner and Koeppel (2009) examined both the number of course choices and overall general education composition for comparing institutions of differing types and sizes. In breaking institutions into tiers based upon *U.S. News and World Report* rankings, they found that schools ranking highest on average have more course choices than lower-ranked schools do. However, the overall number of required general education courses is relatively consistent across the tiers, as are the requirements in math, natural science, history, fine and performing arts, and global studies. On the other hand, requirements such as writing, literature, foreign language, philosophy, and social science showed greater variation across institutions. When looking at the type of institution, writing/composition courses, history, and natural

sciences, along with lab components, occurred at a greater incidence rate within national research universities. Religion, philosophy, and the arts were required much less frequently.

Whether as a result of calls for reform or as a natural progression in response to environmental factors, general education over the past few decades has seemingly been in a near constant state of flux. The American Council on Education reported that approximately 80-90 percent of its institutions either reviewed or revised their undergraduate curriculum during the 1980's (Gaff, 1999). Brint, Proctor, Murphy, Turk-Bicakci, & Hanneman (2009) noted a nearly five credit increase from 1975-76 to 2000-01 in the amount of general education that institutions required, with a concurrent shrinking in the variation of minimum credits required, meaning that institutions were increasing their emphasis on general education and becoming more similar, at least in the amount of work required.

Influences on Curricular Design

As we have seen to be the case throughout history, in the absence of a central governing authority for general education, curriculum design has been dictated by the whims of institutional faculty and environmental influences. In more recent times, environmental influences have expanded to include accrediting bodies, state and federal regulations, labor market needs, as well as the population writ large. Accrediting bodies serve as a governing body for general education insomuch as to require that institutions provide general education. While accrediting bodies all require some form of general education programmed into the undergraduate curriculum (Warner & Koeppel, 2009), the discretion as to how general education is executed lies with each individual institution.

Ideally, the general education curriculum, and curriculum in general, is constructed in a manner that is consistent with each institution's distinctive mission, purpose, and student body in mind (Lattuca & Stark, 2009; Leskes & Miller, 2005; Warner & Koeppel, 2009). As a result, the myriad of ways in which general education is constructed is nearly as numerous as there are institutions.

Given this vast assortment of curricular aims, a secondary voice has risen above the fray from within the higher education industry to provide direction on general education design. Even though the Association of American Colleges & Universities (AAC&U) has been in existence since 1915, its mission since the early 1980's has intensively focused upon strengthening the undergraduate experience and ensuring that all students receive a challenging, relevant general education (Association of American Colleges & Universities, n.d.-a). They have provided institutions with the tools necessary to design and reform an entire general education curriculum, as well as elements within it (Gaff, 1999). Its 1200+ member institutions represent all types, sizes, and missions at the higher education level, both domestically and globally, and in doing so, serve as perhaps the closest thing to a central authority for general education guidance in existence today. Although its membership ranges the gamut of institutional types, from technical institutes to elite research universities, its advocacy work and reports are generally geared towards the field as a whole, as opposed to any particular subset.

AAC&U, in many ways, serves as a sort of advocate for liberal education, with aims towards its preservation within the undergraduate curriculum. Though liberal education is not totally identical to general education, most common general education curricula are heavily slanted towards subjects generally associated with liberal education

(Association of American Colleges & Universities, 2007). Liberal education for the 21st century has been defined as "a comprehensive set of aims and outcomes that are essential for all students because they are important to all fields of endeavor" (Association of American Colleges & Universities, 2007, p. 4). Further, "a liberal education is one that intentionally fosters, across multiple fields of study, wide-ranging knowledge of science, cultures, and society; high-level intellectual and practical skills; an active commitment to personal and social responsibility; and the demonstrated ability to apply learning to complex problems and challenges" (Association of American Colleges & Universities, 2007, p. 4). This is also important because in programs strictly designed for professional preparation in a career-specific field, general education courses that students are required to take may be the only exposure to the arts, humanities, and any other subject area that falls outside of their specific discipline. This type of emphasis on both liberal and professional education at HEIs typical to United States' curricular approaches is in and of itself unique compared to African, Asian, and European universities, which typically only function for the purpose of professional preparation (Lattuca & Stark, 2009).

Along these lines, it is also relevant to mention one of the current endeavors that AAC&U is engaged with. In June 2022, it was announced that AAC&U would be leading an initiative partnering with 54 institutions entitled the Curriculum-to-Career Innovations Institute. AAC&U staff and other experts in the field would serve as mentors to these institutions over a four-month period where they would help institutions to more completely connect college learning with workforce preparedness through a focus on curricular alignment and skill development (American Association of Colleges and Universities, 2022). This initiative takes on added significance in the context of this

study with the consideration that the sample institution is one of the initial 54 participating members.

Industry Perspective on College Graduates

As employer expectations have risen over the past half century where a college education has become an increasingly necessary qualification, the industry expectation of being able to hire college graduates who arrive job-ready has run hand-in-hand. Despite recent adaptations in curricula, higher education institutions are still failing to keep pace with the rapidly evolving needs of industry and society according to employers at large. This sentiment is not new, yet survey after survey over the past few decades has documented the belief among employers that college graduates enter the workforce absent of many of the skills deemed essential to the job. Despite this, employers by and large believe in the value of higher education and have confidence in HEIs (Finley, 2021; Hart Research Associates, 2018).

In 2006, a consortium of organizations representing both business and employee interests published a report on employers' perspectives on the basic knowledge and applied skills of new entrants to the 21st century United States workforce documenting deficiencies among four-year graduates in areas such as writing, written communications, foreign language, leadership, and professionalism/work ethic (Casner-Lotto & Barrington, 2006). In response to these and the overall findings of the report, Donna Klein, President and CEO of Corporate Voices for Working Families, one of the sponsoring organizations of the report, remarked how it demonstrated that new workforce entrants were "woefully ill-prepared for the demands of today's – and tomorrow's – workplace" (McLester & McIntire, 2006, p. 22). At a time that 75 percent of human

capital professionals were already experiencing a talent shortage in their hiring practices, McKinsey and Company concluded in 2012 that by 2020 there would be a further shortfall of 40 million workers possessing the skills necessary for the working world (Ray et al., 2012). By 2015, their projection had been updated to reflect a predicted shortfall of 40 million high-skilled workers and 45 million medium skill workers by 2020 (Dobbs, Manyika, & Woetzel, 2015). A Chronicle of Higher Education report in 2013 likewise found that over half of 50,000 surveyed employers reported difficulties in finding qualified graduates to hire (Fischer, 2013). Most recently, a 2020 AAC&U survey encompassing nearly 500 employers found that only six out of ten believe that college-educated applicants possess the skills and knowledge necessary to be successful in entry-level positions in their organizations (Finley, 2021). It turns out that this sentiment has become quite common in the business sector and many related publications have further documented the phenomenon now commonly referred to as the "skills gap."

The Skills Gap

The term "skills gap" itself has become quite ubiquitous, as it has been used to describe technical skills shortages in specific industries, universal soft skills deficits among entry-level workers across all industries, talent mismatches between where the workers are and where they are needed geographically (Dobbs et al., 2012; Koc, 2018; Weise et al., 2019), shortages of licensed workers in skilled occupations (e.g. teaching and nursing), and in many other similar ways. For the purposes of this study, the focus was on the employer perceived deficiency of necessary skills across all sectors of industry. Jackson (2013) refers to this situation as a "disparity between industry needs and higher education provision" (p. 778). Likewise, in a survey of employers regarding

the skills gap in 2019, Wiley Education Services and Future Workplace used an operational definition of "A significant gap between an organization's skill needs and the current capabilities of its workforce" (p. 5). Despite the congruity between these two definitions, as well as those commonly utilized informally in the literature, agreement upon what these types of skills should be called is a much more elusive proposition. Employability skills (Archer & Davison, 2008; Clokie & Fourie, 2016; Division of Academic and Technical Education, n.d.-a; Finch et al., 2013; Ithaca Group, 2012; Lowden et al., 2011; National Network of Business and Industry Associations, 2015; Sin & Amaral, 2017), 21st century skills (Ahonen & Kinnunen, 2015; Humberg et al., 2013; Moore & Morton, 2017; van Laar et al., 2017), soft skills (AbuJbara & Worley, 2018; Anthony & Garner, 2016; Devedzic et al., 2018; Moore & Morton, 2017; Pactasil & Tablatin, 2017; Robles, 2012), higher-order cognitive skills (Cunningham & Villasenor, 2016), non-cognitive skills (AbuJbara & Worley, 2018), workforce skills (Bughin et al., 2018), key skills (Bridgstock, 2011; Kenny et al., 2007), durable skills (America Succeeds & EMSI, 2021) – despite many different names to describe essentially the same phenomenon, the common denominator is that the specific skills comprising each of these categorizations tend to overlap to a considerable extent and still hold weight regardless of the business sector. Employability skills, in particular, are defined as "general skills that are necessary for success in the labor market at all employment levels and in all sectors" (Division of Academic and Technical Education, n.d.-a). Likewise, the terms "skills," "competencies," "outcomes," "attributes," "characteristics," "values," "literacy," and other such terms are used nearly as interchangeably throughout the literature on the subject. Further, this is an issue that has been explored and thoroughly

written about throughout the world, so it is not simply an issue contained to American higher education or industry standards.

Students at the undergraduate level are often quick to get general education requirements "out of the way" in an effort to progress into their more discipline-specific requirements, under at least a partial belief that it is only at that point that they will begin to prepare themselves for employment in their chosen field (Thompson et al., 2015). On the contrary, the skills gap discourse supports a notion that employers actually believe that more universally applied skills are more crucial for students to develop during their undergraduate education than the subject-specific knowledge pertaining directly to the industry they represent (Archer & Davison, 2008; Cunningham & Villasenor, 2016; Finch et al., 2013; Hart Research Associates, 2013; Robles, 2012). Skills such as written and oral communication, problem solving, and organizational skills are seen to be both more necessary for the job and carry a greater level of expectation that colleges and universities have sufficiently prepared students on, versus knowledge of a content area and technical skills associated with the job (Maguire Associates, Inc., 2013). In one of the most recent industry-wide employer surveys, at least fifty percent of employers rate the following skills as very important, with ninety percent or more considering these learning outcomes as at least somewhat important: teamwork, critical thinking, ability to analyze and interpret data, real-world knowledge and skills application, digital literacy, complex problem solving skills, ethical judgement and reasoning, written communication, data-driven decision making, creative thinking, ability to work with diverse backgrounds, oral communication, quantitative ability, and information integration across different settings (Finley, 2021).

Several other employer surveys over roughly the past decade have echoed the same or similar sentiments regarding the traits that employers desire out of recent graduates. While skills such as critical thinking/analytical reasoning, problem solving, oral and written communication, and teamwork/collaboration are nearly unanimous desires among marketplace surveys, several other skills frequently appear as employer imperatives, including creativity and innovation (America Succeeds & EMSI, 2021; Anderson, 2020; Association of American Colleges & Universities, 2011; Bughin et al., 2018; Finley, 2021; Hart Research Associates, 2010, 2013, 2018; Humberg et al., 2013; Lowden et al., 2011; McLester & McIntire, 2006; van Laar et al., 2017; Volzer et al., 2021), leadership (America Succeeds & EMSI, 2021; Bughin et al., 2018; Finch et al., 2013; Hoke et al., 2013; Lowden et al., 2011; McLester & McIntire, 2006; Volzer et al., 2021), ethical judgement and decision making (Association of American Colleges & Universities, 2011; Finley, 2021; Hart Research Associates, 2010, 2013, 2018; Hodgman, 2018; van Laar et al., 2017), quantitative reasoning (Association of American Colleges & Universities, 2011; Finley, 2021; Hart Research Associates, 2010, 2013, 2018;), adaptability (Anderson, 2020; Bughin et al., 2018; Fischer, 2013; Hoke et al., 2013; Maguire Associates, Inc., 2013; Volzer et al., 2021), self-direction/motivation (America Succeeds & EMSI, 2021; Hart Research Associates, 2018; Hoke et al., 2013; Lowden et al., 2011; van Laar et al., 2017), and the ability to work with diverse populations (Association of American Colleges & Universities, 2011; Finley, 2021; Hart Research Associates, 2010, 2018; Hodgman, 2018; van Laar et al., 2017). To a lesser degree, traits such as civic knowledge (Finley, 2021; Hart Research Associates, 2010) and emotional

intelligence (Anderson, 2020; Bughin et al., 2018; Volzer et al., 2021) have begun showing an increased emphasis on employer lists just over the past few years.

Even considering this lengthy list of seemingly nebulous traits, one ability that has emerged in employer surveys as a dominant desire is the capacity for graduates to be able to gather, analyze, evaluate, organize, and apply data and information. The descriptions of these interrelated skills can vary widely, such that it can be easy to look past the most basic form of the concept where workers are expected to know how to find and use information. As a society that has evolved to where information is placed at a premium, industry has become a reflection of this and therefore dictates that new hires must be sufficiently trained to locate relevant data, integrate it within the setting or to the job being performed, and make informed decisions based upon the available information. Information management (van Laar et al., 2017), the ability to organize and evaluate information (Hart Research Associates, 2010, 2013, 2018; Maguire Associates, Inc., 2013), complex information processing (Bughin et al., 2018; Hart Research Associates, 2010, 2013, 2018), information literacy (Association of American Colleges & Universities, 2011), information integration (Finley, 2021), and real-world knowledge application (Association of American Colleges & Universities, 2011; Finley, 2021; Hart Research Associates, 2010, 2013, 2018) are just some of the many categorizations that have been utilized in employer surveys to measure and describe essentially the same phenomenon.

If these skill deficits occurred in isolation, the situation would be problematic enough, yet the dilemma is even further compounded by the disconnect that exists between the base level employer expectations and student perceptions of their

competency in such areas. Students are on record voicing their own desires and expectations for higher education to prepare them for employment post-graduation (Fishman, 2015; Stolzenberg et al., 2019; Tymon, 2013), however students still overestimate just how prepared they are. A 2017 survey by the National Association of Colleges and Employers (NACE) uncovered sizable differences between student and employer perceptions of proficiency in the eight competencies the organization considers as essential for employees entering the workplace, with employers rating students lower than their self-ratings on proficiency in seven of the eight competency areas (Koc et al., 2017). While student perceptions were not measured two years later in 2019, the updated NACE report instead found that employers rated recent college graduates as considerably less capable than the level of proficiency they consider to be essential in six of the eight competency areas, including professionalism/work ethic, oral/written communications, critical thinking/problem solving, teamwork/collaboration, leadership, and career management (Koc et al., 2019). These findings, along with the eight competencies NACE defines as essential for career readiness, should be particularly salient for higher education, as the organization represents colleges and universities and provides the linkage between academic programs and industry. Other surveys have found evidence of a gap between student and employer perceptions of skill proficiency as well (McGarry, 2017). The fact that a 2017 survey of currently enrolled undergraduates found that only a third of students exhibited a strong degree of confidence that the skills and knowledge they would graduate with would set them up to be able to obtain employment and then be successful once there (Gallup & Strada Education Network, 2017) should provide further cause for concern. Taken altogether, it would fair to say that there is a sizable disconnect

between the perceptions of students and employers regarding proficiency levels and expectations.

Essential Skills Models

Plenty of advocacy groups representing both education and industry interests have additionally taken notice of the employer sentiment related to skills deficits and have constructed industry-informed models reflecting these voiced desires. From the industry side, organizations like the National Network of Business and Industry Associations have attempted to provide guidance for institutions and job seekers with a comprehensive list of skills that employees need to possess for success regardless of the industry or sector. Their list of Common Employability Skills (Figure 2) provides a categorical representation of skill groupings, along with examples of ways in which the skills are manifested in the work setting (2015). For instance, problem solving is parsed out as entailing such capabilities as "(ability) to identify and define the problem," "communicate the problem to appropriate personnel," and "choose and implement a solution." While there are certainly aspects within the overall framework and cascading descriptions which are difficult to be refined directly within the classroom, the model certainly provides the intended guidance to its perspective stakeholder groups.

Figure 2

Common Employability Skills

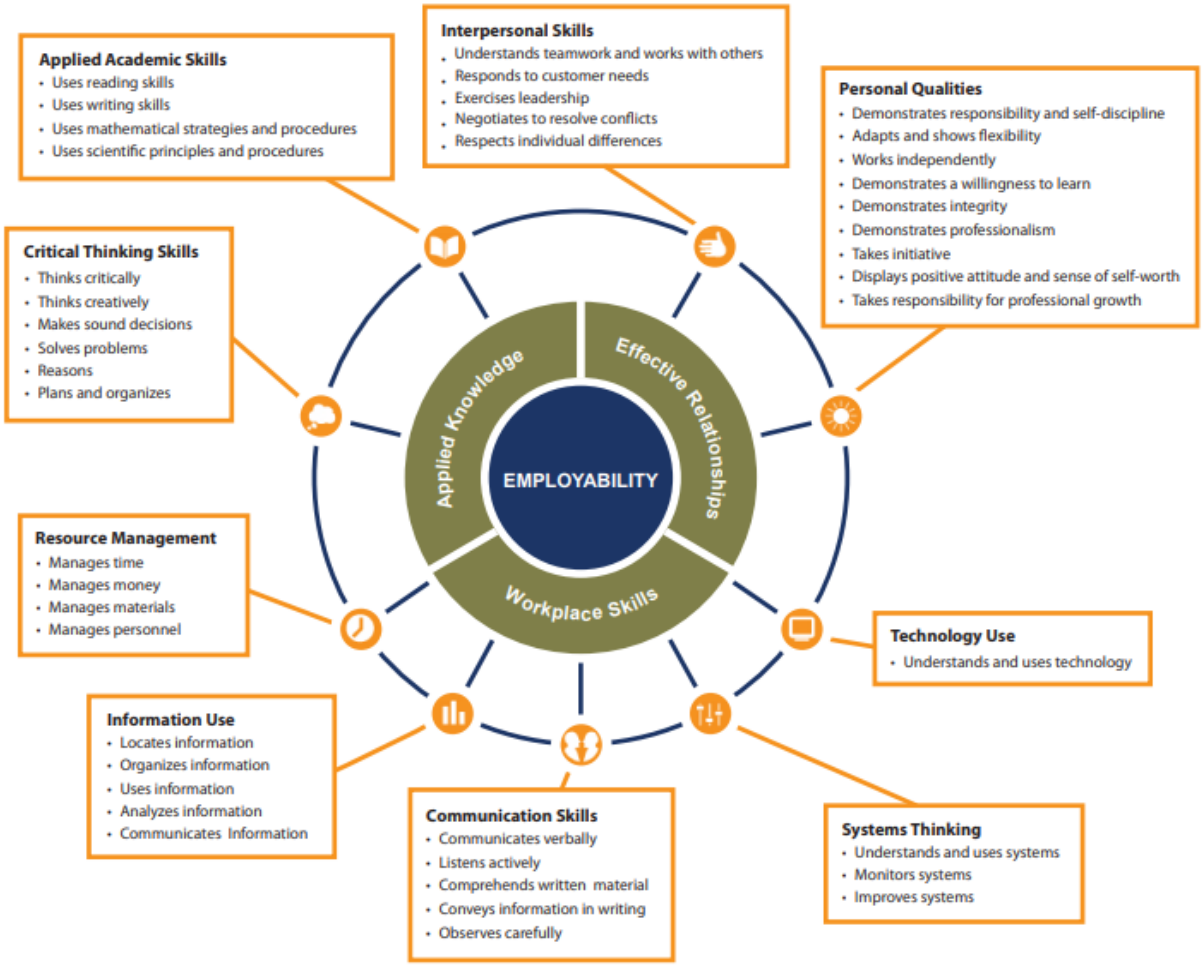
Note. Reprinted from *Common Employability Skills: A Foundation for Success in the Workplace: The Skills All Employees Need, No Matter Where They Work*, by National Network of Business and Industry Associations, 2015 (https://www.umkc.edu/provost/gen-ed/documents/Common_Employability_Skills-03-30-15.pdf). In the public domain.

Quite similar in content to the previously mentioned Common Employability Skills, the Employability Skills Framework is the United States Department of

Education's effort towards creating a synopsis of necessary skills in support of the initiative to increase alignment between education and employers. Also like the Common Employability Skills, the Employability Skills Framework (Division of Academic and Technical Education, n.d.-a, n.d.-b) provides an extremely comprehensive look at the skills and personal qualities said to be necessary for employment preparation. Branching out from three sub-clusters – applied knowledge, effective relationships, and workplace skills – there are nine key skills categories that are further broken down into specific skills (see Figure 3). For instance, thought to be the most academically cultivated knowledge for practical application in the workplace, applied academic skills and critical thinking skills, along with their cascading sub-skills, both encompass the applied knowledge sub-cluster. Of course, there are still many skills from outside of the applied knowledge sphere which can be crafted through education for application in the workplace as well, namely things like communication skills, technology use, and teamwork. Stakeholders could certainly struggle in getting lost among the great depth and breadth of this framework if not for the accompanying resources the department provides to help bridge the gap between theory and application. The supplementary checklist to evaluate whether each skill is being sufficiently addressed and developed in the classroom supports educators with the guidance to plan lessons and curriculum for the needs of industry (Division of Academic and Technical Education, n.d.-c).

Figure 3

Employability Skills Framework



Note. Reprinted from *Employability Skills Framework*, by Division of Academic and Technical Education, Office of Career, Technical, and Adult Education, United States Department of Education, n.d. (https://s3.amazonaws.com/PCRN/docs/Employability_Skills_Framework_OnePager_20180212.pdf). In the public domain.

While unclear if the U.S.-based Employability Skills Framework is directly related to the Australian-designed model of the same name (Ithaca Group, 2012), the two

models follow a similar overall structure with higher level categories cascading down into more granular skills and knowledge typically predictive of success in the work environment. Similarly, institutions across Europe have spent the better part of the past two decades working together in partnership united through the Bologna Process with a goal of enhancing employability for graduates (European Commission et al., 2018). To this end, they have developed a framework of eight key competencies for their institutions to work towards incorporating into curricula: literacy, foreign language, STEM, digital competence, citizenship, entrepreneurship, cultural awareness, and personal, social, and learning to learn competence (Council of the European Union, 2018). This massive effort encompassing 48 participating countries has demonstrated that it is possible to create standards for degree types and relevance and quality of teaching and learning when united behind mutual interest in order to increase student enrollment and mobility, institutional attractiveness, and graduate outcomes, even absent binding legislation. With such a sprawling number of participating nations, each with disparate cultural conditions, implementation and achievement of the ascribed goals was bound to be uneven. Despite this, there have been indications to show that Bologna has been successful in achieving at least some of its intended outcomes (European Commission, 2020; European Commission et al., 2018; Sin & Amaral, 2017). Altogether, these international government-driven ventures to address employability provide a strong indication that the skills gap, employer desires, and the resultant impacts are global concerns.

Among the most influential organizations performing work in this space though is undoubtedly the American Association of Colleges and Universities (AAC&U). With

over 1300 member institutions, its goals revolve around strengthening the higher education experience, particularly with a focus towards liberal education, while providing institutions with the tools to do so (Association of American Colleges & Universities, n.d.-a). Given that its membership encompasses nearly all possible institutional types, both in the United States and globally, it should be of little surprise that the guidance it aims to provide to institutions is generalized enough to be applicable in many different types of schools and situations. Since 2005, its National Leadership Council for Liberal Education and America's Promise (LEAP) has been working to specify what college graduates need to know and are able to do with the knowledge post-graduation (Association of American Colleges & Universities, 2007). A multiyear dialogue with colleges and universities, the business community, and analysis of discipline-specific accrediting bodies resulted in a list of essential learning outcomes to prepare students for the challenges of the twenty-first century. The LEAP Leadership Council recommends that desired outcomes are developed across all fields of study, which include competencies consistent with other surveys of the market (critical/creative thinking, written/oral communication, teamwork/problem solving, etc.).

AAC&U's efforts towards building employable graduates are set apart from other similar initiatives in a few key ways. First, AAC&U has surveyed employers every few years since 2006 to gain a sense of the current marketplace that then enable conclusions to be drawn about how industry emphases and educational performance is evolving over time. Employer voices over the period have always acknowledged a desire for colleges to improve in building skills for the workplace, however, they have also overwhelmingly indicated placing an emphasis on the 4-year college degree (Hart Research Associates,

2010). Further, business leaders in recent years have a higher degree of confidence in higher education than the general public tends to, while also believing that a college education is worth the investment (Finley, 2021; Hart Research Associates, 2018). From a skills perspective, a majority of employers believe that students need to develop a broad base of skills and knowledge and in-depth knowledge pertaining to a specific field of study (Finley, 2021; Hart Research Associates, 2010, 2013, 2018). By comparison, only a small minority (ranging from 16-20 percent) believe that students just need to possess strong discipline-specific knowledge (Association of American Colleges & Universities, 2011; Hart Research Associates, 2010). This type of desired breadth is also signaled within the skills lists where employers tend to place strong emphasis on employees possessing skills in areas directly reflective of AAC&U's desired learning outcomes (Finley, 2021; Hart Research Associates, 2013, 2018).

State Influence

On the home front, many states have been equally active in their attentiveness towards addressing the skills needs of the labor market. In 2015, at least 35 state governors expressed in their various "state of the state" addresses the importance of higher education to the economic and workforce development in the state (Emma, 2015, as cited in Katz, 2015). Multiple states demonstrate their commitment to increasing the number of skilled workers being fed into the employment pipeline coming from higher education via the use of funding incentives for well performing schools in the state. Decisions are often based on completion metrics, though a handful (Florida, Louisiana, Minnesota, Missouri) do also take into account labor market outcomes of four-year college and university graduates (Koproske, 2017; Li, 2018; Missouri Board of Higher

Education, 2018). However, assuming that all those who have earned a degree have been effectively prepared for the world of work is not the same as ensuring that graduates have obtained the skills and competencies needed to be productive employees. So while funding incentives are not usually tied to job placement outcomes directly, a majority of states have worked in recent years to define career readiness, including the knowledge, skills, and abilities that graduates need for success, with an expectation of inclusion in the curriculum (Mishkind, 2014). The state-created skills lists tend to mirror employer surveys, with critical thinking/problem solving, collaboration, social and emotional learning, communication, resilience, and citizenship/community involvement being the most popular characteristics included. One interesting aspect to the categorizations they use within their examination is how they term these skills to be part of "actionable state definitions." In other words, there are employer-based desires for knowledge, skills, and abilities that employees bring to the workforce, however, these are not things that can be further crafted within the classroom environment. Places like Indiana, Texas, and Virginia have taken the actionable definitions even further by creating online tools for learners that link skills and credentials with employment opportunities (Carnevale et al., 2017). Whether explicit or not, the message to public institutions in these states is to actively engage in the state's educational pipeline to create employable graduates (Hoke et al., 2013; Koproske, 2017; Lumina Foundation, 2020; Mishkind, 2014).

AAC&U's Liberal Education and America's Promise (LEAP) initiative is based on a set of recommendations that the LEAP National Leadership Council (NLC) published in a 2007 report intended for educators and the nation emphasizing a set of essential learning outcomes (Association of American Colleges & Universities, 2011).

The NLC itself is made up of a collaboration of business, academic, and policy leaders. The LEAP initiative draws distinctions between liberal education and general education yet triumphs the importance of each towards ensuring student success into the future. As part of the initiative, LEAP States have been formed through an application process which amount to formal collaboratives with the state system or council usually taking charge (Association of American Colleges & Universities, n.d.-b). Their charge is to engage the educational sectors and civic and business leaders through the state to commit to aligning themselves with the essential learning outcomes as defined in the LEAP framework to achieve greater levels of educational achievement. There are currently 14 such states in the nation, with one being Virginia. Virginia serves as an excellent example of how the framework functions at the state level and the guidance subsequently trickles down to its states' institutions. Its goal through its LEAP participation is to enable the enhancement of policies and practices that impact liberal education quality throughout the state in order to improve graduation rates and workforce outcomes.

In Virginia, the axiom that academic programs need to ascribe to the standard whereby a degree sets up the credential holder for gainful employment does indeed hold true. Its state council for higher education initiated a Higher Education and Workforce Alignment project in 2019 where deliberate efforts are made across the employment pipeline to help "individuals prepare for and obtain meaningful careers while also meeting employer needs" (State Council of Higher Education for Virginia [SCHEV], 2020b, p. 1). Alignment for these purposes was defined as "the relationship between workforce needs and higher education academic programs to reduce labor market imbalances" (p. 1). Within this project, SCHEV aims to identify the skills and

competencies necessary to benefit several industry sectors across the state and create a framework wherein higher education performance is measured by productivity in these areas. Concomitant state funding is recommended as a byproduct of this work to create policy levers encouraging higher education's compliance with these efforts. In its report, it further references at least eight other states with similar higher education-to-industry frameworks.

Current efforts in Virginia towards aligning higher education with workforce demands were borne out of state law from a decade earlier. HB 639, enacted as Va. Code § 23-9.2:3.04 (2012), first charged SCHEV with collecting and publishing data from both public and private HEI's in Virginia regarding employment outcomes for its graduates (State Council of Higher Education for Virginia, n.d.). Measures were to be taken at 18 months and five years post-graduation of average salaries and education-related debt. Data was aggregated by major and degree program for graduates obtaining full-time employment in the Commonwealth at an entity reporting to the Virginia Employment Commission (VEC). This, in turn, has led to the creation of the Virginia Longitudinal Data System (VLDS), with data actually available dating back to graduates in 1992-93. The initial law was repealed in 2016 and subsequently reenacted under similar legislation in 2017 to continue governing the data and management of the VLDS (Postgraduation Employment Rates Act, 2017). Despite the wealth of information that the VLDS makes publicly available regarding employment outcomes of the state's graduates, with the limitations on data gathering, conclusions are difficult to draw based on the information available given that outcomes are only captured for approximately 36% of graduates (State Council of Higher Education for Virginia, n.d.).

Emphasis on employment outcomes and job-based preparation is also derived in the state from within the Virginia Department of Education's Office of Career, Technical, and Adult Education. Going back to the 1980's, hundreds of employers throughout the commonwealth have been regularly engaged in interviews or surveys to understand workplace trends and essential skill-needs for entry-level workers (Crespin et al., 2019). Over the last 20 years, this information has generated a set of, what is now, 22 skills termed as Workplace Readiness Skills. These skills have evolved over the years from an original list of 13 in the late-1990's. With each modification throughout its evolution, the list has informed the curriculum and assessment resources used in each of the state's Career and Technical Education (CTE) courses. Admittedly, the students who engage with CTE resources are not necessarily the same type of students or those competing for the same jobs within the state's economy as those students who are completing four-year degrees. However, the overlap of the skills between those listed as Workplace Readiness Skills and those consistently presented as essential in the aforementioned market surveys provide a good indication that the skills deemed to be crucial for workplace success are not context or credential-level specific, rather they are universal and relevant in most workplace, and therefore educational, settings.

Within the state's guidance for public institutions who plan to offer new degree programs, it is required that institutions demonstrate how state-level and employer needs will be fulfilled by the eventual graduates from the proposed program (State Council of Higher Education for Virginia, 2020a). This is just one more indication of the state council's expectations of public institutions to consistently engage in process and curricular improvements that result in program modifications as needed. While each

state may differ greatly in their expectations of higher education and its responsibilities towards the labor market, Virginia's approach provides some insight into how this can play out in the development of policies and programs.

Federal Response

At the federal level, legislative efforts in recent times seeking to compel higher education to effectively prepare college graduates for the labor market has been formalized under the auspices of the Gainful Employment rule. "Gainful employment" was a term first used in the Higher Education Act (HEA) of 1965, but never defined in regulation or statute (National Association of Independent Colleges and Universities, n.d.). As a result, negotiated rulemaking began in 2009 under the Obama administration to define the term as part of the process to introduce new regulations to govern institutions and programs seeking to provide federal financial aid to students. Under the HEA of 1965, the promise of receiving training in a program that would subsequently lead to gainful employment was the condition under which students could receive federal financial aid (Program Integrity: Gainful Employment, 2019). In an effort to address the concerns regarding growing student loan debt in the nation, the legislation intended to compare expected salary outcomes given a specific earned credential against the average debt ratio typically absorbed by graduates in the pursuit of said credential (National Association of Independent Colleges and Universities, n.d.; Program Integrity: Gainful Employment, 2019). If programs failed to reach a certain threshold, they would run the risk of being unable to offer federal financial aid to students in the program. Since the guidance was specific to non-degree programs, which are typically geared towards providing career education, critics argued that it unfairly targeted the for-profit sector of

higher education where such programs are more prominently situated. After years of political back-and-forth and one regulatory revision in 2014, the regulations were rescinded under the Trump administration in 2019.

