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Higher Education Professional Involved in or Aspiring to Careers in Strategic Enrollment Management: Competency Development and Career Pathways

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HIGHER EDUCATION PROFESSIONALS INVOLVED IN OR ASPIRING TO CAREERS IN STRATEGIC ENROLLMENT MANAGEMENT: COMPETENCY DEVELOPMENT AND CAREER PATHWAYS

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Strategic Enrollment Management (SEM) is an emergent and evolving field in higher education (HE). While the concept has often been researched as a system or process implemented by an institution of HE to optimize enrollment, this study examined the professionals that currently lead or aspire to lead those systems. The HE competencies areas that current SEM professionals are most engaged with, the activities they participate in to gain and cultivate competency development, as well as their educational backgrounds and career pathways was the focus of this study. Additionally, this study investigated the competency development opportunities available to individuals working in other HE positions that aspire to SEM-related roles, their educational backgrounds, and the barriers they perceive that hinder access to their development of SEM-related competencies.

The competency areas used in the study were created by American Association of Registrars and Admissions Counselors or AACRAO ("Core Competencies", n.d.) and included change management, collaborative decision making and consensus building, communication, diversity and inclusion, holistic and systemic thinking, interpretation and application of data, leadership and management problem solving, professional integrity, and technological knowledge. This quantitative study used a researcher developed survey that posed questions to a sample of current and aspiring SEM professionals that are members of the professional

organizations, AACRAO and National Association of Student Personnel Administrators or NASPA. This population was chosen to gain perspectives from a broad range of HE individuals in differing careers and employed at various institutions types nationally and abroad. The survey included both closed and open-ended questions to capture the insight of current and aspiring SEM professionals. The survey garnered responses from 973 participants total from the two professional organizations.

The study identified that the main competency areas SEM professionals engage in the most are professional integrity, communication, technology, and problem solving. The activities that both current and aspiring professionals most frequently participate in to further their competencies development are attending conferences, professional organization meetings, and career networking. The perceived barriers that hinder access to competencies development opportunities for those wishing to enter a SEM career fell into the categories of "budget/cost/finding," 'time and resources," "positionality," and "lack of support from leadership and/or institution." Additionally, the study determined the educational backgrounds of current and aspiring SEM professionals, including highest degree completed and academic area of degree. The career trajectory of those individuals currently in the field was also explored. Utilizing the findings from the study, a competency framework summary for a SEM-related higher education position was created. This framework can be used as a basis for creating a comprehensive model for such positions, which currently does not exist and for which these research findings offer an important foundation.

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by

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Completing a dissertation is an arduous journey.
This is not discouragement, it's encouragement to be prepared. ~ J.W.

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Jodi L. Ward

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CHAPTER I

INTRODUCTION

Higher education (HE), not unlike many of the world's industries, is currently facing challenges of sustainability in an environment of dwindling budgets and increased competition. Being more tuition dependent than ever before, higher education institutions are forced to respond and adapt to changing markets in an effort to maintain their positions and capture the attention of college-bound students. Long-term success is contingent upon being proactive and adopting innovative enrollment approaches. Professionals in the position of managing new and continuing enrollments are key administrators on college campuses and vital to strategic decision-making, goal setting, and ensuring optimal student body size and make-up via recruitment and retention activities. Colleges and universities provide a valuable public service, but to be successful these organizations must have effective leaders in place; leaders who can leverage complex external and internal factors and utilize data to drive decision-making, as well as adjust, and adapt organizational strategies when necessary (Anderson et al., 2009). Ensuring that the right leaders are in place with the right competencies necessary to manage such multifaceted institutional tasks is pivotal to the current and continuing state of higher education.

As a result, the field of *strategic enrollment management* (SEM) has emerged as one of the newest major organizational functions of senior level college and university administrators (Hossler & Botranger, 2015). The act of intentionally, as well as strategically, managing enrollment to obtain the ideal student body in a deliberate and directed manner is a newer and continually evolving higher education concept. SEM is not simply about getting a student through the door of any given campus, but it encapsulates their entire college career. Given that

enrollment management deals with all aspects of a student's journey from the admission inquiry through to the alumni/alumnae giving phase, this transformative process shapes the bulk of the relationship students have with colleges and universities. SEM supports the symbiotic relationship between the student and the academy (Croteau & Maginnis, 2005). Having HE professionals with strong leadership competencies, including skills and breadth of knowledge in in many areas across the collegiate enterprise, is not only necessary; it is crucial. SEM structures are the foundation to maintaining financial stability, unifying organizational culture, and preserving institutional longevity (Wallace-Hulecki & Seagren, 2014). SEM professionals with essential skill sets are assets to colleges and universities, but the development process by which these practitioners can acquire, develop, and demonstrate professional competencies effectively is an area where more research is needed.

With more attention on SEM, and as enrollment management-centered organizations become more commonplace in HE, this shift necessitates a need for training and development of existing and upcoming SEM professionals (Hossler & Botranger, 2015). Institutions trying to remain in competitive positions without strategic enrollment management and structured enrollment planning may find themselves losing market share and engaging in costly and non-productive initiatives (Medecica, 2016). As the landscape of higher education changes, colleges and universities are facing dramatic challenges and must adapt accordingly; therefore, it is essential that institutions are equipped with leaders who feel prepared and capable in SEM leadership roles.

Background

Enrollment management in higher education is a relatively new field and has only been a recognized organizational model since the 1970s (Henderson, 2001). The earliest use of the term "*enrollment management*" appeared in an article by Maguire (1976) in Boston College's Bridge

Magazine. Maguire known as one of the "fathers of enrollment management," coined the term to describe an approach for influencing college enrollments (Hossler, 2000). In the article, Boston College alumni, Maguire states his definition as "Enrollment management is a process that brings together often disparate functions having to do with recruiting funding, tracking, retaining, and replacing students as they move toward, within, or away from the university" (Botranger et al., 2012, p. 7). Maguire is credited for launching an institutional change in basic assumptions in higher education. He surmised that universities should operate with an enrollment management system in place to ensure an advantageous position among competitors who are also vying to attract quality students in sufficient numbers during a "period of possible national enrollment declines" (Henderson, 2001, p. 16). As markets softened and the value of college education came into question, the need to manage external and internal forces that shape college enrollment became even more urgent. Currently, higher education institutions are facing a decline in funding due to economic conditions that have forced many colleges and universities into budget reductions. Enrollment management emerged as a strategic concept that is applicable and vital to institutions' ability to continue to offer higher education services to the public.

As enrollment management grew and evolved, a new term emerged, *strategic enrollment management* (SEM) was introduced in 1990 by the American Association of Collegiate Registrars and Admissions Officers (AACRAO) (Wallace-Hulecki, 2007). AACRAO led the way in creating a professional forum for strategic enrollment managers to lay the foundation for best practices in this emergent field. The college enrollment declines during the 1980s and early 1990s was a catalyst for shifts in focus from a traditional college admissions approach to an enrollment management approach (Bryant & Crockett, 1993). Subsequently, Hoff (1999) stated that the issues facing American collegiate institutions are multidimensional and broad in scope requiring professionals in SEM to be proficient in assessment, planning, implementation, and

evaluation to obtain thresholds of enrollment that adequate in quantity and quality for a given institution.

In general, SEM has been deemed a systemic approach of integrating resources across the enterprise to secure enrollment. Several higher education practitioners have offered more specific definitions since this organizational practice first started to appear in the literature. Hossler and Bean (1990) believed that as a concerted organizational concept, enrollment is shaped in part due to the ability for institutions to exert more influence over potential and current students. They felt that a systematic set of enrollment centered activities should be institution-wide, research-based, and encompass the student experience from pre-enrollment to graduation. Dolence (1993) defined enrollment management as "a comprehensive process designed to help an institution and maintain the optimum recruitment, retention, and graduation rates of students, whereas optimum is defined with the academic context of an institution" (p. 8). By emphasizing "optimum" in the definition, this concept is applied situationally to each individual institution and not in generalities across the spectrum of all institutions. Dennis (1998) described enrollment management as both an art and a science; she said a good system cannot exist without good people in place. Enrollment managers, according to Dennis, must "understand the relationship of the student who enrolls with the student who withdraws and the student who persists" (p. 8). Huddleston (2000) expanded upon the concept of optimal enrollment in that a strategic plan is based upon comprehensive and integrative activities that identify, attract, select, encourage, register, retain, and graduate students from targeted segments. Enrollment management is conceived to be a holistic concept that encompasses the integration of institutional mission with the processes of program development, marketing, recruitment, admissions, financial aid, enrollment, orientation, and retention.

A more recent definition offered by Kalsbeek (2013) is that SEM is "a comprehensive approach to integrating all the University's programs, practices, policies, and planning related to achieving optimal recruitment, retention and graduation of students" (p. 22). Similarly, Scannell (2013) recommended that enrollment mangers are charged with finding a system that fits with the institutional mission and fosters cooperation, collaboration, and constant communication with all campus constituents. Baker (2012) further offered that enrollment management is an "institutional response to the challenges and opportunities" (p. 5) that exists concerning recruiting and retaining the right type and quality of student body that meets that particular college or university's mission. The evolution of enrollment management has been credited with the idea of shared responsibility, that not just a person or a department can be charged with meeting enrollment goals (Dennis, 2016). Botranger and Green (2015) suggested that SEM has to be effective in three areas, the organizational framework (e.g. the people of SEM), the process framework (e.g. the how of SEM), and the planning framework (e.g. the what of SEM). As the field has matured, SEM and the need to both strategically and intentionally manage enrollment had become fundamental in post-secondary institutions.

In the purview of higher education, administrators in senior SEM positions are the drivers responsible for key elements of the institutional blueprint for handling student recruitment, enrollment, and retention. Jones (2003) called the act of engaging in systematic strategic enrollment management a paradigm shift. In general, the SEM role involves strategic planning and includes the setting of goals, defining of objectives, and analyzing both short- and long-range outcomes. SEM involves collaboration among multiple divisions including admissions, financial aid, records (the Registrar), and student success/retention, as well as involvement from the academic departments. As such, the concept of SEM is an enterprise-wide

process that is interwoven into virtually every aspect of an institution's operational systems and campus culture.

With increasing competition among peer institutions, and pressure to attract not only students, but faculty, SEM has become an impactful model to attract and build human resources (Jones, 2003). Yet due to SEM's relatively short existence as a strategic business model, the concept is still progressing and being refined by colleges and universities (Henderson, 2015). SEM professionals can expect that change is constant. As student demographics evolve and diversify even greater change is to be expected in the future of higher education. Revolving external factors such as the economic environment and the political landscape shape consumer behavior. While some of external forces are beyond HE institutions' control, they are challenges that must be addressed in long-term enrollment strategic initiatives (Schultz & Lucindo, 2011).

To remain competitive in a national and international marketplace, organizations, including institutions of higher learning, must look at how they are preparing their future leaders (Gilley et al., 2008). Organizations cannot risk the potential pitfalls that could materialize from taking a passive approach to leadership development. Passivity can result in unintended and costly consequences for college and university enrollments as well as impact budgets (Collins & Holton, 2004; Medecica, 2016). While many college campuses have invested heavily in elements such as institutional reviews, feasibility studies, process audits, and other structure-centric areas, more forethought and resources need to be directed toward human capital by offering formal leadership and competency development to SEM professionals (Shuttinga, 2011).

Offices such as admission, financial aid, records, and student success may be perceived as operating independent of one another, but given the nuances of college enrollment they must be able to work collaboratively on integrated goals for strategic planning to be successful. Due to the increase in modalities of learning, especially e-learning, students have more choices

regarding their college education than ever before (Dennis, 2018). Professionals in the SEM field inevitably must understand the factors that influence a market-driven environment (Ward, 2005). Additionally, these key individuals need to be able to understand and apply forecasting models in order to strategically plan for institutional capacity, as well as devise ways to positively impact the decision-making process of prospective students (Bontrager, 2004). Being able to analyze trends and use methodologies for forecasting enrollment is a crucial competency for projecting the size and make-up of an entering class (Langston et al., 2016). The sheer complexity and depth of competencies needed within the profession makes developing SEM leaders that are prepared for this pivotal role even more difficult.

HE institutions that identify and develop leadership talent, evaluate future leadership needs, and implement strategies to support professional longevity, will ultimately be more successful in their enrollment sustainability (Jones, 2003). Given how important it is to have the right leadership in place to advance and sustain college enrollment, a formalized educational and career pathway, career-specific competencies, and ways in which those competencies are developed by SEM professionals is lacking in the literature. The differences in institutional mission, culture, and varied enrollment management systems could be contributing factors to formal pathways. However, it would benefit institutions to have data and resources available to support professional development and mitigate factors that may prevent having highly prepared and attuned SEM leaders in place.

In concert with many campus departments, a SEM leader sustains the institution's efforts to identify prospects, recruit, enroll, retain, and graduate an optimal student body. It is a delicate balancing act between the current situation with enrollment targets and anticipating enrollment trends to prepare for the future (Hope, 2017). For those who wish to excel in an enrollment management career, these individuals require a solid foundation of knowledge of various direct

enrollment support areas, as well as the ability to ensure collaboration amongst various enrollment adjacent units that share institutional responsibility for goal attainment. Leaders in SEM influence institutional success and exert control over the size, shape, and characteristic of the student body. There are several primary university areas/departments that support SEM including admissions, financial aid, records/Registrar's Office, and student success/retention. Although the ways in which SEM models are applied by an institution and the units directly involved may vary from college to college, the core responsibilities of the primary functional areas connected to SEM will be described for general context in the following paragraphs.

The *Office of Admissions* in higher education systems is often the first line unit for inquiries from potential applicants, as well as parents or guardians seeking information. Croteau and Maginnis (2005) stated that the topic of college admissions is one of the most highly discussed and often misunderstood professions within the higher education environment. The admissions office is the area responsible for recruitment activities, as well as guiding prospects through every facet of the application and admission process. In terms of enrollment management, admissions offices and their staff members have often been the starting point from which a strategic plan for enrollment is devised and implemented (Hossler & Bean, 1990). Admissions personnel must be able to get potential students to apply, as well as be aware of the internal and external factors that influence individuals to enroll at a particular institution. After enrollment, ideally the SEM plan introduces measures that support admitted students so they are retained until fulfilling desired degree requirements and graduate.

As competition for prospective students intensifies, recruitment activities can begin as early as middle school and, in some regions, there are early awareness programs that have connected elementary students with college and universities (Pulliman & Bartck, 2018). Other strategies to combat enrollment decline may include the office of admissions enrolling students

conditionally in an effort to not only admit a student who may not meet regular admissions standards, but also offer support to increase their confidence in obtaining higher education credentials. This tactic requires connecting the efforts of admissions with other units on campus such as student success/retention and academic support services (Wildman, 2016). The function of the office of admissions has evolved into an enterprise-wide collaboration that requires coordinated efforts amongst many units on campus. In partnership, these units work toward shared goals and assess and adjust strategies when unexpected challenges arise (Schultz & Lucindo, 2011).

The *Office of Financial Aid* is imperative to the strategic enrollment process in that college choice can often hinge upon tuition costs, discounting, and aid package availability. College affordability has become a central issue for students and their families. Because tuition (net of financial aid) represents the largest source of revenue for many colleges and university budgets, the role of financial aid professionals is integral to the overall strategic enrollment plan. Huddleston (2000) stated that competition has slowed enrollment growth forcing HE institutions to employ economic models that target financial assistance toward segments of students that they felt were more likely to enroll. The manner in which an institution of higher education manages and awards financial aid is a highly tactical and multifaceted process. Institutions must understand awarding policies and continually evaluate their enhancement or hindrance of student enrollment and persistence (Hossler, 1984; Hossler & Bean, 1990). Policies and procedures governing aid distribution must be analyzed to ensure positive impact on enrollment. College choice and enrollment decisions are often centered on aid availability and can be the utmost consideration when students and families are planning for a college education (Hossler, 2002).

The use of aid leveraging is an analytic tool that allows enrollment mangers and financial aid administrators to estimate the amount of financial assistance that would be needed to increase

the probability of a student with a specific financial profile enrolling (Hossler, 2002). Low income students' monetary needs are higher, thus the impact of aid and their ability to attend thorough to graduation is dependent on an institutions pricing structure and ability to grant aid (Lassila, 2010). The focus on the ratio between the tuition that is generated by an institution and the financial aid expended, makes forecasting, budgeting, and enrollment planning integral factors in successful SEM and institutional solvency (Loomis Hubbell et al., 2002). Additionally, financial aid can be a means to strengthen weak academic programs via increased funds for applicants, maximize the return on investment (ROI) in strong academic programs, increase ethnic diversity across programs, improve the overall academic profile, and support athletic or other specialized groups of students (Hossler & Bontranger, 2015).

Financial aid offices are responsible for the accuracy and compliance of all award distribution to ensure it is in alignment with federal, state, and institutional guidelines (National Association of Student Financial Aid and Administrators, n.d.). Need-based aid can be leveraged in a systematic way through strategic pricing and discounting to achieve multiple enrollment goals and influence college enrollment decisions (Hossler & Kalsbeek, 2013). This requires professionals who are versed in policy, trends, and budgeting so they can support the impact of substantial change in financial aid policy on student enrollment and matriculation (Linsemeir, et al., 2004). Policies are perpetually being revised, so it is imperative for those supporting financial aid and overall SEM to stay abreast of changes. This is necessary so policies can be strategically implemented, swiftly amended, and appropriately applied to support student success.

The *Registrar's Office/records units* are responsible for recording and authenticating student history records. They manage student data and historical records, as well as develop, implement and apply institutional policy on a vast range of student and academic related topics. This office has been termed a "custodian of student data or data stewards" (Vitangcol Regoso,

2020). The functions of the Registrar's Office are an integral part of students' full academic life cycle. This central office is responsible for functions such as course scheduling, catalog production and maintenance, the academic calendar, and enforcing state and federal guidelines. The services provide could include such things as course registration, transcript evaluations, degree audits, and graduate certifications. It is also the office responsible for working with faculty on development and delivery of academic programs, as well as curriculum planning and course sequencing (Parks & Taylor, 2019).

The registrar plays a major role in data integrity, quality assurance of courses and curricula, enhancing the process of course management, increasing flexibility of delivery systems, and translating academic policy into efficient procedures that are utilized campus-wide (Diamond, 2007). Additionally, as data stewards, the records staff is an integral part of the data governance structures within an institution of higher education (Vitangcol Regoso, 2020). Staff with roles within the Registrar's Office champion technology to collect, utilize, and disseminate data while maintaining student privacy and safeguarding data integrity (Presswood, 2011). The role of the Registrar's Office has moved increasingly from a department that is mostly transactional to one that is highly participatory and analytical.

Additionally, the Registrar's Office maintains and enforces institutional policy, as well as federal and state policies regarding college enrollment. One of the main and most complex policy being, the Family Rights and Privacy Act regulations (FERPA) or Buckley Amendment (U.S. Department of Education, n.d.) which applies to a parent or an eligible student's access to their educational record. SEM collaborates with the Registrar to ensure practices and procedures utilized by the institution are FERPA-compliant. FERPA Interpreting profiles and trends of entering enrollment classes, as well as factors affecting persistence of current students and the

monitoring of academic progress have become a shared responsibility among professionals in the Registrar's Office and those working in student success area.

In other strategic enrollment capacities, the Registrar's Office has historically developed systems to track at risk students who may be in academic distress, in danger of dismissal, or dropping out on their own proclivity. The tracking system allows the registrar to alert faculty and other student support services that can intervene and assist with academic performance mitigation (Parks & Taylor, 2019). While the terminology may differ from college to college, the Registrar's Office is the primary implementer of "early warning," early-alert," or "early intervention," type programs. These initiative have the goal of identifying and offering corrective actions to students who are academically performing at a level in need of support and intervention (Hossler & Botranger, 2015).

Student success and retention units are involved with academic success and retaining students until they reach degree completion and graduation. In addition to setting targeted goals for net tuition revenue gained from new and continuing students, enrollment management addresses student persistence and graduate rates (Emery, 2020). Student success and retention efforts have been developed around early warning systems, ongoing academic monitoring, academic and social support structures, such as learning communities, and bridge programs to help students not only persist, but thrive. Often this unit works in conjunction with faculty and the Registrar's staff, especially when an early warning system in place.

Faculty often play a large and important role in influencing the persistence of students, especially those that are deemed at risk (DeAngelo et al., 2015; Schriener et al., 2011). Research conducted on college enrollment retention efforts found that it is not enough to use final course grades to determine academic success (Boateng, et al., 2015). In one study of retention efforts, it was determined that even applying mitigation efforts based upon students' midterm grades is

often too late for interventions to reverse the academic outcome and have a positive effect (Sneyers & De Witte, 2018). Ongoing student advisement, especially from the very beginning, is a key element of persistence efforts. Creating a culture of advisement, where faculty are involved outside the classroom from the beginning of a student's educational career and serving as direct links to student's persistence is a tenant of student success and SEM (Ramano & Connell, 2015). These types of partnerships and investments from faculty help strengthen and improve student success and college graduation rates.

Overall, SEM comes into play when universities not only put student persistence policies and practices in place, but also utilize empirical data to measure that success. Student success, as part of SEM, must be able to focus on institutional inputs such as academic profiles and admission indicators, as well as institutional outcomes like retention and graduation rates (Romano & Connell, 2014). Tracking retention is imperative because it is an institutional level measure of success (Hagedorn, 2005). For HE leaders involved in SEM, devising an infrastructure to foster academic success and monitor progress toward graduation is a critically important collaboration (Kalsbeek & Hossler, 2010).

Integrated efforts are the sum of their parts and many other units such as academic advising, alumni affairs, career placement, disability services, diversity and inclusion, information technology, institutional research, orientation, student activities, and veteran affairs, can play integral roles in the overall microcosm of the university. As the field of SEM evolves to meet market demands, it is possible that in the future many more academic and nonacademic units will have expanded and prominent roles in different facets of an institution's strategic enrollment plan.

Problem Statement

Due to a challenging and changing economic landscape, as well as decreasing support from state and federal sources, higher education has experienced a great deal of turbulence over the last few decades (Barr & Turner, 2013; Coomes, 2002; Lederman, 2015; Pope 2017). This environment has created a dire need for skilled leaders that can navigate fluctuating enrollment and manage the circumstances that contribute to and exacerbate those vacillations. Although higher education is an industry that should be proactively preparing and training professionals for executive level roles, academia has traditionally taken a more indirect and reactive approach to professional development and leadership planning (Luna, 2012). Despite the growth of SEM systems that are operationally embedded in HE institutions, career pathways and competency development for its professionals or aspiring professionals has not yet been clearly defined.

Leadership development strategy, as it pertains to individual professionals, is often overlooked in the SEM organizational model (Flanigan, 2016). SEM an emergent field in higher education, can be structurally sound, but deficient in areas that encompass the system managers. The concept of SEM was initially created to intentionally impart strategies to guide higher education mission, vision, and goals, but models are still being defined and refined. SEM is most closely associated with undergraduate enrollment (AACRAO, 2022), however, more recently, the concept of Graduate Enrollment Management (GEM) has been discussed (Campbell & Smith, 2014; nagap.org, n.d.), as have other specialized areas such as medical school (Ruger, 2020), or community college SEM (Kerlin, 2008; Lehmacher, 2013. HE institutions that recognize the importance of developing SEM leadership talent and having professionals in place to strategically build and foster a campus-wide SEM culture will ultimately be more successful in their enrollment sustainability (Putney & Holmes, 2008). However, a detailed and specific

career pathway leading to a SEM career or development of SEM-specific competencies could not be found in the literature.

Given the relatively short history of SEM as a professional career, its evolving nature as an organizational model, and the significance of having key individuals leading the way for college and university sustainability, it is important to understand more about this emergent field and the leaders who drive it. As a leading author in the area of enrollment management, Hossler (1984) was one of the first practitioners to write about SEM as the newest administrative functions to appear in the senior levels of higher education administration. He began to explore enrollment management as a concept that expanded beyond recruiting and enrolling students, and linked efforts with retention and graduation rates. Hossler suggested that enrollment management systems at some colleges would pivot existing structures and processes to envelope retention efforts. However, he surmised that other institutions would be forced to take a hard look at their current situation and develop entirely new structures. For some colleges and universities this business model change would be transformational.

Kremer et al. (1984) were the first authors to have a book published on the topic of enrollment management. They detailed enrollment management as a structured set of procedures and activities that provided a practical framework for improving institutional strength in a competitive marketplace. They focused on eight interconnected activities that included "clarification of institution mission, program development, marketing, recruiting, admissions, financial aid, orientation, and retention" (p. 5). These activities were part of an "as assertive approach to ensuring the steady supply of qualified students required to maintain institutional vitality" (p. 21).

Kremer et al. (1984) defined four unique SEM models that focused on the operational authority aspects of enrollment management. Those models are categorized as the committee

model, the enrollment management coordinator model, the enrollment management matrix and the enrollment management division model. These models range on a continuum from the committee structure, which is small in scale and the simplest, to the other end of the spectrum which is the enrollment management division. This model is structured to involve the entire enterprise. While each model has its own merits, more and more contemporary SEM models tend to be hybrid in style, combining elements from several models (Hart Bucher, 2010).

Black (2004), another expert in the field of SEM, noted that institutions utilizing tactical models are primarily focused inward. Those institutions tend to rely heavily on historical data, as well as anecdotal past experiences, to build strategy. Utilizing what has occurred in the past for decision making related to the future can make adapting to new challenges and pivoting strategy problematic for institutions. Academia is notorious for doing what has always been done, however, this is not dynamic and lacks strategic influence (Buckland, 2009). Dolence (1993) also discusses SEM structures and key concepts, and was the first to position SEM as a way to maintain optimum enrollments as defined by an institution. Hossler and Bean (1990) emphasized while having an enrollment management system in place is a significant function for an institution of HE, no single SEM model or template will suit all colleges and universities.

Bontrager (2004a) suggested that an enrollment management structure and the implementation of a particular model often is guided by the political and cultural climate of an institution. He expanded upon this notion further to state that institutional type, composition and philosophical role will have an influence on the model implemented. He believed that the model is driven by the mission and internal factors such as values and philosophical alignment. In contrast, Kalsbeek (2006) describes the organizational orientation as being influenced by external factors such as the economy and competitive market position. He believes there has been a shift in enrollment management from rigid organizational structure to one that changes

based upon challenges and opportunities externally exerted upon an institution. While Bontrager and Kalsbeek had different views on why a particular enrollment management approach was selected, both discussed the need to connect enrollment initiatives with strategic goals. However, neither practitioner included how or where enrollment managers might develop the skills, knowledge, or competencies needed to engage and orchestrate an enrollment plan that involves multiple operational units.