That the gainful employment regulations were confined to certificate or other non-degree programs within the non-profit, 4-year sector sends the message that the highest levels of government are at least concerned about regulating one form of post-secondary education to ensure that the government is making a worthwhile investment towards ensuring graduates' positive labor market outcomes should not be lost in the details of regulation's ultimate demise. One relic from the initial implementation of the gainful employment regulations that still persists today is the College Scorecard (Program Integrity: Gainful Employment, 2019; United States Department of Education, 2021). This tool was created as a means to make available publicly accessible data regarding the performance of institutions and specific programs withing the schools. While data related to graduate debt and earnings broken down by program is only available for the years that the legislation was actively in place (2014-2018), enrollment, student aid, costs, and student outcomes data are still available by institution dating back to 1996-1997 (United States Department of Education, 2021). This more limited perspective certainly pales in comparison to the data that was made available from 2014-2018, however, the fact remains that the overall period of gainful employment regulation was defined by increasing the transparency to perspective students regarding what they could expect from an institution. Though there are many arguments to be made regarding the validity and accuracy of how debt to earnings ratios were being determined by economic circumstances under the regulations, the enactment of such a rule in the first

place is a strong signal of the growing concern among the American public regarding the return on investment that students are receiving based on the employment opportunities afforded to them through participation in higher education. It is also worth mentioning that a recent examination projecting impacts of the since-rescinded regulations revealed that only 70 percent of the applicable programs at public institutions would have successfully passed the expected thresholds if they were still in place, per an online tool developed by a Texas policy group (Gillen, n.d.; Murikami, 2020).

Contending Viewpoints on the Skills Gap

Despite the seemingly overwhelming evidence in support of the existence of a true skills gap given the number of employer voices attesting to their hiring issues, there are still dissenting voices that question the reality of the situation. Just as with the skills gap narrative itself, these dissents are mainly framed at a generalized level as opposed to being focused upon any specific institutional type. For instance, the National Association of Colleges and Employers (NACE) state that frequent contrarian arguments cite the Bureau of Labor Statistics' (BLS) Job Openings and Labor Turnover Survey (JOLTS) report, which provides that as of 2018 there were roughly 6 million unfilled jobs in the United States (Bureau of Labor Statistics, 2018, as cited in Koc, 2018). In providing context to this figure, NACE mentions that of the 6 million openings, 5.2 million openings were created by a worker separating from a previous job, either through quitting, being laid off, or retirement. They use this figure to reason that the number of separations actually speaks to a healthy job economy given that separations tend to increase during strong economic periods and decrease during recessions. They further argue that these rates have been stable for a 24-month period preceding the report period

and the vacated jobs are ultimately being filled, albeit a small portion do take longer than desired. Likewise, NACE also provides as a supply and demand argument that wage increases remained steady for a ten-year period dating back to the 2007 recession with the rationale that if qualified workers were truly in short supply, then we should have observed an increase in wages to correspond with greater competition in the market for a scarce commodity. Finally, NACE suggests that the skills gap is not a market-wide problem. Rather, they suggest that it is contained to businesses in specific geographical areas where the skilled workers are not present in ample supply, in businesses that refuse to pay the wages necessary to recruit the proper level of talent to the organization, and lastly, in what seems more like a confirmation of industry complaints, where workers are not maintaining their technical skills in line with current demands. Similarly, Hora (2018) has also presented evidence of location and wages as a problem as well.

Peter Cappelli of the Wharton School at the University of Pennsylvania contends that misnomers on both sides of the supply and demand equation are to blame for the prevailing sentiment of the skills gap. On the demand side of the hiring process, the common skills gap argument theorizes that there are not enough workers with adequate and applicable skills for the needs that employers have. In reality, Cappelli asserts that the "skills" employers believe to be present in short-order are really better described as character traits, like motivation and punctuality, and the difficult jobs to fill are less skilled jobs, such as laborer, sales rep, and office support (2012). He also rationalizes that completion rates are attributable to supply issues, since, in part, there is statistical evidence to show that student performance has actually improved over the past few decades. While pointing out these perceived holes in the skills gap argument, he takes

the position that the real issue is the hiring process itself, where employers have become overly specific and demanding with the job postings to the point that it can become impossible to find an applicant that fits with all of the supposedly required criteria.

Other studies argue that a universal skills gap frame is applied improperly when the issues are really relegated to specialized industries requiring specific skills, as opposed to a market-wide shortage on properly skilled workers (Balwanz & Ngcwangu, 2016). STEM-related fields and training for the trades, particularly with respect to technical training deficiencies, have often been cited as specific areas where skills deficiencies need to be addressed.

Hora, Benbow, and Oleson's (2016) contention with the skills gap narrative is less about arguing the validity of its existence, rather that the narrative fails to go far enough in examining factors of culture and context inherent to the discourse. They provide evidence from their own field studies that generally confirm much of the skills gap narrative. They concede that employers do experience specific skills deficiencies as is well documented, but offer that an extension to the employer perspective is necessary given that some shortcomings extend beyond what is possible to be gained within the higher education constructs. This point-of-view is based on descriptions employers provided them regarding the type of skills they are seeking that spread beyond specific knowledge and noncognitive skills, like communication, teamwork, and critical thinking, into describing a competency level that can really only be created through applied experience. Short of internship-like programs, the type of time-intensive, hands-on learning they are seeking would generally not be realistic to accomplish in a limited time frame within a higher education classroom.

Institutional Classifications

Almost 2700 of the 4000 postsecondary schools in operation in the United States offer four-year undergraduate degrees, leaving approximately 1300 schools that only offer two-year degrees. Of the nearly 4000 HEIs, only the smallest minority of institutions are categorized as "Research I (R1)" by the Carnegie Classification system. According to IPEDS data, there are currently 132 doctoral universities nationally that awarded at least 20 research/scholarship doctoral degrees and had at least $5 million in the past year of total research expenditures to earn the "Very high research activity," or R1, moniker (The Carnegie Classification of Institutions of Higher Education, n.d.). Of the 132, 95 are public schools. There are an additional 135 universities that also meet the benchmarks to be classified as a research university but have lesser research activity to those HEIs ranking as R1 and are instead classified as R2 for "High research activity." Nearly all the R1 and R2 institutions offer baccalaureate degrees in addition to doctoral degrees. Size varies greatly among the R1 group of institutions with the smallest enrolling around 2000 students with the range extending upwards to nearly 90,000. In terms of undergraduate population, the majority of student enrollment is on the undergraduate side in almost 90% of R1s, with over half of the 132 R1s possessing a greater than 75%/25% split between undergraduates and graduate students.

Beyond Carnegie classifications, there are also functional divisions of HEIs. One such distinction Lattuca and Stark (2009) make is in the differential approaches taken by public and independent HEIs regarding the balancing of liberal arts against career preparation. They offer that in state colleges and universities liberal arts education is added into the curriculum as a supplement to career programming, whereas independent

schools are liberal arts focused by nature and have adapted to societal demands by adding more professional preparation into their degrees. Evidence of this evolution in catering to societal desires for added vocational programming can be found in the declining number of HEIs that once qualified as independent sector liberal arts colleges shrinking from 212 in 1990 to 130 in 2015 (Baker et al., 2012). Despite disagreement over which majors should be considered professional, over sixty percent of undergraduate degrees are now conferred in vocational or professional fields (Baker & Baldwin, 2015).

Research universities, as a subsection of their larger categories, are said by Lattuca and Stark (2009) to struggle with balancing general and specialized study given that there is greater organization focus placed upon the development of new knowledge. As a separate subset, two-year colleges, often referred to as "community colleges," have evolved over time from their beginnings as preparation for four-year schools earlier in the 1900's, to a stand-alone entity that also now serves the community as part of the mission. Professional development courses, adult education, and occupational preparation are all common to the missions of two-year schools. Two-year and four-year schools certainly share a number of commonalities within their missions and as a result do compete for students in search of the right type of vocational preparation. Likewise, for-profit schools are another subset of schools that is heavily focused upon workforce development. From these various missions, and in spite of some natural crossover, Lattuca and Stark group institutions together into one of three variations – research, liberal arts, and utilitarian. Further, in large comprehensive universities offering many programs, multiple missions may be present from among these three.

Missions

One might assume based on all of the advocacy bodies in place, even made up in large part by representatives from the institutions themselves, that there would be consensus among all HEIs regarding what an optimal general education program should look like. Nothing could be further from the truth. General education curriculum must still be constructed within the boundaries of each institutions' makeup and scope and aimed at supporting the overall unique mission of each institution. Constituent bases vary greatly based upon classifying characteristics of an institution, such as public, private, or for-profit, degree types awarded, instructional program classifications, size, and setting.

Missions are a crucial element of expressing to all internal and external parties what an institution is all about and how they operate in reality (Delucchi, 1997; Morphew & Hartley, 2006; Stich & Reeves, 2016; Taylor & Morphew, 2010). Per Thomas, missions communicate "relational issues and priorities that are deeply embedded, and sub-consciously informing practice" (2002, p. 431). It stands to reason that this concept would extend as well to the language that academic programs communicate regarding their mission and goals, just as is true for the HEI that these are situated within. Some researchers (Marginson, 2008; Stich & Reeves, 2016) have additionally included an economic element within the philosophical lens of the mission statement rhetoric. This logic is based on market dynamics where institutions compete with one another in the global sphere for resources and those that express themselves in an optimal way enhance their ability to recruit students, thereby utilizing the mission statement to increase resources and prestige.

As the number of doctoral degrees awarded plays a role in determining the institutions which qualify as R1 or R2, it should come as no surprise that graduate education plays a major role in the research university (Kenny & Glaser, 1998). R1 universities dominate the top tier of US News & World Report's Best Colleges Rankings (2021), and their mission statements generally reflect this perceived excellence, as well as the multitude of functions they perform (Stich & Reeves, 2016). Per the name, a major commitment in the research university is to create new knowledge, which plays a significant role in how faculty are recruited and retained. As has been the case for many decades, this also means that undergraduate education can at times suffer due to the conflicted priorities of the faculty that are asked to serve both the teaching and research aspects of the institutional mission (Boning, 2007; Kenny & Glaser, 1998; Lattuca & Stark, 2009; Marginson, 2006). Kenny and Glaser (1998) have even gone as far as alleging that students at research universities have been shortchanged on their investments since undergraduate tuition makes up such a large portion of budget support and yet undergraduate instruction can be sub-standard by comparison to other aspects of mission implementation. They reason that undergraduate students are often attracted to these institutions under the false pretense that they will be working with world-class professors and conduct groundbreaking research, but in actuality learn instead from poorly trained teaching assistants, rarely conduct any sort of significant research, and if they do inhabit the classroom with renowned scholars, it is only in large lectures with hundreds of other students. Therefore, Kenny and Glaser's argument centers less upon alleging that the returns for undergraduate students at research universities fails to be

worth the investment, rather that students are misled about the true value of the product delivered.

Regardless of the semantics around Kenny and Glaser's claims, Taylor and Cantwell (2018) empirically demonstrate that spending per undergraduate student at the most prestigious universities significantly exceeds that of less selective institutions. They use the classifications of "multiversity," "elite," and "super elite" to describe the most selective research institutions who spend extensively on the education of its students, while relying the least upon tuition subsidies to do so. At the same time, they show that average graduation rates among these types of institutions far outpace institutions that provide broad access to students and spend considerably less per student. As an indicator of just how unique these institutions are, the top three categories in Taylor and Cantwell's study encompassed only 9% of their sample of institutions, with elite privates making up all of the "elite" and "super elite" classifications. Multiversities encompassed the largest enrollments and were typically public flagship schools that were among the most selective nationally. Outside of Taylor and Cantwell's work, it is also worth noting that at the highest reaches of the research university institutional classification schema, the AAU requires as a part of its membership assessment that institutions can demonstrate a commitment to undergraduate education (Association of American Universities, n.d.-b). Taken altogether, there are strong counterpoints to be made in contrast to the claims that students in research universities receive a lesser product for their investment in undergraduate education.

Going back to the contention that alleges that research universities fall short on the undergraduate teaching ethos, Stich and Reeves (2016) posit that research universities

reflect this in their mission statements by framing instruction within "scholarship" and mentioning teaching under the guise of the uniqueness of the environment or special approach taken towards instruction. Stich & Reeves argue that the use of "scholarship" differentiates the practical from the academic and confirms the idea of the faculty member as scholar first and teacher second. Marginson (2006) insinuates that elite institutions do not need to market themselves and their services the same way as lower-tier institutions do because of the competition they face for students. Lower-tier schools must sell the fact that teaching is "unequivocally their core business" (p. 7), whereas top-tier schools will continue to be highly desired by maintaining institutional prestige through the areas that made them as the perceived elite to begin with, which research usually plays a major role in. With a research-focus also contributing to making a research institution globally recognizable and highly competitive amongst its peers, it is also able to attract talented students from around the world (Marginson, 2016; Taylor & Cantwell, 2018). This competition for limited seats at elite institutions is what allows such schools to build prestige through its ability to be very selective about the top-notch students it elects to admit (Marginson, 2006).

Evidence suggests that vocational preparation is more so a characteristic of less selective institutions than is the case at the most selective (Goyette & Mullen, 2006; Mullen, 2011; Stich, 2012), though this sentiment may go back to what institutions are aiming to convey through their written mission statements. Stich and Reeves (2016) provide support to the notion that the upper-most and lower-most tiers of institutions, in terms of perceived academic quality, convey an aim of preparation for work and life or providing (pre-)professional education at a relatively equal proportion. Within this,

neither institutional tier shows any real propensity to advertise preparation for specific professions. Where the findings do diverge by tier, however, is in the manner in which these workforce preparatory goals are expressed. At upper-tier institutions, "preparation for professions" is the choice of verbiage, whereas "career" is the way it is presented at low-tier institutions. The authors proffer that the selection of "profession," which is often accompanied with mentions of the research being performed, gives the suggestion of an engagement of disciplines instead of vocations. It is this vocational position that lower-tier schools generally stress to entice students, while the upper-tier has the latitude to sell a more specific educational experience, such as a traditional liberal arts education.

Caplan (2018) gives a bit of a dismissive perspective on the real utility of our modern system of education with respect to vocational pursuits. He argues that earning a degree signals to employers that college graduates are prepared to endure a great deal of tedium with the ability to comply with rules and procedures since these are required elements of obtaining a 4-year post-secondary education. To Caplan, this quality is supposedly valued by employers at a greater level than actual skills and knowledge that employees might bring to the worksite. Within this assertion, Wood (2019) takes the position that in such cases, a liberal arts foundation would be essential for students to possess under the assumption that this is the area within their education where students learn to express themselves.

Higher Education as a Public vs. Private Good

There are arguments on both sides of the equation stretching back many decades as to whether higher education, specifically within the public sector, should be viewed as a public good or a private benefit. These arguments often come up in today's world in

the context of determining who should fund higher education – whether that be state and federal governments or the student. For the purpose of this discourse, the focus will be upon public institutions, which the National Center for Education Statistics defines as "a school or institution controlled and operated by publicly elected or appointed officials and deriving its primary support from public funds" (National Center for Education Statistics, 2021, para. 388). From this, it is clear that there is a dependent and reciprocal relationship between the HEI and the public. Beyond this frame, short- and long-range benefits to the individual and society play a major factor the public versus private good arguments.

The research university, in particular, truly embodies all angles of the public versus private good conversation as a result of its complimentary goals to create new knowledge and impart knowledge on its students. Certainly graduates receive an education that offers lifelong potential for making human capital gains based upon the knowledge and skills that are acquired during the time at the institution. Human capital is defined as "the knowledge, skills, and attributes acquired by investment in education and health throughout the lifecycle" (McMahon, 2009). Empirical evidence shows that the earnings potential of individuals with a college education far exceeds that of their high school graduate counterparts, which is directly related to not only the knowledge gained, but the possession of a college degree. Recent data shows that men with bachelor's degrees earn approximately $900,000 more in median lifetime earnings than those with only a high school education; for women, the earnings boost is closer to $630,000 (Tamborini et al., 2015). Additionally, there is research evidence to show that students gain non-monetary benefits from a post-secondary education in the forms of longer life

expectancies, lower alcohol and tobacco consumption, less likelihood of obesity, better physical and mental health, greater life satisfaction, and greater civic participation (Olaniyan & Okemakinde, 2008; Netcoh, 2016; Willetts, 2015, as cited in Williams, 2016). The fact that students are gaining these earnings and physical well-being benefits from their education constitutes the crux of the position that education is a private good.

There is also a public well-being element to investments in higher education. From a strictly economic perspective, a greater concentration of highly educated workers typically aligns with a greater presence of high skilled jobs (Slaughter et al., 2015). These conditions create a stronger local economy, providing rationale to the idea of using public funds to support HEIs (McMahon, 2009). In addition to overall GDP growth in the presence of more educated individuals, some of the benefits seen as private in nature can be flipped and observed as beneficial to society, including lower crime rates, better health outcomes, and greater civic participation (Olaniyan & Okemakinde, 2008; Netcoh, 2016). The research ethos of the research university can also contribute a great deal to the public. While there are certainly private gains to be reaped from research discoveries, whether the payoff is realized by the individual, some private entity, or a combination of both, there is also the generation of non-proprietary knowledge that is shared in the public domain at low costs to ultimately benefit the masses (Williams, 2016).

Moreover, not all outputs from higher education are tangible or empirically measurable, and as a result, the determination of where profitability exists on a continuum between the individual and society becomes much less clear cut. Implications to the community via institutional presence stretch beyond the purely economic aspects and can include service to the community by those associated with an HEI, international

relations via study abroad programs, entertainment opportunities through the arts and athletics, and so many other aspects that accompany the presence of colleges and universities that help create richer communities (Marginson, 2018). If post-secondary education was to be funded solely through student financing upon the logic that it is purely a private good, it is not difficult to assume that many of these aspects would cease to be.

General Education Perceptions and Views towards Reform

Higher education is not an indifferent party to the world outside its boundaries as some skills gap-related arguments would lead one to believe. While not necessarily explicitly intended at directly addressing the skills gap, many HEIs that have heeded the call to update curriculum and programming in recent years to a more modern approach. Additionally, some general education reforms at AAC&U-member institutions have entailed various high-impact practices with potential long-term implications towards building employability, such as capstone projects, electronic portfolios, practicums and internships (Hart Research Associates, 2009, 2016).

After the "disaster area" state of general education in the late-20th century (Carnegie Foundation for the Advancement of Teaching, 1977), programs adjusted by increasing the level of structure in place. Yet judging by the incremental reform efforts during the interim period, particularly since the turn of the century, the perfected state of the GE curriculum may still be aspirational in many places. In addition to the 80-90 percent of institutions that either reviewed or revised undergraduate curriculum during the 1980's (Gaff, 1999), surveys of academic officers in the ensuing decades revealed that the vast majority were either in the process of revising GE requirements or planning

to do so in the near future (Hart Research Associates, 2009; Johnson et al., 2004; Mrig, 2013). Academic officers in these and similar surveys have likewise indicated the placement of a greater priority on general education than in years past, which is complemented by an increase in emphasis on assessing GE outcomes (Hart Research Associates, 2009, 2016; Jaschik & Lederman, 2020; Mrig, 2013). This reform phenomenon has not been limited to a specific sector of higher education, with elite research institutions such as the Universities of Arizona, California-Los Angeles, Nebraska, North Carolina, South Carolina, Virginia, the College of William & Mary, Ohio State University, Penn State University, Virginia Commonwealth University, Virginia Tech, and Wayne State University, among others, all undertaking to some extent a process to reform their GE curriculum. Within these efforts, a number of the schools have utilized the framework and resources provided by AAC&U, which favor an outcomes-based approach over the traditional distribution model (Association of American Colleges, 1994), to guide their reforms and subsequent assessments. It is still unclear though if faculty are fully embracing a shift to outcomes-based models, with 25% of faculty opposing the move and another 55% responding neutrally in a study gauging the faculty viewpoints on shifting GE requirements (Paulson, 2012).

In a 2020 survey of chief academic officers, those representing public doctoral institutions unanimously opined that their institutions effectively prepare students for the world of work (Jaschik & Lederman, 2020). In multiple surveys of chief academic officers at AAC&U member institutions, a majority indicated that their undergraduate programs have clear learning goals and requirements linked to them (Hart Research Associates, 2009, 2016). Among the institutions with a common set of learning

outcomes for all students, the skills and knowledge areas which are addressed in the curriculum share tremendous similarities with the employability skills lists appearing prominently in employer surveys (e.g. writing skills, critical thinking, oral communication, etc.). Yet when it comes to GE, merely 60% of administrators at public, doctoral institutions indicated that they were either satisfied or very satisfied with the institution's GE program and requirements. With 30% of administrators in public, doctoral institutions indicating that their schools are only somewhat effective in providing a quality undergraduate education, one could conclude that improving general education might contribute to an enhanced overall product and greater levels of confidence in it. However, only a similar percentage (63%) to those who expressed their satisfaction in GE also indicated that they had performed a recent review of the effectiveness of GE requirements (Jaschik & Lederman, 2020). Strikingly, half of public doctoral administrators agree that GE requirements have become too expansive, and only a third agree that students emerge from GE with sufficient writing skills. At the same time, only around half of all administrators believe GE requirements are well integrated with major requirements, even though a greater majority indicate an increasing emphasis on doing so (Hart Research Associates, 2009, 2016).

Despite institutions' efforts to the contrary, which in some cases even entails requiring an orientation on the importance and value of liberal arts education (Hart Research Associates, 2009, 2016), students do not seem to share the same sentiment regarding the advantages and utility to be gained from their GE experiences. A 2021 study commissioned by the State Council of Higher Education for Virginia (SCHEV) surveying state-supported institution graduates who completed a degree over a recent 11-

year window is one such inquiry providing support to this belief (Survey and Evaluation Research Laboratory, 2021). These graduates' opinions towards their educational outcomes proved to be quite revealing, particularly with respect to their views on general education. Even though 88% of 4-year graduates voiced satisfaction with their overall education – including 92% voicing satisfaction with the academic quality of their education and 88% holding positive views on the relevance of their course content – only 38% expressed an appreciation for their GE coursework. Among the students that were "not at all" or only "slightly" appreciative of their GE experience (31%), the most common reasons given as explanation were that they did not receive much in the way of value, skills, or knowledge (54%), it was not relevant to their career (48%), it took time away from the major (39%), and it was not worth the cost or time (38%). In spite of this, only 11% of 4-year graduates were dissatisfied with how their education overall prepared them for the workplace. These figures taken together are perhaps a bit surprising given that 33% of the overall sample are currently employed in a discipline unrelated to their major field of study and it is breadth within a degree – which is frequently associated with general education – that is often touted as a characteristic which prepares students for many different types of employment opportunities instead of just those that are narrowly associated with a major. Among the recommendations that individuals believed would have better prepared them for the workplace, the two most popular responses were the need for more hands-on training and an increased focus on developing workplace skills. While this is not necessarily indicative of the presence of a skills gap, it does show some concentrated support among 4-year alumni that they would have liked to have an increased emphasis on specific preparations for the workplace.

These graduates' perceptions are notable, however, given the evidence to show that students believe they are much more proficient in the competency areas that employers hold in high regard than the employers assess them to be (NACE Staff, 2018). So not only are students placing an emphasis upon developing skills that they believe will translate to the world of employment, but they also tend to be more deficient in such skill areas in the eyes of employers than they believe. Related back to the idea of the skills gap, it shows not only a disconnect in what they think employers believe to be important, but a mismatch as well regarding how they should be educated in an optimal way for career preparation.

SCHEV's survey findings related to GE are consistent with other studies as well. One such example comes from a 2015 study by Thompson, Eodice, and Tran examining GE perception among current students at a public R1 university. As with commonly held sentiment on GE, students in this study indicated that if GE were not required, they would probably choose not to enroll in such courses (50%), and they would prefer taking additional major courses as opposed to the equivalent number in GE (72%). Other pertinent findings in the study included 70% indicating that they believed the purpose of GE was to help them become more well-rounded and responsible citizens, with only 50% indicating that GE course instructors challenged them to think about how the GE coursework was relevant to their majors or future careers. This is an important shortcoming to recognize as faculty have been shown elsewhere to agree with the idea that making GE learning outcomes clear to students would improve student learning (Paulson, 2012).

The current student and alumni perspectives obtained in these studies reveal a few things relative to their perceptions of general education. The first is that approximately half or more of students and alumni hold negative perceptions based on most of these measures pertaining to general education. Within this, respondents viewed their educational experiences in their chosen major much more favorably than the requirements prescribed through general education. Further, general education was not viewed as providing skills for the workforce, rather it was viewed that the GE portion of the curriculum served primarily to prepare students as responsible citizens for the world. Lastly, there are perceived shortcomings in faculty making connections between the expected outcomes of GE and how they actually apply to the world outside, particularly in the world of work.

That said, these studies do not indicate the presence of a skills gap, especially among the respondents from the research university surveyed by Thompson, Eodice, and Tran (2015). Within the context of the current study, this is particularly relevant.

If employers are to be believed regarding their claim of the presence of a skills gap among college graduates who are making their way into the workforce, the narrative fails to provide additional context as to how it might apply to students who come to the labor market from among the upper rung of higher education, namely elite, research universities. This study seeks to better understand this relationship, if one does exist. Even with employers making sweeping declarations about the deficiencies of college graduates entering the workforce, it is yet unknown if this applies across all institutional types equally, or at all. Likewise, context related to institutional reactivity broken down by various institutional characteristics is in equally short supply. Therefore, to further

connect the dots related to this complicated issue, there is tremendous value in gaining a greater understanding related to how this might play out within the influential confines of an elite, research university.

General Education in Research Universities

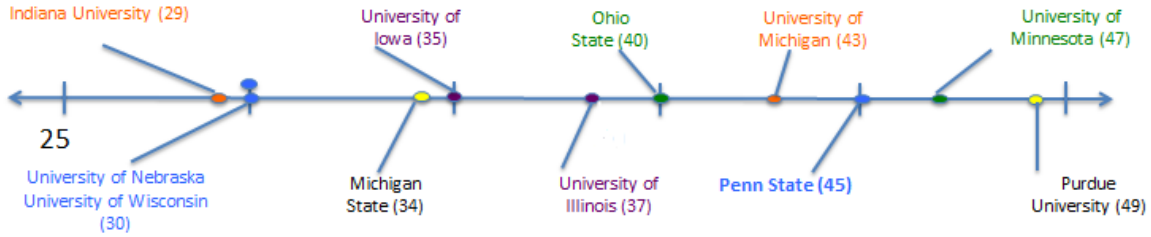
As has been discussed, there is no one-size-fits-all approach to general education or core curriculum across all higher education institutions. These curricular elements can vary a great deal across schools that possess similar institutional types, missions, or students. The general education or core elements can even differ a great deal from program to program within the same institution. Although research universities are a unique subset under the larger heading of higher education institutions, the variations present across this category of institutions are just as numerous as within any other grouping of institutions, schools, or programs. In fact, SACSCOC, which is the regional accreditor for several highly selective research institutions, simply stipulates that general education be a reflection of the institutional mission and characteristics (Southern Association of Colleges and Schools Commission on Colleges, 2018).

As evidence of this variation, Penn State University (PSU) undertook an investigation approximately a decade ago to establish a baseline to compare its own general education curriculum against. Within this investigation, PSU's own requirements were benchmarked with those of its peer institutions collectively inhabiting the Big Ten Conference (University Faculty Senate, n.d.). At the time of the investigation, the Big Ten was still a 12-member conference that was entirely made up of AAU institutions (it has since expanded to a 14-member athletic conference and the University of Nebraska

has lost its AAU classification). A graphical illustration of how PSU's requirements compare against the other public institutions in the conference is displayed in Figure 4.

Figure 4

Required General Education Credits among Big Ten Institutions



Note. Total number of general education credits required among Big Ten member institutions. Adapted from *Part A: National Research on General Education and the Penn State Context,* by Penn State University Faculty Senate, n.d.

Figure 4 clearly shows the great variation in the number of general education requirements from institution to institution, even among AAU, R1 universities. Nevertheless, there are still common elements that often comprise general education. Warner and Koeppel (2009) found that research universities, on average, tend to require two fewer general education courses than Master's comprehensive universities. Within this, research universities tended to require more writing/composition, history, natural science, and science lab courses than both Master's comprehensive universities and liberal arts colleges. However, research universities tend to trail these other institutional types in their offering of religion, philosophy, humanities, foreign language and math.

As a research institution exemplar relative to its general education offerings, the University of Delaware is another R1, public flagship university that recently reviewed its general education requirements for possible revision. Since part of the reform process involved benchmarking its requirements against those of comparable institutions, it is

assumed that the current set of requirements are influenced by other R1 schools' requirements. While it cannot be assumed that the requirements are representative of all R1 institutions, the University of Delaware's requirements contain many elements common to general education across institutions, such as a writing requirement and categories to obtain breadth across the liberal arts. The requirements, along with the purpose and objectives of general education, are presented here as one example of a general education curriculum chosen from this elite group of institutions (see Appendix B). Compared to a group of public universities also classified as "more selective" per Carnegie classifications, these requirements stand up as fairly standard. Deviations to this example set of GE courses tend to be observed most often in the requirement of additional writing, foreign language, and variations within the number and specifics of humanities/social science requirements.

In an article encapsulating specific aspects of its review processes, its faculty members note that, "the decentralized nature of a research university, combined with the dual pressures of research and teaching, makes general education reform especially difficult" (Bauer et al., 2003, p. 23). This statement proved to be particularly prescient given that it was written in the early-2000's and the general education reform at the University of Delaware was not actually implemented until 2016. The reform is also notable in this context because it demonstrates that, at least within this singular exemplar institution, it is possible to create a university-wide common general education curriculum in an R1 institution.

CHAPTER THREE:

METHODOLOGY

The purpose of this research was to explore the responsiveness of HEI's – specifically highly selective research universities – in constructing curriculum with workforce desires in mind. Specific focus was placed upon the application of these relationships to general education. With third-party surveys of employer desires consistently indicating the need for new graduates to possess a greater level of non-discipline-specific skills and abilities, this research aimed to better understand the differential approaches taken across disciplines towards building such capacities. Despite the wealth of information that is available regarding the employer side of the dynamic, there is very little literature that directly explores the higher education response. Within this, the existing knowledge base generally applies the skills gap across higher education equally without regard to institutional differences. With highly selective research universities representing a very unique, yet highly influential, subsegment of higher education, it was important to examine how the skills gap might apply to this specific institutional type.

Lattuca and Stark (2009) posit that the knowledge, skills, and attitudes which are chosen by curriculum planners as points of focus are reflective of their perceived goals of higher education. Therefore, it stands to reason that this population sampled from among many academic programs would be most able to help to make sense of how these dynamics come together to construct and execute a curriculum. Qualitative methodology

was the mode of inquiry with data collected from a single research university utilizing a case study approach. The research questions guiding this inquiry were as follows:

1. In what ways do faculty from different schools in a highly selective research university view the role of general education courses to develop skills as preparation for the workforce?
2. In what ways, if at all, do different undergraduate schools in a highly selective research university aim to develop employability skills within the curricular design, specifically within the general education requirements?
3. What are the internal and external influences that impact the inclusion (or exclusion) in the undergraduate schools of a highly selective research university of employability skills training within its general education?

Research Design

This study utilized a qualitative research approach, which Creswell (2014) notes is "for exploring and understanding the meaning individuals or groups ascribe to a social or human problem" (p.4). Further, qualitative methods are employed in the absence of quantitative inquiry when quantitative measures are unable to ably capture the context and richness desired from the data (Hatch, 2012; Yin, 2009). A qualitative method was also appropriate in this case due to the dearth of literature applying employability skill building in the context of general education in research institutions, which calls for exploration and understanding of the phenomenon (Creswell, 2014).

Case Study

A case study approach was utilized through the examination of a single research university for the purpose of understanding differential attitudes, processes, and

approaches from one academic unit to another. Creswell (2014) provides that case study methodology is used when the case being analyzed in-depth is one – or multiple – programs, processes, groups, individuals, or organizations. Since the organization in this case was a single entity (the university) composed of multiple related units (the academic schools), the setting lended itself well to a case study approach. Further, Yin describes the case study as "an empirical enquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (2009, p. 14). Similarly, Merriam (2009) defines case study research as "an in-depth description and analysis of a bounded system" (p. 40). Applied to the current study, the phenomenon was explored in its current iteration within the context of the chosen institution, placing time and place boundaries on the study.