There is a critical need for having adequately developed leaders in the area of college enrollment infrastructure. Given the imperative nature of SEM systems in HE, it is not strategic for the academy to utilize employee development approaches that are largely transactional and reactive in nature (Jabbar & Hussein, 2017). Leaders in SEM should be able to champion efficacy and link the strategic management processes with the overall goals of the institution in order to be effective leaders. Often position descriptions for SEM and similar HE leadership roles are focused on principal duties and responsibilities, but these descriptions do not demonstrate how a job is done or how key competencies are developed to be successful in that position (Cajigas & McGrath, 2015; Eddy, 2013). To effectively forestall and respond to the evolving nature of enrollment in higher education, SEM leaders must be adept in the deployment of strategic planning and adapt to dramatic changes that have and will continue to embroil higher education in the future (Wallace-Hulecki & Seagren, 2013). Having competency development plans and ongoing opportunities available for individuals who are charged with implementing SEM not only supports the professionals in those roles, but ultimately the institutions in which they are employed.

A SEM leader must be skilled in many complex competencies to be able to build an effective higher education enterprise and lead a body of constituents that will view enrollment as a shared academic imperative (Wallace-Hulecki, 2009). Despite the recognized importance of

collaborative efforts, higher education has often been an industry that operates in silos of organizational structure, resulting in decentralization and lack of aligned collaboration. Collaborative decision-making and consensus building is one of the general competency areas indicated for any professional role held by AACRAO professionals (AACRAO, n.d.). Fostering collaboration and engagement across departments, academic colleges, and the student body is important to sustain the institutional imperatives of facilitating education, supporting student success, and maintaining the value of a college investment. To address the traditional silo approach, a SEM professional should be proficient in bridging areas that have traditionally operated in a stand-alone fashion (Craig, 2017).

Institutions of higher education continue to exist due to the market demand for a college degree. Continued support from the public depends upon higher education institutions being able to demonstrate their value and return on investment (ROI) for students (Perez-Vergara, 2019). The ability to maintain and foster community support, as well as adapt to changes or variations in the collegiate market demand, is key to surviving the evolving economic landscape in HE. Bontranger (2004b) suggested that SEM ultimately succeeds or fails based on the strength of enrollment leaders being able to engage constituents, sustain forward movement toward goals, and link both academics and student success. Black (2001) cautioned that devoid of solid strategic planning, the SEM division will only be proficient in reacting to issues, which presents a temporary solution and not an effective long-term proactive strategy. In addition to Botranger and Black, Coomes (2002), Henderson (2005), Hossler and Bontranger (2015), and Sigler (2017) discuss the core concepts of the SEM model and the best practices used by institutions. Additionally, Kalsbeek, (2006) wrote about key strategies used in SEM and implementing differing structures that fit the individualized needs of the institutional mission.

Without proper development of the necessary competencies, SEM leaders may ultimately fall back on fragmented decision-making and give way to "good enough" judgements and settle for resulting outcomes (Johnson, 2016). The intentionality of being strategic and not simply reactive is essential for the long-term success of a cohesive enrollment plan. SEM professionals need experience and training in a multitude of areas across the institution. Indeed, Pollock (2012) expressed that it is imperative to make a concerted effort to offer professional development for those charged with SEM roles so that they understand how to create and sustain integrated institutional pathways for student success.

Studies Addressing the Problem

The topic for my study has important impact for institutions of HE and will add breadth to the current literature, especially as it relates to SEM and the professionals that drive and maintain enrollment systems. Given that SEM is relatively new in nature, research of this type that examines the engagement of current professionals in competency development activities and the barriers that hinder professional development as well as competencies development opportunities of aspiring SEM professionals was not found. Other related HE research studies will be discussed to provide foundational context to further illustrate my research topic.

Research on the structures, organizational models, and best practices associated with SEM was found in the current literature (Bartlett, 2013; Black, 2004; Botranger 2004a; Hart Bucher, 2010; Henderson 2005; Hossler 1984; Hossler & Bean, 1990; Hossler & Botranger, 2015; Kalsbeek, 2006). Research was also discovered related to the leadership characteristics or skills of SEM and other HE professionals (Liedke, 2013; Lovell & Kosten, 2000; Presswood, 2011; Strickland, 2011). Multiple studies addressed HE professionals and their leadership styles or the personal attributes that contributed to their capacity toward leadership (Dutschke, 2003; Eddy & VanDerLinden, 2006; Harris, 2010; Hughes, 2005; Mendez, 2018).

Leadership theories and frameworks in HE was presented by Black (2015) and Vander Shee (2009). Professional development and career pathways in HE have also been reviewed (Phair, 2014; Schultz, 2019; Schultz & Lucindo, 2011; Stewart, 2004). Leadership competencies of HE administrators, such as college presidents, student affairs professionals, private college chief enrollment officers, and financial aid officers, were explored by Cook, (2004), Hoffman and Bresciani (2010), Stumo (2017), and Woolf (2012) respectively. Caijas and McGrath (2015) conducted a study of a talent management competency model in HE. Lastly, Stefanie (2012) looked at the hiring processes of enrollment managers or similar positions and the competencies indicated within a SEM new hire posting. Additional competency model research was conducted by Bartram et al. (2002), Bradley (2014), Kurz & Bartram (2002), and Spendlove, (2007).

Frameworks such as transformational versus transactional leadership have traditionally been applied to HE leadership (Basham, 2012, Burns, 1978). However, Black (2015) suggested that historical leadership paradigms do not encompass all the qualities necessary to be an effective leader in HE. He concludes that HE administrators need a combination of both leadership and managerial competencies to strategically address the complex challenges faced in the higher education sector. Similarly, Vander Shee (2007) expressed that a single leadership model for every HE institution simply does not encompass all that is required to effectively lead in a collegiate environment as an enrollment manager.

The research that was uncovered on leadership in HE often uses leadership characteristic and leadership attribute interchangeably. My study will focus on a collective of specific HE competencies drawn from the competencies identified by AACRAO (“Core Competencies,”n.d.). While no study could be found that fits the research I conducted on competencies, the development and opportunities for development of current SEM or SEM aspiring individuals, Presswood (2011) examined the leadership attributes of multiple enrollment

professionals in HE. This study focused on whether there were commonalities shared between registrars and enrollment managers at U.S. HE institutions. In the findings, Presswood determined that registrars and leaders in enrollment management do not have differing leadership attributes. In a similar study, Liedke (2013) explored the leadership qualities of public and private institution chief enrollment officers. Liedke's study focused on which leadership attributes were possessed by Chief Enrollment Officers and if institutional type made a difference. His findings revealed no statistically significant difference when looking at leadership attributes and the type of institution in which the HE professional was employed.

Additionally, Spendlove (2007), like Liedke's (2013) study, looked at what leadership attributes and competencies that upper-level administrators should possess to be effective. Spendlove's study was completed at an institution in the United Kingdom (UK) and was not specific to SEM professionals. The UK study conducted semi-structured interviews with Vice Chancellors, Rectors, and Principals of universities, all of which would be considered equivalent to senior-level administrators in the U.S. Spendlove found that while effective leadership is deemed crucial, the higher education institutions in which the senior professionals were employed had no organizational strategy for identifying leaders, nor did they have a process for developing leadership skills.

Strickland (2011) found some SEM leadership skills can be taught or learned and some of those skills are essential to professionals in new leadership roles. She encourages that the skill sets be used to develop SEM curriculums geared toward teaching those that aspire to lead SEM efforts in HE. Similar to Strickland's (2011) study, Lovell and Kostan (2000) devised a list of skills, knowledge, and personal traits necessary to lead in HE. Their study however, focused on building a skill set necessary for successful student affairs administrators, a position that may support SEM goals, but may not be as directly involved as other units.

The leadership styles of enrollment managers and those in other HE positions is evident in the literature and supports the foundational information on the leadership of HE professionals. Unlike learned competencies, studies indicate that leadership styles are inherent by nature and are not necessarily taught or learned by an individual. Researchers including Dutschke (2003), Eddy and VanderLinden (2006), Harris (2010), Hughes (2005), and Mendez (2018), have published studies on various aspects of the leadership styles of enrollment mangers.

Hughes (2005) investigated leadership styles of current SEM professionals who managed undergraduate admissions and financial aid offices. This study indicated that most often enrollment managers displayed transformational leadership style, more than a transactional leadership style. The findings determined that the predominant leadership style of enrollment managers was transformational regardless of gender, institution type (two-year, four-year, or private, public) or educational attainment level of the enrollment manager. A study of Chief Enrollment Managers delved into the correlation between leadership style and enrollment performance (Dutschke, 2003). This study used intuitional type as a delimiter and focused solely on private colleges and universities. This study found no significant results correlating a specific leadership style with increased enrollment.

Harris (2010) found male enrollment managers at community colleges were more often transactional in leadership style, contradicting the earlier study by Hughes (2005). However, the study conducted by Harris was much smaller in scale and consisted of enrollment managers from a single type of institution (community colleges) and only from a single New England area. Mendez (2017), like Hughes, conducted research on leadership styles on a single type of institution (private colleges) but conducted the study among multiple enrollment management leaders in the Southern California area. Her study did not confirm either Hughes' (2005) transformational leadership style or Harris's (2010) transactional leadership style as the

predominant style expressed by EM leaders. Mendez found that at the private Southern California private institutions that EM leaders predominately displayed situational leadership styles.

A study conducted by Eddy and VanDerLinden (2006) found that alternative leadership styles are replacing traditionally held definitions in HE and may provide new ways of understanding the role of leader. Similar to Hughes' (2005) study, the research presented by Eddy and VanDerLinden (2006) focused on leadership styles of administrators at community colleges. Their study indicated that new and diverse ways of understanding leadership are emerging, allowing institutions to rethink traditional images of leaders. The administrators in the study acknowledged the complexity of leadership and provided more than one definition of leadership. While not specific to SEM, this study applied the concept of leadership style at various mid-level positions up through the president's position and across several divisions including academic affairs, continuing education, institutional research, distance education, and business affairs.

While leadership style is important and general leadership skills or abilities may be transferrable and contribute to the overall competency development of HE leaders, my study will focus on HE competencies activities engaged in and the opportunities for development of individuals currently in SEM-related roles and how those competencies are developed by aspiring professionals. Researchers, Cook (2004), Hoffman and Bresciani (2010), Stumo (2017), and Woolf (2012) presented competency-related studies on college administrators, student affairs professionals, enrollment officers at faith-based institutions, and financial aid officers, respectively.

Some research focused on alternative ways of extracting information about competencies needed by HE leaders. Stefanie's (2012) study, while related to competencies and specific to

chief enrollment officer positions derived competencies that were common in the hiring process for enrollment related leadership positions. In a study conducted by Caijas and McGrath (2015) they explored the use of competencies in a talent management model to find the right person for the right position. They agreed with a similar study by Bartram et al., (2002) that a competency model allows organizations to have a framework for examining organizational success and the effectiveness of the professionals charged with managing SEM practices. Spendlove's (2007) study concluded that a more proactive approach to identifying leadership competencies is needed and many universities do not have a systematic manner in which to either identify or develop leaders. Additionally, the following researchers (Boyatzis, 1998; Bradley, 2014; Campion et al., 2019; Haynes, 2016; Marrelli, 1998; Mauer; 2019) investigated various concepts and theoretical perspectives within competency models, and Chouhan & Srivastava (2014) offered a study on competency mapping of professional positions.

My study bridges a gap that exists in the current literature by presenting SEM competencies development in a manner that has not been presented previously. My study investigated not only current professionals' development engagement and opportunities but also, the competency development opportunities and barriers experienced by aspiring professionals. The intent of my study is to gain greater insight on the pivotal aspects of competencies development of SEM leaders such as development activity participation, degree of engagement in established HE competencies areas, and barriers that hinder opportunities for competency development. Additionally, the educational backgrounds and career pathways of current and aspiring professionals are examined to further support the issues related to competency development in the field of SEM. Identifying competencies through research for specific professions is the initial phase of building a competency model, therefore, the results of this

study are a precursor to enabling further research into the development of a SEM specific competency model.

Literature on the educational qualifications held and the career pathways of various HE professional positions is evident in the existing literature. Although these studies did not connect competency development with the career pathways they are of value to highlight their findings as foundational information related to my research topic. One study of the educational attainments and career paths of admissions professionals was conducted by Schultz and Lucindo (2011). In their study, Chief Admission Officers (CAO) and Chief Enrollment Officers (CEO) were interviewed about their educational backgrounds. The key findings indicated that these HE professionals had a large variety of undergraduate majors across multiple disciplines and the majority of respondents had completed a Master's degree. In similar fashion, Stewart's (2004) study examined prior education of enrollment managers. In alignment with Schultz and Lucnido, this study also found EM professionals have a wide range of education and a varied spectrum of experience and qualifications.

In a survey study, conducted by Phair (2014) entry level Admissions Officers were asked about their career paths and educational backgrounds. This study confirmed the finding of both Lucindo and Schultz (2011) and Stewart (2004) that there is not a common educational pathway that academically prepares individuals to enter a SEM-related leadership role. In a non-SEM related HE leadership study, Schultz (2019) explored the impact of leadership development programming on the career pathways of females in higher education. This leadership study, while not specific to SEM, offers insight on educational attainment, leadership development opportunities, and potential gender inequalities that may exist as females attempt to move into HE leadership roles.

Having more concrete educational and career pathways, as well as competency development programming that is SEM specific would pave the way in a more intentional manner for future leaders in the field. The challenges faced by HE, as well as the rapidly changing local, national, and global environment make preparing future leader's more urgent and necessary than ever before. My study supports the need for a core educational pathway, as well as a career guide that includes competency directives and development opportunities for those that desire to enter and make an impact as SEM leaders of HE institutions.

SEM organizational systems and structures are continually evolving and must be able to respond and adapt to the ever-changing landscape of HE. Much of the foundational information on SEM focused on recruitment activities and managing efforts that would allow HE institutions be attract, retain, and graduate an optimal sized student body (Black, 2004; Botranger, 2004; Dolence, 1993; Hart Bucher, 2010; Henderson, 2005; Hossler, 1984; Kalsbeek, 2006; Kremer et al., 1982). While class size remains one of the key goals in many enrollment management operations, those organizational systems have also expanded to diversify by planning, monitoring, and executing efforts that optimize additional metrics such as gender balance, ethnic representation, broader socio-economic spectrum, and alternative student types such as non-traditional aged students.

As challenges arise and student profiles change, the strategies of SEM must focus on mitigating those factors and adjusting course of action. The continuous evolution of SEM is necessary function due to the fluid nature of student needs and market demands. Publications by Barlett, (2013), Black, (2004), Botranger (2004), Dolence (1993), Hossler and Bean (1990), Hossler and Botranger, (2015), and Sigler (2017) suggest that HE institutions need a comprehensive SEM plan that, when implemented, require total institutional commitment. They concluded that the best practices for the implementation of a successfully integrated plan include

effective recruitment and retention efforts; inter-department cooperation, collaboration, and communication; as well as ongoing evaluation and assessment of the practices that have been put in place. When SEM is managed solely by an individual or a single department it may not be able to impart the influence necessary to achieve institutional change (Hope, 2017). Ideally, the entire campus community is invested as a stake holder and has some level of active participation in the implementation, management, and assessment of the core elements of SEM. Collaborative leaders that are able to establish and support SEM systems across the enterprise through shared dialogue, data driven decision making, and a culture of mentorship will be best suited to navigate uncertain times (Miller, 2019).

Enrollment management is designed to support a college or university's mission and meet the educational goals of students (Dolence, 1993). Dolence suggested that the purpose of regularly evaluating an established SEM plan is to determine its return on investment (ROI), assist with institutional decision-making, and to provide necessary information for future planning. Leaders that are familiar with the tenants of SEM and collaborative management are crucial to the execution and evolution of enrollment systems as the success of these practices depend on the contributions of many areas across the institutional enterprise. However, skilled HE professionals are the key element to ensuring SEM systems achieve those results. SEM is not a static concept, enrollment plans are designed to be revisited, refined, and revised, as necessary. Not all institutional plans address enrollment management, but SEM does not exist without strategic planning (Massa, 2001).

Literature Deficiency Statement

Research could not be found on the degree of engagement in competency development activities by professionals currently working in primarily or completely SEM-related roles or the competency development opportunities available to individuals aspiring to enter a primarily or

completely SEM-related role. The general HE competency areas created by AACRAO ("Core Competencies," n.d.) are the basis for the study of SEM competency development. The HE competency areas listed by AACRAO consist of the "knowledge, skills and dispositions" of any AACRAO professional regardless of their role at their institutions and thus are more generalized to accommodate a variety of different HE positions. Additionally, the literature uncovered no clear trajectory in the educational backgrounds for primarily or completely SEM-related roles. AACRAO offers a SEM endorsement program for "in-service professionals," to enhance their enrollment management credentials, however, is only available to individuals who have worked in the field for more than five years, thus aspiring professionals are not eligible. Just over 30 enrollment professionals have completed the endorsement offered by AACRAO since the program's inception in 2012 (Heisserer et al., 2020). In addition to the AACRAO's endorsement program Tremblay (2015) identified 3 colleges (Bay Path University, University of Miami, and Vanderbilt University) that offer Master's programs in Higher Education Administration and offer concentrations in enrollment management. In addition, there are 2 other colleges (Abilene Christian University and University of Southern California) that offer graduate level certificates in enrollment management.

Despite the attention that SEM has received about its importance as an organizational model or professional position, the competency development of the key players that operate primarily or entirely in this capacity or who aspire to do so has not been researched. Developing position-specific competency models is needed in HE, especially in higher level leadership positions (Spendlove, 2007). The SEM competency activities engaged in by current professionals, the availability of competency development opportunities, as well as identified barriers that exist for those aspiring to careers in enrollment management is lacking in the literature. The topic of my study is intended to better understand current SEM professionals as

well as provide information to those aspiring to SEM roles. The study also offers institutional guidance on educational and career pathways for future leaders interested in the field of SEM.

There was a need to explore the gap of knowledge that exists concerning engagement and development of competencies in the area of SEM. This study therefore identified the degree to which activities in the HE competency areas created by AACRAO ("Core Competencies," n.d.) are engaged in by current SEM professionals and the degree to which aspiring SEM professionals have opportunities to develop those same competencies. Additionally, the perceived barriers to development opportunities that exist for HE professionals who aspire to primarily or completely SEM-related positions are examined, as well as the educational and career pathways for SEM roles. My research on the emerging and evolving field of SEM will provide empirical information to address a void that currently exists in the realm of HE literature.

Significance of the Study

To bring in the right students, institutions of higher education must have the right professionals, with the right competencies in place. Therefore, more research is needed in the emergent field of SEM, especially as it relates to a better understanding of the competency development of those in SEM positions, as well as the development opportunities available for those individuals aspiring to do so. Such knowledge is important because it will continue to be essential for colleges and universities to have professionals that can seamlessly transition into SEM leadership roles, either as positions are vacated or new roles to lead the institutions are created. Such research can contribute and compliment the current research on HE and SEM as well as fill the void that is present regarding competencies of current SEM professionals and the barriers that exist to competency development opportunities for HE professionals aspiring to a SEM-related role.

SEM professionals, who can manage strategically across campus-wide departments, act as change agents in financially volatile environments, allocate budgets with limited resources, utilize complex systems to glean knowledge about their customer base, and collaborate to elevate the overall institutional brand, are assets to higher education. Professional development of key individuals who have the capacity to manage essential SEM tasks is vital to the longevity of collegiate institutions. Leaders who possess and develop SEM competencies are equipped to support the sustainability of their respective HE institutions. Much of the existing research on enrollment management in academia has been conducted via qualitative methods. This study was conducted using a qualitative method that surveyed members of two distinct national HE professional organizations. Research of this type and topic has not been conducted previously and the empirical findings amassed from this diverse population of HE professionals broadens the scope of information on the topic of SEM.

Purpose Statement and Research Questions

The purpose of this quantitative study is to explore the degree of engagement in HE competencies area activities by current professionals in the field of SEM, as well as the competency development opportunities available and barriers present for someone aspiring to a SEM-related role. Additionally, my research delves into the educational pathways of both current and aspiring professionals, and the career pathways of individuals that currently have job responsibilities that are completely or primarily SEM-related.

This study involves two distinct groups of HE professionals. The first group consists of HE professionals whose current job responsibilities are completely or primarily related to a major SEM function. Those functions may include responsibilities such as planning, organizing, leading or supporting recruitment, enrollment, persistence, retention, success and/or graduation activities/efforts for potential or current students. The second group consist of HE professionals

who current job responsibilities are either somewhat or not all SEM-related. This group was asked about the degree of aspiration they have toward a primarily or completely SEM-related position. Those professionals not currently working in a SEM related position that had no degree of aspiration toward a SEM-related career did not complete the survey any further. Those that had some degree of aspiration toward a future SEM position were asked about competency development opportunities and the barriers that exist that hinder engaging in competency development opportunities.

Educational backgrounds, including highest degree completed, were obtained from both groups of professionals. For those possessing a Bachelor's degree or higher, the academic area of highest degree completed was also captured. Additionally, the career pathways for current SEM professionals was assessed by asking what their current HE position is and two previous positions in HE, if applicable. This study highlights the gaps that occur between specific SEM-related competencies engaged in by current SEM professionals and the competency development opportunities that are present for someone aspiring to a SEM-related role. This research contributes to a better understanding of competencies activities that SEM professionals participate in and the competencies development opportunities available as well as the perceived barriers experienced by other HE professionals. My research study explores SEM in a way that does not currently exist is the literature. The primary research questions for this study are:

1) For HE professionals that currently have job responsibilities that are completely or primarily SEM-related (Group 1):
    a. how often have they been able to participate in specific activities to develop SEM-related competencies;
    b. how often do you engage in activities related to specific competencies areas;
    c. what is the highest level of education completed and in what academic area;

d. what is career pathway taken to your current position?

2) For HE professionals that currently have job responsibilities that are somewhat or not at all SEM-related (Group 2):

a. to what degree do they aspire to a position that is primarily or completely SEM-related;

b. how often do they have the ability to participate in specific activities to develop SEM-related competencies;

b. how often do they have opportunities to develop abilities in specific competencies areas;

c. what are the barriers experienced that hinder opportunities for SEM competency development;

d. what is the highest level of education competed?

Theoretical Foundation and Narrative

According to Grant and Osanloo (2014, p.17), as a researcher exploring the use of a theoretical framework one should possess "a deep and thoughtful understanding of your problem, purpose, significance and research questions." A conceptual framework is the visual representation of a system of key factors, assumptions, beliefs, constructs, and theories that inform a research design (Miles et al., 2014). This visual representation provides direction to a study and helps to illustrate the organization of the elements being studied such a general purpose, focus of quantitative characteristics, and objective(s). The framework defines the interlinked concepts both graphically and narratively and when presented together, provide contextual information for the topic being investigated. Figure 1 presents the conceptual framework for my study.

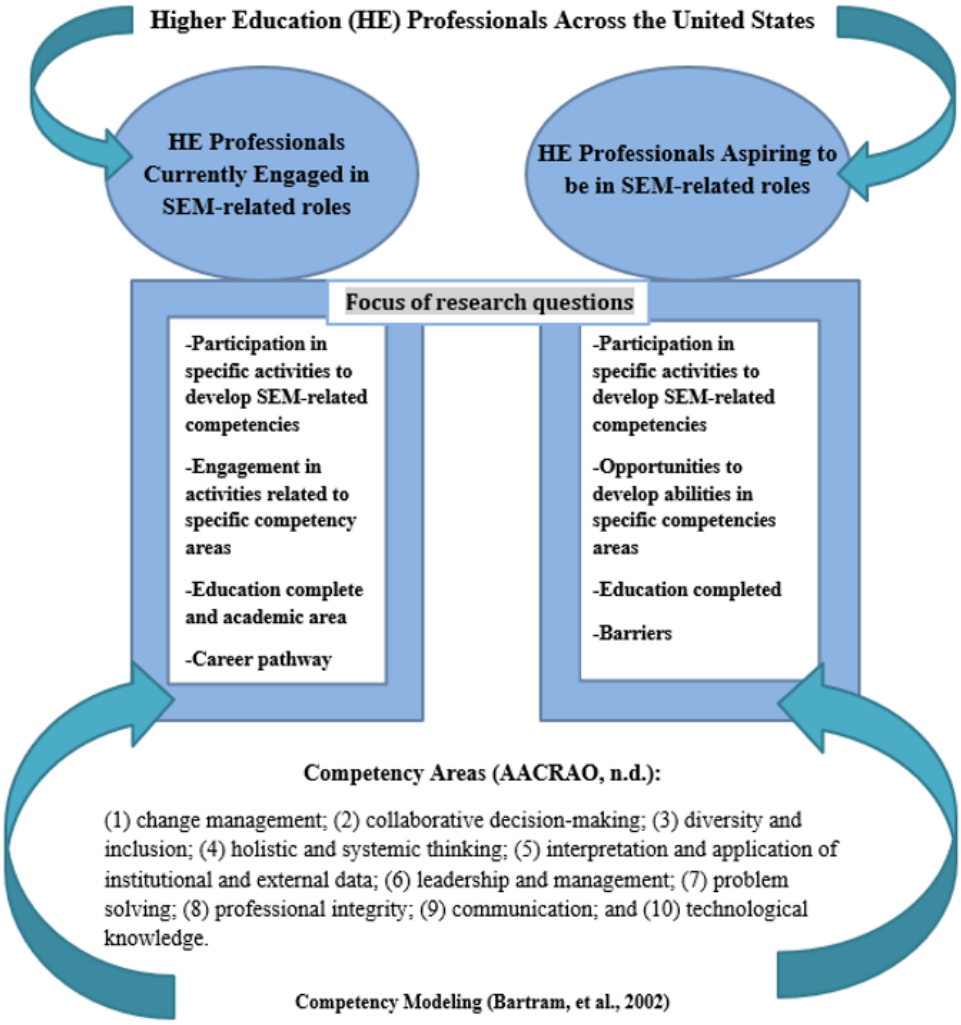

Figure 1

Conceptual Frame of Ward (2022) Study

As shown at the top of Figure 1, my study involved a survey of HE professionals at institutions across the nation and abroad that are either currently in a SEM related role or aspire to one in the future. These groups of HE professionals were asked about their current participation in specific development activities and engagement in activities related to the HE competency areas, how often they have opportunities to develop abilities in competency areas, barriers that hinder opportunities for development, highest education completed, and career

pathways. Survey respondents were placed into the two groups based upon how they answered a question on area of job responsibility: those HE professionals whose current job responsibilities are completely or primarily related to major SEM functions (Group 1), and those HE professionals aspiring to in a position whose job responsibilities are completely or primarily SEM-related (Group 2). Both groups were asked about how often they have been able to participate in specific activities to develop SEM-related competencies. The current SEM professional group were then asked to what degree they engage in specific SEM competencies as well as their highest educational attainment and career pathway (current and previous positions). The aspiring group were asked about the degree to which they have opportunities to develop specific SEM competencies, as well as the barriers that hinder their ability to participating in those opportunities. Additionally, the highest level of education completed and academic area of Bachelor's degree or higher were asked of those individuals.