The primary mode of inquiry was qualitative interviews with representatives (n = 18) of different academic schools at the university under examination. According to multiple authors (Becker, 1970; Denzin and Lincoln, 2011; Merriam, 1998), qualitative methods are utilized to secure rich descriptions from the individual's point of view. As such, this case study could be classified as descriptive since it aimed to "illustrate the complexities of a situation, depict how the passage of time has shaped events, provide vivid material, and present differing perspectives or opinions" (Rossman & Rallis, 2016). This study therefore sought to answer the "why and how" questions of the issues at hand (Yin, 2009).

Research Paradigm

In addition, the research employed the paradigm of pragmatism. Pragmatism deviates from metaphysical concepts such as the presence of a single truth, instead allowing for multiple realities based in both subjective and objective knowledge (Creswell & Plano Clark, 2011). This approach is useful when piecing together multiple perspectives to address the research questions. Pragmatists build the method of their research based upon how they intend to go about answering the "how" and "why" questions inherent within it (Creswell, 2014). As this research sought to not only uncover truths regarding actual approaches of academic units within a research institution towards building employability, it also endeavored to uncover subjective beliefs held by those participants who play roles in dictating what the realities look like in practice.

Setting

The setting for this research study was Mammoth State University (MSU), a highly selective public research university (R1) located in the United States. The university is highly ranked among its peers and is a member of the prestigious Association of American Universities (AAU) of which there are only 64 total member institutions in the United States (plus two located in Canada). Overall enrollment at this public university is greater than 20,000 students, with the undergraduate population exceeding 15,000 for the Fall 2021 semester. The undergraduate population is mostly residential and only a small proportion has transferred in from another institution or internally from another school at the university.

As a highly ranked public institution, its individual metrics also reflect this lofty perception. The retention rate among first-year students consistently is in the upper

quartile of R1 universities. Likewise, four-year graduation rates exceed and six-year rates are in the upper quartile of R1 universities. As with many R1s, the undergraduate population is relatively affluent. When considering the movement of students from the academic enterprise into gainful employment, this is a valuable characteristic to recognize, as evidence has indicated that unemployment rates are much higher at lower family income levels than among those from the highest-income families (Associated Press, 2013; Kochhar & Sechopoulos, 2022).

As an AAU institution, it is "on the leading edge of innovation, scholarship, and solutions that contribute to scientific progress, economic development, security, and well-being" (Association of American Universities, n.d.-c, para. 1). This summary statement is significant within the context of this study because it is reflective of both the caliber of the undergraduate student body and the mission of the institution. It is also reflective of a commitment to enhance society beyond the auspices of the academic realm, which in the case of its application to students, involves professional pursuits beyond graduation. As it relates to MSU, this connection is also made in the institutional mission statement whereby it aspires to develop citizens, leaders, and professionals.

MSU's status as an AAU university also carries with it a number of unofficial roles and responsibilities. First, it carries a level of visibility where it is hugely influential both within the academic realm throughout the state, as well as to communities and businesses. Further, as an elite university, its reach is not bounded within the local community or the state, rather, the impact is felt on a global level. Like other AAU schools, this translates into not only sending graduates out into the working world, but also into creating jobs as well (Association of American Universities, n.d.-a). Certainly

though, graduates from these types of elite institutions are well-qualified and in high demand when they enter the labor market (Salmi, 2009). This is undoubtedly the case for MSU graduates as well. Despite entering the labor market during a challenging hiring cycle due to the dynamics surrounding the COVID-19 global pandemic, three-quarters of MSU graduates during the 2020 academic year were employed by the end of 2020. Another sixth of graduates had proceeded into graduate programs. Fewer than 10% of graduates were still seeking employment by the end of that calendar year.

Based on median incoming test scores on the SAT and ACT, along with the relatively high percentage of admitted students in the top 10% of their high school class, it is clear that students are very well academically prepared upon entry to the university. The other aspect here is that students quite often bring in with them a considerable amount of IP, AB, and dual enrollment credits that exempt them out of courses upon enrollment at the university. Although academic policies are in place to ensure that students still spend a full four years at the university prior to graduation, there are many cases that these outside credits are used to satisfy a significant portion of general education requirements. Additionally, this outside credit accumulation allows many students to take excess major-specific courses and pursue double-majors.

A relatively low number of graduates carry any sort of debt load from the university. This is likely attributable both to cost control by the school and the type of financial means that a large proportion of its students hail from. Additionally, its graduates earn a median starting salary upon degree completion that exceeds the national average.

Academic Schools

The university grants baccalaureate degrees from eight different schools – Architecture, Arts & Sciences ("The Undergraduate College"), Business Administration, Continuing and Professional Education (SCPE), Education (ED), Engineering, Nursing, and Public Affairs (SPA). It also offers graduate degrees within nationally recognized programs in Graduate Business, Law, and Medicine, among others. Within the eight schools that grant undergraduate degrees, there are over 50 approved degree-granting programs listed by the state coordinating agency, with several additional majors that fall under the auspices of the interdisciplinary program.

The university operates under a "decentralized" governing structure, meaning that each school determines its own academic structure and requirements. Students can apply and be admitted directly into their chosen school and often into a major, with some exceptions, although many students begin undeclared and transfer internally within the university to another school and program. Business Administration and Public Affairs students begin as undeclared students and apply to their respective schools through a competitive admissions process after the successful completion of 54 or more credits and several prerequisite courses as stipulated by the school of destination. As such, most, if not all, of a student's general education coursework is completed by the time they gain admission to these two schools.

Accreditation

Under its Core Requirement 9.3, SACSCOC stipulates that each "institution requires the successful completion of a general education component at the undergraduate level that:

> (a) is based on a coherent rationale.
> (b) is a substantial component of each undergraduate degree program. For degree completion in associate programs, the component constitutes a minimum of 15 semester hours or the equivalent; for the baccalaureate programs, a minimum of 30 semester hours or the equivalent.
> (c) ensures breadth of knowledge. These credit hours include at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural science/mathematics. These courses do not narrowly focus on those skills, techniques, and procedures specific to a particular occupation or profession (Southern Association of Colleges and Schools Commission on Colleges, 2018, p. 21-22)."

At the university under study, the schools utilize this latitude provided by SACSCOC to each devise their own version of general education requirements within the degree programs offered.

SACSCOC-accredited institutions are also required to demonstrate evidence of meeting student learning outcomes within each program (Southern Association of Colleges and Schools Commission on Colleges, 2018). Learning outcomes must be specified within each of the educational programs and in general education. Discipline-specific accrediting bodies may, however, stipulate specific degree requirements that are expected to be completed within the programs falling under their auspices. These requirements may occur as a condition of program accreditation, they may be specified as conditions for student certification or licensure in the field, or a combination of both conditions. Only some of the programs at the university under examination fall within this category though.

SACSCOC does not mandate any specific competencies as expected outcomes. It instead notes that the competencies chosen at each institution should be a reflection of its mission. In preparation for each SACSCOC accreditation review, however, each institution must select a learning outcome as a special focus to be assessed for demonstrating institutional effectiveness under its Quality Enhancement Plan (QEP; Core

Requirement 7.2). Unlike SACSCOC, the state education commission stipulates within its Policy on Student Learning Assessment and Quality in Undergraduate Education that public institutions in the state assess themselves on six competencies – critical thinking, written communication, quantitative reasoning, civic engagement, and two additional competencies as selected by the institution itself.

Over the years, additional competencies have varied. For reference, competency assessments across the university in a previous review determined that expectations were being met in critical thinking, quantitative reasoning, and scientific reasoning, while falling short on building oral communication and written communication. Building upon these findings, for the current assessment period, the university has placed its focus on improving student writing skills, as well as global competence and information literacy as additional competency areas. Beyond assessments specific to the SACSCOC reaccreditation process, the university states that it assesses on average one competency per year.

Context and Resources

As with many of its peer AAU institutions, MSU's resources and global reach are quite significant. Like its financially well-off student base, the university itself has a significant endowment that places it in the top quartile of public R1s.

In terms of library resources, MSU is highly ranked by the Association of Research Libraries rankings, which among other metrics is based upon total library and library materials expenditures. Materials, in this sense, are not limited to books and research databases, but also include high tech media, software, training materials, and personnel to assist with outside the classroom instruction. These resources are in addition

to the many state-of-the art spaces – some that are central and some that are specific to individual schools – available to students as well. Altogether, these learning resources often mirror what is available and utilized within the highest levels of business.

Likewise, the university career center and the many branches situated within some of the schools provide yet another substantial resource for students as they look to make the connections between their classroom learning and the broader world. The resources here are extensive as well, in ranging from resume and interview preparation, employer networking, internship and job search assistance, and online skills training offerings. Specific to the employer-related offerings, with the institutional profile being what it is, the connections that the career centers are able to make between the university and the various employment opportunities span a variety of industries with a global reach.

In addition to the curricular development that takes place in the classroom within the various academic programs, these are just a few of the examples of the resources in place at MSU that demonstrate the level of expenditures put in place to support student endeavors and prepare them for the world.

General Education at Mammoth State University

At Mammoth State University (MSU), the setting where this research was conducted, the decentralized nature of curriculum development – in this case general education (GE) curricula – differs in marked ways from school to school and program to program. All undergraduate programs require a minimum 120 credits, of which at least half must be completed at the university, for receipt of a baccalaureate degree. Regardless of the total number of credits required, all programs within the six schools examined in this study (save for one exception) are designed for completion in four years

(or less) of full-time study. Only a very small number of undergraduate students under limited circumstances are approved each term for part-time study.

As a public institution in the state, all degree-granting programs are required to be approved by the State Education Commission (SEC), as it is their charge to ensure program productivity under state law. As part of the approval process for either the creation of new programs or modification of existing programs, the SEC must approve the proposed curriculum. At the institutional accreditation level, Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) provides broad-based guidance on program structure and does not approve curriculum at the course level. Several programs at the undergraduate level at the university also have external governing bodies specific to the academic discipline which stipulate various requirements for inclusion within the program(s) in order to achieve and maintain accreditation standards.

With the latitude provided to programs under the guidelines of the respective approving bodies and within the constructs of the decentralized structure of the university, each school takes a different approach to the set of GE requirements for its students.

College of Arts and Sciences

Any probe and discussion of general education at the university to be studied should logically begin with the College of Arts and Sciences (the "Undergraduate College"). There are a few key reasons for this. First and foremost, the Undergraduate College is the academic school responsible for offering the bulk of courses comprising the various approaches to GE. When only considering Undergraduate College-specific

GE requirements, of the nearly 5000 undergraduate courses which were offered in the Fall 2021 semester, close to half were courses offered by a department within the Undergraduate College that satisfied one of its GE requirements. Undergraduate College courses make up similarly large proportions of GE curricula in the other schools as well. Second, the Undergraduate College GE is a model for other schools at the university by providing a framework for developing its own categories of requirement areas and categorization of courses that qualify towards each area. Third, with the largest number of both programs and students among all the schools at the university, it is rational to begin with the GE curriculum that affects the greatest number of individuals.

Recently, the Undergraduate College began to offer students a choice between two different versions of GE requirements. In the years that immediately preceded, there were as many as three choices afforded to students during a transitionary period between old and new curriculum. The three choices were: the Retired (Old) Curriculum, the Colloquia Curriculum, and the (New) Undergraduate College Curriculum, which actually has two pathway options. As detailed further in the sections that follow, this move signaled a shift from a set of requirements based in decades old "cafeteria-style" approaches of selecting various courses from different departments to produce breadth within GE. The new options address this by being more deliberate in grouping courses by discipline to create requirements then adding the expectation that students select from various departments. This approach is aimed at creating a greater degree of interdisciplinary connection.

Retired (Old) Curriculum. The Retired Curriculum was the set of GE requirements in place for Undergraduate College students, up through its official

retirement, when it ceased to be an option for new incoming students. Depending on the courses chosen to satisfy the requirements, the number of credits required could range from 36-53 credits. Credit variation was rooted in English and foreign language placements, as well as the specific foreign language students selected for study. The curriculum consisted of:

- First and Second Writing (6-9 credits)
- Foreign Language (0-14 credits)
- Historical Studies (3 credits)
- Humanities (6 credits; One course required from two out of three subject areas chosen from among Fine Arts, Literature, and Philosophy and Religion)
- Natural Science and Mathematics (12 credits; Courses must be from at least two different subject areas)
- Non-Western Perspectives (3 credits)
- Social Sciences (6 credits; Courses must be from at least two different subject areas)

The first writing, second writing, and foreign language requirements were grouped together and referred to as the Foundation Requirements, as they were seen as the foundation for successful study in the liberal arts. The remaining groups of requirements were classified as Distribution Requirements and intended to provide students with the type of breath across the spectrum of disciplines that is generally called for under accreditation standards for GE.

Undergraduate College Colloquia. A second option for satisfying GE requirements was also afforded to students beginning in Fall 2016. Starting that year,

students could begin applying for the Undergraduate College Colloquia program, which would take the place of the Distribution Requirements under the Retired Curriculum. In comparison to the new Undergraduate College Curriculum, Colloquium requirements replace the Interdisciplinary requirements. The same expectations for completing the Foundation Requirements (first writing, second writing, and foreign language) remained in place as under the Retired Curriculum. Colloquia were each thematic in nature and required students to complete 30-34 credits of study, depending on the theme selected. Within these 30-34 credits, each Colloquium included an introductory seminar course on the colloquium topic and a capstone seminar to be completed during the final term of the sequence. Courses were to be completed sequentially over the first four semesters at the university, with students in the cohort remaining together in the program over those first two years. Only 40 students were admitted to each Colloquium offered each year and two dedicated faculty members per Colloquium were responsible for teaching both the introductory and capstone courses.

Each Colloquium was designed to explore a contemporary theme, topic, or problem in today's world through the lens of many different fields of study. Colloquia have centered on topics such as corruption, sustainability, environmental footprints, social mobility, and global conflict. In addition to the introductory and capstone seminar courses, a sample curriculum for the "Infectious Diseases" Colloquium was as follows:

- Medical Anthropology (3 credits)
- Disease, Epidemics, and Society (3 credits)
- One 3 credit class in Statistics or Calculus
- Two courses (6-8 credits) related to Human Biology and Genetics

- Two courses (6 credits) related to World History and Public Health
- One 3 credit class related to Global Health and Human Rights

Under each grouping of courses where options were allotted, only a small number of approved courses were included as options to ensure relevance and connection with the Colloquium topic. The structure for other Colloquia followed a similar format where some limited course selectivity was given to students, though the options afforded were carefully selected to ensure coherence with the topic of study.

Colloquium entry has been suspended as of the entering class in the fall of 2021, though it is unclear if this is a permanent change or a reflection of circumstances due to the COVID-19 pandemic, other circumstances, or if it too has now been retired.

(New) Undergraduate College Curriculum. In 2012, a group of faculty members from the Undergraduate College embarked upon an ambitious project to transform general education at the university. A committee of Undergraduate College faculty was formed and tasked with analyzing the current general education structure in place at that time, determining what the outcomes of the GE experience should be, and proposing a plan to chart the Undergraduate College's future direction. The Retired Curriculum was viewed as favorable to producing variety and individual choice, however, the idea of delivering a shared intellectual experience that created connections across disciplines was lacking.

After years of planning this new curriculum, it was approved by the Undergraduate College's faculty for pilot implementation to include more than 500 students. The faculty allowed an increased cohort size of nearly double the next year and within three years of initial implementation, the curriculum had been accepted as the new

path forward for GE. During the pilot stages, an assessment team of faculty from within the Undergraduate College who were not part of the design committee, as well as well-regarded faculty from peer institutions who had recently engaged in a similar GE revision process at their own institution, were all charged with conducting a thorough review of the curriculum model, courses, faculty implications, and both direct and supplementary learning outcomes. Throughout the planning and pilot periods there were numerous opportunities for faculty to provide feedback, with a number of tweaks made along the way based on input and assessments, but ultimately receiving the endorsement of the faculty to implement on a full-time basis.

Through the new curricular requirements, learning is expected to be transformative and apply in all areas of student life while in pursuit of a Bachelor's degree and in life beyond it. Further, it is expected that the liberal education provided will prepare students as engaged citizens and towards purposeful vocations in a rapidly-changing world. Lastly, it is expected that students will leave the university prepared to contribute to the state and the global common good. Within the aspirational statements of the curricular principles, the expected outcomes of an ambitious curriculum are presented as wide-ranging, complete to include the mention of preparation to serve students well in their future employment pursuits.

In the Undergraduate College Curriculum, students have two pathways from which to choose to satisfy their requirements: Inquiries Pathway and Enhanced Interdisciplinary Pathway. Under both pathways, students are expected to complete a reworked version of the earlier Foundations component, which is made up of three categories of classes:

- First and Second Writing (3-6 credits)
- World Languages (0-16 credits)
- Quantitative Reasoning, Math, & Data Analysis (Two courses for 6 credits total)

These courses are viewed as essential for students to learn how to communicate in speech and writing, with numbers, and across barriers. Just as in the Retired and Colloquia curricular options, the first writing and world languages requirements could be reduced or amended based on their placement scores. Without testing out of any of the requirements, completion of the Foundations component would typically be completed over 26 credits.

For students that opt for the Inquiries Pathway, they enroll in four 2-credit classes during their first year referred to as the Inquiries. These are small, seminar-style courses that share an engagement theme aimed at developing an intellectual framework for students to guide educational inquiry in subsequent coursework.

Beyond these 8 credits, students also complete an additional 21 credits, 3 credits from each of the seven Interdisciplinary categories. Out of these course experiences, the Undergraduate College expects that students will explore a wide range of disciplinary perspectives and cross-disciplinary approaches. Further, they project the discoveries made in these courses will "foster vocational calling."

If students choose not to complete the Inquiries Pathway, they will instead be required to complete the Enhanced Interdisciplinary Pathway. Under these criteria, the 8 credits of Inquiries courses are replaced with an additional 9 credits of Interdisciplinary courses beyond the 21 credits required under the Inquiries Pathway. For the 9 additional

credits, Enhanced Interdisciplinary students must select one additional course from select interdisciplinary categories. Of the ten total Interdisciplinary courses students complete, they must be selected from at least seven different departments. The Enhanced Interdisciplinary Pathway was introduced in Fall 2020 when the Retired Curriculum was phased out for new incoming students, and they were left with only a choice between the Undergraduate College Curriculum and the Colloquia Curriculum. During the assessment period of the Undergraduate College Curriculum, reviewers did raise concerns regarding the scaling of Inquiries to serve the entire Undergraduate College population as a potential issue, so it is perhaps sensible that this secondary option was created.

While there are many potential variations in the overall credit count required for each student to complete GE requirements – including taking a 4-credit course when a 3-credit course would suffice, in addition to the previously discussed placement-based variations – a typical number of required credits for the Inquiries Pathway would be 55 credits, with 56 credits required of the Enhanced Interdisciplinary Pathway. In some instances, courses used to satisfy GE requirements can also be used towards satisfying a major requirement. Though the extent of "double-counting" courses and the discussed credit variations all have bearing on just how many unique credits are taken to satisfy GE requirements, it is safe to say that nearly half of the required number of credits that Undergraduate College students must satisfy towards the undergraduate degree will connect in some way with GE standards.

Public Affairs

This and subsequent sections are ordered roughly based upon the degree to which a school possesses a GE curriculum similar to the Undergraduate College, moving from the most comparable to the Undergraduate College to the most unique. In this regard, the School of Public Affairs (SPA) requires its students to satisfy the same exact requirements as the Undergraduate College stipulates for GE, either the Undergraduate College Curriculum or Colloquia Curriculum. SPA essentially amounts to a two-year program where students spend their first two years at the university as Undergraduate College students mostly working through their GE requirements, then apply and transition to the SPA for their final two years which will be mostly spent completing major requirements. They are required to have 60 credits and two prerequisite courses complete in order to gain admission to this competitive program.

The SPA program presents that it is not a pre-professional program in mission, rather that graduates are prepared for a range of opportunities post-graduation, including graduate school and employment in the public or for-profit public policy sectors. Though not specific to projected GE outcomes, the expectation of the program is that students will be able to develop their critical thinking, communication, leadership, and research skills.

Nursing

The School of Nursing offers two pathways to pursue a Bachelor of Science in Nursing (BSN) – one open to traditional four-year students and the second to a group of students under its RN-BSN program. The latter is an option for applicants who are currently licensed registered nurses and can present 90 credits of applicable transfer

work. This group of students encompasses the majority of the part-time enrollment among the undergraduate Nursing population. Since the RN-BSN students complete their GE coursework prior to enrollment into the program, this population has been omitted from examination under the current study. Of the remaining BSN students, most are admitted directly into the program, with a small proportion transferring in and completing three years of Nursing-focused coursework thereafter.

The BSN program is accredited by the Commission on Collegiate Nursing Education (CCNE) and approved at the state level by the state's Board of Nursing. Graduates from the program are eligible to take the National Council Licensure Examination (NCLEX), which upon successful completion allows nurses to practice in the field without obtaining additional licenses in 38 Nurse Licensure Compact (NLC) participating states.

The GE curriculum in Nursing total 48 credits and includes the following course groupings:

- First Writing (3-6 credits)
- Second Writing (3 credits; Fulfilled with a required Nursing course)
- Natural Science and Mathematics (14 credits)
- Humanities/Fine Arts (9 credits)
- Social Sciences/History (9 credits)
- Electives (10-13 credits depending on number required to fulfill First Writing)

Humanities/Fine Arts and Social Sciences/History courses that qualify to satisfy the corresponding requirements are based on the classifications of courses as dictated by the Undergraduate College under the Retired Curriculum.

Where other schools are quite light in their published descriptions of desired skills-based outcomes, Nursing is very forthcoming in advertising the type of growth expected of students working through the program. Among the skills-based objectives, Nursing expects its graduates to have the capacity to collaborate with interprofessional teams, provide evidence-based care, use health information technology and research for evaluation, leadership, and accepting accountability for professional growth and development. Faculty are said to foster critical thinking and promote awareness of social and cultural diversity. Curricular goals are framed with professional pursuits and preparation for placement within the nursing field among its chief outcomes, with a constant eye towards the guidelines and expectations as prescribed by nursing's many governing bodies.

Education

Most of the students that eventually comprise the undergraduate enrollment in the School of Education (ED) begin in other schools at the university, mainly the Undergraduate College. Such students apply to the school during their first or second years at the university. While incoming ED students are expected to begin work towards their GE requirements prior to admission, there are no specific prerequisites that must be completed before entry.

Unlike some of the other schools at the university that allow students who begin in the Undergraduate College to pursue any of the GE options afforded by the Undergraduate College, courses taken from outside of the areas that ED requires can only be counted as general electives. The GE curriculum in ED totals 36-39 required credits and is broken down as follows:

- First and Second writing (6-9 credits)
- Cultural Literacy (3 credits; chosen from a list of ED courses or a study abroad course)
- Data Literacy/Statistics (3 credits)
- Mathematics and Natural Science (9 credits; Courses must be from at least two different subject areas.)
- Humanities (6 credits; One course required from two departments chosen from among Fine Arts, Literature, Philosophy, Religious Studies, or World Languages)
- Social Sciences (9 credits; Courses must be chosen from African-American and African Studies, Anthropology, Economics, History, Linguistics, Politics, Psychology, Sociology, and Women, Gender and Sexuality)

Published curricular goals pertaining to GE are sparse, but written communication, cultural literacy, and data literacy and statistics are all competencies that are stressed as important for students to be able to demonstrate. At the broader undergraduate level, ED certainly emphasizes the real-world and career-related outcomes of its educational programs. Specifically, it is stated that the "combination of rigorous studies and real-world application creates ample opportunities upon graduation, whether you wish to enter the workforce directly or apply for advanced degrees."

The Teacher Education program is most prominent in its attention to preparation directly into the workforce. Each of the undergraduate majors within that program prepare students for teacher licensure within the state. On the other hand, the school offers a non-teaching based program, which poses as a pre-professional program

preparing students for graduate study through its focus on developing math, biological and behavioral sciences, basic human communication sciences, and critical thinking competencies. While accelerated Masters' programs coupled with the Exercise Science degree are advertised as possibilities, both the Exercise Science and another program are presented mainly as direct preparation for employment post-graduation.

Business Administration

Much like the Schools of ED and SPA, the School of Business Administration also admits students through a competitive admission process after two years at the university. Entering students to Business Administration must have completed 54 credits at the university and ten prerequisites, many of which serve as GE requirements. The prerequisites comprising the essence of a GE curriculum are as follows:

- First Writing (3-6 credits)
- Artistic, Interpretive & Philosophical Inquiry (3 credits, as selected from courses that satisfy this Undergraduate College Curriculum component)
- Statistics (4 credits)
- Calculus (3 credits)
- Microeconomics and Macroeconomics (6 credits total)
- World Language (0-14 credits)

The additional three prerequisite courses not included in the above list are Business Administration-taught courses that apply towards the major. In addition to these specified GE areas, Business Administration students are also required to complete a minimum of 57 credits from outside the School of Business Administration. Between these two aspects of the Bachelor of Science in Business Administration is where

students develop a breadth of their study from outside the major. A recent publication from the school touts the value in students pursuing both quantitative and qualitative courses during the first two years at the university as appropriate preparation for the demands of major-specific courses. This liberal arts foundation is considered to be valuable for the Business Administration degree under the idea that broadly educated students will be aptly prepared to deal with the complex issues of the business community and society at large. It further notes that the program is designed to seize on students' previous knowledge to build their skills.

The Bachelor of Science in Business Administration is accredited by the Association to Advance Collegiate Schools of Business. Although there are graduate programs offered in the School of Business Administration, the references made by the school regarding graduates' outcomes only reference job placement in diverse work settings for rewarding careers.

Engineering

The School of Engineering is one of the largest schools at the university. And like the Undergraduate College, Engineering is made up of several departments offering twelve different majors. Most of the twelve are accredited by either the Computing Accreditation Commission or the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET). Entry to the school happens predominantly as direct-admission from high school, with only a small proportion coming into Engineering through the internal or external transfer process.

Given the nature of its degrees, it should not come as a great surprise that the GE curriculum in Engineering is heavily slanted towards the quantitative side, with a focus on science, math, and technology. The 40 required GE credits are as follows:

- Calculus II & III (8 credits between two classes)
- Chemistry with Lab (4 credits)
- Physics with Lab (4 credits)
- Programming (3 credits)
- Science & Technology (12 credits; Multi-course sequence of Engineering courses)
- Humanities & Social Science (9 credits from prescribed list of departments/courses)

The Humanities and Social Science courses do provide a possibility of creating some breadth in the undergraduate degree beyond STEM areas, however, students are allowed to use additional Science & Technology courses other than those otherwise stipulated in the degree. Students following such a path could therefore further concentrate the entirety of the degree within the STEM fields. Beyond that caveat, courses are to be determined from a list of acceptable disciplinary areas that generally spans the offerings in the Undergraduate College. Selected courses must be approved by the advisor as instilling cultural values, as opposed to delivering skill development. This is evident in the criteria that performance-based courses will not satisfy the Humanities and Social Science area, unless accompanied by theory or history instruction. Overall, the school does maintain in its handbook that the inclusion of humanities and social science courses

in the curriculum serve to meet objectives of delivering a broad education and as preparation for the engineering profession.

It is expected that many of the school's graduates will move directly into professional endeavors in industry or government, with another portion continuing on for graduate degrees and pursuing paths in academic scholarship. In preparation for the evolving challenges in the global market that will be faced by graduates, the school seeks to instill knowledge, creativity, inquisitiveness, leadership, confidence, awareness, and ethical values. Since Engineering graduates are exposed to a multitude of employment opportunities, they must understand research methods, be able to integrate broad interdisciplinary considerations, possess confidence in pursuing new professional activities, and have a solid grasp of fundamental principles within the discipline. They are expected to be proficient in oral and written communication, discipline-specific computer and laboratory tools, and working within teams and leading them. Lastly, graduates should be lifelong learners with corresponding self-study habits.

Sample Population

Curriculum committees in the six undergraduate schools included in this study are responsible for the oversight, development, and appropriate revisions of programs and courses within their respective school. Each school differs somewhat in the overall approval process for courses and program creation and revision. At a basic level, however, each school has one primary group of individuals who are responsible for vetting proposals from its faculty and analyzing whether curriculum or programmatic changes are needed within the school. In some cases, these committees function as a steering body that makes recommendations to a higher authority, be it faculty within the

school, all faculty at the university, or to the chief academic officer. The commonality in all cases is that proposals will not go forward without the approval of the curriculum committee.

The study employed a combination of purposeful and maximum variation sampling techniques. Maximum variation sampling looks to create a great deal of heterogeneity among the individual cases being sampled in order to identify themes and differences present among outliers in selection criteria (Miles et al., 2014; Patton, 2015). In the case of this study, sampling individuals from the six different schools at the university presumed that the opinions voiced within the inquiry would be closely representative of most variations in the population, while identifying uniqueness in some areas compared to others. Qualitative research tends to be more purposeful in its selection of a sample, as compared to qualitative work with its bias for randomness (Creswell, 2014; Miles et al., 2014; Patton, 2015). This work was no different in that regard. Patton (2015) uses the terms "purposeful" and "purposive" interchangeably in describing sampling techniques, yet the key element entailed therein is the strategic selection of a sample population based upon pre-determined criteria that creates the greatest level of insight due to the information-rich nature of the data to be gathered for illuminating different manifestations of the phenomenon at inquiry. In the current study, the sample was drawn purposefully based on the criteria of the participants' role in developing the curriculum within their schools or programs.

The sample population for the study was drawn from faculty and staff with roles on curriculum committees within each of the six schools under examination. Since this study was focused upon general education programming in the undergraduate programs,

individuals chosen hold at least some faculty responsibility involving the undergraduate side of its schools' programs. For example, in some schools, the curriculum committee holds combined responsibilities for the oversight of undergraduate and graduate programs and courses. Some of the faculty holding positions on these committees are associated only with the graduate programs in their schools and therefore may have less investment or insight into the undergraduate program's goals and structure. Such individuals were omitted as possible interview candidates due to the limited perspective they could provide towards the information sought. Contrastingly, when such an identification was possible within the information made available to the researcher, committee members with positional or experiential seniority were prioritized as the first points of contact. Many of the schools under examination publicly advertise the details of their curriculum committees via their websites. In cases where such information was not publicly available, the researcher obtained a list of current representatives through an appropriate school contact.

With the sprawling number of programs in the College of Arts & Sciences and tremendous variety of worldviews represented, an additional layer of conditions to ensure a rich sample was placed on the sampling of the Undergraduate College faculty. Programs were broken into five categories according to Carnegie classifications for liberal arts fields (The Carnegie Classification of Institutions of Higher Education, n.d.). In the Carnegie breakdown of 4-year baccalaureate degree programs, programs are categorized as either liberal arts disciplines or professional fields. The classification system further articulates liberal arts programs at the graduate level as either representing the humanities, social sciences, and STEM. In both undergraduate and graduate cases,

interdisciplinary programs constitute an additional standalone category. Adapting this framework to the current study, with graduate classifications representing the same fields of study as the aggregated undergraduate collective version, programs within the Undergraduate College were divided using the categories Carnegie utilizes at the graduate level. As such, in cases that at least one interview could not be secured with a curriculum committee member representing each of the four categories that Undergraduate College programs fall under, an interview was conducted with a department chair from a discipline within said category. While department chairs may not possess the global view on curriculum for the entire school that a representative from a schoolwide committee may have, it was expected that the chair would at least be knowledgeable of the program's curriculum and is given the charge of ensuring that students in the program are meeting overall program objectives, of which general education courses are a part of. Two participants were ultimately derived using this strategy.

Beyond these specific criteria, two additional categories of individuals rounded out the potential participants. First, considering the recent general education reform in the Undergraduate College and the focus towards intended general education outcomes in this study, members of the General Education Committee that led that reform were also included as potential participants. Going into the study, this group was thought to be too far out of scope to offer useful input, but as interviews were being conducted, it became clear that there might be potentially valuable insights that could be yielded from the group towards forming a greater understanding of the overall picture related to general

education at the university. In the end, it turned out not to matter as adding this criterion and soliciting committee members failed to yield any additional participants.

The second additional category of potential participants arose during the course of conducting interviews, whereby there were times when the researcher was referred to other faculty names who would be worthwhile to contact. When the positionality of these individuals met with the aims of the study, such individuals were added to the list of contacts as well. One particular interview outside of the aforementioned criteria that emerged from a faculty recommendation proved to be especially relevant. It was discovered that a program (Liberal Learning for the Workforce; LLW) designed to specifically assist students in preparing for the world of work after graduation was recently initiated and begun operations during the Fall 2022 semester. The individual in question is the initial program director after having been involved with initial program design discussions.