Sourced from professional industry HE and SEM articles or existing research, a number of the general competencies areas that were presented by AACRAO were also evident in the literature as ideally necessary in the scope of a completely or primarily SEM-related position. SEM competencies presented in the literature included *collaborative decision-making* like understanding the influence of law, policy and governance at the institutional, state, and federal level (Hart Bucher, 2010; Hillman et al., 2014; Hughes, 2005; Lovell & Kosten, 2000, Wohlgemuth, 2013; Zumeta, 2009); *diversity and inclusion* or *understanding and application of institutional and external data* such as creating forecast models, enrollment projection and trend analysis to recruit, retain, and graduate a diverse mix of student body including factors such as size, academic profile, and demographic background (Botranger, 2004b; Castrellon, 2021, Henderson, 2014; Hossler & Kalsbeek, 2013; Langston et al., 2014; Muhammad & McManus, 2018; Perez-Vergara, 2019; Stefanie, 2012); *holistic and systems thinking* such as applying

organizational theory and collaborative systems thinking (Black, 2004; Black, 2015; Kalsbeek, 2006; Lovell & Kosten, 2000; Perez-Vergara, 2019; Snowden, 2013); *communication*, like facilitating internal communication as well as external communication and marketing with current and potential constituents (Hughes, 2005; Langston & Schied, 2014; Lovell & Kosten, 2000; Sigler, 2017; Stefanie, 2012; Vander Schee, 2009; and *technological knowledge* such as utilizing the dynamics of technology and enrollment technology platforms to optimize enrollment planning and management (Dennis, 2012; Henderson, 2014; Norris, 2008; Pollock et al., 2017; Pirius, 2014).

My overall conceptual frame is based upon a Competency Modeling construct which provides the foundation for this framework. A competency model is a collection of competencies that jointly define successful job performance and can be used as a framework for assessing competencies in both hard and soft skills for a particular career role. As first defined by McClelland (1973), competence is the personal trait or set of habits that leads to more effective or superior job performance. McClelland felt that aptitude testing, which was the workplace standard in the 1970s, should not be the sole way to select candidates for jobs. McClelland began the competence movement to justify a standard that did not judge a qualified candidate by aptitude alone, but took a more holistic approach. He constructed a scoring system that has evolved into the behavioral indicators and metrics assigned in many current industry competency models. Later other authors offered similar definitions of this competency model (Bartram et al., 2002; Boyatzis, 1982; Campion et al., 2011; Marrelli, 1998, Chouhan & Srivastava 2014).

Competency encompasses the knowledge, skills, abilities, traits, and behaviors that allow an individual to perform a task within a specific professional function and many times are grouped by a defined job type (Boyatzis, 1982). Often a competency model is presented in a manner that is position focused and uses organization-specific language to detail the tasks

involved (Bartram, 2002; Campion et al., 2011; Kurz & Bartram, 2002). A competency model can be used to translate organizational strategy into employee behavior, which makes it highly applicable for the field of SEM. Once roles specific competencies are identified, a rubric that assigns metrics to each competency can be compiled. Metrics are the scaling mechanism that is used to assess level of mastery exhibited by an individual. Often these metrics are categorized on a proficiency scale or organizational standard such as beginner/novice, intermediate/mid-level, senior/advanced or expert/executive which becomes a way to translate organizational strategy into employee behavior (Campion et al., 2019).

The concept of competency modeling has been widely applied by human resources, especially in Fortune 500 companies (Haynes, 2016). It is often used by employers that utilize a pay for performance (PFP) structure (Richard & Kang, 2018). The concept of a PFP model is not widely applied in higher education; however, the core components of a competency model are still applicable. Haynes (2016) conducted a case study of a residential education department at a large, private Midwestern university. This study was used to validate evidence that the competency model is a tool that can measure and improve employee performance as well as improve organizational performance when used as a development intervention. While not specific to SEM professionals, Haynes (2016) study supports the implementation and utilization of competency modeling and its effectiveness in a higher education setting, this study also concludes the need for standardized employment terms and competencies for a given employee group or position. A study of student affairs educators conducted by Hoffman and Bresciani (2010) echoes the study from Haynes (2016), that identifying competencies for a specific professional position is effective in hiring the right people in the right positions.

Similarly, Mauer (2019) indicated that the use of competency models and hiring based upon career competency profiles can prevent bad hires and lessen turnover. Competency

modeling adoption has the benefit of linking future focused talent requirements with strategic business objectives. While competency models are not one size fits all, a well-defined competency model will be able to describe not only how effective performance occurs, but also what effective performance is and how it ties into the broader goals of the organization. Competency modeling or creating competency profiles has been touted as a best practice for HE leadership positions (Haynes, 2016, Hoffman et al., 2010, Mauer, 2019).

My research study is not intended to create a complete competency model, as determining a rubric of specific competencies, levels of escalating mastery, and related metrics for each competency would be necessary. The scope of my study will utilize the AACRAO list of general HE competencies and determine the degree to which current SEM professionals are engaging in competency development activities, the development opportunities that exist for them, as well as for those individuals aspiring to a primarily or completely SEM-related career. Identifying a standard of career-specific competencies list through structured research is one of the initial steps in building a competency model for a particular profession (Bartram et al, 2002, Bradley, 2014). From there the compiled list would need to be vetted by professionals in the field and then modified as needed. Once a formal career-competency model has been built then a scale of performance metrics can be devised and applied to a specific role. The initial stage of identifying those career competencies that are engaged in and can be developed in a primarily or completely SEM-related position is a primary focus in my study. The American Association of Collegiate Registrars and Admissions Officers (AACRAO, n.d.) has published a set of HE competencies that are generalized to be applicable to all AACRAO professionals irrespective of their roles. My study used the AACRAO list as the base of competencies in the research, but narrowed the scope and focus on what activities professional are engaging in to develop competencies and the opportunities that exist as SEM professionals.

Competency mapping is also a term that is used in the literature to address the *process* by which key competencies are identified for an institution and the positions that function within it (Chouhan & Srivastava, 2014). For the purposes of my study, I have selected the definition as presented by Betram et al., (2002) that states competencies are "sets of displayed behaviors that are instrumental in the delivery of desired results or outcomes" (p. 7). This is appropriate for my conceptual frame as I have used the HE competencies presented by AACRAO (AACRAO, "Core Competencies" n.d.) to identify which competencies are engaged in and have opportunities for development by SEM professionals. The competencies examined in this study are those that are important for SEM professionals to possess, and demonstrate, as well as valuable for aspiring SEM professionals to seek opportunities to develop.

When a professional applies specific competencies to their work, in a consistent and deliberate manner, the result of their effort is effective performance, which supports the business goals and objectives of an organization (Marrelli, 1998). Specific job descriptions only provide a summary of the skills required to perform at work, whereas a competency model provides metric-based, job-specific knowledge, skills, and abilities that an employee must exhibit to be proficient in their roles (Bartram et al. 2002; Bradley, 2014). Effective models form a foundation for connecting competency with organizational strategy, thus supporting an organization's long-term goals. Additionally, Marrelli (1998) stated that competency modeling and its application to a profession is a continuously evolving process as the environment that an industry serves changes and evolves.

The competency modeling construct is applicable to this study because it describes career-specific performance within an organization and gives structure to the knowledge, specific skills, and organizational abilities needed for proficiency in a professional role. Competency information for HE and SEM professionals could be found within multiple sources of the current

literature. However, a compiled set of core SEM-specific competencies that is standard in HE, the engagement and development opportunities for such competencies, as well as a clear educational and career pathway for HE professionals aspiring to be in SEM was not found in the existing literature.

Methods Overview

A quantitative approach was utilized to collect survey data from participants. An electronic survey was e-mail distributed to members of the American Association of Collegiate Registrars and Admissions Officers (AACRAO) and Student Affairs Administrators in Higher Education, formerly known as the National Association of Student Personnel Administrators (NASPA). Both HE professional organizations include dues paying members from institutions across the United States and abroad. These professional organizations include representation from a wide range of professional HE roles and institutional types.

The research was conducted using a researcher-developed survey instrument that was independently constructed with the Qualtrics survey platform. A previously utilized survey instrument that would align with the specific research questions being posed in my study was not found. The survey questions were pilot tested with colleagues from my current institution, as well as peers at external institutions who are familiar with SEM careers. Feedback from the pilot test was used to revise the survey as necessary to improve the validity. The responses from the pilot testing were removed prior to the launch of the survey. The invited participants' survey responses were collected in the online platform, Qualtrics and then IBM's Statistical Package for Social Sciences version 24 (IBM SPSS v 24.0) for analysis.

Chapter I Summary

This chapter introduces and explains the background, the significance of the study, and the statement of the research problem. Additionally, the chapter provides a conceptual

framework and graphic to illustrate the theoretical perspective of the study and the research questions. Competency development is a critical component to building and supporting a strong SEM division with professionals that can lead the sustainability of collegiate institutions. Having a solid foundation of leadership that is versed in SEM career competencies stations a university to better meet overall strategic goals, institutional vision, and the administrative processes involved in recruitment, marketing, admission, financial aid, student services and student success (Hossler, 1984; Julien-Molineaux, 2015; Snowden, 2016; Talbert 2012). The ever-changing landscape of higher education creates many complex challenges for HE institutions in their mission to remain solvent. Bryson (2004) stressed that it is important for organizational leaders to utilize strategic planning for optimal enrollment, however, they must also be able to anticipate, respond, and change course in flexible, calculated, and effective ways as needed to manage the often-volatile environment of HE.

Based upon the challenges colleges and universities are facing with fewer number of traditional aged students in the population, decreasing budgets, increasing competition, rising cost of college attendance, increased financial aid regulations, and unpredictable external forces, it is crucial to have the right leaders in place. This study is intended to help fill gaps in the literature regarding activities HE professionals are engaged in for SEM competency development and opportunities for development of current SEM professionals and the opportunities and perceived barriers that hinder development for individual aspiring to SEM careers. Chapter II of this study outlines the foundation of literature about HE leadership development and research that has been conducted in the field of SEM. Chapter III explains the methods utilized to explain the variables in the study. Chapter IV offers a review of the data collected from the survey constructed for this research project, and Chapter V provides a detailed discussion of the findings and how the findings are linked in the context of existing literature.

CHAPTER II

REVIEW OF THE LITERATURE

Strong leadership is an asset in any organization; it is a key element to the sound structure of both for profit and non-profit sectors. Without effective leaders to set direction, motivate others, align vision, and guide employees toward common goals, an organization can suffer negative consequences such as lack of moral, inefficient operations, economic loss, high turnover, poor motivation, confusing expectations, and difficulty maintaining a good public image (Komives, 2010). For colleges and universities to be successful in the current fiscally stressed and unpredictable environment, HE professionals, especially those in leadership roles, must be properly developed for their positions. SEM is a professional area that is crucial to the future sustainability of higher education, thus understanding more about SEM and those who currently hold those positions or aspire to this type of leadership role is crucial. Successful SEM systems need to have successful SEM leaders behind them. The organizational structure cannot be foundationally sound without professionals who are adept at executing SEM concepts. Comprehensive SEM systems are beneficial to both student and institution (Hart Bucher, 2010; Hossler et al., 1990; Kalsbeek, 2006).

This chapter explores foundational topics to give additional support information, context, and data about research that has been conducted on SEM organizational structures, HE professionals' educational qualifications and career pathways, leadership competencies and development of HE professionals, and leadership styles, qualities and attributes of HE and SEM professionals.

Strategic Enrollment Management Structures in Higher Education

In the early 1980s when SEM was just beginning to evolve as an organizational model, any scenario that resulted in a crisis situation generally led to a change in how enrollment was approached (Kremer et al., 1984). Unfortunately, these reactive measures were apt to manufacture additional inherent problems by proxy. As a result of mitigating issues only when they occurred, a reactionary cycle of decision making ensued. SEMS's infancy, there was a lack of data to drive strategy, uncoordinated efforts across units, and little campus-wide awareness of situations that created havoc for enrollment (Dennis, 1998). When college enrollments were robust these issues were not at the forefront of concern for institutions. Declines in enrollment and the absence of institutional coordination to mitigate hindering issues created the need to build a systemic approach, thus SEM structures were born.

Hossler (1984) was an early adopter for promoting SEM and its importance in influencing the size, shape, and characteristic of an institution. In one of the earliest books written on the subject it was stated that SEM affects an entire college by way of resources since it is directly tied to revenue, but also by the way it shapes the quality of the student body and thus the academic culture of an institution (Hossler et al., 1990). Shortly thereafter, Dolence (1993) provided the first context for the usage of optimum enrollment in implementing SEM; he stated that the concept of SEM was a comprehensive process that should optimally achieve and maintain the desired enrollment, retention, and graduation rates of the study body when applied cohesively across multiple departments with similar student success goals. Hossler & Kalsbeek (2010) also expressed the importance of retention of student in any SEM organizational model.

SEM implemented in HE institutions has been seen as a comprehensive process that relies upon coordinated efforts for the optimum obtainment of not only physical capacity, but also ethnic diversity, academic profile, and market share. Black (2004) suggested that the earliest

organizational structures of SEM were less fluid than what we see today in contemporary SEM. He suggested that a future SEM system will be more agile, highly market-responsive, and will serve as an influencer of institution change. These systems will build a comprehensive continuum that engages the student and institution the entire lifecycle of enrollment to alumnus.

Best practices and core concepts of SEM have been more recently explored by Hossler et al., (2015) and Schuttinga (2011). These studies are similar to earlier works presented by Botranger (2004a), (Botranger (2004b), Dolence (1993), Hossler (1984), Hossler et al. (1990), Kalsbeek (2006), and Kremer et al. (1984), which all help establish a foundation for the implementation of SEM models. Indeed, Dolence, Hossler et al., as well as Kremer et al. were among the first higher education practitioners to introduce enrollment management as an organizational concept that is a systematic set of activities engaged specifically to allow institution of HE to exert influence upon their student enrollments. Additionally, Henderson (2005) found that enrollment structures allow colleges and universities to systematically address recruitment and enrollment issues and that these structures are needed to enhance participation, collaboration, and collective consultation across the HE enterprise. In Henderson's study, he found that chief enrollment managers (CEM) felt it was important to become "students of institutional culture" (p. 9). Strategic planning structures detailed by Kalsbeek (2006) combine the planning orientations of academic, administrative, market-centered, and student-focused. His study echoes Henderson's outcomes that the objective underlying SEM is that it is inherently goal-oriented and needs to engage the academic community to achieve those goals.

In more recent literature, Hossler et al. (2014), Schuttinga (2011), and Bartlett (2013) capture the theory of shared responsibilities in SEM structures, and that SEM leaders must rely on professional judgement to determine which model or combination of models best fits the institutional context and academic goals, mission, and vision. Hossler and Botranger's (2014)

book detailed a SEM organizational framework describing from the executive team down to the data team who was involved in the development and execution of SEM efforts. These institutional teams work together to formulate the strategic plan and the structures that guide their organizational model. Hossler and Botranger cautioned that given the variability of institutional type, mission, and goals for enrollment, a specific or singular SEM model would not be suitable for every institution. These organizational models are intended to be malleable and adapted or blended to meet the needs of each institution.

For example, Schuttinga's (2011) quantitative study involved surveys from 45 chief enrollment administrators from institutions within the Council of Christian Colleges and Universities (CCCU), and looked at the relationship between the enrollment management strategies chosen and how those related to institutions that were experiencing declining, flat, or increased enrollment. This study identified usage of strategies in many core SEM areas such as admission, retention, marketing, academic quality, and organizational leadership. The study's finding showed that institutions with increasing enrollment were using multiple strategies and were engaging in more activities to enhance enrollment than those institutions that were maintaining or had decreasing enrollment.

Similarly, Bartlett's (2013) study agreed with Hossler and Botranger (2014) and Schuttinga (2011), in that a hybrid model is most appropriate for SEM systems. Bartlett used an instrument adapted from a Noel Levitz 2001-2002 survey regarding the organizational composition of enrollment management programs at private and public 4-year institutions in the United States. The survey responses received represented 110 private and 61 public institutions. Bartlett's findings stated that understanding SEM organizational structures and how their various components influence recruitment and retention efforts is essential not only for managing current enrollment, but also planning for future college enrollments. The majority of respondents utilized

a SEM division or committee model as their primary organizational structure. The findings indicated that respondents felt the how departments are configured under a SEM model is a critical consideration in structuring enrollment management plans.

Understanding the role of SEM structures and their influence on the college system and enrollment, as well as retention, is important to cultivating a better understanding of the competencies needed by SEM professionals. The strategies chosen can determine what competencies are necessary to effectively create, implement, engage, and maintain those SEM models at HE institutions.

Educational Qualifications and Career Pathways

While many HE administrator positions have designated career pathways through degree programs and professional academies, these structures are lacking for the field of SEM. By industry standards, SEM educational and career pathways have yet to be concretely defined in HE. SEM has been touted as a pivotal function on college campuses, yet the career definition of a strategic enrollment manager is still emerging. The educational backgrounds of HE professionals in SEM tend to vary widely and career pathways continue to be established in ad hoc ways by individual institutions. A SEM endorsement is offered by the professional organization AACRAO (SEM Endorsement Program, n.d.), this continuing education opportunity offers a recognition of a SEM skill set and as of May 2020 has seen just over 30 individuals have complete this self-paced professional development program (Heisserer et al., 2020) While this opportunity has been completed by a small percentage of in-service enrollment professionals, it is not available to professionals that aspire to this type of career, but lack a minimum of five year experience in the field.

College admissions is one of the main functional areas SEM, and prior research has revealed the career track to such positions is unclear. Schultz and Lucindo's (2011) study into the

career pathway and educational backgrounds of professional in enrollment-related jobs took an in-depth look at not only the educational background and career paths, but also their development needs. Their study included 50 semi-structured interviews with chief admissions officers and enrollment managers from a diverse grouping of two and four-year schools from across the U.S. The most frequent undergraduate degrees in the group were in English, History, Psychology and Business. The frequency of Master's degrees was in areas such as Higher Education Administration, College Counseling and Business Administration. Very few in the group of 50 had attained a doctorate degree. When asked about why they entered the field of enrollment management, the answered varied from being in another position in a college setting, to having a good college experience and wanting to help others have the same experience. No clear career pathway was cited in the findings. AACRAO (2017) also did a study of Admissions Directors and Chief Enrollment Officers (CEMOs) that looked at the educational attainment of these professional in a career profile. Of those that submitted the profile, 57% hold a Master's degree and 32% had attained a doctorate degree, but this study did not identify in what academic area the degrees were completed.

Schultz and Lucindo's (2011) study also examined the career development needs of admissions officers and enrollment managers, exposing a critical gap in the field. Few of the participants felt that they were prepared to enter the profession and most indicated hands-on experiences and on-the-job training as their main means of development. The enrollment officers in the study cited a lack of being prepared to deal with the political undertones of shared governance and working with multiple units to be challenging. Others expressed the need to develop skills that helped them deal with the increasing complexity of the changing higher education landscape, and the need to assimilate units across the campus to better function as a fully integrated enrollment system.

The lack of a SEM career pathway creates a problematic situation for HE institutions to ensure they have the right people in the right positions to advance and support enrollment. Schultz and Lucindo's (2011) study ascertained a need for better methods of identifying and preparing new professionals and engaging future leaders. As future evidence, in a study of entry level HE professionals, Phair's (2014) study found that aspiring admissions practitioners felt that they needed to constantly acquire new skills and master new disciplines yet do so without a formal or explicitly defined career path for advancement. Phair's findings were based on surveys from 1,492 Admission Officers, followed by telephone interviews with 40 admissions professional from institutions across the U.S. involved in the National Association of College Admissions Officers (NACAC). While the career of an admission officer has evolved from a single-stop operation to a complex business model that strategically involves multiple units, both Phair's and Schultz and Lucindo's work revealed that a professional development track and career pathway is ambiguous and undefined.

For young professionals, the ill-defined trajectory from entry level into upper management can result in confusion and concern about their professional future. For example, the study of entry level admissions professionals conducted by Phair (2014) indicated that a combination of academic training, enrollment specific training, and management training would lessen confusion and better formalize the professional expectations of a SEM role. Another example is Stewart's (2004) content analysis of position advertisements that appeared in The Chronicle of Higher Education over a five-month period. This study focused on defining the enrollment manager role and examines the characteristics and responsibilities of enrollment managers at public and private institutions across the United States. Among the 46 advertisements analyzed, he found that educational backgrounds and career history requirements listed in the postings varied widely. He established that candidates typically had an average of 5-

10 years of experience when entering SEM and were responsible for managing multiple units. Several skill sets were evident in most SEM position postings, including data driven decision-making, collaborative teamwork, and the ability to utilize technology in leveraging recruitment and retention efforts. However, what was not evident in the research was how professionals had obtained these skills or how additional competencies would be acquired or developed.

Previous research has also revealed that the availability of leadership development programs is not consistently present in HE intuitions. Schultz (2019) examined the impact of leadership development programs on the career pathways of females in HE. While this study was not specific to SEM, it found that leadership development programming is a crucial and effective approach to preparing individuals for upper level positions in college administration roles. This study focused on females and their shared experiences at a community college leadership development program; however, the findings indicate that the participants felt that this type of programming would be impactful if available to all populations and applied across the institution. As was seen in Phair's (2014) study of entry level HE professionals, lacking a career pathway to SEM creates a difficult route for individuals interested in this profession to navigate in a manner that allows them to attain the necessary competencies. Without leadership development or clear educational offerings that lead toward a SEM career, professionals may struggle to solidify their leadership in enrollment management. Not having true ways to enter the profession or be developed as a professional could be a disservice to HE institutions and those individuals who aspire to become SEM professionals

Leadership Competencies and Development of Higher Education Professionals

Visionary leaders are prized professionals. These key individuals effectively drive and manage change and are crucial components in the ever-evolving landscape of HE. More specifically, SEM leaders, are relied upon to recruit, enroll and retain students in ever changing

environments. These professionals need a pathway to career development, so they can evolve into the visionary leaders needed in this crucial role. The complexity of the SEM role makes it imperative for HE institutions address the institutional challenge of having the right employee with the right set of competencies as well as how to develop those individuals for successful SEM careers.

Communication skills and experience as a supervisor is essential to an HE professional that is aspiring to enter the SEM profession. Lovell and Kosten (2000) explored, via a meta-analysis, competencies needed for success as a student affairs administrator in HE. This research did not involve SEM professionals, but due to the breadth of studies analyzed and the fact that these administrators could conceivably move into SEM, its findings are of value to the foundation of information for my study. In their analysis it was found that the most needed competency for professional development was communication skills and supervisory ability. Other foundational skills needed to be competent in student affairs positions were budget administration as well as market awareness, and persistence tracking for retention of students. These competencies are like those which are also needed by SEM professionals. Lovell and Kosten point out that while identifying key competencies of professionals is valuable, it is equally important to identify skill gaps that exist in various roles. Similarly, Cook (2004) looked at the leadership competencies of future community college presidents, identifying general competencies, communication skills and leadership skills as necessary for future presidents. In her study of 18 community college presidents from the state of Illinois, she had leaders rate 47 competencies on a scale of extremely important to not important. While this study contained valuable insight into the various competencies that an executive level HE administrator deemed important, it did not delve into how those competencies were obtained or if there were development opportunities available.

Some of the broad and general competencies identified that could be applied to other HE administrator positions include budgetary stills, technical skills, and the ability to build trust across many constituents. This study not only identified specific competencies needed, but also as has been the case in other studies, emphasized the need to a detailed career pathway. Likewise, Spendlove (2007) looked at leadership competencies of senior level HE administrators at institutions in the United Kingdom. Her findings also uncovered the importance of communication and various "people skills." These findings were in alignment with Lovell and Kostan's (2000) research in that while key competencies are evident, the greater need was in determining more proactive approaches to the identification of specific competencies and the development of those competencies. Spendlove also stressed that leadership and management in the context of HE is fundamentally different than other industry but there remains considerable lack of investment in professional development.

Having a defined set of competencies is a valuable initial step bridging the gaps that exists in the career pathway and leadership development of future SEM leaders. In the SEM-related position of financial aid officer, Woolf (2012) devised a competency model of professional development for financial aid officers. Woolf surveyed 135 current financial aid officers associated with the Western Association of Financial Aid Officers (WASFAA), and asked them to rate competencies on a scale of importance and well as a scale of frequency of use for each competency. This study was specific to financial aid officers, which is a key role in the umbrella of SEM and was able to highlight a competency model that included an Importance/Frequency instrument that would be helpful in constructing similar competency models for SEM professionals. Additionally, Stefanie (2012) used the chief enrollment manger (CEM) hiring process to illuminate competencies necessary to be successful in that role. In her qualitative study, she interviewed eight experienced chief enrollment mangers from private

colleges from the Mid-Atlantic, Midwest and New England regions. As with Woolf's study, the findings presented the need for a competency model to better articulate what specific knowledge, skills, and attributes that are needed by CEMs, while cautioning that this can vary widely depending on institutional vision and focus.

Like Woolf (2012), Black (2015) ascertains that leadership competency frameworks, where available, can be helpful guides if context and situation are considered. His study was fueled by the changing shape of HE leadership due to the complexity, evolution, market competition, and global challenges associated with college enrollment. Due to a "steeped in tradition" type of mindset, academia has been slow to evolve and adapt to the market-driven environment that drives college choice. His study found that the traditional HE leadership approach has some inadequacies as it relates to utilizing and maximizing human resources. His study pointed out that if competencies do not have an element of flexibility regarding the uniqueness of the institution, then effectiveness may be diminished. He concluded that identification of a suitable competency framework is problematic if it does not account for the individual leader, their constituents, and the contextual setting. SEM organizational models differ; thus, a competency framework should have some degree of flexibility to accommodate the unique needs of these variances.

Black (2015) also established that it is essential to not only identify what the competency is, but contextually how it is applied. Black's study did not focus on SEM, but it is valuable to note that leadership competency frameworks can be broad and general, and do not always encompass all the specific competencies of a defined HE role. In Stumos's (2017) mixed-methods study he looked at leadership competencies from both AACRAO and those developed specifically to address the values and characteristics professionals at faith-based colleges and Universities. The professionals in his study were associated with higher educational institutions

affiliated with the Evangelical Lutheran Church and was designed to address professional development needs within this niche population. The study highlights the importance of looking at the importance of necessary competencies and the performance gaps that exists amongst professionals. Indeed, Bradley's (2014) study used systems theory to address the complexity of adopting competency models to improve organizational performance. His study indicates that the act of having a competency model is not enough, but rather it needs to be fully engaged so that it goes beyond what people do in their jobs, but also includes what attitudes, abilities, and motivation levels are possessed by exemplary leaders. HE professional need a combination of leadership and management competencies to address the challenges faced in the HE environment.