With the necessary IRB approvals in place, selected faculty from these lists were contacted via email by the researcher to request their participation in this study with the intent of subsequently scheduling a forty-five to sixty-minute Zoom interview. Prospective subjects were provided with a general summary of the purpose and context for the study. Participants were not compensated for their participation.

A total of 75 faculty and staff were contacted to solicit their participation, with 38 responding for a response rate of 51%. Unfortunately, 20 of the 38 declined to participate, leaving a total of eighteen faculty and staff that ultimately participated for a rate of 24% (18/75). Table 1 below provides a listing of the participants with their pseudonym and their associated school and disciplinary area, as applicable.

Table 1

Participant Listing

Name	School	Department or Discipline (as applicable)	Position
Lily	Business Admin.	-	Curriculum Committee (ex-officio)
Sierra	College	Humanities	Curriculum Committee
Chazz	College	Interdisciplinary	Program Director
Ted	College	Social Sciences	Department Chair
Audrey	College	Natural Science	Curriculum Committee
Eve	College	Foreign Language	Curriculum Committee
Jeffrey	College	Social Sciences	Director LLW Program
Barney	Education	Exercise Science	Curriculum Committee
Elaine	Education	-	Curriculum Committee (ex-officio)
Bunny	Education	-	Curriculum Committee (Chair)
Sally	Engineering	-	Curriculum Committee (Chair)
Mitch	Engineering	-	Curriculum Committee (Chair)
Walter	Engineering	-	Curriculum Committee
Cindy	Engineering	-	Curriculum Committee
Robin	Nursing	-	Curriculum Committee (ex-officio)
Mary	Nursing	-	Program Director
Liz	Public Affairs	-	Curriculum Committee (ex-officio)
Eric	Public Affairs	-	Curriculum Committee (Chair)

It should be noted that participants' position is listed according to the criteria under which they were selected for participation in the study. Many of the individuals interviewed possess a range of valuable additional positional experiences, such as Associate or Assistant Dean, Director of Undergraduate Programs, Department Chairs, Program Directors, and even former Curriculum Committee members for those who were

selected based on another role they hold at current. Ex-officio committee members usually hold a position of administrative authority within the school that makes their participation with the committee valuable and their insights into the programs and curriculum rich.

Semi-structured interviews were conducted with individuals fitting one or more of these aforementioned selection criteria from six undergraduate schools, with five of those six schools represented by multiple individuals with varying perspectives. Saturation of themes that were unique to the school was, in some cases, the point at which no further data collection was necessary within a school. This condition is described by Strauss and Corbin (1998) as the point when information no longer produces new properties, dimensions, conditions, or insights within the coding process. In schools such as the Undergraduate College and Engineering, where the highest concentration of enrolled students (more than 85% of the undergraduate population) and number of programs exist, the intention was to conduct a greater number of interviews in comparison to the smaller programs. Though the greater concentration intention was met, exhaustion of viable participants – in these schools and others – was the point at which data collection was halted.

One of the major assumptions within this approach was that each interview subject possessed a thorough knowledge of the curriculum and related aspects within their school and/or program. From the published descriptions of the curriculum, missions, and goals of each of the schools articulated in previous sections, it should be evident that there is a great deal of variation in depth and thoroughness from one school to another. Participants were viewed as representative of the overall positions held by the

school on these subjects. Naturally, however, each participant possessed a unique worldview and subjectivity that could have been reflected in the responses they provided. As such, questions allowing for individual opinion to enter in the discourse should be viewed through the lens of being a single voice from among the whole school, as opposed to being generalizable to the entire school which would be fundamentally flawed. As a result, only the previously summarized information resulting from document review can be viewed as objectively representative of each school's position.

Data Collection

Informed consent was obtained from each subject prior to each interview. Oral consent was further granted by each of the participants to record Zoom interviews with the live transcription function utilized. Following each interview, the researcher validated each of the written transcripts against video recordings to verify for accuracy of the transcription and to make changes as necessary. Anonymity was guaranteed to the participants through the usage of pseudonyms to describe individual subjects, specific positions held, and institutional identification. Transcripts, notes, recordings, correspondence with participants, and other personally-identifiable information related to actual and potential subjects remains strictly in the possession of the researcher on password-protected computers with applicable software requiring two-factor authentication to gain access in order to maintain confidentiality.

Drawing information from multiple sources of data is a hallmark of qualitative research and assists the researcher with making sense of the results through organizing the data into categories or themes that span all data sources (Creswell, 2014). This type of triangulation helps to avoid errors in researcher interpretation, while developing a

more accurate picture of what is truly happening (Lincoln et al., 2011). Emphasizing the research problem by combining different approaches to understand the phenomenon is also a mark of the pragmatic paradigm (Creswell, 2014). Lastly, it helps in enhancing the generalizability of the study (Marshall & Rossman, 1989).

The main instrument utilized for data collection was the interview protocol (see Appendix A). Interviews were semi-structured in nature allowing for follow-up inquiries to participant responses and conversation that veered from a strict script. Likewise, not all questions were asked in the course of the interview. Many times, participants addressed a later question with an earlier response and there were multiple instances where not all questions could be asked during the course of the 45-to-60-minute scheduled block. In such instances, the researcher prioritized those questions that seemed as though they would yield the most unique information from previous responses and be most enlightening towards addressing the research questions.

In addition to the interviews themselves, to accomplish the triangulation approach, a combination of archival and contemporary documents were reviewed and documented to help inform the development of interview questions and provide additional context for the information yielded therein. The list of document types included in this review along with the information gathered from each consisted of:

- Internal documents, such as:
    - The Undergraduate Catalog (current and historical versions as relevant) – Mission and goal information, program descriptions (including curricular requirements), general education description

  - School and department websites – Mission and goal information, program descriptions (including curricular requirements), general education description, information regarding curricular formation and responsible personnel
  - Program handbooks – Mission and goal information, program descriptions (including curricular requirements), general education description
  - Planning documents – Records documenting curricular formation or reform efforts
  - Documents related to the College of Arts & Sciences reformation project of the general education curriculum
  - University publications for accreditation reviews
- External facing documents, such as:
  - State commission reports – specifically those related to higher education performance in the state and at the institution, and initiatives emphasizing skill building for labor market preparation
  - Legislative reports – focused on instances where regulations have been aimed at higher education performance and improving preparation for the labor market
  - 3rd party analyses documenting the skills gap and higher education response

Included documents were analyzed for the presence of statements of mission and goals particularly related to skills and professional development, details on planning processes and attitudes therein, and an assessment of current state.

Background and Role of Researcher

Creswell and Miller (2000) stress the importance of the qualitative researcher reflecting early in the process to identify what personal beliefs, positionality, or assumptions they may possess related to the subject at study in order to reduce potential bias. Within the university setting under study in consideration of the described sampling strategy, the researcher is not in an impartial position. Specifically, the researcher is employed in a full-time capacity within the Dean's office of one of the schools in this study. Previous employment has included other academic records roles, both within the current school of employment and at the central office level. In these roles, the researcher has been involved in ex-officio and advisory capacities to multiple schools' curricular committees. This involvement has been limited to ensuring compliance with existing policies and providing guidance on best practices for committee process and structure. At no point, however, has the researcher's role involved voicing a position on content, pedagogy, or philosophical mission.

Beyond the specific and tangential experiences working with curriculum committees, the researcher has had various other opportunities to work directly and indirectly with several individuals among the sample population. None of the individuals who were interviewed, however, function in any sort of supervisory or subordinate capacity to the researcher.

Given the researcher's past exposure to both the functional dynamics of some of the curriculum committees and individual participants, it was crucial to triangulate responses against written documents so as to help in avoiding researcher bias. Interviewing individuals until saturation was another strategy that could be considered as assisting in these efforts. Closely following scripted protocols for maintaining interview consistency, regardless of whether subjects were known or not to the researcher, were also viewed as important strategies. Lastly, to protect participants, the same principles and procedures were applied consistently in all cases to protect confidentiality even among those individuals that the researcher has an established relationship with.

Data Analysis

According to Saldaña (2021), a priori codes (or "provisional codes" per Saldaña) are generated from preparatory investigative processes such as literature reviews, the conceptual framework, research questions, researcher's previous knowledge and experiences, and researcher-formulated hypotheses or propositions. Miles et al. (2014) recommends starting with a list of 12 to 50 codes when utilizing a deductive approach, as a priori coding is an example of. Utilizing related literature to describe the expected themes to be ascertained from interview questions relating back to the overarching research questions, an a priori coding system was established as a baseline for evaluating interview responses. These were generally aligned with attempting to answer the research questions.

All transcripts were hand coded by the researcher upon the completion of the interviews. Though many of the expected words and phrases did in fact arise throughout the interviews as expected, the coding system as designed turned out to be much less

useful than anticipated. In part, this was due to the fact that many of the interview questions elicited responses that crossed over a multitude of topics or failed to fit easily within a single code. In short, the a priori codes failed to add meaning to the data. As a result, a new set of codes were assigned through an iterative process to better categorize responses based upon the content. From this initial round of coding, a set of propositions were derived based upon what the researcher believed was present in the data. From there, a second round of coding to align the data with the propositions was conducted so as to determine if the propositions were accurate as they were initially observed. This type of "continual modification and renewal through interaction with the data" (Dey, 1993, as cited in Saldaña, 2021, p. 218) is presumed to keep the researcher from drawing conclusions based on pre-conceived notions instead of what the data is indicating. This second cycle coded data was then grouped into themes, which Saldaña (2021) describes as extended phrases to tell what the data is about and to impart meaning.

Validity

Several qualitative techniques described in the literature were employed to increase the overall validity of the study. Triangulation, using extreme cases, looking for negative evidence, and member checking were all tactics employed to aid in validity efforts. Such techniques are aimed at determining whether findings are accurate through the lens of the researcher, participants, and readers (Creswell & Miller, 2000).

Triangulating findings utilizing multiple sources and forms of data increases validity in comparison to approaches that only utilize a single source of information (Creswell, 2014; Creswell & Miller, 2000; Lincoln et al., 2011; Miles et al., 2014). Using extreme cases and looking for negative evidence are methods that the researcher

anticipated could be borne out of the sampling strategy. By interviewing individuals from different disciplines possessing vastly different worldviews, the expectation was that while common themes would emerge, those themes would converge into two different buckets depending on the school of the subjects – one approach aligned with expressly preparing students for employment and another approach where it is less of a concern. Paying attention for the responses in themes that deviated significantly from similarly situated respondents and then seeking out divergent positions in the evidence was another method employed to ensure that conclusions drawn were valid and reduce the potential for bias. The presentation of contradictory evidence is argued to make the accounts more realistic since there is rarely true consensus in real life when different perspectives are taken into account (Creswell, 2014). Finally, member checking (Creswell, 2014; Creswell & Miller, 2000; Lincoln & Guba, 1985; Miles et al., 2014) was performed during the course of interviews as needed to confirm the accuracy and researcher's understanding of each respondent's intent. Lincoln and Guba posit that member checks are "the most crucial technique for establishing credibility" (1985; p. 314).

Generalization

Maxwell (2009) notes that the lack of generalizability inherent within many qualitative studies is actually indicative of its research value. Ergo, it is the unique set of circumstances within the case study that make it worth examining in the depth characteristic to qualitative work. While this is an accepted trait, there is optimism of still uncovering transferable knowledge that could be insightful to similarly situated institutions, schools, or departments. With highly selective institutions being such a

unique breed within the realm of higher education, this study aimed to uncover a degree of specificity for this specialized type of institution from among an existing generalized body of knowledge. Kennedy (1979, p. 665) describes the scenario when circumstances are "believed or assumed to be sufficiently similar to the study sample that findings apply there as well" as "reasoning by analogy." Regardless of the potential for outside institutions to draw transferable conclusions regarding the role employability plays in curriculum design, the current study was able to identify similarities and differences across the various academic disciplines while the overarching setting and population variables remained relatively constant due to shared commonality within the single institution case approach.

CHAPTER 4

RESULTS

Interviews were conducted with eighteen participants representing various associations to the formation of undergraduate curricula at Mammoth State University (MSU) in order to explore curricular efforts geared towards building student employability, with a particular eye towards general education. Participant responses were grouped into five main themes which attempt to encapsulate and make sense of the many ways that participants view these multifaceted dynamics.

Theme 1: Variation in Understanding of and Purposes of General Education

Participant interviews were intended to establish the purpose, effectiveness, and perceptions related to general education in each of the schools and programs under examination. Early in the process of conducting interviews, it became apparent that an additional aspect of general education needed to be accounted for as well – participants' understanding of what constitutes general education for their program, and in some cases, inability to thoroughly articulate it.

Understanding of General Education

Nearly all of the participants articulated an understanding of what was meant when general education was introduced into interview conversations. This understanding was demonstrated through comments referencing specific skills that are honed through general education ("…the first one that comes to mind is critical thinking" – Robin, Nursing), providing unsolicited background on the evolution of general education in the

program ("…our new inquiries curriculum, this was part of this shift that I've been seeing… that the big trend and push within our disciplines was toward interdisciplinarity." – Sierra, Humanities), context around current examinations of the general education curriculum ("the School of Engineering has for the last 3 years or so…been working on redefining or changing our general education requirements…" – Cindy, Engineering), and a knowledge representative of actual course requirements ("…a lot of those humanities courses, they're part of the common core. So every engineer will take…" – Walter, Engineering). Even some of the accounts representative to the upper division schools or programs demonstrated an understanding of how general education is integrated across the entire program ("We think of the curriculum as a sum of parts that is greater than the individual Gen Eds by themselves." – Elaine, Education) and considered within the context of the entire degree ("[a current student] wants to leave [Education] and come over to Public Affairs… so I am working with him to map the [Education] curriculum onto what we would traditionally have a student complete." – Liz, SPA).

While it was an understood characteristic of MSU that general education requirements vary from school to school, it was unexpected that a number of other participants struggled to articulate what exactly constitutes general education within their school in the first place. A number of participants' statements, which were not specifically relegated to the upper-division schools, seemed unfamiliar with discussing general education, even among individuals who are responsible for maintaining the curriculum. For instance, Mitch, from Engineering, questioned, "When you say Gen Ed, you mean, like everyone has taken language? Everyone has to take math?" Eric, from Public Affairs, shared a similar reaction, "We have core courses that are part of the

major. Is that what you're considering gen ed for our majors?... I don't know. I wish I had a better grasp of what the Gen Ed requirements even are. So maybe I'm the wrong person to even ask on that one." Likewise, Mary, from Nursing, simply stated, "I personally don't have this much connection to their general education requirements."

The apparent lack of awareness of the specifics of general education perhaps received its most profound expressions of this disconnect through a series of statements by Audrey, who is a program director for a Natural Sciences program within the College of Arts & Sciences. She remarked,

> I'm gonna be perfectly honest, I don't know very much about our general education requirements… I'm very well aware of all of the requirements… the requirements, the STEM-based Gen Ed requirements, but beyond STEM… they, as someone who doesn't work in that area of advising, it's a black box to me.

She continued on, saying,

> There seems to be a bit of a disconnect between what students do in our program and what students do outside our program. Which I know how many credits they take, and most of them are not in our program. So what are they doing? That's a great question.

Reflectively, she added, "That's half their degree. What the other half of the degree is, is super important to students, but clearly has not been well infused into the culture of their major, right? Which is really interesting." Finally, she connects the divide between university requirements and school requirements with a potential call to action in saying,

> It's pretty funny to be in a position of running a program and having no idea what 50% of your students do is… and it's just not something that's been emphasized in my role or in my department. We sort of think of those as two completely separate entities, but as a student, they can't. This is an integrated program, so it would behoove us to be more familiar I think, especially with some of the new changes in the Undergraduate College and think about how some of those other things that students are doing can support their learning in our program. I think we really silo those things and that's kind of a shame because we can pull on those, we can reference those.

Audrey's reflections provide not only a comprehensive insight as to the application and understanding of how general education curriculum is positioned and viewed in relation to the major, but they also serve as a notice that a faculty member, regardless of their home school association, can be lacking a full understanding of how general education compliments the rest of the degree.

That said, participants still proffered their own assumptions about how they viewed general education within their school or program. Going back to Eric's previously highlighted statement above, faculty often were asked about general education and responded with comments speaking of the "core" curriculum. A number of commonly used terms, such as "core," still did not turn out to mean the same thing to all people. In Eric's case, core was ultimately equated to the prerequisite courses completed prior to earning admission into the major. From Lily's purview in Business Administration, another upper-division school, core curriculum was viewed in much the same way. However, the difference in the way that the Business school sees GE is that

they conflate the "core" and general education courses as a mixture of 3 distinct course types: the new Undergraduate College Curriculum for general education, prerequisite courses to gain admission to Business, and a core block of courses taken during the first year after admission to the school. This explanation closely mirrors in-print documentation of the program which outlines a two-year liberal arts foundation, followed by an innovative, integrated one-year experience delivering current business skills and perspectives, and closing with a year of specialized expertise in the student's chosen area of study.

The idea of a core set of courses came up heavily in conversations with Engineering faculty as well. In fact, these conversations took place during a time when the school was still in the midst of an elongated review of its general education curriculum with the intention of curricular reform. A central goal of these efforts was to define what the common core should be for Engineering students. Mitch summarizes this effort in saying, "In engineering, we never had a formal common curriculum. It was all done like through culture, only. So there was like a set of courses that every department just happened to require, and everyone kind of vaguely understood that to be the common core that all Engineering students have to take. But there was nothing actually like codifying it." He continued on in saying, "The one thing we did last year is we like looked at the curriculum, and we took all the courses that every single major already requires, that it just happens to be common, and we just kind of wrote a thing that said, you know, this is now defined to be the common core." Walter provided a similar conception of the commonalities, indicating, "We have what's called a common core curriculum, which is basically all the courses that pretty much every Engineering and

[major] student will take." Cindy provided some additional background on these efforts in saying, "They didn't even have a, what they call at the time a common core, or common set of courses… they didn't have Gen Ed environments, per se, for all students in Engineering. Each department had their own thing." Further, she added to this conversation her perspective on how she believes faculty in the school to view the common core, saying, "When you say general education or common core or whatever, most people think these are the courses that everybody has to take."

A few of these faculty mentioned that nothing was previously in place to codify the common set of requirements across majors within the school. However, a review of the annual published requirements for the School of Engineering over the past five years shows that common courses, such as Calculus, Physics, Chemistry, and Introduction to Engineering, are laid out as general education requirements for Engineering students and have remained consistent during that period. Sally contextualizes these requirements and draws distinctions between differing components within general education:

> It's a question of what you mean by general education and the way we use it in Engineering. So there are… we have things that are specifically like humanities and social sciences, breadth electives. But when we talk about general education, in engineering, we often talk about much of what they take in the first year and part of the second year. The classes that all engineers take, which does include things like calculus and physics. It includes 2 of these Science & Technology classes, one in the first year and one in the second year, that all engineers take. Also for Engineering, general… what we consider general education… they have an Intro to Engineering class where students work on, you know, in Engineering,

> they don't come in to their major until the second year, right? So that's why we consider them all general engineers in the first year.

This quote from Sally is especially illuminating because it seems to create separation between different aspects within general education. It is as if the humanities, social sciences, and breadth electives are looked at in a lesser capacity than the quantitative requirements under general education. Mitch draws a similar distinction between the two types of courses, albeit seemingly placing each on an equal plane of existence:

> Our main breadth in the Engineering school is the common technical core, which is all the calculus, and the physics, the chemistry, and all that. There are… we have a set of requirements on humanities and social sciences, and they're basically all courses in the College of Arts and Sciences. And that's sort of meant to be the primary mechanism for students to get some breadth out in the Undergraduate College. "Go learn about something else besides engineering."

Interestingly, none of the participants in other schools made any mention to a core curriculum. This is just one more example to show that general education and core curriculum mean different things to different people.

General Education Purpose

Just as was the case with the various understandings of how general education is comprised, participants' perceptions of general education purpose were just as varied. To establish a baseline, participants were asked if they could provide the school or program's mission specifically related to general education. Only a handful were even able to provide a loose summary of the mission. This left a majority to describe what they

subjectively believed to be the purpose or expected outcomes from a student completing the general education requirements. Despite the variability of responses, some commonalities did emerge from the projected purposes.

Breadth. The idea of general education as creating breadth within the degree was certainly a popular refrain among many of the participants, even if the premise is a somewhat nebulous one. For the most part, breadth was described as variation in course selection, usually within the disciplines housed in the College of Arts and Sciences, and outside of the specific courses required in the major. The philosophical separation between general education and major is probably best encapsulated by Chazz, an Interdisciplinary faculty member in the College of Arts & Sciences, in saying:

> In the thinking of curriculum planners, the choice of the major is the moment when breadth gives way to depth…certainly the idea was that with General Ed requirements is that kids are spreading out across the curriculum and sampling and learning about different areas of knowledge. And then the idea is there, as you know, they're supposed to follow their passion, as the cliché has it.

Liz speaks to this variation between the two separate curricular aspects expressing an expectation that general education is supposed to create:

> A strong foundation across many domains to allow them to make sure when they come into [Public Affairs] that they aren't just… that they didn't just take classes in one domain, and then ultimately, they do have that depth and breadth.

Certainly, Mitch's previously mentioned statement about "learn[ing] something else besides engineering" falls within this space of how breadth is being viewed. From the standpoint of the Undergraduate College faculty interviewed, there was definite

support offered for the idea that general education creates breadth. This is evident in the statements made by a number of the faculty within the Undergraduate College, including Audrey ("we have emphasized liberal arts education so much that there is a lot of breadth"), Eve ("the goal is to give students broad knowledge"), and Ted:

> That's part of the job of the general Inquiries curriculum is to… or requirements are to mix things up so you get a little bit of you know… you're not just heavily weighted to say, to quantitative reasoning. You actually think about art and music and English and literature, and history.

The extent of the breadth that the curriculum allows for is viewed as a strength of the School of Engineering, as evidenced through Walter's comments:

> Comparing the MSU curriculum compared to other engineering programs, I think here they have more breadth across the board, not just in engineering. They're getting I think a little bit more humanities, Science & Technology, which is, is a very different thing here. Science, technology, society, lot of requirements there that other universities are not necessarily requiring and so I guess we kind of look at where our students end up in 3, 4, 5 years out to see if we prepared future leaders.

Walter's comments bring another layer to the idea of breadth by extending the concept beyond simply creating variation in course selection. They also bring an element of utility into play that is alleged to be gained through breadth. Liz also provides testament to the usefulness to be gained through a broad education outside of the major:

> Our goal is that the Gen. Eds would be, would prepare students to layer on the work in leadership and public policy studies that they're going to get at [Public

> Affairs]. That it would give them the foundation to be able to be an informed and ethical, enlightened leader in both leadership, but also in public policy, and give them the depth and the breadth across traditional, you know, other domains that allows them to then layer on the public policy and the leadership aspect of things.

From a practical standpoint, these accounts attesting to the goal of general education being to create breadth within the degree creates symmetry between faculty expectations and those of the regional accreditor's policy on general education.

Filling Gaps or Supplementing the Major. The connection that Liz references between skills development in general education and layering knowledge up towards the major as necessary preparation for success was found to be another common expectation of general education. Prerequisites certainly qualify within this preparatory work for the schools that expect such requirements to be completed within general education coursework, but there were also definite expectations expressed that general education coursework serve the purpose of developing skills that are needed within the major or provide skills that are underdeveloped within the major.

Some of the statements that most clearly illustrate the need for different skills to be developed through general education than is possible in major-specific coursework are based upon instances of necessity. Ted is the Department Chair in one of the largest majors in the College of Arts & Sciences. In talking through specific employability skills that are of value to the department, he remarked, "…civic engagement, we're not really talking about (in the major), and teamwork and collaboration, you know we don't really do. We just don't have that many classes where you can have team working in them." In a similar vein, Audrey commented:

> Particularly the communications aspect that I anticipate is a big part of a lot of the Gen Ed courses, you know we don't do… we do a… an unfortunately low amount of writing in our program. Where science program writing has… we have large classes and writing has really followed by the wayside. Yet we expect our students, if they go on in the discipline, to be strong writers, and so I think we sort of… we hope that some of those types of skills writing communication, critical thinking are coming out of Gen Ed.
>
> Audrey also adds to this:
>
> I would say again, if we go back to critical thinking and writing, I hope that that's where Gen Ed can really emphasize again, as someone over in STEM where those are skills that we highly value, and yet can't have… are doing an inadequate job honestly of teaching in our own classes. We sort of are leaning on Gen Ed to hopefully support those elements of sort of the undergraduate curriculum.

Ted and Audrey's commentary is less about supplementing what is done in the major, rather they illustrate a hope that the skills that their disciplines are incapable of teaching on their own are being taught elsewhere in the curriculum. Elaine, from Education, sums up this state inherent to one of the programs in her own school by saying, "it's almost like you're trying to fill in the gaps that the discipline itself creates because they're just not in a position such that they create this skill naturally." In essence, these statements exemplify an understanding that disciplines each have their limits to what knowledge bases they are skilled enough to instruct on and from there they rely on general education to fill in the gaps so as to create a cohesive curriculum.

The faculty representatives from Public Affairs echoed a similar sentiment relative to general education creating skills that will come to be refined within the major. Eric's comments to this effect on skills development in general education are as follows:

> If they had good problem-solving skills, for instance, that would feed in and we can take care of… you know, the quantitative reasoning that we developed is pretty specific to the types of jobs we think our students are gonna get and so we don't need the Gen Ed to be developed in the quantitative reasoning, and even the leadership. Although, it's certainly, you know, if we had an infinite amount of time, it would be great to have them do it in both, but given that there are constraints we're happy to take care of leadership, quantitative reasoning, civic engagement, even.

The other aspect of this statement that will be explored to a greater degree later in this chapter is the notion that skills development may begin in general education coursework, but refinement specific to the workplace happens within the major coursework. He adds, "…also, we would hope that they're building their critical thinking skills and they're well-rounded coming in. Understanding different, you know, how different perspectives play into the types of critical thinking they need to do." Looking beyond the skills development aspects, there is a hidden component embedded within this statement that is especially noteworthy taken together with other participants' accounts of general education purpose – the notion that general education is creating well-rounded students. This was another notable theme regarding general education purpose that will be discussed later in this section.

Prerequisites. Prerequisites play a major role in the conception of general education for a number of the schools at the university. Although none of the participants expressly presented it this way, the manner in which some of the participants representing schools where students enter the school through the internal transfer process after a year or more often associate program admission prerequisites with general education simply because they are both taken prior to admission to the school. Even if the connection is not made explicitly between general education and prerequisites, some of these departments do have an underlying expectation that the skills being developed in these prerequisite courses will ultimately have an impact on student employability based on the relationship with the discipline. Business Administration is a school that makes the distinction between the two, though they see general education courses as providing a foundation for learning that will come in the major. In their view, the instruction within the major is where employability is then refined. Lily states the following:

> Before they get here, not only are there Prereqs, but then the University tries to do a really good job of what a faculty member said yesterday in a meeting: making sure students are well read and conversant in a number of different areas so that when they come to us and they become very specific in their focus, they have that broad base. That they've been able to kind of delve into different areas. They've been able to kind of interact with different people, different schools. And kind of develop some of those pieces broadly before they really kind of dive into Business.

Other schools take a position that is a variant of this perspective – that at least a portion of the required general education courses are in direct support of major

coursework, and in some cases, serve as prerequisites to successive courses. For instance, depending on the major, Education has situations where "they [students] need to satisfy a particular course outcomes in biology, because that's a prerequisite set of skills that will prepare them for their, you know, next set of courses," says Elaine. Engineering and Nursing faculty both attest to having similar setups with their general education as well. Further, instead of general education programming that spans the full spectrum of disciplines in the liberal arts, some of these schools concentrate a majority of their general education requirements in subject areas that directly align with the major. Public Affairs focuses their GE requirements in quantitative disciplines, Engineering is heavily math and physics based, and Nursing is largely concentrated among the life and physical sciences.

From their perspective within the Undergraduate College, liberal arts faculty members often perceive these overly prescriptive prerequisite expectations to be detrimental to the ideal general education experience for students and fails to deliver the wide-ranging subject exploration that characterizes breadth in the degree. One such comment indicated that placing these particular expectations on students "'intrude(s)' on students' choices in such a way that they cannot think more imaginatively about the overall curriculum." While this concern may not be especially harmful to students that ultimately go on to upper-level majors outside the Undergraduate College, a portion of the concern is related to students who are ultimately unable to gain admission to their desired program in another school and are then left to put together a coherent degree plan within a Undergraduate College major program.

Well-rounded, Civically Responsible Students. If the idea of creating breadth can be considered somewhat nebulous, well-roundedness and civic mindedness could certainly be considered to follow the same path of impreciseness. Nevertheless, much as with breadth, these were end-state desired outcomes that were consistently brought up in conversations as clear goals of general education. If obtained skills are the manifestation of what well-roundedness looks like during the learning process, perhaps civic responsibility becomes the outcome measure of how those skills are deployed in the world. Certainly, the concept of well-roundedness was described by many and accompanied by the skills they view to make up that whole. Each of the six schools examined in this study had representatives speak to at least one of these two characteristics in some sense as outcomes of general education.

In the previous section regarding prerequisites, Lily was quoted as saying that:

> The University tries to do a really good job of what a faculty member said yesterday in a meeting: making sure students are well read and conversant in a number of different areas so that when they come to us and they become very specific in their focus, they have that broad base…

Faculty from across schools definitely demonstrate support for this position and provide context specific to their own programs. Walter, from Engineering, speaks to this, saying:

> Every engineer, I think, should be exposed to a certain subset of courses, topics areas, and to me that's what the general education should do. It makes sure that, it's making sure that we have good, well-rounded students, even in areas that they'll never deal with.

Elaine adds context for students in the Education School, saying, “remember they come in as rising third [year students]… after they will have satisfied Gen Ed requirements in the Undergraduate College, in our major. So students have a broad experience in sort of the general social science major.” Audrey offers a similar perspective, saying, “My understanding is that it is sort of holistic, right? So trying to tack into, you know, bigger picture ideas, giving students skills that will help them broadly.” Mitch goes a bit further in offering his view of the total product they aim to produce in Engineering by saying:

> …developing as a full, full person. And I think a lot of schools… like non-MSU schools, they've kind of like put all their eggs in the basket of ‘Let's just be really technical. Let's just produce really technical strong students,’ which is you know one approach. It’s just not our cup of tea, I guess.

While these faculty are consistent in their desires for general education to make a student more well-rounded, what that comes to look like is still left unclear from these statements. Chazz aims to dispel the notion that well-roundedness is created simply by introducing randomness and variety into course selection outside the major:

> …a set of GE requirements that cannot be fulfilled by random courses. Instead, the Inquiries curriculum tries to present ALL Undergraduate College students with a unified experience that requires them to think about what it means to ‘engage’ with the world aesthetically, scientifically, ethically, politically and socially. Inquiries courses are designed specifically to do this, as part of a GE curriculum. They are not, in other words, introductory courses designed to do something else (that is, to introduce students to particular fields of study).

Likewise, Sierra comments that, “For students, it helps them see how these courses address pressing issues that are part and parcel of them becoming a well-rounded, ultimately a well-rounded participant in society.” Although Chazz does single out Undergraduate College students in his narrative, it is probably safe to say that based upon some of his other statements, he would extend this conception of GE function to other schools that follow the same approach to the general education curriculum as does the Undergraduate College. Nevertheless, both Chazz and Sierra’s statements create takeaways as to how general education is expected to be applied in the world. This is the secondary aspect to be taken away from a multitude of comments received relative to civic mindedness and/or citizenship.

Participants voiced these goals in a number of generic ways, such as “shaping our students to become good citizens” (Sierra), “we want people to be civically minded and be a part of the community” (Liz), and “we have an obligation to… train students so that they can be effective citizens” (Ted). Eve added a bit more to the application piece by saying that the general education knowledge enables students “to be able to go out into the larger world to express and articulate informed opinions” and “to interact with others in a[n] informed and engaged way.”

Engineering students complete a course during their final year of the degree program that Sally considers to be a part of the general education curriculum. The expected outcomes fall in line with other programs’ projected takeaways regarding building citizenship:

> In their fourth-year class that we have explicit assignments that are like, ‘Consider this aspect of your project,’ you know the environmental, the social, the ethical,

> the economic… I mean, you have to explicitly describe how their engineering needs to consider all these factors, which I think definitely contributes to their ability to serve society, when they get out.

Even though including this course under the heading of general education might not align with all other schools, Sally's perspective on the skills takeaway and application for society post-graduation offers some additional specificity on expected outcomes. Of course, this perspective on general education is not unanimous, as Barney, from Exercise Science, provides a divergent voice to the idea that skills development for the wider world really takes place at the general education level:

> I think the general education requirements are again about that grooming of a future contributor to society opposed to really getting into, you know, why information literacy, critical thinking, quantitative reasoning, problem solving, oral communication, that might occur more specifically within a major.

Although it is important to account for contradictory perspectives, Barney's statement should be carefully weighed against the near unanimous accounts to the contrary and considered along with his categorization of general education courses as "necessary evils."

From perhaps a more optimistic perspective, Eric's (Public Affairs) viewpoint gives insight to the possibilities of relating skills to jobs and society:

> Their objective's to try to be involved in the community in some way through their jobs, and that was that was one of the reasons we redesigned the curriculum was more of, I think the second part of the mission you mentioned, which was you know, with our President's emphasis on service to the community. We kind

> of redesigned with the idea that let's help our students realize that regardless of what profession they're in, they can still find opportunities to use their skills in volunteer capacity, or whatever it might be in making our communities better around them. So we've tried to build that.

The overall curriculum redesign that Eric refers to was not limited to general education coursework, but it contextualizes their efforts to align general education objectives with that of the major curriculum in order to create a cohesive program experience for students based around desired program outcomes. From an idealized perspective, it seems that this type of integration and view towards the interaction between the major and all other elements of the degree are important approaches to create the type of well-rounded students that programs aspire to.

Theme 2: High Levels of Perceived Graduate Preparedness for Employment

The skills gap narrative is based upon a basic premise that the possession of a degree in and of itself does not necessarily guarantee that a college graduate is well-prepared for entry level work. In distancing MSU from the notion that the skills gap even applies to the university, the faculty and staff providing viewpoints for this study were consistent in their opinions that MSU graduates are very well prepared for entry-level employment. Perhaps this should come as little surprise given the level of academic preparedness generally possessed by the student body upon entry to the institution. This position is also a shared belief among chief academic officers at public doctoral institutions such that they effectively prepare students for the world of work (Jaschik & Lederman, 2020). Whether such determinations were based on job placement rates, first-person observations, conversations with employers, or other means, all participants who

explicitly expressed a position on the entry-level preparedness of graduates from their school or program projected confidence in students' exposure to the skills and opportunities offered by the university for the sake of preparing them for success in the world beyond the borders of the institution. Although these opinions were not mutually exclusive to one category or the other, there was a fairly clear split on the type of preparedness offered by programs with a more direct line to employment and those aligned with more of a liberal arts approach to education.

Professionally Aligned Programs

Representatives of schools and programs that provide specialized training towards a specific occupation or closely related field believe that graduates are both well prepared for employment opportunities and in high demand by employers. Since there is a more direct line to employment within these areas, the viewpoints held within these academic units are often reflective of the opinions expressed to them by employers who are regularly involved with hiring MSU graduates.

Engineering faculty and staff at MSU are emblematic of this position with confidence that they effectively accomplish both graduating students at a high level while providing the relevant skills development for success in entry-level employment pursuits. Cindy, an instructor in the School of Engineering, addresses each of these aspects. Regarding success with graduation, she says, "MSU Engineering has an insanely high 4-year graduation rate. And that's, that's a marketable talking point, right?" Continuing on, she indicates the following in regards to job placement:

> Based on the fact that they're still so highly in demand. I mean, a lot of them are getting hired in the fall before they graduate in May, right? So they're getting

> multiple job offers months before they even graduate. So I think that that would indicate to me there's some type of… the word's gotten out, right, that these graduates are well prepared and well suited to these jobs that they're being hired for.

Sally, another Engineering instructor, provides further support of these positions in saying, "We have basically a 100% employment when they graduate. I mean it's not… I don't at all feel like they're unprepared to do what society needs them to do at this point." Further, she references the employer perception saying, "Our students are all getting jobs. So it's not, it's not that we get back [from employers] that they have these, some substantial weaknesses that they can't get employed. So yes, being able to be employed is important."

Of course, getting a foot in the door is only the first step in finding workplace success. Beyond the initial hire, an employee needs to possess the requisite skills and abilities to be successful over the longer term. Walter, another Engineering instructor, provides an additional voice indicating that not only are Engineering students successful in obtaining that initial hiring offer ("our students tend to be highly employed after they graduate"), but taking the position a step further in attesting to the level of graduate workplace success experienced beyond the entry-level ("our students have pretty good success, pretty quick promotion up the scale").

While these previous statements all point to statistics and circumstances to speak to program success in preparing graduates for employment, perhaps the greatest statement in support of this comes from Mitch, as relayed directly from employers:

> We've had employers at our little summer meeting tell us, they'll say, 'Oh, if I just want a coder, if I just want someone to sit in the corner and write me an app, I'll go to [competing state institution] and grab one of them. Cause they're honestly just better at coding than you all are.' I'm always a little upset by that. And they're like, 'but if I want someone who's gonna like think outside the box, one day become a manager, be better at handling people, maybe become a leader in my company one day, I'm gonna come to MSU. Cause they have the technical skills, but they also have that, like those soft skills on top of it.' And I think that's kind of like, that's the big sell for MSU is like you're going to get some of that. You're not just gonna come here and learn the technical skills. You're gonna be a well-rounded engineer.

Faculty in the School of Nursing report a similar level of contentment among employers, as well as a confidence from within the school regarding the skill development it delivers. Per Robin, who interacts with employers periodically during career fairs throughout the year,

> The comments they [employers] give me typically are more along the lines of, 'they're super prepared, they're very professional,' you know, that those core sorts of things, not so much even directly about even their nursing skills or their curriculum.

This certainly supports Mary's claim that "I think we prepare them very well." Further, given that nursing is a field requiring licensure to practice, and at the same time is an occupation experiencing a significant worker shortage in recent times (American Association of Colleges of Nursing, 2020), it is notable that Robin also notes that "One of

the things that the State Education Commission (SEC) cares about is, are we meeting the needs of the [state]? They probably, they would probably like to see us produce more BSN grads to do that."

Although the educational training that students receive and the sprawling number of job placement outcomes of its graduates can at times more closely resemble that of a liberal arts program, the degree to which Public Affairs views itself as a professional school, and developing its students as such, is evident in the sentiments of its administrators. Liz is one such administrator that points to the job placement success graduates exhibit as proof of their preparedness by saying:

> Highly prepared. I mean I can elaborate on that if you want. Our undergraduate employment statistics at 6 months are above 94%... have a first destination. Now some of those first destinations are graduate school, but that's what they've chosen to do. It's not like they default it into graduate school. And most of that is not graduate… further graduate study… it's actual gainful employment.

Eric, another faculty member in the SPA, corroborates this position in saying that "the [SPA] students don't generally struggle with finding jobs." As for the degree of skill development taking place within the program as preparation for employment, his indication was simply that, "I think they are leaving, you know, with a set of skills that I feel comfortable with." Within this statement, Eric adds an important caveat that also raised the question of just how much impact the program is having upon the development of the students. He states:

> I'm happy with their level of preparation for entry level work in the types of jobs they're getting. I don't know if we can take credit for that. I think the students that

> are coming to [SPA] often attended very good high schools. They are super motivated. They come from strong families, you know, a lot of them. So I'm not sure that we're adding as much value as we think we are.

Although Eric's query begs for a quantifiable response, without firm data to show exactly where skills are actually developed, this open-ended question remains central to this dialogue – regardless of students' programs of study – even with the many accounts attesting to the strong level of skills preparation present among graduates. Despite the fact that Lattuca and Stark (2009) recognize preparation level of students and associated characteristics as influences on curriculum within their model, Eric's account of this matter is really an outlier among the participants interviewed, so the prevalence of this perspective is relatively unknown.

Generalized Employment Preparation

If societal and politicized attacks over recent years against the workplace utility of a liberal arts degree are to be believed, graduates from non-professional type programs would struggle to be prepared for and able to land entry-level employment opportunities. The counter point to this is offered by Jeffrey, a social sciences instructor and Director of the Liberal Learning for the Workforce (LLW) program, in saying, "Of course, as we know, employment and life satisfaction outcomes are at least as good for arts and sciences degrees as they are for professional degrees, which are explicitly vocational."

While the liberal arts and related disciplines often lack a direct line to entry-level employment in an occupation directly connected with a specific degree, the prevailing viewpoint seems to be that students are being aptly prepared to be a functional member of society that can succeed in a wide range of occupational pursuits. Within this study,

many of the participating faculty expressed exactly this type of belief as to how well their program prepares students for the labor market. From her perspective in Foreign Language, Eve postulates that "the Undergraduate College has a specific general education curriculum, which is… hopefully prepares students in all areas." Likewise, Sierra voiced that, "we feel that the skills that they learn as [Humanities] majors equipped them successfully for any job." Echoing this belief of preparing students for various employment pursuits, Bunny expresses some additional confidence on the work being done in the School of Education in saying, "I think they're very well prepared. I mean, obviously, it depends what kind of entry level work." Jeffrey voices a similar position with respect to the work being performed in the social sciences, saying,

> There is not some sort of deep, or like severely lacking kind of training or skill sets that students don't have that they have to leave with to have good life outcomes. Or at least it appears that way to me.

Finally, Elaine not only offers her own perspective on the preparation level of Education graduates, but also corroborates that position with employer viewpoints. She said,

> People want to hire our graduates. They find them not only very competent, they're really bright, and curious, you know, socially conscious, you know, they're really great… employable individuals. And so, I think across the board, we have an incredibly high rate of, you know, placement in employment situations or acceptance into a graduate or professional program or service.

Certainly, these statements paint a picture illustrating the employability and skills attainment of MSU graduates. Still, it is important to recognize that these accounts could

create a misnomer that perhaps graduates from liberal arts programs may be immediately employable, but only in professions that do not provide specialized training in the given field. Chazz, an Interdisciplinary instructor in the College of Arts and Sciences, challenges this notion with the following:

> If you have an excellent kid coming out of MSU with that kind of coursework, they're gonna go… they can go into business. If that's what she wants to do. In fact, there are many businesses that will value her more than what they would value a [School of Business Administration] kid… We've always put our kids into the business world. It's not like you couldn't get a job when you came out of the College of Arts and Sciences, and I don't think it's that way now.

Just as with the professionally aligned programs, there is also a belief that MSU degrees are enabling graduates to not only be successful upon initial placement in the labor market, but also that they are moving up the ranks because of their education at MSU. Per Chazz:

> We also know that liberal arts students do very well in the job market, or at least that has been the case in normal economic times. Indeed, while it's true that employers complain that students are not work-ready, the fact is, when corporations hire at the higher levels, they often hire "unskilled" but well-educated liberal arts majors—which is to say, people like themselves.

Suffice to say, faculty at MSU, regardless of their home school or department, are consistent in their belief that graduates from the university are well-prepared for whatever next steps are in store for them based upon the skills and knowledge that they ascertain from their time at the university.

Theme 3: Articulation of Employability Skills to Students

A theme that emerged from a number of the discussions relative to skills development and implications for employment was that it is increasingly important in today's world for instructors to assume a more active role while learning is being delivered in the classroom to explicitly articulate to students how it is relevant to their future workplace endeavors. Furthermore, while there is some evidence present to show that this notion is being thought about in disciplines where a more direct line to employment exists, this phenomenon is generally relegated to liberal arts disciplines. This state and its voicing as a contemporary issue of concern is perhaps best exemplified by the following statement from Sierra's perspective in the Humanities:

> I've seen a change in recent years… more of an attention to trying to help students understand how education in the liberal arts can serve them in later life to be active citizens in the community and to use skills such as critical thinking, data analysis, things that they study in the Undergraduate College. Ways in which they can apply those in their lives beyond. How can you operationalize or deploy a major in [Humanities] to get a job afterwards? We didn't see that as our mission to address as professors for a long time. And in many ways, I think increasingly we do see it to be our responsibility to help students understand the value and worth of a liberal arts education. How to help them see how they can apply it and to make a case for what we do to the broader public, to our students. Essentially to legitimize what we do. So I am seeing a shift… How are we trying to tailor our teaching, our curricula to meet the needs of the new labor force?

Colleagues from other disciplines within the College of Arts & Sciences also explored related aspects of this statement with some of their own observations. In talking about the presence and student recognition of employability skills-building taking place within the curriculum, Audrey in the Natural Sciences observes, "I would argue, that that's actually really difficult, perceived from a student's perspective to necessarily see, I think, that we infuse these in our courses, but we're not necessarily explicit about it." Eve from her lens in Foreign Languages provides the following:

> I think that we could all do a much better job of saying, 'what we're teaching you when we're teaching [Foreign Language] is not that you're going to go out in the world and use, you know, [Subject-specific course reading] in your job. It's that we're teaching you to read carefully to be able to articulate your thoughts, and that kind of thing.' And so I don't think that necessarily we should be changing the discipline to match what the students want. I think we should be more looking at, explain to the students and defending what we do, as what they already what they want.

Between these two statements, there is an acknowledgement, first off, that the skills to be gained are not immediately apparent to students. Second, it seems that a purposeful effort is necessary to make these skills apparent. Barney, from Exercise Science, insinuates that for students to understand the expected outcomes from a course, it may be as simple as putting it in print and highlighting it. He provides the metaphor:

> Just like, if I was reading a research study and going right to the methods to say, 'Well, here's the title of the article. Are they actually going to design a study in order to address the question that they're asking?' I would look at a syllabus, and

say, here's the title of the course. How well do the objectives of the course, the goals of the course, as well as the reading materials of the course, align with the title of the course?

Taken a step further, Eve expands upon her previous statement to say, “the faculty are not particularly trained in our articulating the skills that they are transmitting to students that are marketable, but that are not like specific to you know different particular jobs.” Compounded with Barney’s statement, Eve’s then serves as a reminder that it is not simply enough to explain to students what they are learning within the constructs of a time-limited course, rather that there are greater implications to that learning that extend well into the student’s future.

Upon review of these statements, it is natural to question whether this issue is specific to the College of Arts & Sciences and liberal arts disciplines in general, or if there is applicability from the statements to general education and/or other disciplines as well. Given the alignment among the different disciplines in this study with the levels of emphasis they place upon different employability skills – which will be covered in the following section – combined with a present-day attention to graduate employment outcomes, it seems reasonable that this concept may be applied in other academic areas as well. At the very least, Mitch, from Engineering, is on record as part of this study in saying that, “I always tell my students, like, we are preparing you to like understand how the world works, so that no matter what job you land in you can adapt and learn how to be successful in that job regardless.” So there is at least some indication of students leaving from these professionally-aligned programs and having a need to be mobile within the world of work with their skills.

One of the major discoveries within the iterative process of interviewing for this study turned out to be that a few faculty members in the College of Arts & Sciences directed the researcher towards a new program within the Undergraduate College that was being freshly implemented for exactly the purposes outlined within this section. The Liberal Learning for the Workforce (LLW) program was recently instituted with part of its stated charge aimed at articulating marketable employability skills for the workplace. The program itself had apparently been in the works for a number of years with the backing of some influential donors and internal faculty support towards creating a credited experience within the curriculum wherein students learned to translate the skills that they had already obtained in their liberal arts training. The program would then supplement the existing skills with new skills training in in-demand subject areas as per the workforce. The program director, a social sciences faculty member by trade, was able to provide a series of insights for this study on the program's formation and the expected outcomes from students' participation. To that end, Jeffrey describes the interaction of general education, major, and the world beyond as:

> I think part of our mission is really to sort of return to that level of cognitive abstraction and to step back and say, 'Okay, you did, Gen Ed. You got some tools there. You did your major. You learned new ways of thinking. You learned… you had like declarative knowledge. You have habits in mind, you have all this sort of stuff that you've indeed gained over the last 3 or 4 years.' So how do you step back and understand that at a level broader than sociology? Or anthropology, or economics, or whatever their major may be…most students won't do anything with their major… Specific. Anything specific with their major. So the question

> then is really like, is first of all, it's like helping them transcend the major and think about what transdisciplinary outcomes liberal arts education provides. Which is why Gen Ed stuff is really important.

In short, the contextualization piece of skills attainment is a crucial part of preparing students for their future endeavors, and it is a major part of what the program aims to do. Jeffrey continues:

> Making those explicit, giving students the chance to practice those skills in applied ways, and then to practice describing the skill sets that they have in specific ways that translate between academic and career domains, I think is, that's the focus of the program.

While it remains to be seen what impact this program will have upon the students participating in it, along with any potential trickle down into course-specific efforts by faculty outside the program, it certainly seems as though there is both a recognition and acceptance within the Undergraduate College that these types of efforts towards assisting students in making sense of their learned skills and translating how they relate to the workplace. The early faculty interest in participating with the program would also indicate that there is a belief that these are valuable aspects to include within the curriculum.

Theme 4: Similarities and Differences among Conception of Skills for Employment

While this study was neither intended to be quantitative, nor mixed methods, in the nature of its data collection, certain themes were observed within the frequencies and tendencies with which specific employability skills were discussed by participants.

Employability Skills Emphases by Frequency

To derive some loose conclusions about the skills that seemed to be discussed and emphasized most and least by the various participants, approximate averages and overall frequencies were used to better understand how skills were viewed with respect to one another. Within the course of interviewing participants, they engaged in a visual activity where they were asked to align a set of designated employability skills along a continuum based upon the level of emphasis that each receives in the curriculum. The set of skills presented to participants were chosen based upon a combination of the frequency with which they appear in the literature on employer-desired employability skills and those chosen for assessment by MSU in accordance with the state education commission's mandate. The visual representation of skills emphases allowed for a series of questions that followed to further understand how skills development is manifested within curriculum. While these were not to be treated as a ranked order, the modified q-sort technique that was employed was intended to allow for some rough conclusions to be drawn about which skills are featured most and least prominently in comparison to one another. As it turned out, as they went through the process of completing the task, it was common occurrence to hear in the participants' dialog indications that they were generally treating the activity as a 1-12 ranking. Two screenshots to show the beginning and completed states of this activity are included below as Figures 4 and 5.

Figure 5

Modified Q-Sort Skills Activity – Blank

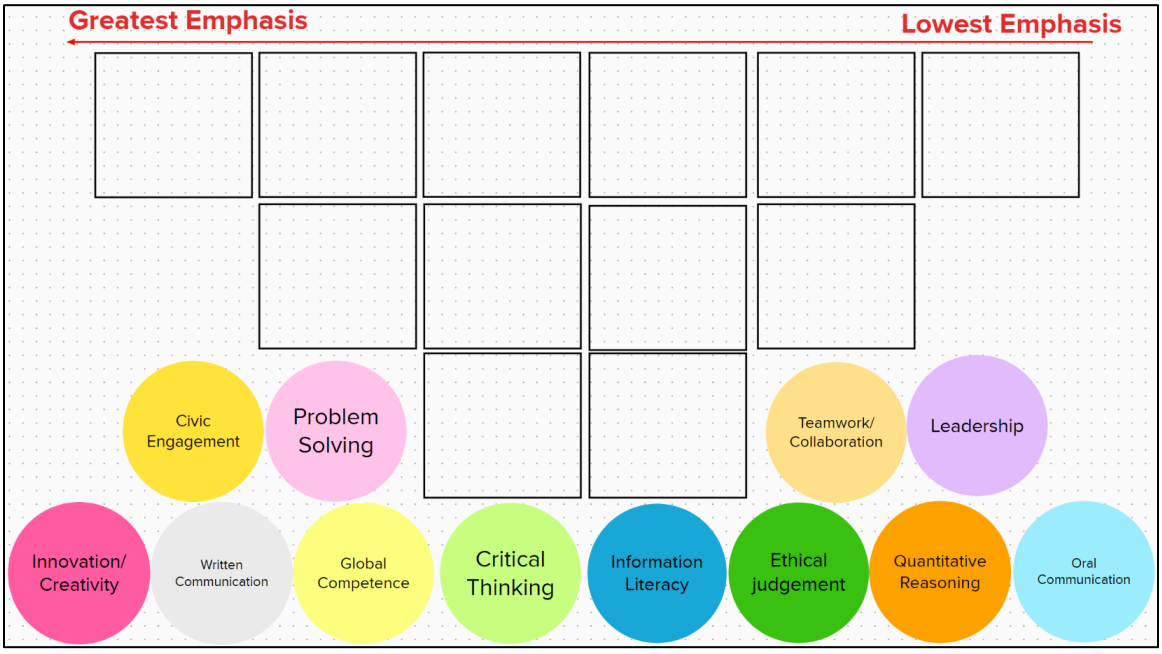
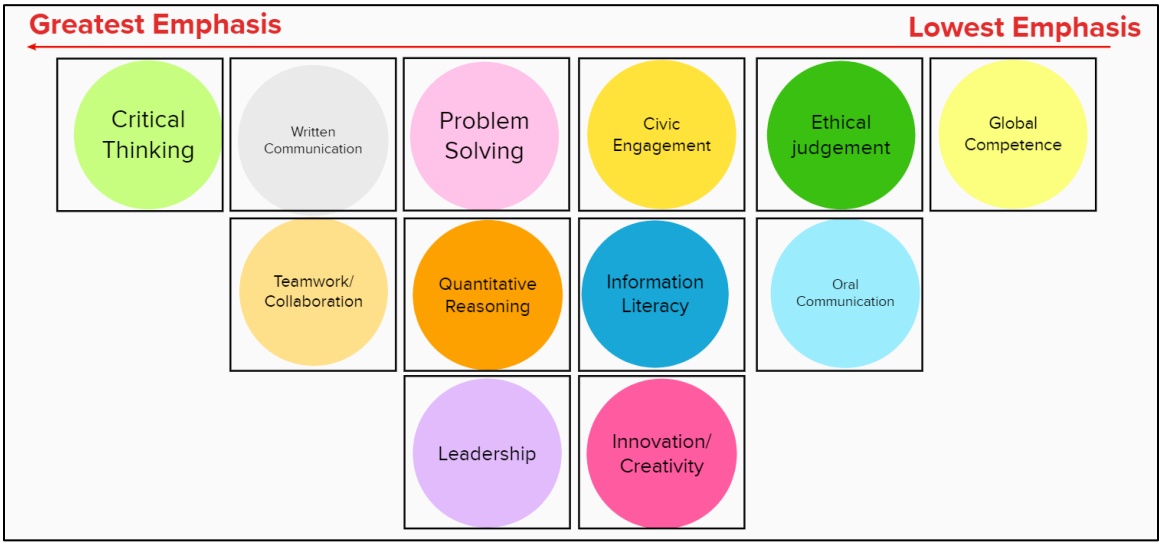


Figure 6

Modified Q-Sort Skills Activity – Complete



Following the logic by which participants placed skills within the Q-sort diagram, combined with the verbal cues they provided about the ordering they used for positioning

the various skills, average positions along the continuum were calculated assuming a 1-12 order of emphasis, with 1 being the greatest emphasis and 12 being the least. In a few instances, participants indicated that two or more skills were equal in emphasis to one another. In such cases, the skills were each assigned the same rank. Three of the 18 participants in the study did not complete the activity and therefore are not accounted for in the calculations. Individual participant rankings and the average ranking for each skill are represented in Table 2.

Also included within the table are two additional elements. The first stems from the modified Q-sort activity and subsequent conversations. Participants were each asked to talk about their top three or four skills and elaborate on what it means within the context of the curriculum for the skills to receive the greatest emphasis. Each time that a participant mentioned a skill in this context, it was totaled towards an overall number of "top 3" mentions. These totals are each listed in Table 2. Additionally, the researcher scraped through the entirety of each transcript to calculate the overall number of times a particular skill was mentioned in the course of the interviews. If the same skill was mentioned more than once in the continuation of a participant's extended statement, it was only counted once. But if it was brought up again in the course of the same interview while speaking on a new subject, it was tallied again. This data is also featured in Table 2. Although this is a very rough and unscientific measure, taken in combination with the other frequency data, some consistent themes of emphasis were observed.

Table 2

Employability Skills (ES) Frequencies

	Lily	*Sierra*	*Ted*	*Audrey*	*Eve*	*Barney*	*Bunny*	*Sally*	*Mitch*	*Walter*	*Cindy*	*Robin*	*Mary*	*Liz*	*Eric*	**Average**	**Top 3 Freq.**	**ES Freq Totals**
Critical Thinking*	6	1	3	3	1	2	1	1	1	2	5	2	1	6	5	**1.92**	11	40
Problem Solving	5	7	2	2	4	4	2	2	1	1	1	3	4	4	8	**2.75**	10	24
Quantitative Reasoning*	2	12	1	1	5	3	10	3	1	4	2	6	11	5	2	**4.92**	9	26
Teamwork & Collaboration	1	8	11	6	3	8	12	4	4	3	3	1	3	2	12	**5.50**	8	22
Written Communication*	4	6	6	5	2	6	6	5	6	6	7	11	6	10	9	**6.00**	4	29
Oral Communication	3	2	7	9	11	5	4	8	5	7	12	4	5	7	10	**6.58**	3	13
Leadership	12	10	12	8	6	11	3	7	9	9	4	9	2	1	1	**7.50**	4	14
Ethical Judgement	7	3	9	11	10	9	11	6	7	8	6	5	7	9	4	**7.67**	2	13
Information Literacy*	10	5	5	4	8	1	9	9	10	11	11	8	8	12	6	**7.42**	3	17
Innovation & Creativity	8	11	4	7	9	7	7	11	8	5	9	7	12	11	11	**8.08**	0	10
Civic Engagement*	11	9	10	12	7	10	5	12	12	10	10	10	9	3	3	**9.67**	2	14
Global Competence*	9	4	8	10	12	12	8	10	11	12	8	12	10	8	7	**9.75**	1	8

Note. * denotes QEP Competency at MSU

Examining the most emphasized skills based on these measures, it is clear that critical thinking and problem solving are the most valued for development across the curriculum, regardless of school or program. Some additional trends that emerged were that these two skills were placed in the top three most often, critical thinking always appeared in the top half of each continuum, while problem solving always appeared in the top two-thirds, and no skill came up in conversation more frequently than critical thinking.

The next echelon of skills was also fairly consistent in its ranks among average emphases, top 3 mentions, and overall frequency. Included in this group were quantitative reasoning, teamwork and collaboration, written communication, oral communication, and leadership. A couple things could be said about this group of skills to differentiate them from the top two skills. The first thing is that each of the skills in this group received rankings that ranged the full spectrum from most to least emphasis. The second part to this is that these extremes could at times be attributed to the type of discipline that the faculty member represents, particularly if the discipline is closely

aligned with a type of skill. For instance, the School of Public Affairs includes within its overall mission an emphasis upon leadership. Unsurprisingly, the two participants from this school both ranked leadership as the skill receiving the greatest emphasis in their curriculum. Likewise, approximately half of the programs represented in this study could be described as being largely quantitative in nature. As a result, it should come as little surprise that quantitative reasoning would rise near the top of the overall average rankings considering the concentration of responses.

One of the perhaps most surprising things about the skills that rose to the top and those that dropped to the bottom is the apparent disconnect that is present between the programs and the university at large. As part of the Quality Enhancement Plan (QEP) for which the institution is responsible for preparing as part of its next reaccreditation process with SACSCOC, six skills were determined to be the institutional focus for assessment. Three of those six skills selected were ranked among the top five for the purposes of this study as described above (critical thinking, quantitative reasoning, written communication). However, the remaining three skills selected for the QEP ranked among the bottom four skills in this study (information literacy, civic engagement, global competence). As these measures are not meant to be generalizable to the institution at large, this finding may be aberrant by comparison to other schools and departments, but curious nonetheless.

Disciplinary Skills Alignment

There is certainly a great deal of homogeneity among the programs in the different schools and departments around the most heavily emphasized skills of critical thinking and problem solving. Beyond this, what tends to be true across the board as well

is that the emphasis a skill receives within an academic area is a direct reflection of the type of discipline represented. Eve encapsulates this well in saying that "humanities majors probably have more of an emphasis on critical thinking, maybe creativity and teamwork. And the science majors have more of an emphasis on quantitative reasoning and information literacy, and possibly problem solving. Maybe creativity and teamwork." And while these skills emphases may not always present themselves exactly in the manner described within these different disciplinary classifications, her point that the skills being developed in various academic areas reflect the discipline is something that is seen throughout the accounts in this study. Elaine, in Education, derives a similar comparison while providing an example to this effect saying, "that core value of global competence is very high in our [Social Science] major. They don't care about it in Exercise Science. Whereas they care deeply about quantitative reasoning and that would be a high value for that major."

As mentioned, quantitative reasoning is a skill that presents strongly in many of the departments represented in the study. Within the study, quantitative disciplines ranged the gamut of STEM areas, while also including disciplines such as economics. From a science-based perspective within the Undergraduate College, Audrey expresses the skills-based intentions of the program:

> …quantitative reasoning, problem solving, and critical thinking. I think that when we think of STEM disciplines, we hope that that's what our… again this is… I think these is content, like completely content, separate from content. Right? So you know, being able to give students the ability… reading, you know, data literacy is critical, being able to you know, think through a problem, be creative

> about the solution, but in a very quantitative way, being able to read data, understand numbers, make measurements, design experiments. You know, all of that sort of stuff tends to be our, the emphasis that we see in STEM in general.

Although not a STEM-based program in definition, Ted describes the same primary skills as the focus for his quantitatively based major in Economics:

> I wrote quantitative reasoning, problem solving, and critical thinking as our top choices and I think that's really what we're doing. We're kind of critically looking at the world and different, what we would say call markets, but just different environments where people are agents or industries, governments are interacting with each other and then trying to think about, you know very carefully about how the different constraints of people face, you know, impact the world we live in.

What we see in Ted's statement is that the skills development focus within the program is a reflection of not only the discipline itself, but also an indication that the demands of the world beyond graduation have an impact as well.

Sally connects her entire field with the most important skills in much the same way in saying, "we are Engineering. So we are trying to create problem solvers by, kind of, definition. That's what engineering is: solving problems with math and science." It should then come as very little surprise that the skills-based training aspirations of the participants representing Engineering do skew heavily towards problem solving and quantitative reasoning. For instance, Mitch's perspective related to his program in Engineering is quite similar to that of Sally. He states,

> It is a problem solving major. It's, that's just like the nature of it is every class is like, here is a set of problems we're gonna solve, here. We're gonna analyze those problems and do a bunch of math. And then the, all this other stuff [employability skills] is kind of just layered on top, because you need to… but this is the core.

Walter's account is much the same in reiterating the alignment between discipline and skills focus:

> It seems like basic problem solving is one of the main features of all the courses we have. Critical thinking to varying degrees, but usually in the courses that we have, we're always telling students, 'we're teaching you hopefully how to think, even though you may work on different problems.'

Like Ted, Walter's statement also makes a connection between the classroom and employment in the field.

Interestingly, there was one other school that fashioned itself as quantitatively focused even though it does not seem to be connected to its mission, yet the skills training aspirations of the school certainly align to it. That school was SPA. To this point, Eric indicated:

> So leadership, and quantitative reasoning, and civic engagement… Those 3 things are kind of built into our DNA of what we are as a school. Then I think with the ethical judgment, that is for us, I think, built into the… it, it informs the quantitative reasoning and the civic engagement.

Once again here, we see an example of a program where the skills are a direct reflection of what the program is envisioned to embody. To that effect, the program has

recently undergone a deliberate revision process that is still ongoing whereby the faculty have aspired to outline what the program aims to be about, or as Liz puts it,

> We have developed over the last year a matrix of kind of hard and soft skills that should be developed… again, we said… when we hand somebody that degree, that diploma, what do… what are the skills that we want them, to be sure they have? And then we mapped it to each of the individual courses.

Beyond the skills mentioned by Eric as being part of the charge of school, Liz includes one other in saying:

> Because one of the charges of Mr. [Founder of the School] was to create ethical and enlightened leaders, ultimately… taking out the course that's called integrating ethics and public policy made our Dean concerned. And so I have spent also the last year, while we were developing this [skills] matrix, part of it was to show him where ethical judgment was still being taught within our curriculum.

Taken altogether, the skills that Eric and Liz chose to highlight as the greatest points of emphasis within their program – other than quantitative reasoning – can be directly traced back the mission of the school, which, paraphrased, talks about training engaged, enlightened citizens and ethical leaders who go out into the world and effectively serve the public.

While not all skills development emphases can be so neatly connected back with the mission and written objectives of the school or program, the series of accounts in this section do still reflect the connections that are often present between academic disciplines and specific employability skills foci.