Additionally, institutions must work toward further developing the competencies that leaders possess so that they can elevate from competent to proficient levels in the defined skills necessary. Identifying the competencies is only a portion of the process. Institutions must also determine how to acquire those skills and make an investment in the development those competencies. By considering the entire competency process, leaders will be less challenged by ambiguity and have a better understanding of not only know what the needed competencies are for their position, but how, when, and in what circumstances to apply those skills. This comprehensive approach will be beneficial to both the employee and the organization.

Leadership Styles, Qualities, and Attributes in Strategic Enrollment Management

The diverse and complex nature of influencing and managing enrollment on college campuses requires an equally diverse and complex set of skills, qualities, and leadership attributes. The essence of leadership in HE has often been ambiguous, as well as contested due to its sheer complexity (Bolden et al., 2008). Commonly researched in higher education and other industry fields are the leadership styles of individuals in various professional positions. As

careers evolve and take on more specific responsibilities, there becomes a greater need to not only understand the diverse ways in which individuals lead, but also the specific attributes, knowledge, and skills necessary to be successful in their current and future professional roles.

Research has been conducted on the leadership qualities and attributes of SEM and HE professionals. These qualities were primarily expressed as intrinsic, not learned. While this is unlike the specific learned and developed SEM competencies that are the focal point of my study, this type of research adds to the contextualization of my topic. In Liedke's (2013) quantitative study on leadership qualities, he received surveys from 154 chief enrollment management officers from four-year non-profit institution from across the U.S. The survey asked them to evaluate 21 leadership qualities that support success in the field of enrollment management. The leadership qualities most cited as valuable to chief enrollment officers were communication, character, competence, and problem solving. These findings were not affected by institution type (public or private) or enrollment size (five population segments were included ranging from < 1,000 up to 20,000 or more). The least cited qualities in the study were self-discipline, servanthood, vision, and teachability.

The outcome of Liedke's (2013) study was to determine which leadership qualities were intrinsic to the chief enrollment officer position and perceived to be most advantageous to the position. While differences could not be found in institution type or enrollment size, difference in individual rankings did appear to be influenced by length of time in higher education, thus indicating that extensive professional experience may shift leadership perspectives. Liedke discussed leadership in the form of inherent, not learned leadership qualities which support one's ability to be successful in a leadership role, but did delve into the specific competencies a SEM professional would require to be successful. His study strengthens the body of research on leadership qualities of those in a SEM-related career. He also discovered that similar to studies

on educational backgrounds and career pathways conducted by Schultz and Lucindo (2011) and Stewart (2014) that educational background varied widely among chief enrollment management officers. Additionally, their experiences came from multiple career promotions in a variety of HE areas, not a specific SEM career pathway.

Communication skills have been found to be a key leadership attribute and essential for a SEM professional. For example, Presswood (2011) examined leadership attributes of 70 enrollment mangers and registrars at HE institutions from 29 states across the U.S. and considered differences by institutional size, slotting the institutions into two distinct categories that included small/moderate or medium/large. Her study looked to find commonalities among leadership attributes between those in registrar versus enrollment management roles. In agreement with Liedtke (2013), this study found that communication was a key leadership attribute, but her study further broke the communication attribute down into skills such included networking, establishing rapport, and giving a good first impression. Presswood concluded that along with communication skills, problem-solving skills were common leadership attributes among these HE administrators. While she found that the majority of leadership attributes were shared amongst registrars and enrollment mangers, she indicated enrollment managers exhibited stronger communication skills, ability to impact decision-making, and were able to express vision more fluently that their registrar counterparts. Additionally, in alignment with Liedtke, this study also established that size of institution had no statistical significance the leadership attributes possessed.

Some researchers have specifically studied the leadership styles of SEM professionals in differing institutional types and found that while a specific style may be evident, more importantly to SEM professional was gaining leadership experience. Hughes (2005) and Mendez (2018) examined enrollment managers in 4-year institutions, whereas Harris (2010) focused on

SEM professionals at community colleges. The participants in Hughes's study were employed by private or public higher education institutions in the southern region of the United States and limited to those enrollment mangers who supervised undergraduate admissions and financial aid offices. Her findings showed that while enrollment managers in the study, as a majority, identified as transformational leaders, it was not a statistically significant finding. She surmised that the ability to influence followers in a key factor in transformational leadership. Results from her study indicate that as leaders gain experience, they become more transformational in leadership style. However, due to nebulous qualifications and a wide range of supervisory experiences held by enrollment managers that this is less evident in mid-level managers. Mendez examined enrollment manager leadership styles of enrollment managers at small, private non-profit colleges and universities in Southern California in a qualitative study. This study interviewed 10 enrollment manages with experience levels ranging from 5-30 years. Her findings indicated that situational leadership was the predominant theme among the participants differing from the transformational leadership style found predominately in Hughes's study. The contrast in finding indicates that the context in which leadership takes place imparts influence and impacted the findings. Factors such as institutional goals, balancing needs of student with that of the institution and influence of public constituents all plays a role in framing leadership styles.

Lastly, Harris (2010) examined the enrollment managers within 15 community colleges in Maryland to determine if the leadership style demonstrated influenced student recruitment and retention. Analysis was conducted on differences among gender and the findings revealed that gender did influence leadership style with the majority of men demonstrating transactional leadership style and women demonstrating transformational style. Similar to the findings of Liedtke (2013), these SEM participants in Harris' study indicated career experience in enrollment management as the attribute that most helped influence recruitment and retention of

students. Their experience was gained while on the job and not through any directed professional SEM development or training. The literature supports the notion that experience in the field of SEM, regardless of leadership style, appears to be crucial to success in the SEM industry. What remains to be answered is how are the skills necessary for the experience SEM leadership acquired and developed over time. The competencies necessary for SEM success can be honed over time, but professionals may become proficient and effective much sooner if a plan for competency development were in place.

Chapter II Summary

This chapter has provided the foundational information about SEM structures and the multitude of differing models present in HE. The educational backgrounds and career pathways of those in HE and SEM roles was explored. Additionally, leadership competency and the competency development of HE professionals were examined. Lastly, research on leadership attributes, characteristics, and styles in SEM was highlighted to provide additional context regarding what studies exist in the current literature. This review also established that informational gaps are present regarding SEM professional competencies and development opportunities. Further research was needed on the competency requirements for a career in SEM, as well as how these leaders gained and developed those competencies over time.

Not only is identifying SEM-specific competencies valuable to both professionals and institutions, but studying the behaviors of SEM professionals is insightful for the future evolution of the profession and adds to the existing literature in the field. Research on SEM competencies engagement and development can lend support to professionals and institutions by determining which competencies are most important for building skills to a level of proficiency or mastery. Additionally, beyond this study, it would be significant to understand how, when, and during what circumstances professionals should apply a given competency. College and universities that

are proactive and have prepared professionals effectively for SEM careers will be better suited to undertake the challenges facing higher education today and in the future. Ultimately those individuals charged with SEM will be better equipped to adapt to any current or future challenges and drive necessary changes at their institutions. This literature review is the foundation of information available about HE and SEM competencies development. In Chapter III the methodology for the study is described including research design, population and sample, instrumentation, data collection process, and the data analysis plan for my study.

CHAPTER III

METHODOLOGY

In the current climate of higher education, enrollment is a key measurement in the viability and sustainability of an institution. The leadership personnel that are charged with meeting enrollment goals and institutional expectations regarding the make-up of the student body are crucial elements for success. Having the right people to carry out strategic plans, cultivate a vision, deploy effective deliverables, and meet the enrollment needs of the colleges and universities that employ them is essential. This study will investigate the emergent field of strategic enrollment management (SEM). The research will involve those professionals currently working in completely or primarily SEM-related roles, as well as HE professionals who aspire to such SEM-related careers. The purpose of this chapter is to provide an overview of the research design, methodology selected to collect the empirical data, and analysis procedures used for this quantitative study. This chapter outlines the population, potential sample size, instrument development, and pilot testing of the researcher created survey. Validity of methods, limitations, and delimitations will also be discussed.

The topic of SEM specific competencies and the development of those competencies have not been researched in this manner previously. This study will expand the current literature in area of HE and SEM. General HE competencies created by The American Association of Collegiate Registrars and Admissions Officers (AACRAO) will serve as the basis of the study. The degree to which SEM professionals engage in competency development activities and what opportunities exist for development of those competencies over time. Additionally, aspiring SEM professionals will be asked about barriers present that hinder their opportunities to gain

competencies development. The Competency Model was used as the conceptual framework for my research. Although this study does not propose to construct a complete competency model for leadership positions in SEM, it does lay the foundation to utilize the competencies data and findings to expand further into a model that can be used by institutions.

Much of the research that has been previously conducted in the area of SEM professionals has focused on their innate leadership styles or leadership attributes, not role specific competencies used, competency activities engaged in or needing to be developed. Also, many of the prior studies have been conducted qualitatively. This quantitative study is an alternative approach to reach a larger target audience and broaden the research in the field. My research seeks to gather data sufficient enough to describe the competency development activities engaged in and the opportunities for competency development that exist for professionals currently working in completely or primarily SEM-related roles, as well as the competency development opportunities for professionals that aspire to SEM focused careers. The measures employed in this study are designed specifically to advance the understanding of the activities that SEM professionals engaged in for their competency development, as well as the perceived barriers hindering aspiring SEM professionals from opportunities to access competencies development. This research will be beneficial and useful to academic leadership at HE institutions to better understand the competencies needed and ways in which to develop applicable competencies for a SEM-related profession. The information gained from this study could be used by HE institutions to improve the availability of development opportunities for both current and aspiring SEM professionals, as well as direct institutional investments for competency development into the most pertinent activities.

Research Design

The importance of having strong SEM leadership is essential, but how HE professionals develop and engage in competency activities to be effective in these essential enrollment roles has yet to be defined in a standardized way. This research employs a non-experimental research design using a quantitative study to reach a broad sample of HE professionals, both currently working in primarily or completely SEM-related roles, and those aspiring to enter a primarily or completely SEM-related career.

Non-experimental design is utilized when a researcher cannot control or manipulate the predictor variable. Rather than manipulating an independent variable, the research measures variables as they naturally occur (Salkind, 2010). This research design was deemed most applicable in linking methods to outcomes in the study because it is appropriately used when research is descriptive or correlational. Research that uses description or correlation describes a situation as it stands or describes a relationship between two or more variables without interference or manipulation from the researcher (Black, 2002). Non-experimental designs can answer questions about groups and whether or not differences exist. When the goal of the research is to use descriptive analysis to present the finding the non-experimental method is a practical choice.

A quantitative approach uses post-positivist claims to develop knowledge and uses instruments such as surveys to obtain data on predetermined research questions that yield statistical results (Creswell & Creswell, 2018). Knowledge is gained through questioning, investigating, and interpretation of key results. A post-positivist research approach assumes that the method being applied to a given study should be selected based on the research questions being addressed (Groff, 2004). This inaugural survey will allow the pointed research questions posed in my study to be specifically addressed by the population sample. Overall, a non-

experimental quantitative approach is appropriate for my study to increase the scope of information on the topic of SEM professionals. Leadership development research in HE is prevalent in the literature, but there are not any studies that directly describe SEM professionals and the competency activities they engaged in, the competencies development opportunities that exist for current and aspiring SEM professionals, or the perceived barriers present that hinder competency development opportunities.

Population and Sample

The population chosen for this study includes current professionals who belong to one of the national, professional, membership-based HE organizations: The American Association of Collegiate Registrars and Admissions Officers (AACRAO) or the Student Affairs Administrators in Higher Education, formerly known as the National Association of Student Personnel Administrators (NASPA). Both organizations provide members opportunity for collaboration of ideas and engagement across the various HE sectors and different institutional types. As an active member of both these professional organizations, I have access to the contact information available in the membership directories. The members that have published e-mail addresses in the directories will be included in the sample. Only e-mail addresses will be added to my invitation database and all responses will be confidential and aggregated in the findings. By utilizing participants from both organizations, this allows for a broad range of response from differing role and aspirational levels.

The primary units represented in these organizations are the offices of Admissions, Registrar, Financial Aid, Student Success, Student Affairs, Academic Advising, and Higher Education Administration. There are 2,600 higher education institutions from across the U.S. and abroad represented in the AACRAO organization and 2,100 in NASPA. The membership that is represented across these organizations will provide the opportunity for a diverse group of HE

professionals to comprise the sample. Those individuals who are a member of either of these professional organizations, and have chosen to have their contact information printed in the member directory, received an invitation to participate in the study. Those participants who completed and submitted their survey by the deadline had their confidential responses included and aggregated in the data analysis.

Instrumentation

To collect the data necessary to answer the research questions for this study, a new questionnaire was created by the researcher. An existing survey that appropriately addressed each of the research questions was not found in the current literature. SEM is a relatively emergent field and professionally evolving career. Due to the fact that SEM is a newer concept, there were not any specific studies that directly and fully addressed research questions posed to current and aspiring SEM professionals. Therefore, it was essential to create a new instrument. The survey (see Appendix A) begins with informational paragraphs about the study and participation consent.

Questionnaire Design

A web-based questionnaire was created using the Qualtrics Survey Software platform to capture data from HE professionals regarding the competency development activities they engage in, barriers, highest education completed, and career pathways. The survey questions were constructed using the principles of Tailored Design Method (TDM). Those principles include how questions are created and ordered, instrument design, and testing and implementation with a goal of increasing responses from participants (Dillman, et al., 2009). The TDM is utilized to establish trust, maximize perceived benefits and minimize costs for the researcher. Dillman et al. stated that the TDM has been shown to reduce the four sources of error in survey research including: coverage, sampling, nonresponse, and measurement. There is skip

functionality, display logic, and sequence branches embedded in the survey to ensure that each unique group sees only the questions that pertain to them. The beginning of the survey splits individuals into two groups that include professionals that currently have job responsibilities in a primarily or completely SEM-related career or those that are in an HE positions with job responsibilities that are either somewhat or not at all SEM-related. Those answering either somewhat or not at all will be further subdivided by their degree of aspiration for a completely or primarily SEM-related career. Any survey participant that does not currently have job responsibilities in a primarily or completely SEM-related role or aspires to such a position will be routed to the end of the survey.

In addition to asking about competency activities engaged in and development opportunities available, previous positions, and highest level of education completed and in what academic area. Display logic was used to show the appropriate questions in each block to the appropriate group. The survey questions related to specific competency activities engaged in and development opportunities use the 10 general HE competency areas defined by AACRAO (AACRAO, n.d.), including change management, collaborative decision making, diversity and inclusion, holistic and systematic thinking, interpretation and application of institutional and external data, leadership and management, problem solving, professional integrity, communication, and technological knowledge. The responses for these items were measured on an ordinal level using a 5-point Likert scale such that 1 = Never; 2 = Rarely; 3 = Occasionally; 4 = Often; 5 = All the time. Additionally, SEM aspiring survey respondents were given an open text box to list any perceived barriers they have experienced that hindered their access to SEM competency development opportunities. Having open-ended questions in the survey allowed for richer data to be presented and greater insight into the addressed topic.

The last part of the survey will be questions about the educational backgrounds including highest degree completed and in what academic area. Additionally, the current SEM professionals were asked questions about their current position and 2 previous positions to establish what type of career path they had taken. See Appendix A for the contents of the survey.

Validity

The instrumentation for this researcher-created survey method was evaluated to determine the degree of validity of the instrument as an effective research tool. As this survey has never been used in research previously, it does not have established reliability or validity. Creswell & Creswell (2018) stated that validity means the researcher is able to use the questions in the survey to accurately address the research questions in the study. There are several ways to ensure validity of the survey instrument. First, it is imperative that the questions being asked of participants are clearly stated and not ambiguous. Second, the directions, logic, and flow of the questionnaire should clear, concise, and consistent throughout the survey. Third, given that this instrument has been specifically designed for this study it is important to conduct a pilot test prior to deploying the survey to minimize any threats and establish content validity.

Pilot Testing

Pilot testing was conducted with two colleagues at Western Michigan University (WMU) as well as two HE peers at external institutions (a community college and a private college) who are familiar with SEM and could provide constructive feedback on the topic. The survey divides into branches of specific sets of questions designated for current SEM professionals and those that are aspiring to a SEM careers. Each pilot test participant was asked to answer according to both the current and the aspiring role so each branch of questioning was tested. In addition to the scrutinizing content of the questions being asked, pilot testers were asked their opinions on navigation, survey functionality, the sequence of questions, and length of survey. The process of

engaging seasoned professionals that have a background in SEM helped to further support the validity of the instrument and the topic being addressed by the survey items.

The participants involved in the pilot test examined all aspects of the research design from a functionality lens including: logic, flow, question construction, clarity, scales, and timing of the survey questions. To establish content validity pilot testers were asked the degree to which the questions addressed the topic being studied, were the items appropriate for the subject matter as well as participants being asked, and were the survey items representative of the theoretical construct upon which the questionnaire was designed to address. Upon completion of the survey the pilot test participants were asked for their critiques. This process provided opportunity to adjust individual question verbiage for greater clarity of communication and understanding of the topic. The pilot testers offered feedback that confirmed that the items in the instrument were appropriate, adequate, and sufficient to measure the subject matter. The survey items were determined to be clear, easy to read and interpret, and the items addressed each facet of the intended research questions.

Additionally, the pilot testing process provided a means to evaluate the technology involved in the web-based delivery of the online questionnaire. The survey functionality was evaluated in differing technology mediums including: smart phones (iOS and Android versions were used in pilot), tablet, and personal computer, as well as tested in a variety of different Internet browsers (Chrome, Edge, and Firefox were used in pilot) to ensure a wide range of compatibility. Delivery of the e-mail invitation was confirmed to both the on campus and off campus participants, although this was too small of a pilot to confirm mass deliverability. The Interim Chief Information Officer for WMU was consulted to determine the best way to deploy the survey using the Qualtrics platform and to ensure all university policies were being followed. This consultation resulted in changing the default organizational from e-mail address (wmu-

qualtrics@wmich.edu) to my own university e-mail. This process update was to make the survey request more identifiable and deliverable to external e-mail addresses. The data collected in the pilot testing was removed from the database prior to deploying the survey instrument to the sample population of participants, as not all members of the pilot group were also members of one of the professional organizations selected for the study.

Data Collection Procedures

Approval to administer the study has to be sought and obtained from Western Michigan University's Human Subjects Institution Review Board (HSIRB) prior to the deployment of the instrument. See Appendix D for HSIRB approval letter. The survey was administered using the online survey software Qualtrics and upon approval from HSIRB was sent to participants electronically via e-mail. The invitation was e-mailed from the researcher's Western Michigan university e-mail account to the potential participant's e-mail address published in the AACRAO or NASPA membership directory. The initial e-mail invitation included a description of the study and approval number from Western Michigan University's Human Subject Institutional Review Board. The initial e-mail gave the participants an estimated time of completion (approximately 5-7 minutes), as well as instructions on exiting the survey at any time if they so choose. A deadline of June 3, 2022 was established as the date by which the survey had to be submitted in order for the data to be included in the study. An embedded link was provided for participants to start the survey in the invitation. Also included was an URL that could be cut and pasted into an Internet browser. If the invitee began the survey, that action indicated consent to participate in the study. Participants e-mail addresses were not associated with their responses as all data was aggregated in the final analysis. See Appendix B for initial survey invitation. Appendix C provides a copy of the first reminder e-mail and Appendix D the final reminder e-mail. The reminders served as a follow-up to the initial invitation to encourage participation in the research study. Both reminders

referred to the topic being researched and ask participants to complete the survey and submit responses by June 3, 2022 in order to have the responses include in the study.

Upon the conclusion of the specified survey response window, all data received was exported and uploaded into IBM's Statistical Package for the Social Sciences version 24 (IBM SPSS v 24.0) for statistical analysis. The data imported to IBM SPSS v. 24.0 was screened and cleaned to remove any survey submitted that had missing responses. As not all questions were required, some respondents elected not to answer certain questions. The amount of missing data represented more than 10% of the sample so this did not permit replacement at the item score level using a maximum likelihood multiple imputation method (Eekhout et al., 2014). The removal process was exercised because missing data reduces the statistical power of a study and factoring the maximum likelihood function in SPSS, in this case, has the potential to produce estimates that are biased (Enders, 2010, Osborne, 2012). A missing data rate of 15%-20% is common in educational and psychological studies (Enders, 2003) as the subjects of surveys in these areas tend to be more personal in nature.

In compliance with HSIRB, the data retrieved from the survey will be stored securely on a password protected device for a period of three years. In accordance with Western Michigan University security protocols, the password protecting the device will be changed yearly. Additionally, beginning in 2023, the protocol will require a pass phrase (longer string of text) for increased protection against breaches. As an additional security measure, the device storing the data requires two-factor authentication to gain access.

Data Analysis Plan

The responses to the survey items were exported from Qualtrics and then uploaded to IBM SPSS v. 24.0 software for analysis. Table 1 shows how each research question aligned with the items in the survey instrument. Prior to beginning data analysis, the responses were screened

to exclude any submission that did not have all survey items completed. Cleaning was essential to avoid the reporting of biased results (Enders, 2010, Osborne, 2012). After screening and cleaning the data, the second stage of the analysis involved computing the frequency distributions (counts and percentages) of the responses to those survey items classified into specified qualitative categories. The next stage involved statistical analysis of the 5-point ordinal level scores used to measure the SEM activities and SEM-related competencies of the respondents such that 1 = Never; 2 = Rarely; 3 = Occasionally; 4 = Often; 5 = All the time.

Table 1

Crosswalk Table

Research Questions	Items from Survey	Data Analysis
For HE professional that currently have job responsibilities that are primarily or completely SEM related, items 1, 2, 3 are screening questions for Group 1:		
1.a. How often are they able to participate in specific activities to develop SEM-related competencies?	Item: 5	Descriptive Statistics
1.b. How often do use specific SEM-related competencies in your current position?	Item: 16, 17, 18, 19, 20, 21, 22	Descriptive Statistics
1.c. What is the highest level of education completed?	Items: 14, 15	Descriptive Statistics
1.d. What is the career pathway taken to your current position?	Items: 23, 24, 25, 26	Descriptive Statistics
For HE professionals that currently have job responsibilities that are somewhat of not at all SEM related, item 3 is a screening question for Group 2:		
2.a. To what degree do you aspire to a position that is primarily or completely SEM-related?	Item: 4	Descriptive Statistics

Table 1—Continued

Research Questions	Items from Survey	Data Analysis
For HE professionals that responded that they have some degree aspiration toward a position that has job responsibilities that are primarily or completely SEM-related:		
2.b. How often are they able to participate in specific activities to develop SEM-related competencies?	Item: 5	Descriptive Statistics
2.c. How often do they have opportunities to develop specific SEM-related competencies?	Items: 6,7, 8, 9, 10, 11, 12	Descriptive Statistics
2.d. What are the barriers experienced that prevent SEM competency development opportunities?	Item: 13	Descriptive Statistics
2.e. What is the highest level of education completed	Items: 14, 15	Descriptive Statistics

The responses to each item are not a continuous variable, but are hierarchically ranked at the ordinal level (i.e., the distances between each successive point on the scale from 1 to 5 are not equal). The 5-point ordinal scores awarded by the respondents to each item does not constitute a normally distributed variable with an equal interval between each point on the scale (i.e., the distance between 1 = Never and 2 = Rarely was not the same as the distance between 4 = Often and 5 = All the time). Analyzing ordinal level item scores as if they are measured at the interval level can lead to errors (Liddell and Kruschke, 2018, p. 328) and "the mean and standard deviation are not appropriate for ordinal data" (Jamieson, 2004, p.1118). Allen and Seaman (2007) also stated that when using descriptive statistics that in general the mean and standard deviation are invalid parameters when data uses an ordinal scale. Therefore, the grouped median value was used to summarize the 5-point responses to each item. The grouped median is a less biased estimate of central tendency than the mean for questionnaire item scores measured at the ordinal level (Agresti, 2013; Jenkins, 2020).

The variability of the response data was estimated by bootstrapping, which is a method of estimating the variance, standard deviation, standard error, and/or confidence in IBM SPSS v. 24.0 by random sampling (Wright and Field., 2009). Using the SPSS editor, a total of 1000 random samples were drawn from the raw data using the Monte-Carlo method. This method performs a process which shuffled the data like a pack of cards between each sample (Manly et al., 2020). The bootstrapped 95% confidence intervals (CI) of each median were computed, representing the lower and upper limits within which the true median in the population was captured in at least 95 out of 100 samples (Burke, 2016) Thus the data has 95% confidence that the true proportion lies within the interval (Gilliland & Melfi, 2010).

Limitation and Delimitations

The survey was distributed to HE professionals that are members of either of the following professional organizations: AACARO and NASPA. A limitation present in this study is that the survey was only sent to those individuals that voluntarily chose to publish an e-mail in the current membership directory. The published e-mail must be valid at the time that the database was created. As these membership directories may only be updated annually upon membership dues being renewed, there is risk of sending invitations mid-renewal cycle to obsolete e-mail addresses. This situation was experienced by bounce back received for undeliverable addresses. The limitation that the contact e-mail addresses are obtained from the membership directory and assumes that a valid address has been published has other risks. Due to the global pandemic caused by COVID-19, some institutions conducted reductions in workforce as cost cutting measures to accommodate smaller budgets. As a result, the membership directory, at the time that the survey was distributed, could have been affected by this recent unprecedented phenomenon and not be fully up to date with active members. This

situation was evident by the auto-generated bounce back messages indicating that the individual was no longer employed at the college or in that position.

The convenience sampling technique was selected as the researcher is a member of both professional organizations. A limitation associated with sending an electronic survey is the possibility of a low response rate despite having a robust sample available. The response rate could also be affected by the survey reaching the intended recipient, but being delivered to junk folders due to variable levels of firewall security. A limitation is that spam filters cannot be controlled for in this environment. Increased security features at institutions make it difficult to discern if electronic messages are deliverable even is the e-mail address is valid. Another security limitation is that those receiving invitation may be reluctant to click on The URL that takes them to the online survey. Additionally, the response rate could also be affected by survey fatigue, as this group of members are heavily utilized for various studies in higher education. Timing could also be a limiting factor depending on the work load cycles and academic calendar of the survey participants. Participation in the study is voluntary, this creates potential for non-response bias to impact the data collected from the survey instrument. Participants are divided into groups by current role in SEM or aspiring to be in SEM, there is potential for one group to respond significantly more than the other. Lack of incentive could also contribute to low response and become a limitation in my study.