Skills Connections to Employment Needs

Each of the participants from the schools represented in the study were able to make connections between the academic learning provided in the program and its application to employment pursuits. The many variations in how they connect the dots, however, demonstrate just how differently faculty can make sense of the connection between education and employment.

College of Arts & Sciences. The liberal arts perspective on building employability is relatively straight forward – students are not being educated for the purpose of obtaining a job in a specific profession, rather they are trained so that they can be successful in a number of different post-graduate pursuits. Sierra attests to this with her statement that, "We feel that the skills that they learn as [Humanities] majors equip them successfully for any job." Audrey offers a similar intended goal:

> University is about learning how to think, not learning how to do. And that if you want to learn how to do, you need to find ways to train in that way. And so we learn how to… we train our students on how to be [scientists]. And if they want to go on as [scientists], hopefully we've given them good training. Since most of them don't, that ends up being a real challenge for us. And so we hope that those other things are, you know, are skills that can be very well transferable, and I think they are.

Thus, the Undergraduate College is interested with providing students breadth in many liberal arts areas with varying methods of examination, depth in a major that is not necessarily associated with definite employment pursuits, and an overall development of students for the rapidly changing world at large. Per Chazz from his Interdisciplinary

lens, “I think the liberal arts ideal is that students immerse themselves in classes that make them question things… think critically is the cliché.” All of these ideals are consistent with the school’s mission as well. However, this approach is not without a fair amount of handwringing in response to the demands of the job market.

It seems that liberal arts programs do often struggle with straddling the line between basing approaches in theory while preparing students for all that the world has to offer and the constant calls to educate students for the labor market. Chazz holds the line on maintaining the liberal arts values in saying that, “there are many ways to develop people who will assume professional occupations, but a narrow skills-based curriculum is not the way we in the liberal arts attempt to do it.” Ted articulates the push and pull through a series of statements describing his department’s approach to curriculum:

> …thinking about all kinds of problems, for being competent and using and analyzing data and interpreting data. But it is an academic department. And so you know there's sometimes a tension, between… well, there's no… the faculty in the department you know wanna teach kind of traditional kind of academic economics. Academic evaluations. And for the most part, we don't directly link that to the job market or particular jobs.
>
> However, he adds:
>
> We have an obligation to present, to train students so that they can be effective citizens, and to work… to be able to engage in a labor market and to have satisfying careers. And so I think that's something in our program, we think very much about.

Sierra presents a similar broad-based perspective that considers employment implications without a specific focus on any one professional track to be dictated by narrow skills development:

> We have focused on creating responsible, thoughtful, conscientious, well-rounded individuals who then… that has, I think, we have seen that as our mission, right? Who, then can deploy the kinds of skills, and particularly critical thinking skills and an engagement with the wider world that can deploy those orientations in whatever way they want, whatever way they choose once they graduate. The two majors that I've been involved with – our intent has been to help produce a well-rounded, culturally literate, individual that is responsive to global issues, ethical issues, issues of race and social justice, issues that are at the heart of these two disciplines, right?

In many respects, the intentions outlined within these two majors that Sierra represents are at the heart of what the Undergraduate College intends to foster in all of its students. The intentions articulated here are pervasive in the words of all the Undergraduate College participants involved with this study. Beyond high-level missions though, there are tangible skills that they aim to foster within their respective departments.

Teamwork is one skill that comes up frequently among Undergraduate College faculty. Sierra specifically ties teamwork and collaboration back to employment in saying,

> …the teamwork. This is something we explicitly say. 'When you have group projects to do, these are the kind of skills you're going to need in a job

> eventually.' And the students nod. They know this. They don't particularly like team, group projects often, but I think they appreciate that. They understand that… part of the justification for that is that they are going to have to collaborate in the workforce in whatever career they pursue.

Communication is also identified by multiple faculty members as being important to students' development, specifically written communication. However, it is also identified as an area by a few as needing improvement. From the more quantitative lens with the Undergraduate College, Audrey also includes information and data literacy emphases as "un-specific competencies" that are taught within the major but need to be brought to the forefront and given increased attention. Jeffrey describes these, and aforementioned employability skills like critical thinking, problem solving, and quantitative reasoning, as being:

> Harder to talk about, but they're what let you do your job well. Get the next job and learn how to do that well, and so on, and so forth. So to me they're really kind of the heart of the liberal arts and sciences degree.

While many of the key players within the College of Arts & Sciences agree with this categorization, it is also true that there is a tacit acknowledgement that this often is not enough to appease students and employers as it comes to building employability. As a result, there are basically two main approaches aimed at firming up an already robust liberal arts education. Jeffrey describes these two ongoing efforts as follows:

> …helping students translate and understand what is essentially a very intentionally non-vocational education, but one that paradoxically has like immense vocational benefits. So you know it's a paradox, how do you understand

> that paradox? How do you help students understand what they've learned in the Undergraduate College, and then frame it better? And then and also add some skills. Some high impact skills that they may lack that may be particularly effective in the job market.

With the initial part of this statement based around a need for articulating employability skills which was outlined in the previous section, we look at the second part of this claim. Clearly the pull of the employment world factors strongly into considerations around how these broad, non-discipline specific skills need to be supplemented by other in-demand skills in order to meet the desires of the employment world. Within the LLW program, Jeffrey says what they "want to do is give students a range of the fungible skills, the hard skills that they can leave with that maybe give them a leg up." These "fungible skills" and associated strategy equate to a:

> Focus on a specific thing. You know coding, or this or that language, coding language, or GIS, or things like that are not offered frequently outside of specific majors in the Undergraduate College. But then stand to add, something important to a student's portfolio, as they graduate. So there is, there is a skilled aspect.

Although this LLW venture was created as a standalone program to supplement major pursuits, in the years prior, academic programs have also been at work programming in course offerings aimed at providing skills specifically to aid in employment pursuits. For instance, within the languages, there has been an addition of classes for specific purposes like global health or treating translation as a marketable skill. Sometimes in these, and other departments, tracks are created to state, via the transcript, what marketable skills students possess as they go out into the world. Even

Chazz, from his heavily traditional liberal arts-based perspective, concedes that "we're always looking to include 'skills' courses when they contribute to the major, and many such courses are also ones that employers may wish to see. But employer desire is never much of a consideration with us." In essence, this largely sums up both the Undergraduate College's overall position on building skills for employment and its approach towards doing so.

Public Affairs. Outside of the Undergraduate College, schools and departments are, in most cases, much less conflicted about the tethering of skills-based education into the curriculum for the benefit of students enhancing their job prospects. Aside from the aforementioned focus on skills development in areas directly aligned with their mission, Public Affairs mentions a few other common employability skills in their points of emphasis, along with some discipline-specific competencies as well. Per Eric,

> We have the sort of the standard like 'we students need to be able to think critically.' And one of the emphases of the new curriculum is being able to be smart consumers of information. So how do we discern between good and bad information quickly? How to write clearly and how to communicate clearly, and how to use data. We have these skills that we've identified and we've tried to build them into the courses and making sure that they're covered throughout the curriculum.

Liz stresses oral communication as a high-level priority and indicates that there is such a significant emphasis on teamwork and collaboration that "everyone in our school, whether the undergraduate or graduate level would say everything we do is in teams." Beyond these skills, however, there is also a strong consideration as to what appears on

the transcript for the outside world to see specific to policy studies in the school. Liz describes this deliberate effort as trying to:

> Build an actual cohesive transcript that's going to allow them to say, 'Yes, I know something about education policy,' or environmental policy. And I can now go for that job that's going to say… going to require, not just the skills that they come out with, but also the substantive knowledge.

So while Eric may indicate that "we're hopeful that we've given them the general skills to be employable in a number of different fields," there is definitely a concentrated focus on developing skills towards the typical range of professions that their graduates tend to pursue.

Business Administration. Business Administration takes a similar tact towards strengthening the generalized skills base while maintaining a definite eye towards employment as a part of their considerations. Like SPA, Business places a high value on developing oral and written communication throughout the curriculum, as well as working heavily in teams during their final two years to refine the teamwork and collaboration. According to Lily, this is specifically so, "when you get out into the workforce that you can work with other people and collaborate on projects." Where they do put a more unique and targeted stamp on skills in the curriculum is in featuring development in data science, business analytics, and global competency. They view these areas in particular as being essential in today's global commerce professional's toolkit.

As will be discussed in the section to follow, the remaining three schools all have programs that are governed by an outside authority specific to the discipline. This comes

with its share of rules and responsibilities related to what is required in the curriculum. Assuming then that the skills, knowledge, and subject material falling under that category is largely outside of the program's control, the focus here will be on those elements of relative choice that the department has over the curriculum and the associated skills.

Education. In Education, there are strong themes across the programs regarding what they stress as important. Writing and written communication are viewed as not only essential towards professional pursuits in the field, but a relative weakness that they are working hard on trying to improve, particularly due to an enhanced focus on doing so for the sake of the QEP. Oral communication is viewed in a similar light of importance as well. Barney ties the importance of communication in with other skills and subject-specific knowledge to stress just how important it is for students to be skilled in it:

> The number one thing I hear from employers is, 'are they a good person?' And you know that's a big thing. They'll say, 'we'll teach them what they need to know.' I think, what a good person represents is, do they communicate? Do they handle constructive criticism? Do they work collaboratively? Are they a team player? Because throughout our curriculum, they're gonna be well versed with, you know, health in general. But at the same time, again, you can be a 4.0 and maybe score in the 98th percentile for the MCAT or whatnot, but at the same time, if you can't communicate effectively then that's a problem.

Certainly, Barney's statement brings some other skills into play as important as well – such as teamwork and collaboration – yet the weight he places on the need to develop strong communication skills was made all the more clear at another point in his interview when he equated a deficit in this area to be predictive of poor professional

prospects. Likewise, Bunny places a similar vital emphasis upon developing leadership due to the implications associated with employment within some of the fields in education. All of these aspirational development goals are also reflected either explicitly or implicitly in the school's mission and vision statements, so there seems to be a general consensus around how the school aims to prepare students for employment.

Engineering. Engineering certainly focuses heavily upon quantitative and related pursuits, as covered in the previous section, but there are a number of other skills that are characteristic to its many programs as well. Like several of the other disciplines, many of the faculty in Engineering stress teamwork and collaboration with the intention of preparing students for the demands of the workforce. Mitch attests to this saying,

> There's a lot of teamwork collaboration in the group, in the curriculum. Where we do that, of course, the group projects and things like that. Mostly because that's what students tend to do in the workforce. They're going to be on a team. They're gonna be working on one small part of a bigger application. They need experience in that. They don't like it, but mostly because it's hard to simulate.

These skills also appear in the Engineering mission statement, as does communication, which participants' comments tend to stress as relating mainly to the purpose of explaining how a conclusion is arrived at. Mitch explains the importance of this skill in the workplace saying, "we always talk about how you have to be able to explain your solution to people. It's not good enough to just see it in your head. So there's a lot some emphasis on that for sure." On a related note, and perhaps unsurprisingly given the many others in different schools that expressed this as well, writing deficiencies

were viewed to be present in Engineering. Cindy offers her perspective and explains her efforts in this regard:

> My interest in them [projects] has been not just helping students with the content of the projects, but helping them become better writers. Because I feel like if I turn them loose, if I graduate these students, and they have to write a report and they've done the math right, but they can't explain the math that they've done, then it's gonna be… it is worthless. Maybe not worthless, but it's gonna frustrate somebody else who has to read this report.

Beyond the general skills, there are certainly the subject-specific skills present that are just as valued for their applications to employment. Hiring professionals in the field, as Engineering has done, to teach courses because the existing faculty members do not possess the necessary expertise to prepare students for the particular field certainly provides a testament to the value placed on preparing students for employment. The two semesters of professional development projects that are required during the final year in the program is evidence to this fact as well. Likewise is the constant adaptation to the rapidly changing fields and adjusting the curriculum to account for it, as Mitch describes:

> I teach an AI class, and it looks, every 5 years, it looks totally different. I think I replace 20% of the material every time I teach it to bring it more up to date. It's just crazy how different the electives are. 10 years ago, we didn't have any like machine learning, or like any of these cool, like, AI courses. Now we got a cryptocurrency class and 3D machine learning classes and data mining classes. So that stuff, just, we're just trying to keep up with the breakneck pace of research and innovation.

With all the attention paid towards employment though, it would be easy to construe the approach in Engineering as one only interested in post-graduation employment outcomes. This paradox is perhaps best summed up by Mitch:

> Yes, it [employment preparation] is a huge part of what we do, but not at the cost of like the general theoretical knowledge, which is what they came to MSU for. I always tell my students like you can learn how to be a programmer online, or you can learn how to like really understand how computing works at a place like MSU. And there are so many times in class where I'll say, 'hey, the person who learned how to do this online is going to do this incorrectly. And it's gonna break something because they don't really understand what they're doing.' And that's like, that's the value of the education, hopefully.

Within Mitch's statement we see elements of the multifaceted approach that is present at an institution like MSU towards employment preparation. There is an emphasis upon ensuring that employment outcomes can be met successfully, but the education is much more than a narrowly tailored approach aimed at delivering only skills that are directly applicable to the projected discipline-specific jobs. This approach also views a need for developing a broadly educated student as well.

Nursing. The Nursing perspective as it relates to skill development for employment is truly the most straightforward among all the programs because it can be summarized as Robin does in saying, "there's very little they do in the Nursing BSN curriculum that isn't directly pointed toward preparing that student to graduate and become a nursing professional." She even took this a step further in conversation by explaining how transferable skills can be located nearly anywhere in the curriculum. She

said, “even if it's, let's say, a kinesiology volleyball course, it's still teaching you strategy, critical thinking, and how to be successful playing volleyball, right?” So while critical thinking, writing skills, teamwork, ethical decision making, problem solving, leadership, and overall professionalism are talked about by Robin and Mary as being prominent throughout the curriculum, these efforts are all directly related to the skills that they need to be proficient with to be nursing professionals. Many of these same elements are also reflected in the school’s mission statement. Robin does make an interesting point, however, in saying that it is the development of these types of skills “that produce a nurse that is at a different level of critical thinking versus maybe somebody who comes out of an associate degree program.” So while students in this program are subjected to applied learning in the clinical setting and courses that simulate the professional environment, inside the program (and perhaps outside as well), it is the view that these generalized employability skills are the capabilities that set their graduates apart in the professional setting.

Theme 5: Variety of Influences related to Curriculum Development

In talking through the process of forming and revising curriculum with the participants sampled in this study, it was certainly apparent that there are many different types of influences that impact what the curriculum ultimately comes to look like. Weaving in skills development within different areas of the curriculum can take many forms, from creating new programs, editing existing programs, adding new courses, or even distributing skills development differently among the existing courses. Each of these types of curricular adjustments came up in conversation during this study. Looking beyond the faculty who pull the levers to determine the logistics of such changes, many

other forces were discussed as playing a role in the consideration or execution of curricular shifts.

Employer Influence

In the context of this study, it should come as little surprise that employer voices were found in many academic areas to play a role in the molding of curriculum. Certainly there are schools and programs at the institution that try to resist the calls to increasingly conform the education to the whims of employers, though operating in complete isolation seems to be an outlying position. Even the programs in the Undergraduate College that partook in this study may be resistant to direct influence from employers, yet not entirely immune to the pull of market forces when it comes to constructing their programs. For instance, Ted indicated that he has received numerous requests in the past from employers that wish to come speak to their classes:

> Where we kind of draw the line is when we get, and I get this fairly regularly… they feel like it'd be really great for them to talk to our students as part of a course, maybe teach a course, or come in and present a lecture on the kinds of work they're doing. And generally we don't accommodate that because what they're teaching is not the kind of academic economics… It's more of a practical, you know, professional presentation, which is certainly useful. But we're not a professional school or a program.

The flip side to this perspective, however, is the acknowledgement that it is still valuable to work within the curriculum to build skills that will be valuable to students as they enter into the workforce. In describing a specific curricular adjustment as an

example of how the department has been receptive to the changing marketplace, Ted explained:

> We required a course called [course name]… which is basically the statistical methods… to evaluate data. And both of those [course revisions] are kind of reflections of the way the profession has changed over the last 2 generations, I mean. But certainly it's just become much more mathematical. Prior to that, [it] had just been an elective… but so much of what [professionals] are doing now, and the world, you know, social science more generally, is data driven. And it just seemed kind of you know, to have a serious major… that didn't require students to understand how to do work with data just didn't make sense. So we added that.

Of all the accounts of participants from the Undergraduate College though, Ted's was the outlying account of where there was direct contact with employers. Coincidentally, when asked about any type of interaction Jeffrey has had with employers in support of shaping the LLW program, he lamented an inability to collect a thorough enough representative sample given resource constraints. Instead, he referenced AAC&U employer surveys as a major point of reference to inform his work saying, "they do a really robust… and they've done for this for many years, a robust employer survey specifically focused on liberal arts outcomes, and they update it every 3 or 4 years."

For other schools, however, interfacing with employers seems to be a much more attainable goal and, therefore, a regular occurrence, which in some cases is a very sought-after perspective. In the course of interviews, employer perspectives often came out as aggregate statements of generalized feedback that the programs hear from employers, but there were certainly more specific accounts of interactions with employers as well.

Liz provided a great example of the feedback loop working its way from employers all the way through the cycle to eventually having a direct impact on the curriculum, per the following:

> We have the conversation with employers to say, 'what are the skills that you're looking for?' And then we rely on the translation between our Director of Career Services, myself, and our faculty committee to actually make sure that, you know, how those things were seen and how those things were adjusted. One of the things we noted, you know, in the conversation before was the curriculum only had 9 credits of electives. Now, those electives are where you actually take your interest in national security, or education policy, or the environment where you actually gain the substantive knowledge in that space. And so what that translates to us is… if an employer says I want them to have more substantive knowledge when they come in, not just the tools that you're teaching them in [Public Affairs], okay, that translation is giving them more electives to be able to develop that substantive knowledge is what we need to do.

While Eric may have had trouble with his recollection on specific impacts to the curriculum, his perspective mirrors Liz's in the level of credence that is given to employer perspectives, with an added focus on skills:

> …they have [employer expectations of skills to be emphasized], and I just don't remember what they are. But they're things that we tried to integrate into the undergrad curriculum, and I'm trying to remember now specifically what they were. Yeah, I wish I could remember. I wish I had off the top of my head. But

there were things that they specified that they wish that our students knew better. And we've tried to address it.

Elaine offers a similar example of how employer feedback has been utilized in the Teacher Education program relative to practicum placements:

> Our employers told us that students have challenges in a couple of very concrete areas. One of them was about like tools and strategies for engaging in very diverse, ethically direct language, in culturally diverse classrooms. And so our program took that to heart and said, 'Okay, we have political placements in the [surrounding region] general area for our programs. We need to do a better job of having students in, be really intentionally getting placements in a broad range of experiences.' So we are using the language in the metropolitan classifications that the schools use with like IPEDS data, to be able to like ensure that students have a much more representative experience in classrooms that take shapes in so many different ways, rather than, 'I don't have a car. So place me at [nearby elementary school], because you know, it's close to my apartment.' Those practical considerations obviously have a place, but our employers told us very specific feedback and we changed our clinical placement rotations as a result of that employer feedback.

Of course, this example goes more towards the execution of the curriculum, rather than altering requirements, but the remediation is still aimed at the skills development of the students involved in the program. Education has also considered the direct feedback from employers towards altering coursework as well though. Bunny offers a recent example:

> The justification [for a course creation or modification] sometimes does address that in terms of like the, you know, the profession has a need for these services. For instance, there were some new courses that came up… this was in Counselor Ed too and their specific justification was these were short courses, for, like continuing professional development for counselors, because they were specifically around dealing with students during and after pandemic. So the fact that there was a professional sort of need for these things spurred, you know, some people to create these short courses that people would want.

And while Education is certainly utilizing the voices of employers to inform the presentation of their programs, consider Barney a voice that would like to see an even a greater emphasis placed on gathering feedback based on his statement arguing that:

> One of the things that I think we always can do a better job of talking to employers that employ our students. And say, 'what do you wish they would do differently?' 'Yeah, what do you think that they're lacking on?'

Engineering in one school that does take this type of active approach in soliciting employer feedback. Mitch describes the setup:

> We have a… it's basically companies that pay money for extra access to us. We have some fancy name for it. It's like corporate… I can't remember the name… It's basically if you're a company and you want to hire MSU students, you can come to like the career fair through the career office, or if you pay the department some lump sum donation, you get like special recruiting privileges where you can sit in special places in [Engineering] Hall and talk to students as they're walking to and from class. And then you get we do like a workshop with those companies

> in the summer, where we talk to them a little bit about, 'what are our student strengths? What are their weaknesses?' We tell them about our curriculum, and they give us some feedback on things they'd like to see. And we don't, we're pretty good about not just like bending over backwards for whatever the big tech companies want. But just knowing a little bit about what they want to see in the curriculum is usually beneficial.

This particular approach is especially unique and valuable given the benefits on all sides of the equation. Namely, students get to interact with employers in a way that may eventually turn into employment or at least better prepare them for it, the employers get to actively recruit from a potential labor pool of their choosing, and the department is able to solicit and incorporate employer feedback into their curricular consideration for the benefit of their students long-term.

Nevertheless, what you see throughout these accounts is that each school views the role of employers in impacting curriculum in different ways – both in the way that input is ascertained in the first place and then how it actually influences educational programming.

Governing Boards

Governing boards play a role in impacting curriculum at two levels, albeit for those programs that are governed by a discipline-specific authority, it seems to be a more substantial influence in shaping curriculum. The regional accreditor for the institution and state governing board seem to be less invasive as compared to discipline specific governing authorities. Five of the six schools (all except Business Administration) represented in the study touched on one or the other (SACSCOC or SEC), though more

from the standpoint of how they provide guidelines to work within or an acknowledgement of needing to demonstrate proficiency within the guidelines. New programs or substantive changes to existing programs must go to SEC for state-level approval and those programs that are considering either type of action – or have done so in the past – are acutely aware of this dynamic. Although that stipulation seems to function more so as a barometer for determining if that level of curricular action is worth jumping through the necessary hoops. An account from Walter in Engineering, provides a bit of insight to that effect:

> We don't really have a lot of flexibility of adding credits. I think if we add or subtract more than 3 credit hours from the standard curriculum, we have to get approved from the state. And so we try to play inside that plus 2, minus 2 idea as best we can.

The influence of SACSCOC seems to be relegated to efforts centered around preparation for reaccreditation/reaffirmation and assessments associated with those processes. In the run up to these five- or ten-year processes, departments become even more attuned to the effectiveness of the skills they are developing within the curriculum and ensuring that their measurables are strong. Elaine in Education speaks to that impact saying:

> This year we are really working hard on our writing across the curriculum, writing enhanced curriculum criteria. Like we have a group of faculty, staff, and graduate students who teach some of our courses working with that. So that is in front of mind. I would say, that's been a sort of a conscious emphasis of ours the last 18

> months or so. Not that it wasn't before but I think it's more intentional the last 18 months or so, because of the QEP.

As a whole, the participants who spoke of SACS reaccreditation or the QEP followed from the same mold of how these create an added cognizance around their competency assessments within the department. For some schools and programs, the influence of SACS and SEC is minimal by comparison to their discipline-specific governing bodies. Per Sally:

> SACS, and that process seems kind of simple compared to ABET accreditation. So when the University has to do their accreditation assessment, the engineers are like, no problem. Just give them the, you know, the ABET material that we already have. So at least in that sense that we're very well prepared to do that.

One of the things that ABET seems to limit for Engineering as it comes to curricular changes is the time periods in which the school and its programs will consider making alterations to the curriculum. While the decision is a subjective one, Walter describes the decision saying:

> As we get closer to the ABET review, we don't like to make too many changes, because it makes the ABET process a little bit more tedious. And so once we get past ABET, then we like to make more changes.

This is something that he feels does stagnate the curriculum. However, he then seems to contradict himself in saying that:

> I don't think a single thing would change if ABET wasn't a thing. Be teaching the same courses. We would still be teaching roughly the same topics. We try to fit

> what we do to ABET and not the other way around, I guess. Which I think is okay.

Whether that is true or not would be a matter of conjecture, however, it is clear based upon the multiple accounts that course objectives and skills assessments are heavily influenced by ABET standards. From Cindy's perspective within her program, ABET is the source that defines which skills get built into the program and courses for student development:

> When we were trying to make our objectives… our course outcomes align with ABET objectives, a lot of our objectives were content focused, right? Like we want them to be able to solve these types of problems. We want them to have this, this skill set. And being a math class, right? It's, it's, those are problem solving courses.

Further, while Cindy already admits to altering her course structure to aid with ABET assessments, Walter does acknowledge that demonstrating improvement to maintain their standing with their accrediting body is something they will have to deal with in the future:

> Eventually we'll probably have to make some adjustments based on their feedback. And ABET requires it. They wanna see this continuous improvement process and that's part of it. So somehow we'll have to demonstrate that for this next review.

In the end, the bottom line with all of this program oversight is that graduates cannot be licensed and subsequently employed in several of the regulated engineering

disciplines without having completed an accredited program, so it is crucial for students that the program follows the accrediting body's guidelines.

Two other schools included among this population are also subject to the same sort of rigorous oversight required for graduates to receive licensure in their field – Nursing and Education. The representatives from each of these schools stressed the same sort of overall needs for complying with regulatory standards and the level of responsiveness by the schools. From the Teachers Education perspective, Elaine explains how employer feedback is an essential component as per the governing board:

> We are by obligation with our Teacher Ed and our [other] programs to do annual employment, employer surveys. So we know how they feel about our graduates. So we know whether they feel like we're prepared and in what areas we need to bolster our training or provide additional support. So the employers are absolutely a stakeholder there, because we have a direct pipeline in Teacher Ed to a school.

Beyond this direct feedback, Elaine then goes on to describe the responsiveness with which they must make curricular changes based on the governing board, which also seems to be a relatively regular occurrence:

> Each year our teacher preparation programs are required by the State to make amendments based on the [State Legislature] or the Board of Education. So those are constantly in shift, based on our accreditation requirements and our State Board.

Robin from Nursing strikes a very similar tone to Elaine with her own statement about the impact of their own oversight bodies:

> I think there's a lot more external pressure when developing the curriculum. There are certain things we have to have in there or the Board of Nursing and the accrediting bodies, you know, will say we're not doing what we need to do. So you start with that for me and you have, again, it's like have these checklists… We got to make sure we have all these, and then you use that external to figure out how do we make that work internally?

Clearly for these programs leading to licensure, we see how essential it is that the programs follow the guidance of their governing authorities.

Advisory Boards

One offshoot to direct employer input is the approach that some of the programs have chosen to take, which is to construct advisory boards to solicit input from. For the academic units that have constructed such advisory groups, it seems that pulling in a combination of alumni from the program and employers that frequently hire program graduates is the prevailing method. Nursing has assembled a group in exactly this manner that is just beginning to meet this fall semester, so it is too early to say what type of impact it might eventually have on the program.

One of the programs in Engineering has been meeting with their advisory group for a bit longer and does admit that it has influence on the construction of curriculum. Walter related that:

> They all have very different opinions of what our students need, based on their kind of selfish perspective of their company, and what they do. But they give us an idea of what things industry expects our type of students to have when they enter the workforce.

More specifically to skills-based feedback, Walter also offered the following:

> For example, one of our companies on the board, they really want our students to understand product management as like an area… even though we're not really certain like product management, how you teach a course on that. But we've had so many discussions on, 'well should we require a project, product management type role in a course?' We haven't done it. We haven't offered an elective on it. We've talked more about it than we've actually done. We have a whole list of things that we would ideally like to make changes on, and so that mostly came from the feedback from the board. But nothing's actually changed yet. So they have an impact. They have influence.

From a differing position in Engineering, Sally provides additional perspective on how advisory boards can also be a valuable point of reference when the school is missing an expert faculty member who can relate to the field in which graduates are going out into to get jobs. Per Sally, "we do have these advisory boards of all professional engineers, practicing engineers. And so we really hear, their perspective is all based on what they, you know, want and need our future graduates to be doing."

As a related approach, Public Affairs has utilized their advisory board during the course of their curricular revision in order to validate the competencies that they have built into the redesign to ensure that they have placed appropriate emphasis on each as a reflection of what employer needs are. Per Liz:

> Having employers rank them… it's part of why we had a conversation with our advisory board when we were looking at redoing our curriculum is, 'you guys are out there hiring [SPA] graduates. What are the things that you're looking for as

> you… as you think through it?' And the list of competencies that were written into the curriculum report over the last 4 years, and then have now been kind of pulled out into that matrix [of skills emphasized in the curriculum] are, you know, things that were developed and tested back with employers of [SPA] students to make sure that those are the things that are on the list.

Truly, Liz's account of how her school has utilized the input of their advisory board demonstrates the value they derive from this input and the level to which it can be both incorporated into the curriculum and validate the approaches taken. While there are many similarities between this approach and those taken by other programs with advisory boards, we see once again that the strategy employed, and the level of credence given to this influential body ultimately varies and needs to align with each program's goals of what they hope to accomplish.

Alumni

Alumni are certainly a group as well that bears mentioning as an influential role in shaping curriculum, especially given that both Nursing and Public Affairs consider their voices valuable enough to include within their advisory boards. Eric, from Public Affairs, also shared that alumni and employers have been surveyed at various points in time, per the following:

> We've had students, alumni that have graduated…we've done surveys where we've tried to capture this sort of thing of like, 'How much was this expected of you in your first job?' and 'How did you feel like you measured up to that?'

Likewise, Engineering incorporated a similar sort of querying of its alumni to solicit input when it embarked on its process to reform the general education curricula in

the past few years. Sally indicated about the committee responsible for the revision that, "they did do a lot of data gathering, right? So they reached out especially to alumni to find out about, you know, what they really did need to know in their professional careers." Her impression of the work that they had done was both thorough and useful to inform the decisions that had to be made about potential revisions:

> I thought that was very well done trying to be like, you know, 'Do… Do they really need to know electricity and magnetism? Do all engineers need to know that?' …very specific topics. 'Do they really need to know how to do partial integration?', or whatever. And so after that, they did say they sort of reimagined Science & Technology and the Intro class, more sort of in a modular way, of the topics that kept coming out across the different kinds of engineering that should be included for all of our Engineering students.

Although the surveying of alumni and employers was generally well-regarded in the information it gathered to inform the curriculum revision process, the one piece of criticism that was voiced within this study is certainly illuminating when considering the topic at hand. Cindy stated:

> I wish that they had asked these employers and these graduates, you know what soft skills, or I forget what you call them, you know these non-discipline specific traits. I wish they had asked them about those things as well as the content.

Although it is anyone's guess as to what type of action soliciting such information might have led to, it can be inferred from this statement, those that proceed it, and the process itself that the skills being prioritized are more of the discipline-specific variety.

There is still a fine line of being receptive to feedback, yet being discerning enough to recognize what input merits action and what does not. This is something that was expressed really well through the following statement from Mitch:

> We also survey our alumni pretty regularly. And those surveys are really interesting, because usually what ends up happening is the students will say, 'in my job every day I have to use this tool. Why didn't you teach me this tool when I was at college?' And we always kind of fight against that, because it's kind of a you know, 'teach someone to fish, not give them a fish' type of situation. We try to stay in theory land and teach them the principles so that they can learn whatever tool their company asks them to use. But sometimes if we see a lot of students saying like, 'Oh, I didn't have enough experience in X during undergrad,' we'll throw that in somewhere.

Lastly, although only one faculty member from the Undergraduate College spoke about alumni as an influence on curriculum, it is a very pertinent account to the discussion. Namely, Jeffrey provides the following background on his own data collection methods regarding graduate outcomes and soliciting input from alumni:

> I had a pretty large data set going on what students found interesting and effective. And then with follow up contact after students graduated, I got, I think, some sense of which of these lessons actually remained useful as they entered the job market. And then you know what they didn't find all that great or there's some things that you make them do it in a course or in a program, and at a time they're in college, and they're thinking about their major, and it's not obvious to them why they should do it and they complain about it, or they're not engaged by it. But

then, 2 years after they graduate it's quite clear all of a sudden, exactly why they needed to do XYZ thing.

With his background as an instructor teaching classes slanted heavily towards preparing students for post-graduation employment, it is definitely reasonable to assume that this type of information had some bearing on the decisions being made during the formative process of the newly instituted Liberal Learning in the Workforce (LLW) program under his direction.

Students

In addition to previous students providing perspectives that come to influence the curriculum, current students play a significant role in many areas as well. This influence comes through a few key ways – direct input, major selection, and course enrollment. Direct input, in particular, can be solicited in many forms. Formalized approaches include exit surveys, course evaluations, focus groups, and participation on curriculum committees, whereas informal may be a collection of individual conversations with students, sometimes relayed from a secondary source.

Although Lattuca and Stark (2009) indicate that it is rare for students' influence on curricular plans to reach a college-wide level, MSU proves to be a bit of an outlier in this regard in a few prominent ways. The first of these examples of where student voices have directly impacted the curriculum is in the formation of the LLW program in the Undergraduate College. Jeffrey indicates that a major driver in the creation of the program was students asking for it over a series of years until some of the more influential deans were finally able to find the funding and support to push it through. Jeffrey addresses the resource challenge and the hope that the program continues to grow:

> With only, a handful of faculty, is that viable? And we ultimately… We all see it's a great need and that students are asking for it. We don't quite have the infrastructure to sustain it. But we thought, okay, we're gonna approve this and we're gonna hope, then, that departments can use this new program as leverage when going to the Dean and asking for more faculty lines.

He does view the faculty indications he has received thus far as signals of support for the long-term prospects:

> I think it really fulfills a need. I think there's a pretty clear and obvious sense on the part of students in the Undergraduate College that something like this should exist, which is why we had such a great [faculty] response [to the call for instructors and topics].

Just as with students voicing that they need more skills development for employment and that ultimately leading to the LLW program, student input can also be influential in assessing where holes and inefficiencies exist in the curriculum.

In Nursing, students have even been responsible for impacting program delivery in more subtle ways, like their identification of patterns where clinical groups were being assigned with BIPOC students all relegated to the same section. In response, a more conscious effort is made now towards diversely spreading students out across sections. Similarly, following the significant events throughout the country over the past few years that have increased racial tensions, students identified a need for increased training in order to be better prepared to deal with situations along these lines that could arise in the working world. Per Robin:

> Working groups were formed pretty much based off of student requests to let's have some real discussions about what we're teaching students on the part of the curriculum regarding diversity and equity, there have been changes made in not the curriculum, but definitely in courses and in training students and in training faculty, but absolutely have had an effect on what we're teaching, and what we're doing, and that's, that's continuing. …great suggestions were made for how can we use language differently when we're discussing clinical populations. How can we have simulations that better reflect a diverse population, client population than we currently are? How does the history, not only of nursing, but locally in our hospital, have an effect on what happens over there, and how we work in that space, or how we reach out to the community? A lot of those things are driven by students asking those questions. So I would say in my 20+ years I haven't seen an impact as big as that one has been.

Allowing space for students to raise these types of issues has been considered valuable in other schools as well. Engineering is one of the schools, in addition to Nursing, that incorporates students into its curriculum committees. In doing so, they see real value in students "tell[ing] us important things when a class isn't working as we'd hoped," according to Sally. Walter shared his perspective on the student role and voice:

> MSU students especially are very comfortable with sharing their opinions, which is really good for us. We usually have a second, third, and fourth year representative so we have kind of the whole spectrum of students that we'll see in our program. That's probably the best place. They're kind of supposed to be the, not just give their opinions, but bring in opinions from their fellow students about

> what they're seeing, what they're having issues with, you know, when they go on their internships over the summer, is there something that we should somehow try to incorporate better? And that, it's successful to varying degrees.

Walter's account in relating the feedback received from internship experiences does bring employment implications into the discussion, which is important when that is a valued end goal. Education takes a similar approach to their assessments of student feedback where they "look at students' exit surveys to decide, you know, how are students fairing in terms of their confidence to be successful in graduate school or their readiness to get a job, or they just felt like they had a good experience in their major academically," per Elaine. She continues on and gives an example of how this feedback may ultimately play out in adapting the curriculum:

> Sometimes it's, 'Oh, we need another course here as an elective because many students are seeking opportunities to have research experience.' So we wanna make sure to add that as an option in the elective pool of courses, for example. It's not a requirement because we don't have a direct assessment of research skills other than ability to write, critically reason, and think quantitative. But in terms of like a research experience in a lab, students who are going on a more science lab-based experience would find that really necessary. So we build that into the curriculum, and we do that, those kinds of revisions annually.

With both "preparing professionals" and "conducting research" expressly mentioned in the Education mission, it makes sense to take such an approach. Nevertheless, adaptability in response to labor market preparation is not something that is

entirely limited to the more professionally-aligned programs, as per the accounts from Eve:

> [Foreign Language] is a discipline, in general… all of the faculty are trained in literature, but that is not what, as we have our discussions, not what the students want. Like, they don't want to take a major that is [Foreign Language] literature. And so most of the courses that are offered are aimed more at cultural studies.

And Sierra:

> …to a certain extent sometimes these [curricular] changes are motivated by a desire to address student needs, and some of those needs have to do with what students are planning to do after graduation. So sometimes that's a force.

The Undergraduate College has shown beyond these examples that departments are actively working to find other avenues as well to better align programs with employer demands. Sierra provided examples of proposals that have come to the curriculum committee in the past few cycles, like rebranding a minor to bring it "more in alignment with directions that the field is taking" or the creation of a new minor in order to better prepare students for niche professional pursuits such as "Health and Medical Cultures of the Spanish-speaking world." Nevertheless, one of the gold standards in demonstrating flexibility and responsiveness to student demands with respect to their perspectives on labor market preparation is exemplified through the creation of the International Studies program, an interdisciplinary, student-designed major.

While the creation of a new major as initiated and created by students for the partial purposes of aligning desired learning with professional aspirations could be a case study onto itself within the sphere of knowledge that this study aims to occupy, the focus

instead is upon the high-level takeaways from this effort that most help to explain the questions at hand. What the case does demonstrate is that with a coherent, well-reasoned plan and enough institutional support, it is possible to push through curricular change – to the extent of entire program creation – from the student position. To accomplish this, students studied similar programs at other universities, created a proposal detailing the major and its curriculum, assembled a teaching faculty in support of the project, and lobbied administrators until the program was eventually passed. The goals of this student organization were doing good in the world and in service, while seeking the skills and connections to work globally in NGOs, government, international agencies, and multinational corporations, which the students hoped that this interdisciplinary major could provide.

This International Studies (IS) program was created as an interdisciplinary major for a few key reasons. First, students did not want to be forced into an overly narrow disciplinary field providing depth, but in the wrong area of study. Second, they were seeking the type of broad-based skills that only a multiple perspective approach could offer. Chazz, who was selected to lead the program at its creation and for several years to follow, expressed a great hesitation upon being initially recruited due to concerns that "liberal arts education has been reduced to the training of student selves for corporate jobs, with ideas and academics almost an after-thought." Nevertheless, he elected to push through in the hopes that he could "help them get the kinds of practical training and skills they desired, but not at the expense of critical liberal arts education. That had to come first." All of the standard hallmarks common to liberal arts programs and skills that employers look for are present as aspirational outcomes of the program: communication,

leadership, critical thinking, problem solving, and global competence, among other things. The approach, however, is something that is a bit more nuanced and not easily boiled down to these basic elements, so it is perhaps better to consider Chazz's account of what students come to offer in comparison to their professionally-aligned school brethren:

> The critical perspective they have learned causes them to question assumptions about technical expertise that professional schools cannot question without undercutting the basis of their own authority. Thus when IS students work with teams originating in the professional schools, they often find the experience highly unsettling. More than one such student has come to me profoundly troubled, not merely by their partners' blind faith in technical expertise, in situations in which our students were convinced that the technical fix was unworkable and irrelevant for the 'target' population, but even more so by the inability of their partners to hear the IS perspective.

International Studies still to this day serves as a sort of a middle ground option for students between majoring strictly in a discipline situated within one of the schools of Business Administration, Public Affairs, or Arts & Sciences. Yet, the number of students each year that decide to pursue IS are relatively miniscule by comparison to the number of students that move from the Undergraduate College into Business or Public Affairs. Of course, the number that aspire to gain admission to Business and SPA are much greater. Sierra estimates that 50-60 percent of incoming first-year students each year desire to ultimately be in the Business school. She also proffers that this shift in greater concentrations of student aspirations towards the professionally-aligned programs of

Business Administration and Public Affairs, in particular, is something that has really transpired over the last decade or so:

> I think it started to happen during the Obama years. After the recession. …since the creation of [SPA], for example, which coincided with changes at lots of peer institutions that were instituting credentialing programs… so undergraduate certificates. Students started wanting these kinds of credentials that they could then put on their resume and would somehow help them get a job… Students started flocking to that. Then later, new programs in the Ed school… these are more recent… We're seeing our students increasingly opting to double major, or try to find a way to double major, or take courses in some of these professional schools.

Though it is unclear if these alleged shifts are reflective of larger trends elsewhere, it does seem that within MSU there is a clear emphasis among students for programs and training that prepare students for the labor market.

Resources

Beyond the broad estimations and general observations about shifts over time, what is clear in talking with Undergraduate College faculty is that they absolutely perceive these competing programs in other schools to be a major threat to their overall program's wellness, which helps to explain some of the responsiveness to both student demands and to provide more employment-based opportunities for student learning. And clearly this competition is such a large driving force behind many such efforts because the dynamic of students transferring from the Undergraduate College directly impacts program resources. Under the university's relatively new tuition model, "there is

economic influence on how the curriculum is shaped. There are majors that are deemed not viable because they don't have the number of students," according to Eve. And the competition goes both ways. According to Chazz, "the schools are competing for tuition. And so when 75 kids a year go and leave the Undergraduate College and go to [SPA], it hurts the Undergraduate College. You know, in serious ways, we have million-dollar deficits because of these things." When these types of situations cannot be overcome, Eve paints the worst case scenario of the questions to be asked:

> Is it even worth it to have a [Foreign Language] major? Because if you don't have X number of majors, you're not getting this revenue which is what the board of trustees you know, is looking at per major in the… or the president, the Provost office, and that sort of thing. So then that goes up and down with the security of the Undergraduate College, and how it's economic security.

While these dynamics are raised in respect to the number of students in a given major, they also play out in a more granular way as it relates to individual course enrollments. A greater number of course enrollments is accompanied by an increase in funding back to the departments, so once again these are issues that weigh heavily on departments that stand to lose funds as students flock to other areas. So in some respects, while students' choice of major and individual course selections are distinctly different, the effects of these decisions ultimately have the same bearing on curriculum, namely resource allocation.

CHAPTER 5

ANALYSIS AND DISCUSSION

The case study approach employed within this research was directed at understanding general education curriculum at Mammoth State University (MSU) within the context of endeavoring to build students' skills for the labor market. The influences inherent to the curriculum development process were also examined within this context in order to better understand the degree to which they contribute to the end result of what the curriculum comes to be. Five overarching themes were observed, with each being thoroughly detailed in Chapter 4, and those themes will be connected back to the research questions that guided this study. Limitations to the current research, as well as recommendations for practice and future research, will be covered in this discussion as well.

The five themes that emerged among participant responses which assisted in understanding the meaning and patterns in the data were as follows: (1) Variation in the understanding of and purpose of general education, (2) high levels of perceived graduate preparedness for employment, (3) articulation of employability skills to students, (4) similarities and differences among conception of skills for employment, and (5) variety of influences related to curricular development.

The research questions that guided inquiry in this study that themes and participant responses will be related back to were:

1. In what ways do faculty from different schools in a highly selective research university view the role of general education courses to develop skills as preparation for the workforce?
2. In what ways, if at all, do different undergraduate schools in a highly selective research university aim to develop employability skills within the curricular design, specifically within the general education requirements?
3. What are the internal and external influences that impact the inclusion (or exclusion) in the undergraduate schools of a highly selective research university of employability skills training within its general education?

It should be noted up front that although there is clear delineation on paper between general education requirements and major-specific courses – and the distinct differences between the two were discussed in the course of interviews – the expected divergence in the perceptions of these two areas generally did not play out as anticipated. While there was clear rationale for distinguishing these curricular elements from one another, it was an unexpected finding that faculty often do not view curriculum quite this neatly, especially when considering the implications of skills development for the sake of the labor market. This seems to be in no small way attributable to the faculty not often thinking and talking about employability skills in association with general education. Thus, it was discovered that there is a level of complexity in the thinking of the curriculum planners regarding these topics such that their responses and beliefs do not always fit cleanly within each of these research questions.

RQ 1: In what ways do faculty from different schools view the role of general education courses to develop skills as preparation for the workforce?

One of the important findings here was that most faculty in the study did not articulate the purposes of general education in a robust manner. It is unclear if participants lacked an understanding of the various aspects that comprise general education in their program or if the interviews simply failed to fully capture the intricacies of their general education knowledge. Based on state and national calls for reform of the curriculum to better prepare students for the labor market, it seemed that faculty serving on curriculum committees would have a pulse on these environmental demands and therefore be the most likely individuals within their undergraduate school or department's faculty to be addressing the skills gap through general education. However, in conversations, the articulation of the purposes of general education varied greatly, and, in many cases, few details were offered on specific goals for general education. Certainly, given the structure within this university, it would have made sense if upper-division schools had a lesser understanding of the specifics of a general education curriculum being administered largely or entirely outside of their school. Instead, the discussions across all schools often centered on philosophies of general education and the role of general education in an ideal curriculum.

The published curricular requirements in the undergraduate catalog for each school provide a straightforward foundation to start from when considering what constitutes general education in each school. Five of the six schools in the study simply refer to their requirements under a header of general education, but the School of Business Administration breaks from this in classifying general education coursework as

prerequisites. This aligns with the manner by which Lily also described their general education within her interview, although she also incorporated elements in her discussion that are strictly taken after admission to the major. This is just one example of how a school makes general education work for the program, while individuals interviewed did not provide clear delineation or definition between general education and the rest of the degree. Those interviewed in Engineering also offered individual understandings that were not consistent with the school approach to general education. While the conception of general education was for multiple individuals equated to a "common core," two of the four participants were not aware of the codification of common requirements across the school prior to the curricular revision project their school is currently engaged in, which does encompass general education. There were also a few participants who admittedly knew very little of the general education structure and intended outcomes, which meant that their viewpoints were based mainly upon conjecture and assumptions.

All of this background on the different schools' understandings of the makeup of general education is immensely valuable context and demonstrates the challenge in attempting to address this research question. Phrased another way, how can it be determined what faculty perceive to be the role in building employment skills in general education if they each present individualized perspectives of what general education consists of? It may be that these faculty will review the general education curriculum when school or committee processes require a more complete understanding of the codified process. However, we are still left with only a series of individualized viewpoints of an aspect of the curriculum from which to better understand their perspectives.

Some similar subthemes did emerge from among discussions about the projected purposes of general education. The idea of general education as preparation for the major, as was mentioned in the sense of prerequisites by the Business school, was prominent across the schools, even if the definition of preparation varied considerably across the numerous accounts. Education, Engineering, and Nursing all have courses built into the general education requirements which are bona fide prerequisites for later courses in the major that will prevent degree progression without successful completion. Less constrained by policy in this manner, there are also instances where skills and knowledge are gained within general education and then ultimately scale up to enable students to be successful in successive classes. Business Administration and Public Affairs students cannot even gain admission to these schools without successful completion of the prescribed general education courses, so these students obviously cannot progress in the major without them.

Preparation for the major takes on other forms as well. The Undergraduate College fashions the liberal arts approach built into the breadth of general education to extend beyond simply taking lots of classes in different areas. It aims instead to teach students how to think and evaluate information from different methods of inquiry. This type of preparation is much less tacit, but nevertheless seen to be part of the purpose of general education. The Undergraduate College, Engineering, and Public Affairs faculty were all on record touting these values as an essential aspect of general education. Separate from prerequisites, many schools also voiced the importance of general education coursework supplementing the skills gaps innate to some majors. In heavily quantitative fields, this shortcoming may amount to the ability to teach writing. In large

majors where the modality is usually restricted to large lectures because the course sizes do not lend themselves well to alternate teaching methods, general education courses may be the place that students need to refine their teamwork and collaboration. Whatever the case is, there is a reason that general education courses are required as part of the undergraduate degree and that is because there are essential elements to be gained in support of a cohesive program of study.

While the creation of well-rounded, civically-responsible citizens is another common goal of general education, as voiced by many of the faculty in this study, participants really only seemed to make connections between general education, employment, and skills for the workforce within the context of the previously discussed objectives of general education. Even then, the connection between the skills that students are expected to develop within general education under whichever of these subthemes that have been discussed and the deployment of these learned skills was generally seen in the light of how they benefit students within the composition of their degree program, rather than the implications that they hold towards preparing students for the labor market. There are certainly some exceptions to this rule. For instance, Nursing's viewpoint was that everything a student enrolls in over the course of their degree program ultimately has some sort of bearing on their ability to be a well-prepared and skilled nursing professional. This seemed to be the minority opinion, however, as professionally-aligned programs usually believed that the skills development which would ultimately be beneficial to students in the labor market was taking place in discipline-specific coursework, even if the same skills were being developed within all aspects of the degree program.

Going back to the issue of a lack of clear delineation – or a participant's articulated understanding thereof – between general education requirements and those required within the major, it is difficult to say if the viewpoints that were voiced were fully reflective of what students gain from general education and how much it equates to skills development for employment purposes. To that extent, it is worth questioning just how useful the faculty conception of skills development in general education is, specifically those faculty in schools outside the Undergraduate College. If nothing else, the skills students learn in general education are rarely equated to employment among the group of faculty interviewed for this research. For faculty within the Undergraduate College that do not aspire to place students into a specific professional role in the first place – rather they envision that the degree creates a well-rounded student who is prepared for employment in many different areas – general education holds a more valuable place for introducing skills to students that will carry weight towards their employment pursuits.

RQ 2: In what ways, if at all, do different undergraduate schools aim to develop employability skills within the curricular design, specifically within the general education requirements?

One of the struggles that was encountered in deciphering the accounts of the participants towards connecting the ways in which general education aims to prepare students for the workforce was that the perspectives offered often discussed employment preparation in a generalized sense relative to curriculum, rather than in a targeted manner focused upon general education. However, this is perhaps indicative of their views on employment-based skills preparation overall. Essentially, they did offer their overall

viewpoints on how the program prepares students for the labor market and the specific skills that receive focus, but it may be that the views were either specific to the major or encompassed the program as a cohesive whole. Nevertheless, we are still left with questions regarding the role of general education. Is general education not viewed as a place of employability skills development, but instead workforce development is limited to the realm of the major? Or perhaps do faculty see that the skills development that might be happening in general education is integrated across the curriculum, even if they are unable to point to the specifics of what is happening in GE? It seems likely based on the varied accounts that there are elements of each of these options present.

Some of the participants' accounts that best help to explain the second part of this question – specifically the aim of developing employability skills through general education – are really captured within the discussion around research question #1 with one caveat: some faculty recognize a need to articulate to students when employability skills are being taught throughout the curriculum. So, while the third documented theme was not observed specifically in the context of general education, the premise raised therein could certainly be extended to general education courses, and perhaps is even more essential within that space of the curriculum. Since this concept was brought up mostly within conversations with faculty members from the College of Arts & Sciences, where a perception often exists anyways that liberal arts courses are not directly relatable to employment, it stands to reason that the heavily concentrated liberal arts coursework within general education would benefit students greatly if faculty made an increased effort towards making the connection from the classroom to the labor market clearer.

In terms of current efforts to this end, the formation of the LLW program demonstrates the Undergraduate College's commitment towards making these pronounced connections, albeit from a place in the curriculum that is separate from where the initial learning begins. Nevertheless, not only is this program being aimed at illuminating the skills students have already obtained and then drawing a direct line to employment, but it also offers students opportunities to take topic courses specifically teaching in-demand skills for the workforce. These skills are more so "hard skills" by definition, or as Jeffrey described them in the course of conversation, "fungible." Yet the skills are perceived to be highly marketable in today's labor market, covering areas such as, coding, business writing, entrepreneurial leadership, data mining in social media, and complex decision making.

Within the individual disciplines throughout the Undergraduate College, there are also efforts being made towards creating more skills-based learning angled towards labor market preparation. Connections between a discipline and a specific professional role or sector being built into the curriculum, like learning a foreign language for translation services or global public health, demonstrate a willingness to embrace curricular adaptations aimed at delivering more marketable skills to students. Combined with the characteristic liberal arts priorities of critical thinking and problem solving, these efforts all come together towards forming a growing array of curricular programming aimed at increasing the marketability of graduates. With the incorporation of additional focused efforts on developing skills such as teamwork, written communication, and oral communication, often as a result of general education programming, there are relatively

robust efforts – albeit sometimes underrecognized – being made within the Undergraduate College towards preparing graduates for the workforce.

Likewise, there are consistencies across all schools at the university in developing some of the more in-demand skills that employers are seeking. While critical thinking and problem solving are universally valued and strongly emphasized among the schools and employers alike, skills such as teamwork and collaboration and written and oral communication are prominently featured within the curriculum by most programs as well. While quantitative reasoning was emphasized a bit more overall than teamwork and communication skills in participant interviews, it was the latter set of skills that faculty were most likely to connect with the needs of the workplace. Within that understanding, it was a common occurrence to hear faculty say that they often functioned in teams or assigned many group projects for the sake of developing these skills with the workplace in mind. This was a finding which was more heavily concentrated among the professionally-aligned programs. In contrast, the many individuals who voiced concerns about the shortcomings of written competency training in general education did not belong to any one school or discipline, and, in some cases, represented employment sectors that do not obviously present as writing intensive fields. This finding should not be surprising, however, when considering that surveys have shown that only a third of administrators at public doctoral-granting institutions agree that students emerge from GE with sufficient writing skills (Hart Research Associates, 2009, 2016).

What was evident about quantitative reasoning, as well as other skills to follow, was that the academic programs that valued this skill most highly were also disciplines with a strong quantitative emphasis as a field. STEM programs, Economics, and

Business Administration were all associated with this effect. Likewise, leadership and civic engagement are both contained within the mission of SPA, therefore these were two of three most emphasized skills according to their faculty participants.

Moving beyond the universal employability skills that schools all emphasize and strongly relate to the workplace, there are a few other unique points of emphasis that emerged from the various programs. Since many of the Engineering disciplines represented in this study are very technical in nature, it is no surprise that a number of the other skills that received specific mention, like coding, artificial intelligence, programming, and data mining, are highly technical and received a focus within their courses. However, some of the Engineering faculty were also quick to point out that despite the emphasis placed upon instructing on topics of that nature, employers have voiced to the departments that they are more interested in well-rounded students who they will ultimately provide job-specific training for. There is, of course, another unspoken aspect of why MSU programs would be attractive in the eyes of employers to recruit students from as well. Between the academic preparedness of students and the elite profile of the institution, the level of classroom instruction is just one more piece of the puzzle to explain why employers recruit from MSU in the first place.

The only other program that demonstrated a strong focus on skills beyond those already discussed was the School of Nursing. However, their viewpoint is that everything that students are learning over the course of the entire degree program will ultimately have relevance in the workplace. Robin made a point to offer an example directly to this effect. She said, “even if it's, let's say, a kinesiology volleyball course, it's still teaching you strategy, critical thinking, and how to be successful playing volleyball,

right?" And while students making the connection between the volleyball class, as in this example, and their professional role as a nurse is not assured, it is hard to argue the point that it all feeds in to teaching a student how to think critically through strategy, which does have direct relevance to the workplace.

RQ 3: What are the internal and external influences that impact each school's inclusion (or exclusion) of employability skills training within its general education?

As with the Lattuca and Stark (2009) model, many influences both internal and external to the schools were found to play significant roles in forming the curriculum and impact skills emphases therein. As discussed previously in this chapter, however, it is difficult to distinguish in many cases between general education and the program curriculum as a whole.

First, it was observed that among external influences, employers do play a substantial role in offering feedback to the academic community regarding what is sought after from the students emerging from programs at the university. Several programs demonstrate a willingness to involve corporations and formalize the relationships by offering specific opportunities for employers to be active in interacting with students and faculty. Since there is a common perception in the world that students need to be learning hard skills specific to their desired employment paths, it is valuable for departments to hear from employers that what they are really seeking in most employment sectors is broad-based skills development. Otherwise, curriculum might be tailored towards a narrow skills-based approach for industry that instead wants to be able to train new employees as they see fit. These are concepts that have also been prominent in the existing literature relative to the employer positions on the skills gap (Archer &

Davison, 2008; Cunningham & Villasenor, 2016; Finch et al., 2013; Hart Research Associates, 2013; Robles, 2012). Specific to MSU, this is exactly what programs like Exercise Science and various Engineering programs have heard from employers such that they are really seeking graduates with strong communication, teamwork, and problem-solving skills, instead of being wholly focused on discipline specific skills. It also provides credence to the positions held in statements made by Ted:

> Where we draw the line is when we get… some alumnus is put in touch with me, and they feel like, it'd be really great for them to talk to our students as part of a course, maybe teach a course, or come in and present a lecture on the kinds of work they're doing. And generally we don't accommodate that because what they're teaching is not the kind of academic economics.

and Mitch:

> Students [alumni] will say you know, in my job every day I have to use this tool. Why didn't you teach me this tool when I was at college? And we always kind of fight against that, because it's kind of a you know, teach someone to fish, not give them a fish type of situation.

These statements are good examples to show where faculty will draw the line in not overly conforming to the whims of outside voices who would like to see more targeted efforts in connecting programs to specific employment opportunities.

One of the offshoots to employer influence related to skills that surprisingly only came up in one conversation – in talking with Jeffrey – was the utilization (or lack thereof) of market research as conducted by 3rd party advocacy groups such as the AAC&U towards measuring employer desires from higher education. In a few instances,

peers – in the way of other institutions or similar programs – were mentioned as outside influences that assisted with understanding the broader marketplace and norms within the field, but the absence of these 3rd party efforts ever factoring in to curricular considerations was a noticeable omission.

As mentioned above, alumni voices also play into the skills that are featured in the curriculum – both positively and negatively. From the constructive standpoint, alumni are shown as being valuable cogs in the machine as they have a first-person perspective of everything the academic program does and does not have to offer, while also possessing a view of how the education translates to the field in real-time. Both Nursing and Public Affairs have chosen to formalize these influential roles through their inclusion of alumni on their advisory boards, and Engineering recently engaged them as part of their curriculum revision project. Many informal pieces of feedback were related as being useful as well within other programs.

Amongst programs with discipline-specific governing board oversight, overall program outcomes and knowledge specific to the discipline leading to licensure (or similar) seem to be what is most shaped by that oversight. Individual program elements and structure of the curriculum at large are much less guided by outside oversight. Since the regional accreditor only stipulates that breadth and a coherent approach be guaranteed within general education, these are stakeholders that may influence the program curriculum overall, but not at the level of dictating specific skills to be developed in general education (Southern Association of Colleges and Schools Commission on Colleges, 2018). While the influence is indirect in nature, governing bodies were seen to have impact on skills development in areas like Teacher Education where employer

feedback is a requirement of accreditation. As a result, the line of communication from employer back to the school enables the sharing of concrete feedback for skills and knowledge-based adjustments to be made. Of course, there is an underlying assumption here that the employer feedback loop would not be created in the absence of the governing body's requirements, yet we will never know. Also, potential adjustments to come out of such a dialog are more likely to impact program requirements and student development within the major than to affect the general education requirements, yet it still demonstrates a responsiveness exhibited by programs in direct response to feedback from the employer side.

Perhaps the most prominent of all influences on curriculum, at least with respect to the expectation the researcher held prior to data collection, was the role that students play at MSU. Although maybe this should not be surprising given that Lattuca and Stark (2009) offer multiple locations within their model on the formation of curriculum where students are believed to play a role. Likewise, student influence at MSU was observed to take on many different forms. Students wield their influence in several ways: course evaluations, exit surveys, direct contact with faculty, roles on curriculum committees and task forces, and through their choices related to course and major selection. All of these data points were accounted for within at least one program at MSU among the sample population.

There are no greater examples of student influence over how skills are developed, and what skills are focused upon at the undergraduate level than the two programs that were created in the Undergraduate College, at least in part, in response to student demands. These two programs are the Liberal Learning for the Workforce (LLW)

program and the interdisciplinary International Studies program within the Undergraduate College. In the case of the International Studies program, not only had students identified a programming gap within the existing curriculum and programs, but they were able to carry their efforts many steps further through research, designing a program that fit with their skills desires for future opportunities, soliciting support among the administration, and ultimately gaining it. All the while, the key skills that are characteristic to the program – skills like communication, leadership, critical thinking, problem solving, and global competence – are the same that are found commonly in other programs, yet in this case, directed towards meeting different aspirational goals. From a program formation level, this is surely not an easily replicable task for students in other schools or at other institutions, but it does set the high-water mark for what is possible and creates a model for others to work from.

There may be more attainable alternatives for inserting skill-building into the curriculum such as student supported initiatives like the LLW program. At least from an administrative standpoint, there are significantly fewer hoops to jump through without it carrying an additional credential. However, it is appealing for students to use as a signal, given that the program and associated coursework will be listed on the transcript, which does add a degree of legitimacy for those external to the institution to view as achievement and skills growth that is being recognized at a university level. The skills courses themselves are likely to be a draw for a majority of the students who enroll in the program, which demonstrates all the more the value that students place on attaining marketable skills for the workplace.

There is also another way in which students affect curriculum and the skills provided with a given course of study that cannot be understated. This impact is through student decisions about course and major selection. Within the university's financial model, departments with more majors and enrollments receive a greater budgetary allocation. While this may not seem like a big deal for the programs and courses that are in high demand, for those that are on the other end of the equation and just scraping by with minimal numbers of each, any additional substantial drop could become an existential issue. Therefore, these dynamics place such struggling programs in a compromising position. As a result, it creates a potential situation where curricular offerings are more likely to be shaped by things that will be most attractive to students. We see small instances of that in this study through examples like those from Eve in explaining the small adaptations in instruction that have been made within Foreign Language programs to bring programs more in line with the type of areas where students are actually leaving from the programs and going out and getting jobs after graduation. The Undergraduate College and other non-professionally aligned programs may seek to train students in a way that does not target any specific job, rather a range of them, but enrollment pressures create scenarios where they need to become more amenable to meeting students where they are at and where they want to go. Nevertheless, resources make a significant difference within the operating range of what a program can and cannot accomplish, so the faculty recognize that student enrollments are a crucial aspect.

The Skills Gap

The direction of this study was substantially informed by an overarching question regarding the responsiveness of highly selective research institutions to the employer-

identified skills gap. Though the skills gap is characterized by deficits in generalized skills areas, and skills development in general education coursework was examined as a result, the reality is that the connections between the two are not made so neatly at a highly selective research university. Instead, the skills gap at this level of higher education is often viewed more contextually than the prevailing generalized narrative would lead one to believe. It is clear that concerns expressed about gaps in skills that students bring to the labor market are quite general in nature, and do not account for variation in students' career goals in different institutional types. They also do not account for the varying degrees of academic preparation and skills that students bring to different institutional types.

It was clear that the faculty in this study viewed employment preparation as a significant responsibility of their programs. While the conclusion cannot be drawn that all graduates of the university possess all of the desired employability skills, the faculty accounts of their graduates' employment preparation, in combination with the apparent market demand for its graduates, attest to graduates that are highly prepared for the labor market. However, instead of emphasizing the same generalized skills equally across all programs as the skills gap might call for, faculty at MSU generally concentrate skills development across the program in a manner that is reflective of the discipline itself and the potential employment opportunities within the field of study. Students play a role here as well. Given that students select majors and courses – including general education courses – and experiences outside of the classroom in a manner that is often consistent with building a skills toolkit aligning with projected outcomes post-graduation, whether

that be graduate study or employment in a field consistent with the subjects they studied in college, student demand must be considered an element in shaping skills development.

In retrospect, given that SACSCOC's Core Requirement 9.3.c calls for breadth of knowledge to be established through general education coursework, yet "not narrowly focus on those skills, techniques, and procedures specific to a particular occupation or profession" (Southern Association of Colleges and Schools Commission on Colleges, 2018, p. 21-22), it was perhaps misguided to believe that there would be a greater attention paid to labor market skills development in general education. The faculty perspectives provided did illustrate, however, that general education coursework may compliment other degree program requirements, which can take a more deliberate approach to successfully preparing students for gainful employment. This manifested itself at MSU through the utilization of general education coursework to further supplement the priorities of the program or to fill in skills gaps that are present within discipline-focused study.

As a result, this research calls into question the universality of the prevailing model of a skills gap in higher education, certainly at the level of the highly selective research university. With highly prepared students entering selective universities, it is possible that students have a considerable accumulation of skills appropriate to their employment goals prior to even engaging in an undergraduate education. Complimenting students' existing skills toolkit with a world-class education then results more often than not in the development of a graduate in high demand by employers. With employers actively seeking out graduates of highly selective research universities, such as at MSU, it is likely that the generalized skills deficits that the skills gap purports to be present in

the labor market is not significant for this population. Nevertheless, the differing skills priorities across programs combined with the universal success at MSU of placing students into gainful employment at very least indicates that there can be many different successful approaches to refining skills for the labor market.