Since the survey being constructed for this study is the first of its kind, analysis of the data from the study could not be set into the context of prior studies in this area. The absence of quantitative studies in the competency activities engaged in and competency development opportunities of SEM professionals lessens the researcher's ability to predict how the survey will be received. Therefore, as a new instrument, it is difficult to gauge the response as it hinges upon the decision to participate in this type of research study. To mitigate this given limitation

and lessen the threat on internal validity the survey will be explained in detail and options to contact the researchers or Western Michigan University's Human Studies Institutional Board prior to beginning the survey will be offered. Participant drop-out even with this mitigation in place is another limitation. A delimitation of this particular study is that the result can only be generalized. The scope of this study does not encompass all HE professionals, only those that are members from AACRAO or NASPA with contact e-mail available in the membership directory. Membership in these organizations is also open to secondary educators, consultants who interact with HE professionals, and retirees. Another delimitation is that this study is that it is intended for current HE professionals, but all members of the organizations will receive an invitation. A non-probability sample has the limitation of not being representative because not all members of the population have an equal chance of participating; therefore, the degree to which the sample differs from the entire population is unknown.

Chapter III Summary

To summarize, this chapter outlines the population, sample, and methodology used to explore the specific competencies activities engaged in by professionals in a primarily or completely SEM-related career or the development opportunities available to those aspiring to a SEM-related career, as well as the highest education completed by both groups and the career pathway of the current SEM professionals. Additionally, there is a detailed cross walk table that links the survey questions to the research questions, categorized by current SEM professionals (Group 1) or aspiring SEM professionals (Group 2). The methods used to statistically address the research questions are discussed in this chapter as are the limitations and delimitations of my study. Chapter IV will present the findings including the results of the data analysis.

CHAPTER IV

RESULTS

The purpose of the cross-sectional survey was to explore and improve knowledge and understanding of the development of career competencies and activities to gain and further advance competencies among Higher Education (HE) professionals who currently hold or may aspire to holding positions related to Strategic Enrollment Management (e.g., leading or supporting efforts to recruit potential applicants and enroll students, managing student records, student engagement, persistence, success/retention efforts, and/or graduation activities for current students). The responses to the following items in the survey were summarized using IBM SPSS v. 24.0 to address closed ended questions and responses to open ended questions were manually grouped and analyzed thematically:

1) For HE professionals that currently have job responsibilities that are completely or primarily SEM-related (Group 1):

1(a): How often have they been able to participate in specific activities to develop SEM-related competencies?

1(b): How often do they engage in activities related to specific competencies areas?

1(c): What is the highest level of education completed and in what academic area?

1(d): What is the career pathway took them to their current position?

2) For HE professionals that currently have job responsibilities that are somewhat or not at all SEM-related (Group 2):

2*(a): To what degree do they aspire to a position that is primarily or completely SEM-related?*

2(b): How often have they been able to participate in specific activities to develop SEM-related competencies?

2*(c): What is highest level of education they competed?*

2(d): What barriers did they experience that hindered opportunities for SEM competency development?

Description of Data

Sample Size

The total number of survey respondents was *N* = 973, drawn from the target population of HE professionals, including the American Association of Collegiate Registrars and Admissions Officers (AACRAO) which has approximately 11,000 members (www. aacro.org); and the National Association of Student Personnel Administrators, which has approximately 13,000 members (www.naspa.org). The data set contained too many cases *(n* = 275, 28.3%) to permit the missing values to be replaced statistically. In general, replacing missing values by mean scores causes biased results if the missing values represent more than about 10% of the total (Enders, 2010, Osborne, 2012). The missing values included responses to items concerned with the levels of employment among all the participants (*n* = 53, 5.4%); the degree to which some respondent's aspired to primarily or completely SEM-related jobs (*n* = 20, 2.1%); the SEM-related activities among respondents currently holding SEM-related positions (*n* = 54, 5.5%); and the development of competencies among respondents who currently aspired to SEM-related positions (*n* = 147, 15.1%). After cleaning the data by excluding all respondents who provided missing values, the total samples size was *N* = 698, representing 71.7% of the original number of respondents.

The margin of error of the survey data using an acceptable confidence interval was calculated. If the margin of error, or level of uncertainty, was too high, then the researcher could not be confident that the sample represented the population of HE professionals from which the sample was drawn (Gilliland et al., 2010). The larger the sample, the smaller the margin of error, and the more confidence the researcher had that the sample data were accurate (Qualtrics, 2022).

Table 2 presents the results of the screening for missing values, identified as blank cells or labelled as "-99" in the SPSS data editor.

Table 2

Analysis of Missing Values

Items		Respondents	Number of respondents who did not answer	*N* after exclusion of missing values
1	Primary area of responsibility	All	0	973
2	Level of employment of the respondent that best described his/her current position	All	53	920
3	Degree to which the respondent's job responsibilities were related to major SEM functions (1 = completely; 2 = primarily; 3 = somewhat 4 = not at all)?	All	1	919
4	Degree to which the respondent's aspired to a primarily or completely SEM-related job (1 = high; 2 = moderate; 3 = small; 4 = no)	Answered 3 or 4 to Q3	20	899
5	How often the respondents participated in seven activities to develop SEM-related competencies (1 = Never to 5 = All the time)	All	0	899
6 to 16	Activities among respondents currently holding SEM-related positions (1 = Never to 5 = All the time)	Answered 1 or 2 to Q3	54	845
23 to 33	Competency development among respondents who currently aspire to SEM-related positions (1 = Never to 5 = All the time)	Answered 1 to 3 for Q4	147	698
17	Highest level of education completed	All	0	698
18	Academic area	All	0	698
21	Previous two positions in higher education	Answered 1 or 2 to Q3	0	698

The results of the calculation in Figure 1 show that the observed responses to the survey with 95% confidence intervals (i.e., at least 95 out of 100 samples) will be about ± 3.7% of their

values in the population of 24, 000 HE professionals. An acceptable margin of error for this type of survey is < ± 5% (Omair, 2014). The sample size of *N* = 698 respondents generated quantitative data with an acceptable level of confidence and a narrow margin of error.

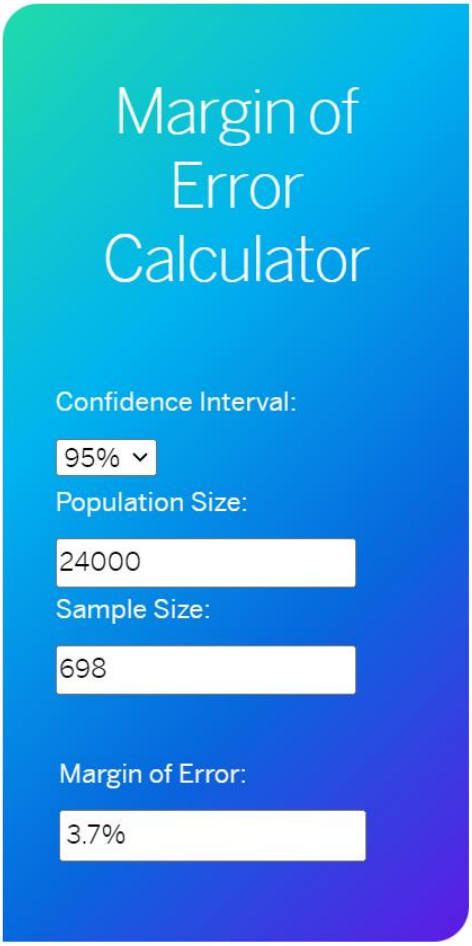

Figure 2

Margin of Error Calculation

Note. Qualtrics (2022)

Characteristics of Sample

Table 3 shows how respondents self-identified the degree to which their job functions are related to SEM. The majority of the 698 respondents excluding missing values (*n* = 463, 66.3%) were in Group 1, holding professional positions in HE that were primarily or completely SEM-

related, while the remainder (*n* = 235, 33.7%) were in Group 2, holding professional positions in HE that were somewhat or not at all SEM-related. Table 4 compares the areas of responsibility of the respondents in Group 1 vs. Group 2.

Table 3

SEM-Related Functions of All Respondents (N = 698)

Group	Function	*n*	Percent
1	Primarily SEM-related	257	36.8
	Completely SEM-related	206	29.5
2	Somewhat SEM-related	206	29.5
	Not at all SEM-related	29	4.2

Table 4 compares the 11 areas of responsibility of the HE professionals between Group 1 vs. Group 2.

Table 4

Areas of Responsibility of Respondents in Group 1 vs. Group 2

Area of Responsibility	Group 1 (*n* = 463)		Group 2 (*n* = 235)	
	n	% in Group	*N*	% in Group
Enrollment Management	108	23.3	7	3.0
Admissions and Recruitment	77	16.6	13	5.5
Registration and Records	63	13.6	26	11.1
Student Services	62	13.4	66	28.1
Student Success/Retention	54	11.7	24	10.2
Other	37	8.0	42	17.9
Enrollment Services	29	6.3	8	3.4
Advising or Counseling	17	3.7	10	4.3
Academic Services	12	2.6	14	6.0
Financial Aid	4	0.9	16	6.8
Faculty	0	0.0	9	3.8

Note. Group 1 = Current SEM professionals in primarily or completely SEM-related position; Group 2 = Aspiring SEM professionals currently in a somewhat or not at all SEM-related roles

The most frequent areas of responsibility within Group 1 were Enrollment Management (*n* = 108, 23.3%); Admissions and Recruitment (*n* = 77, 16.6%); Registration and Records (*n* = 63, 13.6%); Student Services *(n* = 62, 13.4%) and Student Success/Retention (*n* = 54. 11.7%). In contrast, the most frequent area of responsibility within Group 2 was Student Services *(n* = 66, 28.1%) followed by Academic Coaching, Career Development, Career Services, Disability Services, Enrollment Research, and Student Affairs, (*n* = 42, 17.9%); Registration and Records (*n* =26, 11.1%); Student Success/Retention (*n* = 24, 10.2%); and Financial Aid (*n* = 16, 6.8%).

Analysis of Research Questions

Research Question 1

This section presents a descriptive analysis of the survey responses given by the HE professionals with job responsibilities that were completely or primarily SEM-related (*n* = 463). The seven frequency distribution histograms in Figure 3 reflects the skewed or asymmetrical responses to Q5: *How often have you been able to participate in these specific activities to develop SEM-related competencies?* Because the responses to the 5-point ordinal level scale were not normal or symmetrical bell-shaped curves, simple parametric descriptive statistics (e.g., mean and standard deviation) were not applicable to summarize the response data. The use of mean has one main disadvantage and that is it's particularly susceptible to the influence of outliers. Median is also used when normal distribution is not present as strongly influenced by skewed values (Purdue Online Writing Lab, n.d.)

As a result of having findings that were not symmetrical, the central tendencies of the data were estimated using the grouped median. This is when the middle value of the data within the class interval divides each frequency distribution into two halves, it is a better measure of arithmetic mean in cases where there are extreme observations or outliers affect the mean and median values. The grouped median was chosen because it is a less biased estimate of central

tendency than the mean when the data deviate from normality (Agresti, 2013). Figure 3 shows the frequency distributions of activities that Group 1 respondents participated in to develop SEM competencies.

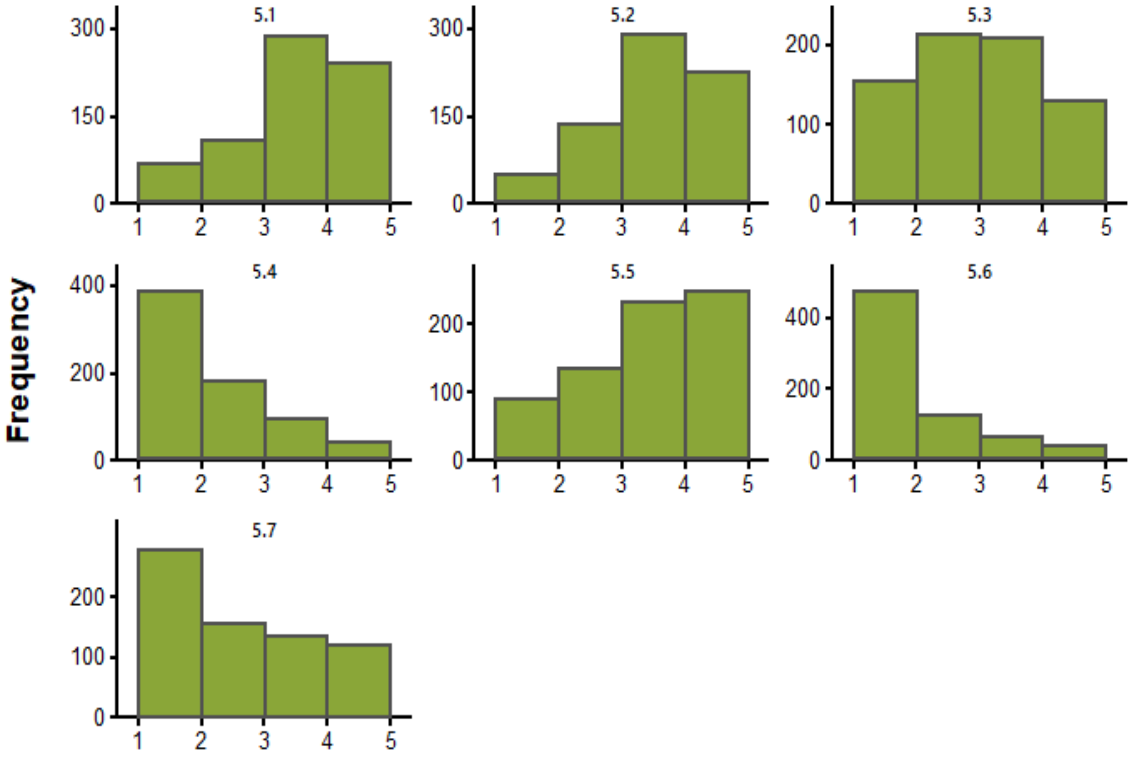

Figure 3

Frequency Distributions of Group 1 in Activities to Develop SEM-Related Competencies

Note. Group 1 = current SEM professionals. 5.1 = attend a conference; 5.2 = career networking; 5.3 = continuing education course; 5.4 = contribute to an association/academic journal; 5.5 = professional organization meeting; 5.6 = SEM endorsement program; 5.7 = serve on an association committee

Table 5 presents the median scores ± 95% CI to address Question 1(a): How often have they been able to participate in specific activities to develop SEM-related competencies? The median scores ± 95% confidence intervals (CI) > 3.0 indicated that at least 95 out of 100 respondents in Group 1 occasionally attended a conference or professional organization meeting,

and participated in career networking. The median scores ± 95% CI around 2.0 indicated that at least 95 out of 100 respondents in Group 1 rarely attended a Continuing Education Course, and/or served on and Association Committee. The median scores ± 95% CI < 2.0 in Group 1 indicated that at least 95 out of 100 respondents never to rarely contributed to an Association or Academic Journal and/or and SEM Endorsement Program.

Table 5

Participation of Group 1 in Activities to Develop SEM-Related Competencies

Item	Specified Activity	*Mdn*	*Bootstrap 95% CI*	
5.1	Attend a conference	3.28	3.20	3.36
5.5	Professional organization meeting	3.20	3.09	3.31
5.2	Career networking	3.16	3.05	3.25
5.3	Continuing education course	2.42	2.30	2.54
5.7	Serve on association committee	2.05	1.90	2.22
5.4	Contribute to association/academic journal	1.61	1.53	1.69
5.6	SEM Endorsement Program	1.39	1.33	1.46

Note. Group 1 = current SEM professionals. Ordinal scores for the specified activity: 1 = Never; 2 = Rarely; 3 = Occasionally; 4 = Often; 5 = All the time

Table 6 presents the responses to Q6 to Q16 to address question 1(b): How often do they engage in activities related to specific competencies areas? The median scores ± 95% CI are ranked in order of magnitude. The most frequent activities with median scores ± 95% CI > 4.5, reflecting responses of 4 = Often to 5 = All the time, included two activities related to professional integrity and communication. The next most frequent activities with median scores ± 95% CI between 4.0 and 4.5 included at least one activity related to problem solving, technology, collaborative decision-making and consensus building, interpretation of data, leadership and management, and diversity and inclusion. The less frequent activities with median scores ± 95% < 4.0, reflecting responses of 3 = Occasionally to 4 = Often, included two activities related to holistic and system thinking, professional development, and change management.

Table 6

Group 1 Engagement of Activities Related to Specific Competencies Areas

Item	Use	Activity	*Mdn*	*Bootstrap 95% CI*	
13.1	Professional Integrity	Carry out career activities in an honest, professional, and ethical manner.	4.76	4.71	4.80
14.1	Communication	Utilize verbal and non-verbal communication and listening skills to draw information from others.	4.62	4.57	4.67
13.2	Professional Integrity	Balance institutional policy, practices, and resources with appropriate and ethical data-driven decisions.	4.55	4.50	4.61
14.2	Communication	Use business etiquette, negotiation tactics, consensus-building, and situational awareness when communicating.	4.44	4.38	4.50
15.1	Technology	Utilize appropriate technology applications for tasks.	4.35	4.29	4.42
12.1	Problem Solving	Employ an analytical and creative approach to address problems.	4.30	4.23	4.37
7.2	Collaborative Decision-Making and Consensus Building	Work effectively with diverse groups.	4.23	4.15	4.3
12.2	Problem Solving	Understand foundational practices and uses various problem-solving techniques.	4.12	4.03	4.2
10.2	Interpretation of Data	Use data to support decision-making and create a culture of evidence for short and long-term objectives.	4.06	3.96	4.14
11.2	Leadership and Management	Identify and operationalize customer and student best practices.	4.05	3.95	4.14
8.1	Diversity and Inclusion	Promote the expansion of ideas, perspectives, and understanding in a diverse and inclusive community.	4.04	3.93	4.12
9.1	Holistic and System Thinking	Analyze and understand the interconnectedness of systems, cultures, and processes.	3.90	3.80	4.01
10.1	Interpretation of Data	Interpret and apply institutional and external data for the purposes of short-term and long-range planning.	3.89	3.8	4.00
16.2	Professional Development	Support professional development to advance enrollment services practice and foster innovation.	3.86	3.76	3.97

Table 6—Continued

Item	Use	Activity	*Mdn*	*Bootstrap 95% CI*	
9.2	Holistic and System Thinking	Understand the applications of systems thinking to the academic mission, goals, and values of an institution.	3.82	3.72	3.92
11.1	Leadership and Management	Identify the business processes necessary to operate an office, develop a budget, and build a staff to conduct activities.	3.82	3.71	3.94
6.1	Change Management	Identify the need for change within an organization based on data analysis and/or environmental scans.	3.78	3.69	3.87
15.2	Technology	Improve or redesign processes using technical solutions .	3.77	3.68	3.86
8.2	Diversity and Inclusion	Identify and mitigate systemic barriers to equality and inclusiveness.	3.73	3.63	3.83
16.1	Professional Development	Use professional development opportunities to remain current regarding trends and innovations	3.69	3.6	3.77
7.1	Collaborative Decision-Making/ Consensus Building	Facilitate stakeholder involvement through the stages of collective and effective solutions.	3.67	3.56	3.77
6.2	Change Management	Execute a communication plan that conveys the urgency and status of change to the campus community.	3.19	3.07	3.30

Note. Group 1 = current SEM professionals. Ordinal scores for the specified activity: 1 = Never; 2 = Rarely; 3 = Occasionally; 4 = Often; 5 = All the time

Table 7 presents the data to address question 1(c): What is the highest level of education completed? The most frequent highest levels of education within Group 1 were Master's degree (*n* = 243, 52.5%); Doctoral degree *(n* = 158, 34.1%); and Bachelor's degree (*n* = 56, 12.1%).

Table 7

Highest Level of Education Completed in Group 1

Highest Level of Education	*N*	%
Master's Degree	360	52.9
Doctoral Degree	215	31.6
Bachelor's degree	97	14.2
Associates Degree	6	0.8
High School Diploma/GED	2	0.2

Note. Group 1 = current SEM

Table 8 presents the frequency of distribution of the academic area of highest degree completed for Group 1, which includes those professionals that are currently working in a completely or primarily SEM-related role. This data addresses the second portion of question 1(c): what is the academic area of the highest degree completed? The most frequent academic area reported was Education (*n*=373, 55.4%); Social Sciences (*n*=115, 17.1%); and Liberal Arts (*n*=68, 10.1%).

Table 8

Academic Area of Highest Degree Completed in Group 1

Academic Area	*n*	%
Education	373	55.4
Social Sciences	115	17.1
Liberal Arts	68	10.1
Business	55	8.1
Other	49	7.2
Science	13	1.9

Note. Group 1 = current SEM. The highest frequencies noted for "Other" degrees were in Law, International Affairs, Social Work, Fine Arts, and Ministry

Tables 9, 10, and 11 list the frequencies of the first, second, and current positions for Group 1 (current SEM professional) to address 1(d): What is the career pathway that took them

to their current position**?** The career pathways were very variable representing over 100 different jobs, with no clear patterns or directions. Table 10 shows that the most frequent first positions, each representing more than 1% of the total, and collectively representing over three quarters of the sample (*n* = 361, 78.0%) included Director or Associate Director, Not in Higher Education, Vice President, Associate or Assistant Vice President, Dean or Assistant Dean, Coordinator, Registrar, or Assistant Registrar, and Executive Director, Academic Advisor, Faculty, Manager, and Vice Provost. The most frequent first position was Director (*n* = 74, 16.0%).

Table 9

Career Pathways of Group 1: First Position

Position	*n*	Percent
Administrator	1	.2
Admissions Ambassador	1	.2
Admissions Counselor	1	.2
Admissions Officer	1	.2
Admissions Representative	1	.2
Admissions Specialist	1	.2
Admissions Supervisor	1	.2
Admissions Tour Guide	1	.2
Articulation Officer	1	.2
Assessment	1	.2
Assistant Provost	1	.2
Assistant Vice Chancellor	1	.2
Assistant Vice President,	1	.2
Associate Vice Chancellor	1	.2
Associate Vice Provost	1	.2
Building Coordinator	1	.2
Campus One Stop Representative	1	.2
Campus President	1	.2
Career Center Director	1	.2
Career Development Coordinator	1	.2
Career Resources Specialist	1	.2
Career Service Coordinator	1	.2
Cashier (Student Accounts)	1	.2
Communications Manager	1	.2
Community Engagement Program	1	.2
Community Outreach Coordinator	1	.2
Computer Applications Specialist	1	.2
Counselor/Advocate	1	.2
Course Evaluator	1	.2
Curriculum Advisor	1	.2
Curriculum Specialist	1	.2
Degree Auditor	1	.2
Director/Registrar	1	.2
Enrollment Assistant	1	.2

Table 9—Continued

Position	*n*	Percent
Enrollment Data Specialist	1	.2
Financial Aid Counselor	1	.2
Financial Aid Director	1	.2
Financial Aid Manager	1	.2
Graduate Admissions Coordinator	1	.2
Head of Admissions	1	.2
Human Resources	1	.2
Institutional Effectiveness	1	.2
Interim Director	1	.2
Interim Director of Enrol	1	.2
Interim Director of Finan	1	.2
International Credential	1	.2
International Recruitment	1	.2
Library Worker	1	.2
Marketing Director	1	.2
Marketing Strategist	1	.2
Military & Veteran Services	1	.2
Minister of Education	1	.2
Office Assistant	1	.2
Office Manager	1	.2
Post-Secondary Success Coordinator	1	.2
Principal Consultant	1	.2
Program Assistant/Advisor	1	.2
Program Manager	1	.2
Records and Registration	1	.2
Recruiter	1	.2
Recruiter and Senior Administrator	1	.2
Recruitment & Admissions	1	.2
Recruitment Ambassador	1	.2
Research Assistant	1	.2
Residence Director	1	.2
Resident Assistant	1	.2
Senior Admission Counselor	1	.2
Senior Admissions Advisor	1	.2
Senior Assistant Registrar	1	.2
Senior Student Affairs Officer	1	.2
Student Affairs Coordinator	1	.2
Student Engagement Associate	1	.2
Student Engagement Outreach	1	.2
Student Services Coordinator	1	.2
Student Services Director	1	.2
Student Success Coach	1	.2
Student Success Director	1	.2
Title IV Administrator	1	.2
Transfer Evaluator	1	.2
Verifications Coordinator	1	.2
Veteran Benefit Advisor	1	.2
Veteran Support Services	1	.2
Vice Chancellor	1	.2

Note. Group 1 = current SEM professionals

Table 10 indicates that the most frequent second positions, each representing more than 1% of the total, and collectively representing over two thirds of the sample (n = 326, 70.4 %), included not in HE, Director, Assistant. Associate, Executive Director, Vice President, Dean, Associate or Assistant Dean, Academic Advisor, Coordinator, Registrar or Assistant Registrar, Faculty, Advisor, and Manager. The most frequent second position was not in Higher Education (n = 100, 21.6%).

Table 10

Career Pathways of Group 1: Second Position

Position	*n*	Percent
Not in Higher Education	100	21.6
Director	72	15.6
Assistant Director	30	6.5
Associate Director	20	4.3
Vice President	15	3.2
Associate Dean	13	2.8
Academic Advisor	12	2.6
Assistant Dean	10	2.2
Coordinator	9	1.9
Executive Director	9	1.9
Assistant Registrar	8	1.7
Registrar	7	1.5
Faculty	6	1.3
Advisor	5	1.1
Dean	5	1.1
Manager	5	1.1
Associate Vice President	4	.9
Academic Counselor	3	.6
Admission Counselor	3	.6
Admissions Advisor	3	.6
Assistant Vice Provost	3	.6
Associate Registrar	3	.6
International Admissions	3	.6
Residence Director	3	.6
Senior Associate Director	3	.6
Administrative Assistant	2	.4
Admissions Recruiter	2	.4
Admissions Specialist	2	.4
Assistant Admissions Officer	2	.4
Assistant Vice President	2	.4
Enrollment Manager	2	.4

Table 10—Continued

Position	n	Percent
Graduate assistant	2	.4
Graduate assistant	2	.4
Grant Director	2	.4
Program Coordinator	2	.4
Registrar and Director	2	.4
Research Assistant	2	.4
Special Assistant	2	.4
Student Services Coordinator	2	.4
University Registrar	2	.4
Vice Chancellor	2	.4
Academic Coach	1	.2
Admissions Assistant	1	.2
Admissions Consultant	1	.2
Admissions Officer	1	.2
Admissions Operations	1	.2
Admissions Supervisor	1	.2
Assistant Provost	1	.2
Assistant Vice Chancellor	1	.2
Assistant Vice President	1	.2
Associate Professor	1	.2
Associate Provost	1	.2
Associate Vice Chancellor	1	.2
Bilingual Youth Advocate	1	.2
Campus President	1	.2
Chief Operating Officer	1	.2
Clinical Instructor	1	.2
Communication Officer	1	.2
Data Management Analyst	1	.2
Degree Systems Analyst	1	.2
Departmental Assistant	1	.2
Enrollment Services Coordinator	1	.2
Executive Vice President	1	.2
Federal Work Study Administrator	1	.2
Financial Aid Counselor	1	.2
Graduate Program Manager	1	.2
Grants Coordinator	1	.2
Honors College Program Assistant	1	.2
Institutional Effectiveness	1	.2
Interim Assistant Vice Chancellor	1	.2
Interim Director	1	.2
Interim Vice President	1	.2
IT Help Desk Specialist	1	.2
Lab Technician	1	.2
Management Data Analyst	1	.2
Office Associate	1	.2
Orientation Coordinator	1	.2
Peer Counselor	1	.2
Program Associate	1	.2
Program Chair	1	.2
Program Director	1	.2
Program Management Specialist	1	.2
Program Manager	1	.2
Project Manager	1	.2

Table 10—Continued

Position	n	Percent
Promotion Coordinator	1	.2
Records Assistant	1	.2
Records Specialist	1	.2
Recruiting Assistant	1	.2
Recruitment Coordinator	1	.2
Recruitment Coordinator,	1	.2
Regional Admissions Counselor	1	.2
Registrar Staff	1	.2
Registrar/Associate Dean	1	.2
Research Administration	1	.2
Researcher	1	.2
Residence Life Coordinator	1	.2
Scheduling Coordinator	1	.2
Senior Academic Advisor	1	.2
Senior Academic Advisor	1	.2
Senior Assistant Director	1	.2
Senior Associate Dean	1	.2
Senior Director of Admissions	1	.2
Senior Systems Administrator	1	.2
Specialist	1	.2
Student Activities Coordinator	1	.2
Student Assistant	1	.2
Student Leader	1	.2
Student Life and Housing	1	.2
Student Life Coordinator	1	.2
Student Navigator	1	.2
Student Recruitment & Advisor	1	.2
Support Coordinator	1	.2
Teacher	1	.2
Technical Director	1	.2
Technical Support Coordinator	1	.2
Transfer Admissions Coordinator	1	.2
TRIO Peer Mentor	1	.2
Vice Provost	1	.2

Note. Group 1 = current SEM professionals

Table 11 indicates that the most frequent current positions, each representing more than 1% of the total, and collectively representing about half of the sample (n = 329, 46.8%) included Director or Assistant Director, Vice President, Registrar, Associate or Assistant Registrar, Vice President, Associate or Assistant Vice President, Dean, Assistant or Associate Dean, Vice Chancellor, Associate Vice Chancellor, and Vice Provost.

Table 11

Career Pathways of Group 1: Current Position

Current Position	*n*	Percent
Director	79	11.3
Vice President	53	7.6
Associate Registrar	31	4.4
Assistant Director	30	4.3
Associate Vice President	17	2.4
Associate Director	16	2.3
Dean	15	2.1
Executive Director	15	2.1
Assistant Dean	13	1.9
Assistant Vice President	12	1.7
Vice Chancellor	10	1.4
Associate Dean	8	1.1
Associate Vice Chancellor	8	1.1
Vice Provost	8	1.1
Assistant Registrar	7	1.0
Enrollment Manager	7	1.0
Associate Provost	6	.9
Registrar	6	.9
Academic Advisor	4	.6
Assistant Vice Chancellor	4	.6
Associate Vice President,	4	.6
Coordinator	4	.6
Manager	4	.6
Senior Associate Director	4	.6
Senior Associate Registrar	4	.6
Assistant Vice Provost	3	.4
Chief Enrollment Officer	3	.4
Graduate Assistant	3	.4
Senior Associate Vice President	3	.4
University Registrar	3	.4
President	2	.3
Program Coordinator	2	.3
Program Director	2	.3
Program Specialist	2	.3
Senior Director	2	.3
Academic Counselor	1	.1
Academic Program Manager	1	.1
Adjunct Counselor	1	.1
Admissions and Enrollment Services	1	.1
Admissions Director	1	.1
Assistant Enrollment	1	.1
Assistant Resident Direct	1	.1
Assistant Director	1	.1
Benefits Manager	1	.1
Career Coach	1	.1
College Access Coordinator	1	.1
College Counselor	1	.1
College Recruiter	1	.1
Data Director	1	.1
Enrollment Assistant	1	.1
Enrollment Coordinator	1	.1

Table 11—Continued

Current Position	n	Percent
Enrollment Specialist	1	.1
Executive Vice President	1	.1
Graduate Admissions Director	1	.1
Graduate Recruitment Coordinator	1	.1
Graduate Student Success	1	.1
Interim Assistant Vice President	1	.1
Interim Campus Director	1	.1
Interim Vice President	1	.1
Military & Veteran Services	1	.1
Military Student Services	1	.1
Office of Admissions	1	.1
Online Support Specialist	1	.1
Operations Research Analyst	1	.1
Outreach Specialist	1	.1
Program Advisor	1	.1
Program Manager	1	.1
Project Manager	1	.1
Provost	1	.1
Records and Retention Specialist	1	.1
Registrar and Assistant	1	.1
Registrar and Director	1	.1
Registrar Specialist	1	.1
Registrar Systems Analyst	1	.1
Registrar/Dean of Enrollment	1	.1
Residential Experience Co	1	.1
Retired Director of Enrol	1	.1
Senior Director	1	.1
Senior Academic Advisor	1	.1
Senior Admissions Counsel	1	.1
Senior Admissions Officer	1	.1
Senior Assistant Director	1	.1
Senior Associate Registrar	1	.1
Senior Research Associate	1	.1
Service coordinator	1	.1
Specialist	1	.1
Strategic Enrollment Manager	1	.1
Student Affairs Officer	1	.1
Student Engagement Outreach	1	.1
Student Services Professional	1	.1
Student Success Assistant	1	.1
Student Success Associate	1	.1
Student Success Coach	1	.1
Student Support Case Manager	1	.1
Student Union Director	1	.1
Student Veteran Center	1	.1
Systemwide Director	1	.1
Transfer Admissions Counselor	1	.1
Transfer advisor	1	.1
Transfer Course Evaluator	1	.1
TRIO SSS College Success	1	.1
TRIO Student Support Services	1	.1
Undergraduate Enrollment	1	.1
Undergraduate Retention	1	.1

Research Question 2

This section presents the evidence regarding HE professionals that currently have job responsibilities that are somewhat or not at all SEM-related. Table 12 presents the frequency distribution of responses to address 2(a): To what degree do they aspire to a position that is primarily or completely SEM-related? The majority of the respondents in Group 2 (*n*= 122, 51.9%) aspired to an SEM-related job to a small degree, a smaller percentage aspired to a moderate degree (*n*=91, 38.7%), whereas relatively few respondents aspired to this job to a high degree (*n*= 21, 8.9%).

Table 12

Degree to Which the Respondents in Group 2 Aspired to a SEM-Related Job

Degree	*N*	%
To a small degree	122	51.9
To a moderate degree	91	38.7
To a high degree	21	8.9

Note. Group 2 = aspiring SEM professionals

Table 13 presents a frequency distribution to address 2(b): How often have they been able to participate in specific activities to develop SEM- related competencies? The median scores ± 95% CI < 3.0 indicated that at least 95 out of 100 respondents in Group 2 rarely to occasionally attended a conference or professional organization meeting, participated in career networking, or attended a continuing education course. The median scores ± 95% CI < 2.0 indicated that at least 95 out of 100 respondents in Group 2 never to rarely served on an Association committee, contributed to an association or academic journal and/or and SEM Endorsement Program.

Table 13

Participation of Group 2 in Activities to Develop SEM-Related Competencies

Item	Specified Activity	*Mdn*	*Bootstrap 95% CI*	
5.1	Career networking	2.95	2.82	3.09
5.5	Attend Conference	2.78	2.62	2.93
5.2	Professional organization meeting	2.70	2.51	2.88
5.3	Continuing education course	2.47	2.30	2.64
5.7	Serve on association committee	1.80	1.66	1.97
5.4	Contribute to association/academic journal	1.45	1.36	1.55
5.6	SEM Endorsement Program	1.36	1.29	1.45

Note. Group 2 = aspiring SEM professionals. Ordinal scores for the specified activity: 1 = Never; 2 = Rarely; 3 = Occasionally; 4 = Often; 5 = All the time

Table 14 presents the median scores ± 95% CI for the items concerned with how often there is opportunities to develop abilities related to the competency activities in Group 2. The median scores ± 95% CI in Table 13 are ranked in order of magnitude. The most frequent activities with median scores > 4.0 (reflecting responses of 4 = Often to 5 = All the time) included two activities related to professional integrity and one related to communication. The next most frequent activities with median scores of 3.5 to 4 included at least one activity related to communication, problem solving, and technological knowledge. The least frequent activities with median scores < 4.0 (reflecting responses of 3 = Occasionally to 3.5) included two activities related to diversity and inclusion, holistic and interpretation and application of data, and professional development, and one item related to technological knowledge, leadership and management, The least frequent activities with median scores < 3.0, representing responses between 2 = Rarely; 3 = Occasionally included activities related to technological knowledge, holistic and system thinking, professional development, diversity and inclusion, change management, leadership and management, and collaborative decision making /consensus building.

Table 14

Frequency of Opportunities to Develop Abilities in SEM Competency Areas: Group 2

Item	Competency	Competency	*Mdn*	*Bootstrap 95% CI*	
30.1	Professional Integrity	Carry out career activities in an honest, professional, and ethical manner.	4.22	4.09	4.34
31.1	Communication	Utilize verbal and non-verbal communication and listening skills to draw information	4.10	3.93	4.23
30.2	Professional Integrity	Balance institutional policy, practices, and resources with ethical data-driven decisions.	3.92	3.72	4.08
32.1	Technological Knowledge	Utilize appropriate technology applications for tasks.	3.69	3.51	3.85
29.1	Problem solving	Employ an analytical and creative approach to address problems.	3.61	3.43	3.78
31.2	Communication	Use business etiquette, negotiation tactics, consensus-building, and situational awareness	3.58	3.33	3.82
29.2	Problem solving	Understand foundational practices and use various problem-solving techniques.	3.28	3.17	3.48
24.2	Collaborative Decision Making /Consensus Building	Work effectively with diverse groups on consensus building.	3.27	3.1	3.44
25.1	Diversity and Inclusion	Promote the expansion of ideas, perspectives, and understanding in a diverse and inclusive community.	3.27	3.09	3.43
26.1	Holistic and System Thinking	Analyze and understand the interconnectedness of systems, cultures, and processes.	3.15	2.92	3.33
28.2	Leadership and Management	Identify and operationalize customer and student best practices.	3.13	2.94	3.31
27.2	Interpretation and Application of Data	Use data to support decision-making and create a culture of evidence for short and long-term objectives.	3.12	2.9	3.31

Table 14—Continued

Item	Competency	Competency	*Mdn*	*Bootstrap 95% CI*	
33.1	Professional Development and Contributions to Competencies	Use professional development opportunities to remain current regarding trends and innovations in higher education.	3.10	2.87	3.31
27.1	Interpretation and Application of Data	Interpret and apply institutional and external data for the purposes of short-term and long-range planning.	3.04	2.81	3.23
32.2	Technological Knowledge	Improve or redesign processes using technical solutions.	2.94	2.74	3.12
26.2	Holistic and System Thinking	Understand the applications of systems thinking to the academic mission, goals, and values of an institution.	2.93	2.69	3.14
33.2	Professional Development and Contributions to Competencies	Support professional development of one's self and others to advance enrollment services practice and foster innovation.	2.91	2.62	3.16
25.2	Diversity and Inclusion	Identify and mitigate systemic barriers to equality and inclusiveness.	2.90	2.65	3.12
23.1	Change management	Identify the need for change within an organization based on data analysis and/or environmental scans.	2.81	2.62	3.01
28.1	Leadership and Management	Identify the business processes necessary to operate an office, develop a budget, and build a staff to conduct activities	2.64	2.40	2.90
24.1	Collaborative Decision Making /Consensus Building	Facilitate stakeholder involvement through the stages of collective and effective solutions.	2.53	2.31	2.74
23.2	Change management	Execute a communication plan that conveys the urgency and status of change to the campus	2.16	1.94	2.37

Note. Group 2 = aspiring SEM professionals. Ordinal scores for the specified activity: 1 = Never; 2 = Rarely; 3 = Occasionally; 4 = Often; 5 = All the time

Table 15 presents the frequency distribution to address 2(c): What is the highest level of education they completed? The most frequent highest levels of education within Group 2 were similar to Group 1: Master's degree (*n* = 110, 46.8%); Doctoral degree (*n* = 54, 16.6%); and Bachelor's degree (*n* = 36, 15.3%).

Table 15

Highest Level of Education Completed in Group 2

Highest Level of Education	*n*	Percent
Master's Degree	110	46.8
Doctoral Degree	54	23.0
Bachelor's degree	36	15.3
Associates Degree	3	1.3
High School Diploma/GED	0	0.0
Other (Not specified)	32	13.6

Note. Group 2 = aspiring SEM professionals

Table 16 presents the results of a thematic analysis of the qualitative data to address 2(d): What barriers did they experience that hindered opportunities for SEM competency development? Over half of the respondents (*n* = 122, 51.9%) did not make any comments or replied that they experienced no hindrances. The majority of the responses (*n* = 31, 12.6%) were classified in the theme "Budget/Cost/Funding." The limitations associated with time, time and cost, and time and resources, were the second most frequently reported barriers (*n* = 14, 5.7%). Issues associated with "Positionality" was frequently reported as a perceived barrier (*n* = 11, 4.4%) as were lack of support from leadership (*n* = 10, 4.0%); lack of support from the institution (*n* = 10, 4.0%). Staff shortages and heavy workloads were frequently reported as barriers (*n* = 8, 3.6%) as were administrative issues *(n* = 7, 2.8%); communication issues (n = 5, 2.0%) and lack of resources (*n* = 3, 1.2%). Other less frequent barriers were identified by the

themes: "|Lack of opportunities;" "Data capture;" "Government policy;" "Lack of mentor;" "Organizational structure;" "Personal;" and "Race/Ethnicity."

Table 16

Barriers to SEM Competency Development from Group 2

Response to: "What barriers have you experienced that hinder opportunities for SEM competency development?"	*n*	Percent	Theme
No response	93	39.6	No Comment
None	29	12.3	None
Funding	3	1.3	Budget/Cost/Funding
Cost	2	.9	Budget/Cost/Funding
Cost	1	.4	Budget/Cost/Funding
Budget cuts	1	.4	Budget/Cost/Funding
Budget doesn't allow for it	1	.4	Budget/Cost/Funding
Budget issues	1	.4	Budget/Cost/Funding
Budget related barriers	1	.4	Budget/Cost/Funding
Conferences are expensive	1	.4	Budget/Cost/Funding
Cost and staffing issues	1	.4	Budget/Cost/Funding
Finances - funding for programs and services	1	.4	Budget/Cost/Funding
Financial barriers related to not enough employees	1	.4	Budget/Cost/Funding
Funding and time devoted to other tasks	1	.4	Budget/Cost/Funding
Funding and true commitment to the professional de	1	.4	Budget/Cost/Funding
Funding of development experiences	1	.4	Budget/Cost/Funding
Lack of financial resources	1	.4	Budget/Cost/Funding
Lack of funding	1	.4	Budget/Cost/Funding
Lean budget	1	.4	Budget/Cost/Funding
Limited funds for continuous training	1	.4	Budget/Cost/Funding
My university and department don't cover costs	1	.4	Budget/Cost/Funding
Not adequate budget	1	.4	Budget/Cost/Funding
Not available in budget	1	.4	Budget/Cost/Funding
Not in the budget to do so	1	.4	Budget/Cost/Funding
Not in the budget	1	.4	Budget/Cost/Funding
Not offered in my dept	1	.4	Budget/Cost/Funding
Resources (financial)	1	.4	Budget/Cost/Funding
The budget doesn't allow for it	1	.4	Budget/Cost/Funding
Was told by my leader that we do not have a budget	1	.4	Budget/Cost/Funding
Work in a lean unit that cannot afford to do it	1	.4	Budget/Cost/Funding
Having relevant but not direct SEM experience	1	.4	Positionality
If don't have a title, experience not as valued	1	.4	Positionality

Table 16—Continued

Response to: “What barriers have you experienced that hinder opportunities for SEM competency development?”	*n*	Percent	Theme
Language barrier and/or lack of knowledge of SEM	1	.4	Positionality
I have experienced the barrier of positionality.	1	.4	Positionality
I'm not really in a position that lends itself to SEM	1	.4	Positionality
Involvement in decision making based on current position	1	.4	Positionality
Level of employment	1	.4	Positionality
Not being at the table where decisions are made	1	.4	Positionality
Not being here permanently	1	.4	Positionality
Only offered to higher level positions	1	.4	Positionality
Only offered to upper management	1	.4	Positionality
Awareness at management level of the competencies	1	.4	Leadership support
Leadership conflicts	1	.4	Leadership support
Leadership does not make it a priority	1	.4	Leadership support
Leadership does not offer this	1	.4	Leadership support
Leadership micromanagement	1	.4	Leadership support
Limited higher education leadership	1	.4	Leadership support
My supervisor takes the lead on SEM	1	.4	Leadership support
No organization and lack of knowledge from leaders	1	.4	Leadership support
Senior leadership not willing to invest in taking	1	.4	Leadership support
Unwillingness in leadership to adapt to technology	1	.4	Leadership support
Institutional culture	1	.4	Institutional support
Institutional support for SEM competency development	1	.4	Institutional support
It is not supported by my department director	1	.4	Institutional support
Lack of support from supervisor	1	.4	Institutional support
Management does not support these activities	1	.4	Institutional support
Management doesn't support these efforts	1	.4	Institutional support
Not offered to new hires	1	.4	Institutional support
Nothing related to competency development.	1	.4	Institutional support
Clear institutional vision of SEM goals and outcomes	1	.4	Institutional support
Internal support for development	1	.4	Institutional support
Administration	1	.4	Administrative issues
People and departments work separately from one another	1	.4	Communication issues
Systemic barriers of ineffective communication	1	.4	Communication issues
I think getting people to see the cross-collaboration	1	.4	Communication issues
Efforts being led by others in the portfolio	1	.4	Communication issues
The challenge of forming partnerships	1	.4	Communication issues
Lack of resources; small staff with "only" 40 work	1	.4	Staff/Workload
Scope of work is too broad	1	.4	Staff/Workload
Shortage of staff to cover	1	.4	Staff/Workload

Table 16—Continued

Response to: "What barriers have you experienced that hinder opportunities for SEM competency development?"	*n*	Percent	Theme
Staffing issues	1	.4	Staff/Workload
Turnover of seasonal staff in critical decision-making	1	.4	Staff/Workload
COVID and decrease in staff	1	.4	Staff/Workload
Too many tasks	1	.4	Staff/Workload
Workload barriers, we do not have enough staff	1	.4	Staff/Workload
Workload too large to take time off for it	1	.4	Staff/Workload
Time	2	.9	Time
Lack of time to build or improve knowledge	1	.4	Time
Needing time to parse out	1	.4	Time
Time to focus on it	1	.4	Time
Time to practice the competency and develop them	1	.4	Time
Time	1	.4	Time
Too many tasks, not enough time	1	.4	Time
Too much task work and not enough time for develop	1	.4	Time
Tyranny of the immediate	1	.4	Time
Limited time to dedicate to efforts, limited fundi	1	.4	Time and Cost
Time and Funding	1	.4	Time and Cost
Time and Resources	1	.4	Time and Resources
Not a priority here	1	.4	Low Priority
Other agenda items are more heavily prioritized	1	.4	Low Priority
Other competing responsibilities	1	.4	Low Priority
SEM is not seen by others as a primary responsibility	1	.4	Low Priority
Administration focuses on training VP level staff	1	.4	Administrative issues
Institution Administration priorities and direction	1	.4	Administrative issues
Limited to no collaborative efforts with the administration	1	.4	Administrative issues
Management that micro-manages	1	.4	Administrative issues
Unwilling movement by some stakeholders	1	.4	Administrative issues
Upper administration	1	.4	Administrative issues
Individuals at my institution gatekeep SEM activities	1	.4	Administrative issues
Appropriate resource distribution	1	.4	Lack of Resources
Low resources, always focused on fixing problems	1	.4	Lack of Resources
Resources limit how often my staff and I can attend	1	.4	Lack of Resources
Opportunities are rare	1	.4	Lack of opportunities
Toxic workplace, lack of professional dev opportunities	1	.4	Lack of opportunities
Ability to capture good data.	1	.4	Data capture
Government Policy on Education	1	.4	Government policy

Table 16—Continued

Response to: "What barriers have you experienced that hinder opportunities for SEM competency development?"	*n*	Percent	Theme
Lack of a mentor relationship with my supervisor	1	.4	Lack of mentor
Organizational structure	1	.4	Organizational structure
Personal mental health issues	1	.4	Personal
I am Asian American	1	.4	Race/Ethnicity

Note. Group 2 = aspiring SEM professionals

Chapter IV Summary of Results

The total number of survey respondents was $N = 973$, drawn from a target population of about 24,0000 HE professionals. After cleaning the data by excluding all respondents who did not complete the survey, the total samples size was $N = 698$, representing 71.7% of the original number of respondents. A sample size calculation indicated that this number of respondents generated quantitative data with an acceptable level of confidence (95%) and a narrow margin of error (± 3.7%). The majority of the respondents ($n = 463$, 66.3%) were in Group 1, holding professional positions in HE that were primarily or completely SEM-related, whilst the remainder ($n = 235$, 33.7%) were in Group 2, holding professional positions in HE that were somewhat or not at all SEM-related.

An analysis of the survey responses highlighted the results of Group 1 (HE professionals currently in a completely or primarily SEM-related role) with respect to (a) How often they participated in specific activities to develop SEM-related competencies; (b) How often they engaged in activities related to specific competencies areas (c) Their highest level of education completed; and (d) The career pathways that took them to their current positions. The analysis also represents the responses of Group 2 (current HE professionals that aspire to a completely or primarily SEM-related role) and includes results of (a) To what degree they aspire to a position that is primarily or completely SEM related; (b) How often do they have the ability to participate

in specific activities to develop SEM-related competencies; (c) what are the barriers experienced; and (d) what is the highest level of education completed? Chapter V presents a more detailed summary of the major results for Groups 1 and 2, provides the evidence to address the research questions in my study, and discusses the conceptual framework, the limitations, the practical implications, and the recommendations for future research.

CHAPTER V

DISCUSSION

The purpose of this descriptive study was to analyze the cross-sectional survey data collected using an instrument developed by the investigator, entitled "Competency Use and Development in Strategic Enrollment Management (SEM)." The responses to this survey were analyzed to describe the self-reported competency development activities, competencies engaged in, educational qualifications, career pathways, and perceived barriers that hindered opportunities for SEM competency development in a convenience sample of HE professionals located nationally and abroad (N = 698). The sample was divided into two mutually exclusive groups. Group 1 consisted of HE professionals whose current job responsibilities were completely (*n* = 257, 36.8%) or primarily related to a major SEM function (*n* = 206, 29.5%). Group 2 consisted of HE professionals (*n* = 235) whose current job responsibilities were somewhat SEM-related (*n* = 206, 29.5%) or not all SEM-related (*n* = 29, 4.2%) but had some level of aspiration toward a completely or primarily SEM- related position.

Chapter V is presented in five sections. The first section summarizes the major findings in order to detail the competency development activities engaged in, opportunities for SEM competency development, and education completed by both Group 1 and Group 2, as well as career pathways of Group 1(current SEM professionals) and barriers to competency development expressed by Group 2 (aspiring SEM professionals). Additionally, the findings with respect to the conceptual framework are discussed and how the results of this study support the initial foundation for building a Competency Model. The second section considers the limitations of the study, focusing on threats to external and internal validity. External validity is the degree to which the findings may be generalized from the sample to the population from which the sample

was drawn. A study that lacks external validity cannot be generalized in a broader context to other situations, people, times, and settings (Stangor, 2015). Internal validity is the degree to which the statistics provided reliable evidence to infer cause-and-effect relationships (Pearl et al., 2016). The third section discusses the results in the context of the previous studies reviewed and cited in Chapter II. The fourth and final sections consider the implications of the findings with respect to HE professional practice, the field of SEM, and recommendations for future research.

Summary of Major Results

The major results are summarized in three sections. The first section focuses on the analysis of the survey responses of Group 1: Participants currently in completely or primarily SEM-related positions. The second section focuses on the analysis of the survey responses of Group 2: Participants currently in somewhat or not SEM-related positions, but aspiring to a completely or primarily SEM-related position. The third section compares the competency activities engaged in, job responsibilities, competencies engaged in, qualifications, and opportunities for competency development between Group 1 and Group 2.

Group 1: Participants with Completely or Primarily Strategic Enrollment Management-Related Positions

How often were the HE professionals in Group 1 (current SEM professionals) able to participate in specific activities to develop SEM-related competencies? The median scores ± 95% CI > 3.0 (using a 5-point scale where 1 = Never, 2= Rarely, 3= Occasionally, 4= Often, 5 = All the time) indicated that at least 95 out of 100 respondents in Group 1 occasionally attended a conference or professional organization meeting, and participated in career networking. The median scores ± 95% CI around 2.0 indicated that at least 95 out of 100 respondents in Group 1 rarely attended a continuing education course, and/or served on an association committee. The

median scores ± 95% CI < 2.0 indicated that at least 95 out of 100 respondents never to rarely contributed to an association or academic journal and/or and SEM Endorsement Program.

How often did Group 1 (current SEM professionals) engage in activities related to specific competencies areas? The most frequent activities with median scores ± 95% CI > 4.5 (reflecting responses of 4 = Often and 5 = All the time) included two activities related to professional integrity and communication. The next most frequent activities with median scores ± 95% CI between 4.0 and 4.5 included at least one activity related to problem solving, technology, collaborative decision-making and consensus building, interpretation of data, leadership and management, and diversity and inclusion. Figure 4 shows all the competency areas with results of median scores.