Thus, this study suggests that the skills gap should not be viewed in absolute terms. For example, in a 2021 AAC&U survey (Finley, 2021), written communication was described by 90% of employers as a somewhat or very important skill for entry level employees. Yet, within this study, when speaking with faculty members representing various areas within the Engineering school at MSU, students were perceived to possess poor writing skills. It is possible that the expectations for the quality of writing in the Engineering school are higher than for the labor market, as despite the perception of shortcomings on the part of those interviewed for this study, major companies from across the country actively seek to recruit these same graduates, whose exceptional starting salaries evidence exceptional demand. Through this example, it becomes apparent that the skills gap cannot be applied equally across all employment sectors, academic disciplines, and institutional types. Therefore, while the skills gap does describe an issue common to the college-to-employment pipeline, no generalized claims of a skills gap apply to all institutional types.

A similar move away from thinking of general education as a “one size fits all” portion of the curriculum is also important here. The importance and utility of general education as a curricular element not tied to labor market preparation is made clear in the analysis of documents from the SACSCOC accrediting agency earlier in this paper. While those interviewed rarely addressed preparation for the labor market or the use of

general education for that purpose, they clearly expressed the belief that MSU students were well prepared for careers, and there is existing evidence to support that belief. The available indicators, as culled from the data in the study, namely job placement rates, employer satisfaction as evidenced by continued recruiting from the university, and faculty accounts of career preparedness levels, point towards a high level of students' skill development for the workforce upon completing an undergraduate degree from MSU. Open access four-year institutions, two-year colleges, and other institutional types do not consistently place graduates into the upper echelon of job opportunities to the degree that MSU does. Simply put, labor market skills are conceptualized and developed in different ways in different institutional types. All of this tells a story that seems to indicate that the "skills gap" narrative is overly generalized and needs to be looked at contextually by accounting for an array of institutional and student characteristics.

Limitations

This study encountered several limitations, many of which are directly attributable to the sample. First, this study only examined a single institution, one that is a selective, research university. While several of the undergraduate schools and departments were represented to provide differing viewpoints, there would certainly be greater variation in opinions and approaches if other institutions had been included. Second, the sample of participants fell short in a number of areas that could have yielded either new and unique views or corroborated existing viewpoints that were voiced. Despite exhausting all reasonable opportunities to obtain representation from groups such as the School of Architecture or the General Education Committee, the researcher was unable to secure participation from the groups. These groups certainly could have added

another layer of rich information to what was already discovered. Likewise, the inability to connect with the university's contact person for the AAC&U Curriculum-to-Career Innovations Institute is another source of disappointment given the possible insights from an initiative seemingly in alignment with aspects of this study. Overall participation could have been compromised by a variety of factors, such as competing time demands during the contact period or considerations relative to the ongoing global pandemic, among other possibilities. Continuing with the theme of obtaining additional perspectives, hearing from outside the university could have proven to be quite valuable here as well. Whether that outside perspective had come from an authority at the state governing level or from employers themselves, these viewpoints certainly could have assisted in informing the view of just how well prepared and successful graduates from this university are when it comes to entry-level employment. Lastly, in terms of gathering information and drawing inferences about it, this study was conducted by a single researcher. Despite the many efforts employed to avoid researcher bias, the truth is that it still could have entered into the determinations made and ultimately delivered flawed interpretations.

Considering the many methodological limitations, it is also important to consider the holes in the body of knowledge which make it difficult to piece together an already complicated dynamic. As noted, the skills gap is a generalized argument without specific context or evidence of the potential applicability among different institutional types, or how it might vary from one to another. Even though the skills gap focuses upon graduates possessing the capabilities needed to step successfully into employment, as opposed to their success in simply obtaining work after graduation, it would be useful to

have firm evidence to show what gaps might be present specific to this institution and its students. As it stands, only job placement data exists, and that information is incomplete and inconsistent. While these assessments are outside of the questions asked in this study, such information would assist with filling in knowledge gaps.

Considerations for Future Research

This study points to the need for research on the skills gap in other types of postsecondary institutions. Similar research at other institutional types, has the potential to unlock findings to broaden the knowledge base on the skills gap and general education. While the goal of this case study was not based on creating generalizability given its qualitative nature, research on other institutions' approaches to building employability through general education, and curriculum as a whole, would contribute to understanding what institutional and environmental factors might play the greatest roles in shaping the curriculum. Additionally, there is potential to better understand how the skills gap applies differently based upon the makeup of the student body, the resources and characteristics of the institution, and the aspirations for placing its students into the labor market. With student and societal demands directed at achieving optimal employment opportunities through the completion of a college education, combined with the time and monetary investments associated with it, there is an urgency associated with better understanding this issue as it pertains to all of higher education.

The incorporation of different types of voices into the discourse could also prove tremendously educational in future work in this space. While it made sense here to focus this study directly on those faculty and staff who are most proximal to curricular decision making, it was also very evident that there are others associated closely with the process

whose insights would build the knowledge base. Since resource allocation was referenced at various points in this study, the perspective of administrators who make future allocation decisions is just one example of additional institutional actors that could offer insight. Similarly, given the influence of student demand on curricular offerings, future research might well incorporate a focus on student perspectives on general education and skills development.

Finally, future research might also turn attention to new ways in which universities like MSU might assess the degree to which they are meeting their own visions and missions for workforce preparation.

Recommendations

The document analysis of general education reform efforts at MSU and the other universities examined in preparation for this study indicated a significant level of attention within the curriculum to labor market outcomes. As a result, it was expected that skills development for the labor market in the conventional sense would be addressed in detail by those interviewed for this research. However, this was not the case. While faculty in this study viewed the major, and perhaps graduate and professional education upon completion of the undergraduate degree, as primary sites of preparation for the labor market, general education as a site for that training seemed to carry less relevance. This could possibly be attributed to the fact that students at MSU bring high levels of academic preparation to the institution and often carry lofty aspirations for placement in high-level professional opportunities upon entering the labor market. Nevertheless, the expected connections between general education and skills development for the workforce were not apparent. That said, there are still valuable insights from this study

for practitioners and researchers alike, particularly with regard to aligning student career goals to preparation for meeting those goals.

Recommendation 1: Incorporate general education review along with regular curricular review process

In the course of talking with participants about the role of general education and skills development, some participants were unhappy with what they saw as shortcomings of general education. Without generalizing from the group interviewed here, programs, departments and schools should be concerned whenever faculty express a need for curricular improvement.

To that end, one recommendation for future practice in postsecondary institutions, particularly those like MSU, would be to incorporate a review of general education within the regular schedule of curricular review for each program. This recommendation does not aim to address the frequency of what constitutes a "regular schedule," as programs need to determine what works best within their specific set of circumstances. Rather, it is simply suggested that programs consider the entirety of the degree program when contemplating what the expected outcomes are and where those outcomes will be achieved. From a skills-based perspective, this aligns with the approach that Liz and Eric talked about in their interviews relative to the matrix of skills that SPA values for development within the program with an expectation that they can map to wherever that skill is being developed in the curriculum.

Since some faculty in this study were vocal about their sense of the shortcomings of deficits in general education at the university, it makes sense that any deficiencies be addressed in the curriculum planning process. Further, given the extent to which students

at this university bring in credits with them upon admission, it is reasonable to consider the degree to which students who have completed equivalent coursework prior to enrollment have also acquired the desired skills development.

Recommendation 2: Increase internal alignment within the university between administration, programs, and faculty

This recommendation in particular pertains to alignment specific to skills and program aspirations. In some respects, this recommendation is a continuation of the first. If a degree program is designed as a cohesive sum of parts towards delivering graduates with a set of intended outcomes, the faculty delivering the learning need to be aware of what the goals are and where the instruction they are delivering fits within the whole. As with the first recommendation, if a faculty member assesses a skills deficiency among students in a course and begins remediating because they believe that learning should have taken place before their course in the curriculum, yet it will actually take place later in the degree program, this is not an issue with the preceding coursework, rather an issue with sequencing. However, if the faculty member fails to grasp the overall setup and intentions of the degree program in the first place, that point could easily be missed. This point should not be construed as a judgement indicating that this state is representative of all cases where participants voiced deficiencies. That said, the prevalence with which incomplete or inaccurate representations of general education were discussed could certainly give one pause in considering whether faculty truly comprehend how all the elements of the degree program interact with one another and what purpose they serve. Conversely, there were several accounts that would indicate that program requirements and objectives are viewed holistically across the program, so it is still beneficial to

understand on a more granular level where skills are being developed within the curriculum.

Essentially, recommendations one and two collectively amount to addressing what Audrey from the Undergraduate College voiced in saying:

> It's pretty funny to be in a position of running a program and having no idea what 50% of your students do is… and it's just not something that's been emphasized in my role or in my department. We sort of think of those as two completely separate entities, but as a student, they can't. This is an integrated program, so it would behoove us to be more familiar I think, especially with some of the new changes in the Undergraduate College and think about how some of those other things that students are doing can support their learning in our program. I think we really silo those things and that's kind of a shame because we can pull on those, we can reference those.

Regardless of the school association, it is not unreasonable when considered from a student's perspective to think that they should expect their program administrators who are responsible for academics and curriculum, as well as faculty within their program, to have a firm grasp on what the program has to offer and how all the pieces come together in support of students.

The disconnect between differing levels of the academic hierarchy was evident through the emphasis that participants voiced towards employability skills development in their programs, particularly with the respect to the Quality Enhancement Plan (QEP) for SACSCOC reaccreditation. As Elaine brought up in the course of conversation, the efforts being made during this year towards emphasizing QEP designated skills in the

academic programs will be at their greatest right now because that is what will be put forward for review. Nevertheless, when participants ranked out skills by their level of emphasis in the curriculum, they placed three of the six among the bottom 4 least emphasized skills among 12 discussed. While it is certainly plausible that the other non-QEP skills are much more hard-wired within these disciplines, the reality is that there were multiple occurrences of where comments were made along the lines of, to paraphrase, "we don't really care that much about global competence." Given the fact that global competence and information literacy were the two out of the six competencies that were hand-picked by the schools to be included in the QEP, it does seem that there is a level of disconnect present between those decisions and the individuals responsible for carrying them out. The situation points to the need to ensure that all levels of personnel are on the same page with what is to be accomplished. If the faculty are on the front lines of carrying out institutional or program initiatives, they need to be keenly aware of their task, and preferably know why. Likewise, if faculty are to be expected, as per these recommendations, to make explicit when the learning and skills development in the classroom aligns with employment, all of the key players involved with the design and execution of curriculum need to be on the same page.

Given the unique nature of MSU as an elite and selective institution, in which general education as a tool for labor market preparation is not seen in the same way it is presented in more general literature on the skills gap, it – and other institutions like it – will benefit from developing and articulating its own strategies and accountability measures for workforce preparation. If the expected goals, outcomes, and requirements of the full curriculum are not documented in writing, then this is an imperative initial

step. From there, faculty need to be able to articulate their approach to preparation for the labor market within their programs. For faculty with elevated responsibilities along these lines, such as program administrators, curriculum committee members, or faculty advisors, it is even more essential to possess a thorough understanding of all aspects of the program delivery. Initial orientation and continuing education for all faculty should encompass a full overview of curriculum, to include an understanding of the goals for general education. Further, in the case of administrators and curriculum committee members, a regular review of the full curriculum will help to ensure that the purpose and content are more likely to be in alignment.

Recommendation 3: Embrace efforts towards building employability in the curriculum

The truth is that efforts are already being made across the university towards enhancing student employability within every school's programming. This situation just comes down to whether or not a school is willing to be overt with their acceptance.

The Undergraduate College is the most traditional of the schools in its liberal arts approach to education, such that they believe in developing students who are well-rounded and prepared to be productive citizens in the world. As perhaps a secondary concern, they also want students to be skilled with a general toolkit that enables them to be successful in a wide range of employment pursuits. However, even though they are not prescriptive about requiring students to take narrowly tailored courses that build skills for the labor market, in response to student demand, they are actively adding such experiences into the curriculum with greater frequency. There are no greater indications of an acceptance to create programs based on student desire for workforce preparation

than the creation of the LLW program and a student-designed major with roots in employment preparation, as the International Studies program is. Particularly with the LLW program, there are many ways that such a program could be customized to address the unique constructs found in any type of institution and subsequently deployed in a manner in keeping with the institution's mission and goals.

Further, from a skills-based angle, programs are already emphasizing the most in-demand skills that employers look for from college graduates. There were a number of instances where participants in this study talked about how they will insert commentary to students to stress the applicability of the learning to the workforce when they are teaching a lesson. For instance, several faculty from different schools discussed the priority that is placed on having students work on projects in teams in order to refine teamwork as a skill with future applications in the workplace. Pedagogical changes in many cases would be unnecessary, instead faculty would be wise to review their course content to consider where there are lessons already built in where connections to the labor market can be explicitly discussed. In particular, doing so in general education courses could have an impact in lessening the perception that these courses are somehow less valuable to students' development.

Several times during the course of conversations participants raised the fact that employer feedback often touts a desire for students to gain these basic, universal, employability skills, such as communication and teamwork. Employers then expect to have to teach new employees the specifics of what they need to know for the job. As a result, programs can double down on these efforts to impart such employability skills, but as has been discussed, the translation piece of explaining to students how the skills they

are learning in the classroom allows for a seamless transition to the labor market is where the efforts need to be concentrated. Just as with the LLW program, if efforts can be partaken towards illuminating the connections between the skills being learned and the workplace – and possibly complemented by a few currently in-demand, marketable hard-skills – then students will be supremely prepared for the labor market without the programs having to sacrifice their mission in order to do so.

Recommendation 4: Solicit feedback from multiple stakeholder groups in the crafting of curriculum

We can see plainly throughout this study that there are a multitude of influences on curriculum depending upon the school. Governing boards are explored in detail, but for the purposes of this recommendation, they can be treated as an influence that the schools have no subjectivity over whether to include their feedback or not. It is a necessity for program viability.

Other influences outside of the faculty, who will always have a voice as the decision-makers in curricular design, have proven their usefulness in providing outside feedback, which is something that should continue for those departments who engage in this approach already. Alumni, current students, advisory boards, and employers are all examples of such outside influences that have been discussed at length. Programs who are not already engaging in soliciting such input should look to take advantage of such valuable perspectives. Within the constructs of this study, employer feedback is a natural fit for assisting programs in crafting their curriculum in ways that will benefit students entering into the labor market. As some of the participant accounts demonstrate, there are times though that employers will try to push their agenda upon programs in ways that

extend beyond the line of theory-based education into something that is either a marketing tactic or tailored very narrowly towards specific work. While vocational and technical programs at other types of schools may value that nature of employer relationship, it does not meet with the ideals of the programs within a highly selective research university. The programs in an institution such as MSU may value those relationships and feedback to the point of adapting curriculum in beneficial ways that meet with disciplinary or marketplace norms or advances, but faculty in most schools are still keen to not overstep the line reaching into true vocational programming.

Advisory boards and alumni have also been shown within this work to provide a valuable perspective for the programs that seek it. Like employers, programs need to sort through the feedback from these groups related to enhancing skills and employment preparation. Taken at a high level though, these inputs can prove to be especially useful insights. Particularly in the case of young alumni, these are individuals with a fresh first-person perspective of what the academic program has to offer and where the shortcomings may lie relative to preparation for entry-level work. Likewise, active students were shown within this study to offer an extremely valuable perspective in many programming decisions. While current students do not yet have the full picture of the comprehensive nature of their education and how it applies to the labor market specifically, they do possess a first-person account of their lived experience in the program and are often able to identify program shortcomings that stakeholders from different positions in the curricular loop are unable to otherwise identify.

As indicated, faculty have the final say in what eventually comes to be when it comes to curriculum, yet we have seen that there is value to be imparted to the

conversation from other stakeholders possessing a vested interest in the program. As a result, it would be wise for programs to continue searching for ways to best solicit and incorporate such feedback that can be beneficial to adapting curriculum to help serve students' long-range goals. After all, as Lattuca and Stark (2009) reason, the purpose of academic plans is to foster students' academic development. Curriculum should therefore be interested, at least in part, upon meeting students' desired learning objectives. At a highly selective research university, these desired outcomes, particularly related to the labor market, are different that at many other types of institutions, so the student expectations should be gauged accordingly.

Conclusion

This study drew on prior research and understandings of the "skills gap," the proposition that there is a gap between the skills developed in colleges and the skills that employers most often value in the labor market. This research sought to understand the ways in which a highly selective research university understands the issue and conceptualizes professional preparation for students in curricular planning. Using the skills gap as a starting place by which to help explain the higher education-to-career continuum could create a belief that only institutions who struggle with career placement might need to ensure its graduates are optimally employable. This study assumes all institutions are endeavoring to serve students' best interests educationally and to improve their life outcomes post-graduation. Prior research on the skills gap narrative has not generally focused on one postsecondary institutional type. Thus, this study has endeavored to explore the ways in which faculty at an elite and selective university conceptualize skills development for the labor market through general education.

Prior research has demonstrated that students choose to attend college primarily to improve their employment prospects (Fishman, 2015). For elite institutions, it is not enough to ensure that students can find a job after graduation, rather they need to be maximizing skill development in ways that exceed the skill levels that students enter the institution possessing in the first place.

Selective colleges and universities, such as the one under examination here, recruit talented students and support them through a high rate of completion. They also turn significant attention to direct career placement, and to further education leading to highly professionalized careers. In light of these obligations, they focus considerable resources and expertise on the ways in which their curricula support their mission and vision for student success from matriculation through post-graduation.

This study sought to gain an understanding of the degree to which decision-making processes and curricular efforts at a selective research university are aimed at helping to build the skills that employers expect college graduates entering the workplace to possess. The focus of this study was directed at understanding what role the general education curriculum played within the context of building students' skills for the labor market at one institution. Further, with the recognition that faculty significantly shape the curriculum, the study was designed to determine the extent to which employment preparation and outside influences entered into the shaping of general education curricula.

The researcher therefore endeavored to answer three main research questions. First, in what ways do faculty from different schools within a highly selective research university view the role of general education courses to develop skills as preparation for

the workforce? Second, in what ways, if at all, do different undergraduate schools of the institution aim to develop employability skills within the curricular design, specifically within the general education requirements? Third, what are the internal and external influences that impact each school's inclusion (or exclusion) of employability skills training within its general education?

The data collection and analysis for each of the three research questions illustrated a multifaceted approach to preparation for the labor market at the institution under study, an approach that was more nuanced than the general understanding of the "skills gap" literature would suggest.

Five themes emerged from the data that help to explain the underlying dynamics. The themes observed were:

1. Participants universally perceived graduates from their programs to have a high level of preparedness for entry-level employment.
2. There was a substantial variation in the understanding and perceived purposes of general education among participants.
3. Articulating employability skills to students through the curriculum and instruction can be a significant tool in helping students connect classroom learning to employment.
4. There were many differences in faculty perceptions of what skills were most important for students to master for employment, varying by school and major of enrollment.
5. There are a variety of influences that play significant roles in the development of curriculum that can prepare students for the labor market.

Although the skills-based learning that takes place through general education and major-specific coursework was often comingled by faculty interviewed, the interviewees generally conveyed an understanding of goals for career preparation in their academic programs. Within that understanding, there was variation in perceptions of the ways in which general education was supporting their program's goals for labor market preparation, where deficiencies existed, and where general education was not seen as a key site for workforce preparation in a program. Based on the interview data collected, it could be said that general education does contribute to creating a relatively cohesive degree program. Exactly how workplace-related skills development in general education is viewed among the faculty is a bit less clear. By and large, building direct linkages between general education and the workplace was not seen to be as essential by those interviewed for this study as one might expect to see in research on other institutional types. At MSU, faculty view general education through the lens of preparing students for the major and the major for the world of work, especially when the discipline is linked to particular professions. In this way, the faculty are not often thinking about general education and its direct applications for the workforce. But they do think about general education preparing students for the major in many cases, which then may be viewed as the portion of the curriculum preparing students for the workforce.

However, employment preparation does exert influence in the way that curriculum is constructed and the employability skills most often referenced in the skills gap narrative are generally present as points of emphases within the programs. Combined with the levels of pre-preparation that students often arrive at the institution

with, it creates a complicated picture of exactly where skills development is most explicitly taking place before graduates are released into the labor market.

That said, high demand employability skills, such as oral and written communication, teamwork, critical thinking/analytical reasoning, problem solving, and creativity/innovation (Ahonen & Kinnunen, 2015; Finley, 2021; Hart Research Associates, 2010, 2018; van Laar et al., 2017) were frequently cited in faculty narratives on major-specific coursework at MSU. The accounts gathered for this study have demonstrated that there is a common expectation that students will enter into a major at MSU competent in many of the skill areas most often desired by employers, independent of whether the expectation has been explicitly written into the curriculum through prerequisite requirements or general education. While there are certainly sections of the labor market where a set of broad skills is necessary for employment, in many cases, MSU graduates aspire to jobs requiring specialized undergraduate training or advanced degrees. The curriculum at MSU is designed to provide students with the requisite skills for virtually any type of employment, especially in the sectors that expect the greatest level of undergraduate preparation. Faculty perspectives and accounts of employers that were drawn upon over the course of this study attest to the fact that MSU graduates are generally seen as highly prepared for the labor market.

The fact that each institution should have distinctive approaches to addressing the skills gap has not been featured prominently in the predominant literature on the skills gap is extremely significant going forward. This suggests that a variety of stakeholders in student preparation and success collaborate on better understanding the skills needed for their own students' labor market aspirations, and the degree to which the curriculum

addresses any skills gaps. In many settings, general education may be a key portion of the curriculum in addressing a skills gap, yet the general public, legislators, and many students that navigate the higher education system often possess a negative perception of the usefulness of general education coursework under the auspices that the time, effort, and monetary investment does not ultimately benefit the graduate upon entry into the labor market. These constituents are vital to the success of colleges and universities, so a faulty understanding of curriculum and student outcomes has potentially detrimental implications for institutions, especially at institutions that are less successful at producing highly employed graduates than at elite institutions like MSU. It is important for academic leaders in all postsecondary institutions to connect with the employers and industry sectors where they anticipate a strong likelihood of graduate job placements to gather perspectives from the industry side to ensure that the skills preparation that they are delivering to their students falls generally in line with what they will need to be prepared with for success beyond graduation. While this does not necessarily portend that academic units shift curriculum drastically to account for these desires, they should still be mindful of them and work within their program structure and goals to connect the two where it makes sense and to illustrate to students and outsiders these connections.

Although the recommendations offered as part of this discussion could certainly enhance student labor market preparation in selective research universities, as with most significant changes within higher education, their implementation will require a resilient coalition of stakeholders, faculty, students, administrative leaders and industry representatives. To this point, there were highly influential individuals in Dean-level positions in the Undergraduate College and in the Engineering program who successfully

collaborated with others in creating the LLW program and the curricular revision process, respectively. Any incorporation of the recommendations made herein would likely require the same level of collaboration, a compelling argument for doing so, and possibly additional resources to support these efforts. Nevertheless, the findings of this study suggest that institutions of all types should turn attention to their own students' aspirations and career goals, and ensure the curriculum prepares those students to meet their goals. This understanding will have a positive effect in supporting students through better aligning student goals and the efforts of all institutional units to prepare students to meet those goals in the future.

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Appendix A

Interview Protocol

Thank you for taking the time to meet with me today. I truly appreciate your time and willingness to assist me with this study. Before we begin the interview, I would like to review the procedure with you.

The interview is designed to be completed in sixty minutes, but the time required could be shorter depending upon the responses you provide.

You have read and signed the consent agreement. Do you have any questions about the agreement?

I'm interested in learning about the role that building student employability plays in the development and maintenance of undergraduate curriculum. With that in mind, as you consider your responses to the questions I will ask, you can assume that even when I don't say it explicitly, I am asking specifically about your undergraduate school or program. That said, whatever information you provide, whether related to objective school process or your own subjective beliefs, will be treated confidentially. If at any point you do not wish to respond to a particular question or would like to end the interview, please let me know. You have the right to withdraw from the study at any point without penalty.

Do you have any questions before we begin? May I begin recording this session?

1. Could you please describe your role and the length of time you have spent working in the undergraduate program(s) at [MSU]?

2. What role do you play in the development and/or revision of undergraduate curriculum within your school?

Let's talk a little bit about mission…

3. To paraphrase from the university mission statement, it states that [MSU] develops students into citizen leaders and professionals. With that in mind, how does the school/program, within the constructs of the course curriculum, satisfy the "developing professionals" aspect of the mission?

    a. Probe: How do the GE requirements, if at all, contribute to these specific aspects of student development?

4. Does your school have a mission specifically associated with GE?

    a. How would you summarize the intended outcomes of GE for students in your school/program?

        i. In what ways does the GE mission (or intended outcomes, if no explicit mission exists) align with the mission (or goals) of the school/program?

        ii. From your perspective, what should the purpose of GE be within an undergraduate program?

    b. Probe: In what ways does either the overall or GE mission (if one exists) include objectives specifically tied to employment preparation or outcomes?

5. In your estimation, in what ways is your (school's) GE curriculum effective in meeting the goals of the undergraduate program as a whole?

    a. Probe: What could be improved?

I'd like to talk now about the curriculum development process…

6. What considerations internal to your school are accounted for when developing curriculum (i.e., Are skills being measured)?

    a. Probe: In what ways, if at all, do student competency assessments play a role in determining a need for development/revision?

7. What influences outside of the school play a role in the development of curriculum and how strong are these influences?

    a. Probes: [If not mentioned specifically] How, if at all, do [SEC] guidelines play a role in curricular development/revision?

        i. SACSCOC?

        ii. Any relevant accreditation, certifying, or licensing bodies specific to the discipline?

        iii. Alumni?

        iv. University mission and goals?

8. Can you talk about how the consideration of students shapes general education curriculum?

    a. Probe: What role does preparing students for employment after graduation play in the development of curriculum?

    b. When course or program change proposals are brought forth to the committee (or within your role pertaining to curricular changes) for review and action, in what ways are potential implications to job preparation considered as a part of the committee's (your) task?

        i. If they are not, why not?

Changing gears…

9. We're going to look at a visual representation of various skills to talk through briefly. I have shared a link with you in the chat that I would appreciate if you could open. Once the link opens, please click on "Visitor" and then close the side bar on the right side of the screen that reads "Getting Started in Mural." Now you should see some empty boxes and colored circles. [Check that participant can view] Allow me to explain. Marketplace surveys spanning the full spectrum of employment sectors have frequently revealed that the skills which employers tend to value most highly are non-discipline specific. You should see a number of these skills featured on the screen each in their own circle. I would like for you to take a few moments now to think about the emphasis that is placed upon students' mastery of each of these skills within your school's curriculum and arrange them accordingly on the screen. Skills that are given the greatest emphasis in the curriculum should be placed to the left of the screen and decrease in emphasis as you move from left to right. There is no value assigned to the vertical axis. Rather, skills that you place in the third column, for instance, could be assumed to

have roughly the same emphasis as one another. You should have the ability to simply drag and drop the skills circles accordingly, but if you are unable, let me know. My screen syncs up with yours, I can see what you see. [If issue, share screen and ask participants to talk me through it]

a. [Once complete, **SCREEN CAPTURE**] Can you briefly talk me through the top 3-4 skills you've listed here and tell me why these receive the greatest level of emphasis in the curriculum?

b. How are greater levels of emphasis evident within the curriculum? (If pause, e.g. dedicated courses, integration across courses, mission, goals, intended course outcomes, etc.)

c. Are employability considerations a factor in the level of importance placed on the development of any of these or related skills?

d. When considering only the general education components that students complete in your school's program(s), how might this picture shift, if at all? You can rearrange the skills if you wish or simply talk me through it. [**SCREEN CAPTURE** if needed]

e. Is there a point or a line of demarcation as you look across this continuum where you could say that everything beyond it to the "Least Emphasis" side is not really emphasized explicitly in the Gen Ed curriculum? In other words, you might have skills like "technological proficiency," which isn't one of the skills in the list, but you may say, "well it's great if they develop that skill" – or conversely that you don't care at all if they do – but either way, it's not something that you set out to accomplish through general education.

i. How does that differ, if at all, from the overall program curriculum?

f. How does building employability factor into considerations about how GE should be structured?

g. Are there any skills that stand out from the above list, or any that are not listed, that you feel need to be more strongly integrated within the curriculum?

h. In your view, how well prepared skill-wise would you say that graduates from your program are for entry-level work?

You can go ahead and close the Mural window. We are finished with it now. A few more questions…

10. Whether through surveys, focus groups, one-on-one interviews, site visits, or similar, have you had the opportunity to interact directly with employers within your teaching faculty or leadership roles where they provided feedback specific to the program's curriculum?

    a. Probe: Have these employers specified skills that should be given more emphasis?

11. In what ways does the University and your school/program bear responsibility for ensuring that students are sufficiently prepared for employment after graduation?

12. What is the process or schedule in place for regular curricular review of the undergraduate program in your school?

    a. Probe: Does the review include general education requirements?

13. When was the most recent curricular revision to the GE requirements in your school?

    a. What did it entail?

14. Are there currently plans to substantially revise aspects of the undergraduate curriculum, and if so, can you please describe?

    a. Probe: What do you anticipate would be the goals of such a revision?

15. Is there anything else related to the topics we have discussed here today that you think would be valuable to add that we have not already talked about? Or any questions you might have for me?

As I review the transcript from this session, if I find that I need additional clarity to any of the responses you have provided, I may reach out. Likewise, if you have any follow-up questions for me, feel free to contact me.

Either way, this has been both enlightening and immensely valuable to my research. I truly appreciate you taking the time to talk with me and for all your candor in responding to my questions.

Thank you again so much.

Appendix B

General Education – University of Delaware

Purpose of General Education (University of Delaware, n.d.-b)

At the University of Delaware, General Education sets students along the path of possessing a complete set of characteristics of one who is both broadly and deeply educated. [GE] seek[s] to prepare students who are:

- Engaged citizens, involved in the world around them, and who understand the major challenges and debates of the day.
- Aware of their intellectual strengths and interests and of their ethical values and commitments.
- Aware of and capable of interpreting the arts and culture of modern and past societies,
- Equipped with the essential skills necessary to thrive in a rapidly evolving world including the ability to be a lifelong learner, creator, and innovator.

General Education Objectives

To fulfill these purposes, major requirements and general education requirements are combined to meet five objectives.

1. Objective #1: General education prepares students who are able to read critically, analyze arguments and information, and engage in constructive ideation.
2. Objective #2: General education prepares students who are able to communicate effectively in writing, orally, and through creative expression.

3. Objective #3: General education prepares students who are able to work collaboratively and independently within and across a variety of cultural contexts and a spectrum of differences.
4. Objective #4: General education prepares students who are able to critically evaluate the ethical implications of what they say and do.
5. Objective #5: General education prepares students who are able to reason quantitatively, computationally, and scientifically.

General Education Requirements (University of Delaware, n.d.-a)

General Education requirements are comprised of six university-wide requirements all undergraduate students must fulfill prior to graduation:

1. First Year Seminar (FYS)
    - Satisfied with a one-credit, 8-week, pass/fail University 101 course taken during the first semester.
2. English 110 (ENGL110)
    - 3-credit seminar introducing academic writing. Can be satisfied with outside credit.
3. University Breadth Requirement
    - Requires a minimum of 12 credits from approved University Breadth courses representing each of the following categories:
        i. Creative Arts and Humanities
        ii. History and Cultural Change
        iii. Social and Behavioral Sciences
        iv. Mathematics, Natural Sciences and Technology

- Note: some programs do stipulate specific courses to satisfy one or more of these areas

4. Multicultural Course Requirement
    - Satisfied with a single approved course aimed at providing students awareness of and sensitivity to cultural pluralism
5. Discovery Learning Experience (DLE)
    - Course(s) usually completed during a student's final year in their degree program that include options such as:
        - Internships
        - Study Abroad
        - Senior Theses
        - Practica
6. Capstone Experience
    - Satisfied with a minimum of a 1-credit approved course in the final year with examples including:
        - Honors Thesis/Senior Research
        - Course-Based Research
        - Professional Practicum and Internships
        - Design Projects
        - Programmatic ePortfolios
        - Senior-level Seminars
        - Field Experiences
        - Appropriately defined classroom courses