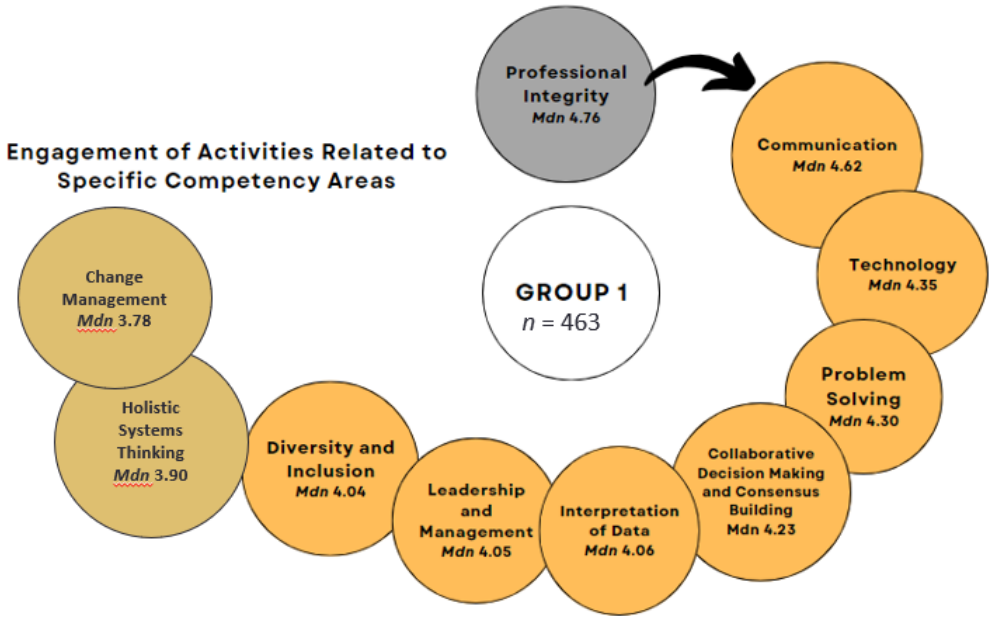

Figure 4

Group 1: Competency Areas with Most Engagement

Note. Group 1 = current SEM professionals

What was the highest level of education completed? The most frequent highest levels of education within Group 1 (current SEM professionals) were Master's degree (*n* = 243, 52.5%) and Doctoral degree (*n* = 158, 34.1%). What was the career pathway that took Group 1 to their current position? The career pathways were highly variable representing a spectrum of over 100 different jobs, with no clear patterns or directions. The most frequent career pathways with respect to HE positions included Director for the first position (*n* = 74, 16.0%) and also for the second position (*n* = 72, 15.6%).

Group 2: Participants with Somewhat/Not Strategic Enrollment Management-Related Positions

To what degree did Group 2 aspire to a position that was primarily or completely SEM-related? The majority of the respondents in Group 2 (*n* = 122, 51.9%) aspired to a SEM-related job to a small degree, a lesser percentage aspired to a moderate degree (*n* = 91, 38.7 %) whereas relatively few aspired to a SEM position to a high degree (*n* = 21, 8.9%). Respondents that did not aspire to a future career that was primarily or completely SEM-related were routed to end of the survey, thus not completing the study. Figure 5 presents a chart of Group 2's future aspirations for a career that is primarily or completely SEM-related.

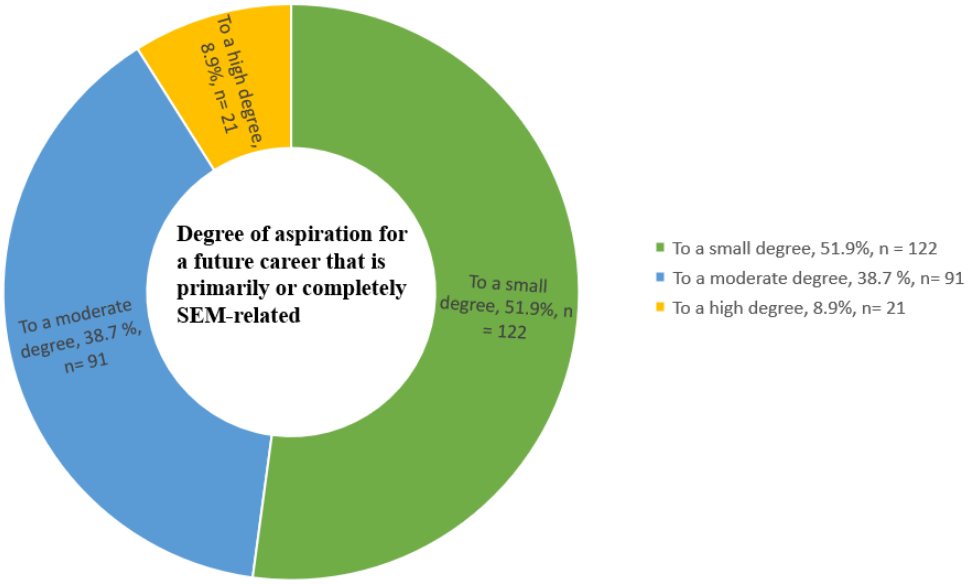

Figure 5

Group 2: Degree of Aspiration for a SEM-Related Position

Note. Group 2 = aspiring SEM professionals

How often were the HE professionals in Group 2 (aspiring SEM professionals) able to participate in specific activities to develop SEM-related competencies? The median scores ± 95% CI < 3.0 indicated that at least 95 out of 100 respondents in Group 2 rarely or occasionally attended a conference or professional organization meeting, participated in career networking, and/or attended a continuing education course. The median scores ± 95% CI < 2.0 indicated that at least 95 out of 100 respondents in Group 2 never to rarely served on an association committee, contributed to an association or academic journal and/or and SEM Endorsement Program. Figure 6 presents the participation in specific activities that Group 1 versus Group 2 participated in to develop SEM-related competencies.

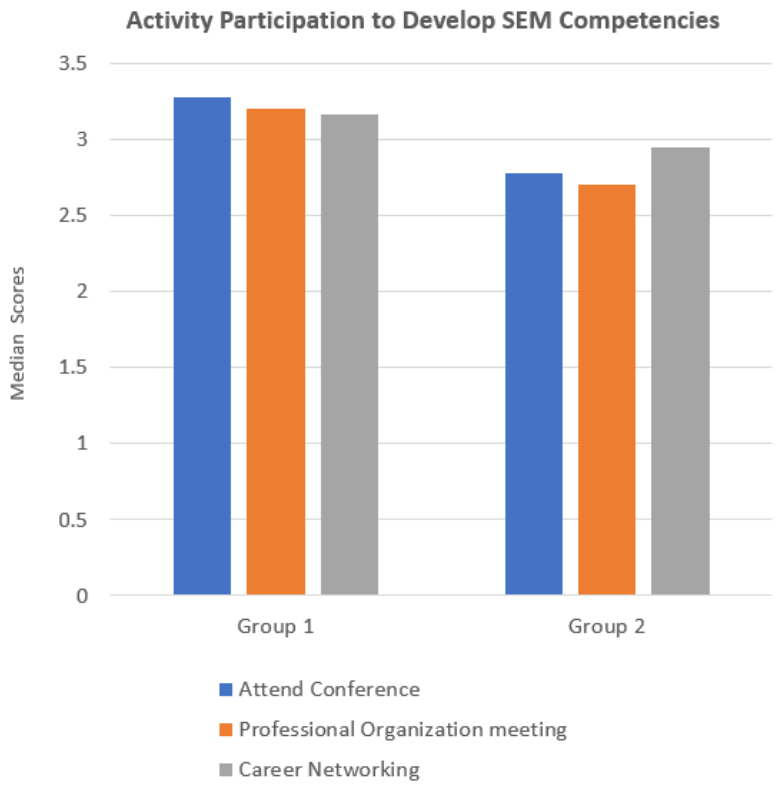

Figure 6

Group 1 vs Group 2 Participation to Develop SEM Competencies

Note. Group 1 = current SEM professionals; Group 2 = aspiring SEM professionals

The competency areas that Group 2 (aspiring SEM professionals) had the most frequent opportunities to develop are shown in Figure 7. The top unique competency areas were: Professional Integrity (*Mdn*= 4.22), Communication (*Mdn*=4.10), Technological Knowledge (*Mdn*= 3.69) and Problem Solving (*Mdn*=3.61) which mirrored the unique competency areas indicated by respondents in Group 1 (current SEM professionals). The competency areas that differed from Group 1 (current SEM professionals) in sequence of frequency included: Collaborative Decision Making/Consensus Building (*Mdn*=3.27), Diversity and Inclusion (*Mdn*=3.27), these two areas had results that were tied with the same median in each area, Holistic and Systems Thinking (*Mdn*= 3.15), and Leadership and Management (*Mdn*=3.13). The

Holistic and Systems Thinking competency area was not identified in the top 8 frequencies by Group 1 (current SEM professionals) and is the only category area that did not show up in the primary frequencies for both groups. Change Management was the area identified as the area with least opportunities to develop.

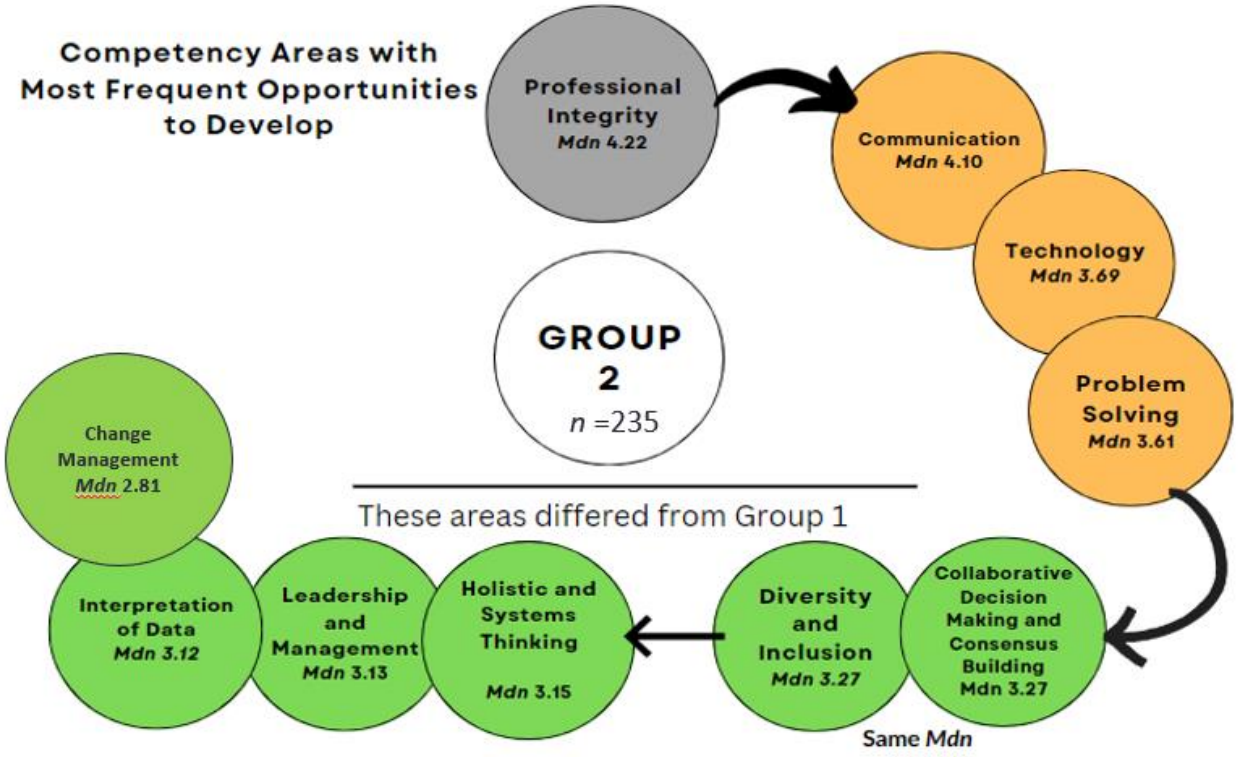

Figure 7

Group 2: Competency Areas with Most Frequent Opportunities to Develop

Note. Group 2 = aspiring SEM professionals

What barriers did Group 2 (aspiring SEM professionals) express that hindered their opportunities for SEM competency development? Figure 8 presents the main 4 thematic areas that were compiled from the responses to the open-ended survey item regarding barriers to competency development opportunities.

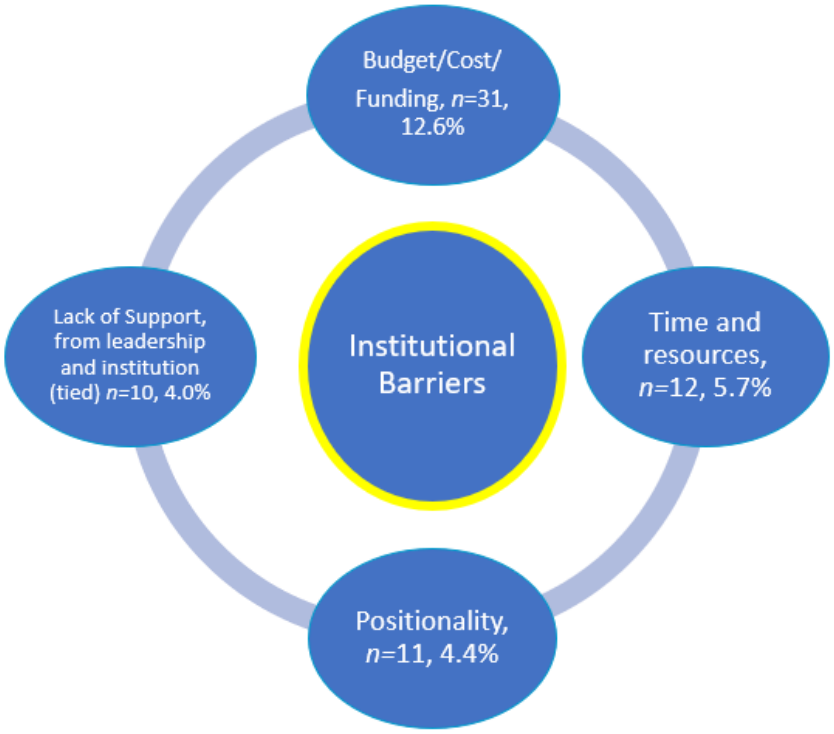

Figure 8

Group 2: Barriers to Competency Development Opportunities

Note. Group 2 = aspiring SEM professionals

The majority of the narrative responses to this qualitative question (*n* = 31, 12.6%) provided answers that were categorized in the primary theme "Budget/Cost/Funding;" evidenced by responses such as "Budget related barriers;" " Budget doesn't allow for it; " "Financial barriers related to not enough employees to actually do the work it takes to carry out the plans;" "Limited funds for continuous training;" "Was told by my leader that we do not have a budget for professional development;" and "Conferences are expensive." The responses associated with time, time and cost, and time and resources, were the second most frequently reported barriers (*n* = 14, 5.7%) reflected by responses such as "Too much task work and not enough time for development and strategy;" "Resources limit how often my staff and I can attend relevant

professional development programs;" "Appropriate resource distribution to partake or implement opportunities;" and " Lack of time to build or improve knowledges and to test out ideas is the biggest obstacle." Issues associated with the next theme "Positionality" were frequently reported as perceived barriers (*n* = 11, 4.4%) indicated by answers such as "I have experienced the barrier of positionality." For example, there was a learning opportunity that I was denied acceptance from because my Director also applied for the program;" I'm not really in a position that lends itself to SEM competency development;" "SEM is not seen by others as a primary responsibility of my position. In my view, however, nearly everyone on campus plays a role in SEM;" "Having relevant but not direct SEM experience;" and "Only offered to upper management." Lack of support from leadership (*n* = 10, 4.0%) and/or the institution (*n* = 10, 4.0%) were identified as barriers, suggested by responses such as "Leadership does not make it a priority;" and "While my supervisor encourages professional development, my institution does not."

Additionally, staff shortages and heavy workloads were reported as barriers by the members of Group 2 (*n* = 8, 3.6%) as evidenced by responses such as "Workload too large to take time off for it;" and "We do not have enough staff to cover jobs for professional development opportunities." Administrative issues (*n* = 7, 2.8%) were indicated by responses such as "Administration focuses on training VP level staff members mainly;" and Institution Administration...often have minimal understanding of the work being done and why it's being done the way it is." Communication issues (*n* = 5, 2.0%) were reflected by responses such as "People and departments work separately from one another creating self-interest as opposed to common goals, workflows, and opportunities;" and "Systemic barriers of ineffective communication because of the disconnect between divisions and a lack of ability/interest/funds to remedy and streamline information."

The comments made by respondents to this open-ended survey item were captured in total and grouped by themes in Table 16, Chapter IV. While the majority of respondents had no response (*n* = 93, 39.6%) or said none (*n* =29, 12.3%), the comments made by the remainder of the sample provided valuable insight to the barriers that are perceived by HE professionals to be a hinderance to their opportunities for development of competencies. The comments in Table16 are quotes of the responses from the Group 2 participants in the survey. These items are the factors that institutions should closely examine and work to mitigate in an effort toward creating an environment where employees feel they have opportunities to enhance their professional competency. The data is valuable not only for the topic of this study, but would also be of value for future research on HE employee professional development and retention.

Additional Findings: Differences Between Group 1 and Group 2

The research questions posed to Group1 and 2 were answered using descriptive statistics; however, given that there are two unique groups of respondents some comparative inferential data was compiled as additional findings to illustrate the differences The members of Group 1 whose positions were closely aligned with SEM attended more conferences, professional organizational meetings, and had greater participation in career networking, serving on an association committee, and/or contributing to a journal compared to their HE peers in Group 2 whose job responsibilities were not related to major SEM functions. However, the effect sizes were very small ($\eta 2H \leq .04$) implying that these differences may have limited practical significance.

The differences between Group 1 and 2 had medium practical significance with respect to areas of responsibility (Cohen's W = .43). The most frequent areas of responsibility among Group 1 (current SEM professionals) were enrollment management (*n* = 108, 23.3%); admissions and recruitment (*n* = 77, 16.6%) and registration and records (*n* = 63, 13.6%). The

second group (aspiring SEM professionals) identified as being in student services (*n* = 66, 28.1%); other responsibilities associated with students (*n* = 42, 17.9% e.g., course transfers, career services, health education, housing, and multicultural affairs) and registration and records (*n* = 26, 11.1%). The records and registration job responsibility area showed up within a medium range of statistical significance in both of the respondent groups. Figure 9 presents a graph of the top 3 areas of job responsibilities for the respondents in Group1 and in contrast, Group 2.

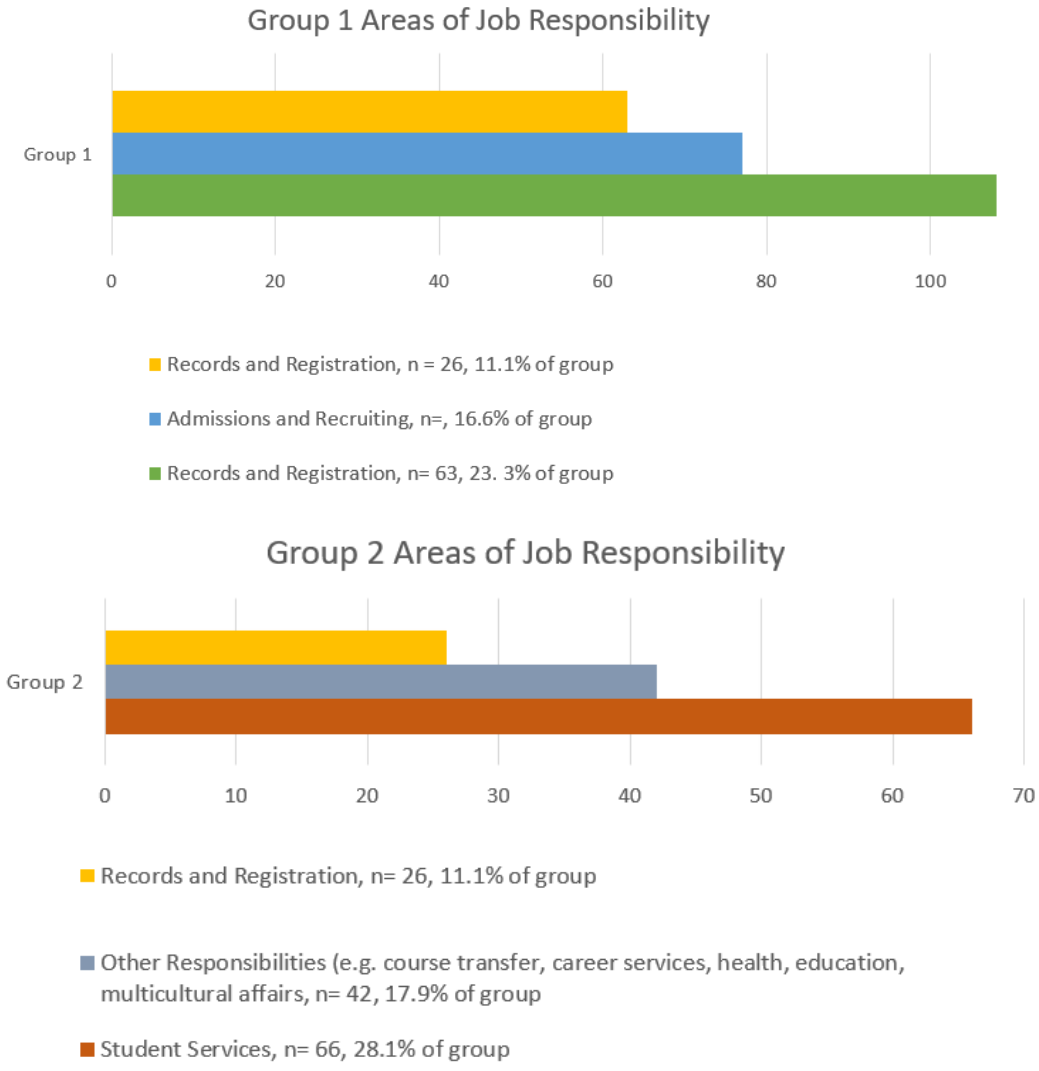

Figure 9

Group 1 v. Group 2: Areas of Job Responsibility

Note. Group 1 = current SEM professionals, Group 2 = aspiring SEM professionals

The differences between Group 1 and 2 with respect to their highest levels of education had little practical significance (Cohen's W = .12). Most of the participants in Group 1 (current SEM professionals: *n* = 401, 86.6%) and Group 2 (aspiring SEM professionals: *n* = 164, 69.8%) had been awarded a postgraduate (Master's or Doctoral) degree. Similarly, the differences between Group 1 and 2 had little practical significance with respect to their academic areas (Cohen's W = .12). The most frequent academic area of with just over half of the respondents in Group 1 was Education (n = 257, 55.5%). Education was also the most frequent academic area in Group 2 (n = 116, 49.4%). These findings are in alignment with other studies that site Master's as the most frequent academic level of degree and Education as the degree area most often obtained (Schultz and Lucindo, 2011).

Competency Summary Framework

The conceptual framework presented in Chapter I (see Figure 1) provided a lens through which to look at a complicated problem through a different perspective, and to move the focus from a simple description of the major responses to particular survey items to a descriptive model based on general concepts. From this we can expand further into the study by identifying career-specific competencies in SEM as this is one of the initial steps of building a Competency Model (Bartram et al., 2002). A Competency Model can also outline the most important knowledge, skills, abilities, traits, and displayed behaviors that allow an individual to perform a task and deliver desired results or outcomes within a specified professional function (Boyatzis, 1982; Bradley, 2014; Campion et al., 2011; Campion et al., 2019; Marrelli, 1998, McLeland, 1973; Sanchez & Levine., 2009; Chouhan and Srivastava, 2014).

A set of competencies for SEM professionals, as well as an educational and career pathway for HE professionals aspiring to a career in SEM was not found in the existing literature. This study utilized the general HE competencies compiled by AACARO ("Core

Competencies", n.d.) and surveyed current SEM professionals to gain insight on which of those areas of competencies were most often engaged in, developed, and what activities current professionals participated in to further their competencies development. Additionally, those professionals currently in SEM roles were asked about their educational backgrounds, including highest degree complete and academic area of degree as well as their career pathways into SEM.

The major results obtained in my study can be used as a foundation for building a Competency Model for SEM-related positions. While greater detail is necessary to create a comprehensive model, this summary captures the initial competency findings from the study that may be expanded upon in future research. A complete competency model would require additional investigation and a deeper dive into competency mapping as well as categorization of competencies into escalating levels such as beginner/novice, intermediate/mid-level, senior/advanced or expert/executive. It also requires a rubric of competencies with designated metrics for each to objectively assess outcomes and performance (Campion et al., 2019). While this could be standardized for SEM leadership positions, ideally a role-specific model would also be tailored to also be institution-specific and consider institutional context.

The major activities to develop SEM competencies (based on the items with the highest scores in the survey) included attending conferences and professional organization meetings, participating in career networking, and attending continuous education courses. The major competency areas included professional integrity (e.g., carrying out career activities in an honest, professional, and ethical manner); communication (e.g., utilizing verbal and non-verbal communication and listening skills to draw information from others); technological skills (e.g., utilizing appropriate applications for tasks) and problem solving (e.g., employing an analytical and creative approach to address problems).

A postgraduate (Master's or Doctoral) degree was the most competent level of education for professionals in a SEM-related role. In both groups a Master's degree was the most frequent degree of completion, with respective findings in Group 1(current professionals: *n* =360, 52.9%) and Group 2 (aspiring SEM professionals: *n* =110, 46.8). The Doctoral degree was second most frequent with Group 1 (current SEM professionals: *n* =215, 31.6%) and Group 2 (aspiring professionals: *n* =54, 23.0%). Only Group 1 (current SEM professionals) was asked about the academic area of degree completed with the top areas being Education (*n* =373, 55.4%), Social Sciences (*n* =115, 17.1%), and Liberal Arts (*n* =68, 10.1%). Figure 10 shows the comparison of highest education degree completed between Group 1 (current SEM professionals) and Group 2 (aspiring SEM professionals). This figure also presents the academic areas of degree completion.

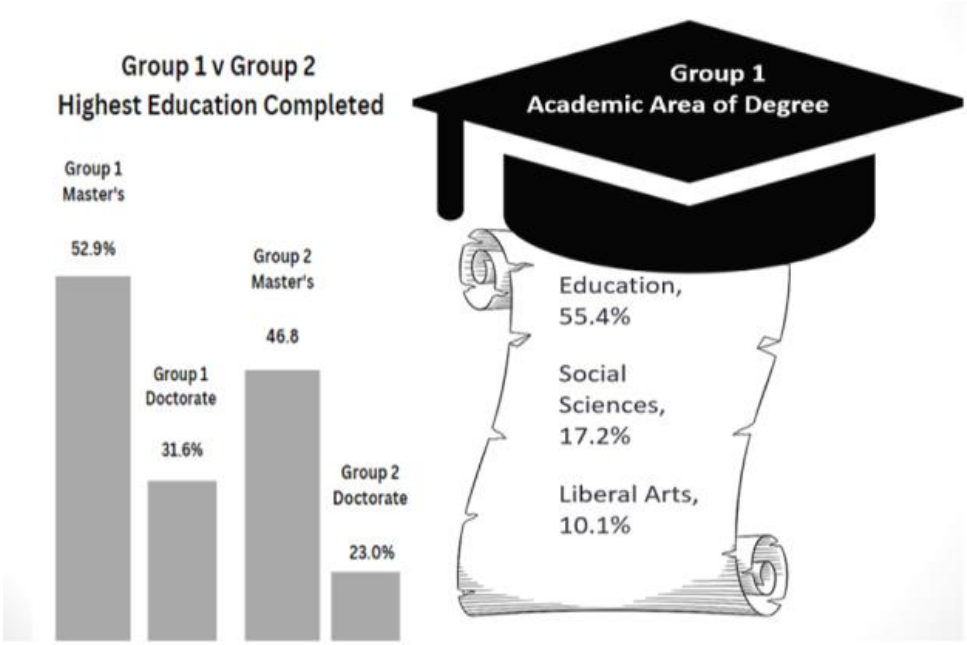

Figure 10

Group 1 and Group 2: Highest Education Completed and Group 1: Academic Area of Degree

Note. Group 1 = current SEM professionals, *n*= 463; Group 2 = aspiring SEM professionals, *n*=235

The career pathways spanned a large spectrum of variables representing over 100 different jobs, with no clear patterns or directions; however, the most common current position pathways in order of frequency involved Director, Vice President, Associate Registrar, and Assistant Director. Previous positions for both position 1 and position 2 were very similar with the most frequent positions noted as being Not in Higher Education, Director, Assistant or Associate Director, and Vice President. Figure 11 depicts the details for both current and previous positions for Group 1(current SEM professional) respondents.

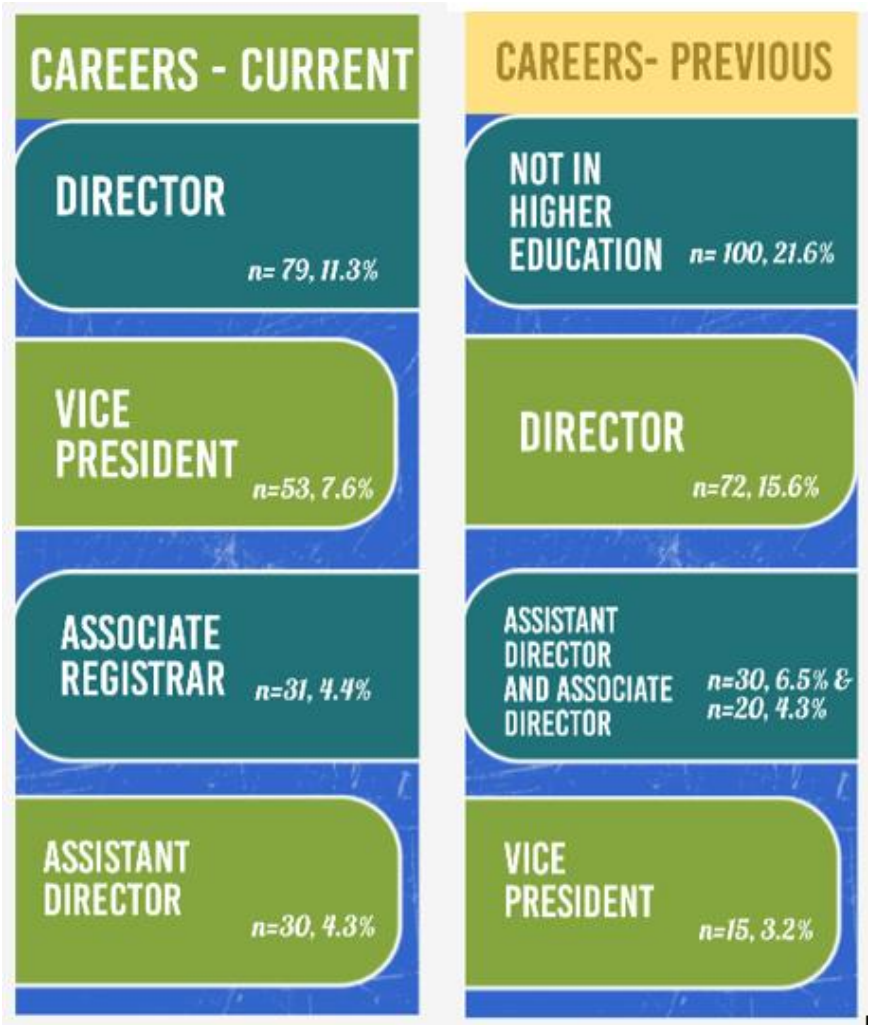

Figure 11

Group 1: Current and Previous Positions

Note. Group 1 = current SEM professionals

To summarize the findings from Group 1 (current SEM professional), Figure 12 details a competency summary framework of the various sections of the survey.

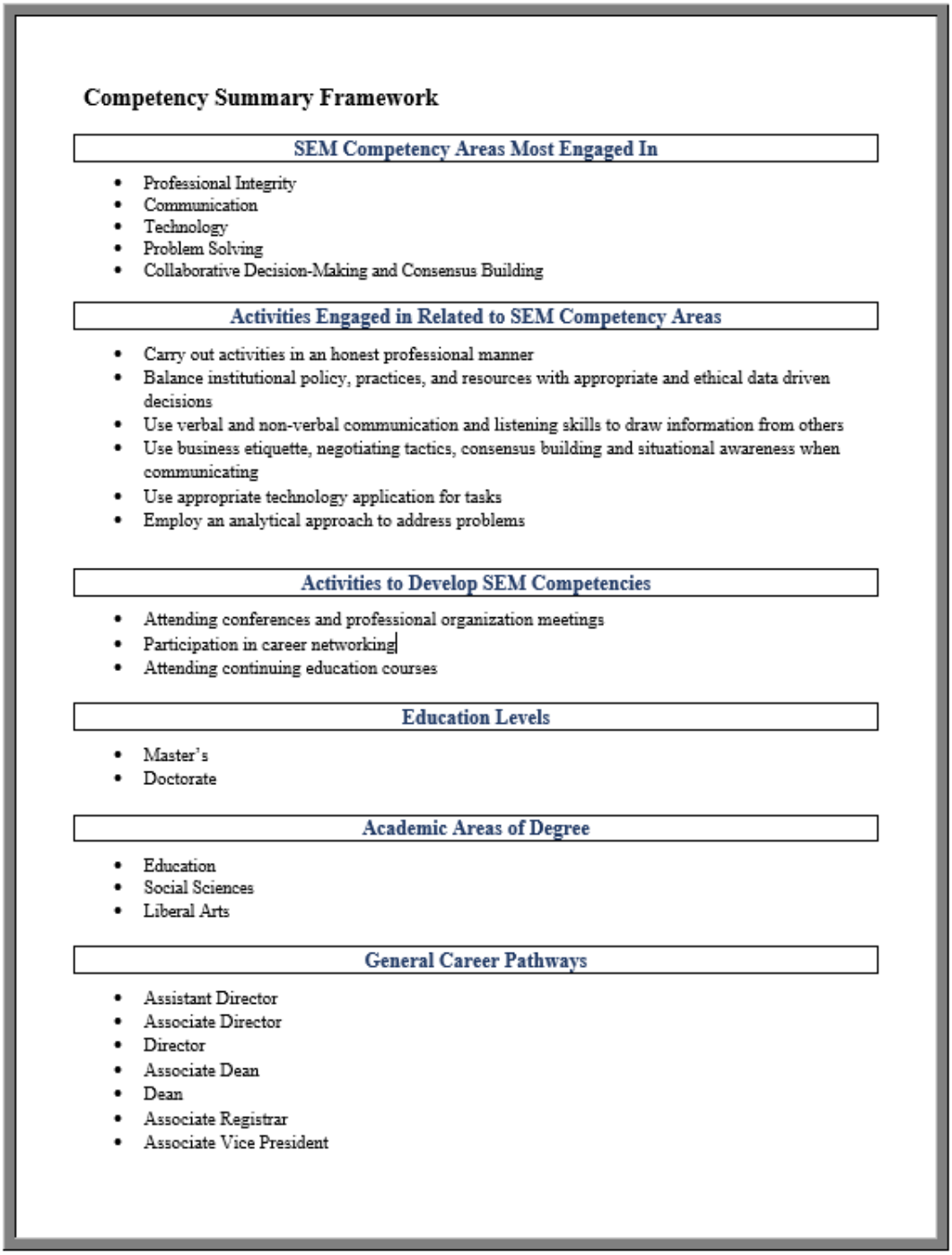

Figure 12

SEM Competency Summary Framework of Ward (2022) Study

While the summary is not a comprehensive competency model, it does contain foundational information from the findings in the study to complete the initial phases of constructing a definitive model. Conducting research to gather and analyze background information and drafting a framework are the beginning steps to building a competency model for a specific position. Additionally, a complete list of role specific competencies would be identified and metrics assigned to each of those defined competencies. When a competency model is built for a position, it would contain specific job-related knowledge, skills, abilities, personal traits or characteristics and displayed behaviors. Those specific elements would have an established rubric including assigned metrics to gauge different levels of proficiency and measure performance.

A typical competency model will have a standard format and elements for each position, however, the framework for a particular position should be tailored to a specific organization and institutional context (Bartram et al., 2002). Not only does a competency model help to determine levels of proficiency of an employee in a given position, but can also be highly effective in identifying gaps in knowledge and skills. The presence of competency deficiencies allows institutional leadership to enhance development plans and customize training opportunities (Campion et al., 2019), Competency models are used to translate organizational strategy into employee behavior, which is why this type of tool would be appropriate and applicable for professionals in SEM related positions.

Limitations

The unavoidable limitations of my study included the many sources of error that are known to occur in all types of research that depend on the collection of self-reported data from a convenience sample of participants using a cross-sectional survey (Creswell & Creswell, 2018). One source of error is social desirability bias (Callegaro, 2020) which occurs when respondents

emphasize their socially acceptable behaviors (e.g., activities that develop SEM competencies) but ignore to report their socially undesirable characteristics (e.g., barriers that hinder the development of SEM competencies). Another source of error is carelessness, because some respondents may not worry about whether they provide correct responses (Meade & Craig, 2011). Moreover, some respondents may have answered the questions incorrectly because the wording of the questionnaire was perceived to be confusing or they interpreted what was being asked differently than intended (Sue & Rittter, 2012). While pilot testing was conducted and resulted in some refinement of how questions were structured, it is difficult to overcome how a respondent interprets a particular question.

Excluding the unknown measurement errors, the total size of the convenience sample in my study (N = 698) excluding missing values, drew from a target population of about 24,000 HE professionals. This sample was considered to be large enough to generate quantitative data with an acceptable 95% level of confidence and a narrow 3.7% margin of error (Omair, 2014). The survey contained too many missing values in Group 1 (n = 463) and Group 2 (n = 235) (representing 28.3 % of the total number of respondents) to permit replacement at the item score level using a maximum likelihood multiple imputation method (Manly & Wells, 2015). Consequently, the external and internal validity of the results were threatened by the large proportion of missing values which reduced the representativeness of the sample, and may have distorted inferences about the population (Osborne, 2012). The bootstrap validation module was utilized in SPSS to overcome the issue of missing values therefore taking a smaller sample that was "bootstrapped" from the larger sample. This method is a type of re-sampling where large numbers of smaller sample of the same size are repeatedly draw, with replacement, from the original sample (Manly, et al., 2020).

Relationship of Results to Existing Studies

Discussing the relationship of the results of my study to existing studies is challenging because the important SEM-specific competencies for HE professionals have not previously been described in the existing literature. The findings of my study were most consistent with the results of Lovell and Kosten's (2000) meta-analysis, focusing on the competencies needed for success as an administrator in HE. The conclusion of the meta-analysis was that the most needed competencies for professional development included communication (e.g., using communication and listening skills to draw information from others); and ethical leadership skills (e.g., balancing institution policy, practices, and resources with appropriate and ethical data driven decisions). Other researchers have reported that communication skills are a key leadership attribute and essential for a SEM-related HE professional. The conclusions of this study comply with the conclusions of Cook (2004) who examined the competencies of future community college presidents, identifying communication and leadership skills as necessary for future presidents. Enrollment managers have also been shown to exhibit stronger communication skills than their registrar counterparts (Liedtke, 2013; Presswood, 2011).

The results of my study were also consistent with Lovell and Kostan's (2000) conclusion that even when key competencies are evident, there is a need to develop more proactive competencies. However, previous studies have not examined how those competencies were obtained and if development opportunities were available (e.g., through participating in conferences, professional organization meetings, career networking, and continuing education courses). Some of the other general competencies of HE professionals including the integrity to build trust across many constituents (Spendlove, 2007). Also, Spendlove (2007) stressed that the skills required of a leader in HE are fundamentally different than those required in other

industries. Nevertheless, there remains considerable lack of investment or consistency in professional development for HE professionals.

The results of my study confirm Black's (2015) assertion that a Competency Model for HE professionals can be a helpful guide as long as its context and situation are considered. However, the current study, did not highlight the fact that if competencies do not have an element of flexibility regarding the uniqueness of each institution, then effectiveness may be diminished. Although Black's study did not focus directly on SEM, his conclusions were consistent with my Competency Summary Framework presented in Figure 12, explaining that a Competency Model does not need to encompass all of the specific competencies of a defined HE role and can be built upon and adjusted over time. My Competency Model did not comply with the findings of Bradley (2014) who used systems theory to address the complexity of adopting competency models to improve organizational performance. Bradley suggested that a Competency Model must go beyond what people do in their jobs, and include what attitudes, abilities, and motivation levels are possessed by exemplary leaders, my study does not go into attitudes or motivational levels of SEM professionals. The barriers to a career pathway for SEM-related jobs in HE had not been previously described in explicit detail in the literature, however the Chief Enrollment Officer Profile developed by AACRAO (2017) and a study by Schultz and Lucindo (2011) both confirmed that the career pathway of Chief Enrollment Officers and Admissions Officers was extremely varied. AACRAO reported that over a third, 34% of participants entered into a Chief Enrollment Officer role from and Admissions/recruiting position.

The results of my study agreed with the conclusion that the diverse and complex nature of influencing and managing HE enrollment requires a diverse and complex set of skills, qualities, and leadership attributes (Bolden et al., 2008). According to Liedke (2013) these skills,

qualities, and attributes are mainly intrinsic and not learned. This view contradicted the focal point of my Competency Model, that highlighted the need for specific learned and developed SEM competencies. In assessing leadership, the skills, qualities, and attributes may be more intrinsic, but this study's main intent focused on competency development and learned behaviors through various activities such as training, networking and professional organization involvement. However, similar to my study, Liedke and others (e.g., Schultz & Lucindo, 2011; Stewart, 2014) agreed that educational backgrounds and career pathways varied very widely among HE professionals with experience in SEM. The background experiences of HE professionals tend to come from multiple career promotions in a variety of HE areas (e.g., Director, President, Registrar, Dean, Provost), and there is no specific SEM career pathway. Additionally, the second highest number of participants *(n*=34, 7.3%) did not have a position in HE and entered the profession as a second position or higher position. AACRAO's (2017) career profile on Chief Enrollment Officers agreed with my results that the majority of SEM related professionals indicate holding a Master's degree, 57% of participants in their profile. In a study conducted by Stumo (2017) his findings for the highest degree completed for Chief Enrollment Officers at colleges and universities affiliated with the Evangelical Church of America indicated that the terminal degree/doctorate was held by the most participants *(n*=14, 40%) followed by a Master's (*n*=14, 40%).

My study did not focus on the leadership styles of the participants. Other researchers have studied the leadership styles of SEM professionals in differing institutional types and found that although a specific style may be evident, the most important factor was that SEM professionals need to gain leadership experience (Harris, 2010; Hughes, 2005; Mendez, 2018). Liedtke (2013), similarly suggested that career experience in enrollment management and not leadership style is the attribute that most helped influence the recruitment and retention of

students. The literature supports the notion that experience in the field of SEM is crucial, regardless of leadership style. Therefore, the most important question that was addressed by my study is how can the skills necessary for a career in SEM be acquired and developed over time?

Implications for Future Research

The literature shows that previous research on SEM has historically focused on the theories and perspectives of this organizational system. Additionally, when research was focused on individuals in SEM, the studies primarily focused on leadership characteristics and attributes, not specific career competencies and how those could be developed. SEM is a growing and constantly evolving field. SEM can be highly variable based on the type of institution (private or public), size, educational focus, or regionality. Future research may delve into how SEM differs among those institutional variables. Or focus could be placed upon the growth of segmented niche areas such as Graduate SEM, referred to as GEM or S-GEM, in the literature (Campbell & Smith, 2014, nagap.org, n.d.), International SEM (nafsa.org, n.d.), adult education SEM (Aidsu, 2006), community college SEM (Kerlin, 2008; Lehmacher, 2013) or SEM in medical education (Ruger, 2020).

With respect to research of SEM competencies and HE professionals interested in developing competencies and aspiring to those roles, a qualitative approach could provide richer and more reliable information than just a quantitative approach (Friesen et al. 2012; Guillen, 2019). Phenomenology becomes hermeneutical when it moves from description to interpretation, by exploring methodologically how and why human beings derive meaning from their lived experiences, mediated through language, narrative, and storytelling (Padilla Diaz, 2015), so this approach to the topic could capture additional insight and expand upon what can be captured using the quantitative method.

The rich qualitative data that could be collected by interviewing participants in an educational setting in the future may permit the development of additional concepts to further develop the Competency Model outlined in Figure 4. Such a model could include the non-quantitative themes that influence competency development and career pathways in SEM among HE professionals (Power, 2019). Thematic analysis of interviews may reveal more depth into the factors affecting the competencies of HE professionals in SEM or aspiring to those roles as well as the perceived barriers that hinder further competencies development than the statistical analysis of quantitative data alone. Additionally, participants could be asked to not only discuss the barriers present, but also thoughts on how an institution should respond to mitigate those issues. This could be an avenue to pursue to gain greater knowledge on the topic of SEM as well as HE employee retention in general. In regards to career pathway additional questions could ascertain how individuals enter the career of SEM given how many in Group 1cited their first positions (7.3% of respondents) and second positions (21.6%) as not in Higher Education. Career pathways for SEM whether researched further qualitatively or quantitatively could delve deeper into what career were held prior to entering a SEM career. Those positions “not in Higher Education” and the avenues that led into SEM could be a future research topic.

Qualitative research is usually guided by questions beginning with ""How" and/or "Why" focusing on the need to collect and analyze rich details to describe how the participants feel about a specific phenomenon and to interpret why they give meaning to those feelings (Cypress, 2015) For example, a qualitative approach might be implemented to address the following questions to develop a new Competency Model for HE professionals aspiring to or already engaged in SEM. Many of the barrier themes (such as budget/funding/cost, positionality/administrative issues, or workload/priority) to competency development could be turned into qualitative questioning. How and why do economic conditions and resources relate to

the development of SEM competencies among HE professionals? How and why do the institutional practices, regulations, and procedures of HE professionals relate to the development of SEM competencies in different educational settings? How and why does staff workload affect the activities engaged in relate to the development of SEM competencies?

Additionally, further information could be assessed regarding aspirations toward SEM related careers. In the major findings only a small portion of respondents aspired to a SEM career to a high degree, this is an area and the reasons why could be assessed by further investigation. Why isn't SEM a career field that more professionals aspire to enter? Are more tailored educational tracks necessary to stimulate increased aspiration? What is the most direct career pathway for aspirational professionals? The reasoning could be expanded into research the about employee retention and how to retain professional in vital SEM roles. These and other pertinent questions about the acquisition, usage of core SEM competencies, and the most effective pathways into the profession remain to be answered either by qualitative rather than quantitative methods.

Summary Implications for Practice

The findings of this study imply that HE institutions must recognize the importance of developing SEM leadership talent. Moreover, HE institutions must have professionals in place to strategically build and foster a campus-wide SEM culture that will ultimately ensure enrollment sustainability (Putney & Holmes, 2008). The findings of this study also imply that effective professional development is necessary for HE professionals to achieve relevant competencies in SEM by having experience and training in a multitude of areas across the enterprise (Johnson, 2016). Furthermore, the findings of my study imply that simply being reactive is not the best way to ensure the long-term success of a cohesive enrollment plan (Pollock, 2012).

The implications are that HE professionals must achieve strategic goals through being professionally proactive (e.g., developing competencies through attending conferences and professional organization meetings, participating in career networking, and attending continuous education courses) as well as highlighting the importance of leaders to display professional integrity (e.g., carrying out management activities in an honest, professional, and ethical manner); communication skills (e.g., utilizing verbal and non-verbal communication and listening skills to draw information from others); technological skills (e.g., utilizing appropriate applications for tasks) and problem solving skills (e.g., employing an analytical and creative approach to address problems). The findings in the competency areas most engaged in such as professional integrity, communication, and problem-solving skills could be developed in ways that hadn't been considered in the study to help mitigate perceived barriers such as lack of time or lack of budget. Instead of attending a conference, professional organization meetings, or taking a continuous education course, employees could be developed in more concentrated, individualized that are more time efficient and cost effective. Engaging in activities such as mentorship, skill building at staff meetings, informal networking during morning coffee appointments, or job shadowing experiences allow quality investments of professional development in more conducive "bite-sized" ways. This study supports the need for leaders to get creative and connect with employees in new and innovative ways and use professional development in ways that can "grow you own" within institutions.

The overall implications of my study are that it is imperative for the institutions of HE to make a concerted effort to offer professional development for those charged with SEM roles, and to remove the barriers that prevent HE professionals from aspiring to SEM roles. This group of HE professional needs to understand how to create and sustain integrated institutional pathways for student success in the future. HE professionals who acquire and develop skills in other areas

of responsibility associated with student management (e.g., student services, course transfers, career services, health education, housing, multicultural affairs, etc.) are unlikely to aspire to the competencies required for SEM, so these resources can be concentrated in more specific departments. My Competency Model (see Figure 4) indicates that the most important competencies that must be acquired and developed by HE professionals who aspire to or are engaged in SEM include advanced knowledge and skills related to professional integrity, communication, technology, and problem solving.

The results of the current literature concur that placing focus on comprehensive strategic enrollment management plans will ultimately enable institutions of HE to address ongoing enrollment challenges with clear goals targeted on the enrollment, retention, and completion of students. However, my research has highlighted that fact that systems for competency develop of SEM professionals are lacking the same magnitude and structure. To reiterate what was stated as the significance of my study in Chapter I "to bring in the right students, institutions of higher education must have the right professionals, with the right competencies in place." A system fails to be comprehensive without developing the individuals charged with managing the structures that regulate enrollment inputs, outputs, and outcomes within the institution. This study can provide guidance for aspiring professionals on the ideal educational attainment, career paths, and what competency areas are important to develop for a SEM-related position. This study can also provide guidance to leaders in HE on what needs to happen in regards to developing future SEM professionals and where resources should be dedicated. More intentional emphasis needs to be placed on building highly competent SEM leadership. For institutional sustainability investments could be of greater value and produce higher ROI if focused inward on the current and aspiring human capital. SEM is a complex and diverse concept that is constantly evolving. Therefore, it is critical to have professionals in place that are equipped with competencies to manage systems

that not only align with institutional mission and goals for enrollment, but are also agile enough to adapt to any extraneous factors that could produce shifts in the HE paradigm.

REFERENCES

AACRAO. (n.d.). *Core competencies*. https://www.aacrao.org/resources/core-competencies

AACRAO. (n.d.). *SEM endorsement program*. https://www.aacrao.org/events-training/training/online-learning/sem-endorsement-program

AACRAO. (2017) U.S. Chief Enrollment Management Officer Career Profile. https://www.aacrao.org/research-publications/aacrao-research/2017-u.s.-chief-enrollment-management-officer-career-profile

Agresti, A. (2013). *Categorical data analysis* (3rd ed.). Wiley.

Aidsu, K. (2006). *Impact of enrollment management, marketing, strategic planning on adult higher education enrollment patterns*. (Doctoral dissertation). ScholarWorks (Order No. 930).

Allen, I. E., & Seaman C. A. (2007). Likert scales and data analyses. *Quality Progress, 40,* 64-65.

Anderson, B. S., Covin, J. G., & Slevin, D. P. (2009). Understanding the relationship between entrepreneurial orientation and strategic learning capability: An empirical investigation. *Strategic Entrepreneurship Journal, 3*(3), 218-240.

Balayan, A. (2016). A study of factors and conditions associated with graduate enrollment management practitioners' participation in professional development. *Strategic Enrollment Management Quarterly*, *3*(4), 305-334.

Barnes, B., & Harris, M. (2010). Privatization influences and strategic enrollment management decisions in public research universities. *College & University, 85*(4), 1-9.

Bartlett, S. A. (2013). *Retention, persistence, and enrollment management: An exploration of organizational models.* (Doctoral dissertation). ProQuest (Order No. 3573428).

Barr, A., & Turner, S. E. (2013). Expanding enrollment and contracting state budgets: The effect of the great recession on higher education. *The Annals of the American Academy of Political and Social Science, 650*(1), 168-193.

Bartram, D., Robertson, I. T., & Callinan, M. (2002). Introduction: A framework for examining organizational effectiveness. In I. Robertson, M. Callinan, and D. Bartram (Eds.), *Organizational Effectiveness: The Role of Psychology* (pp. 1-10*).* Wiley.

Basham, L. M. (2012). Transformational and transactional leaders in higher education. S.A.M. *Advanced Management Journal, 77*(2), 15-23.

Black, J. (2004). Defining enrollment management: The political frame. *Colleges and Universities, 80*(2), 43-44.

Black, J. (2004). Defining enrollment management: The structural frame. *Colleges and Universities, 79*(2), 37-39.

Black, T. R. (2002). *Understanding social science research*. (2nd ed.). Sage Publications.

Black, S. A. (2015). Qualities of effective leadership in higher education. *Open Journal of Leadership*, *4*(1), 54-66.

Boateng, K., Plopper, B., & Keith, D. (2015). Shared faculty-student lifestyle habits and their implications for college student retention. *Journal of College Student Retention Theory and Practice. 18*(3), 250-262

Bolden, R., Petrov, G., & Gosling, J. (2008). Tensions in higher education leadership: Towards a multi-level model of leadership practice. *Higher Education Quarterly, 62*(4), 358-376.

Bontranger, B. (2004a). Enrollment management: An introduction of concepts and structures. *College and University, 79*(3), 11-16.

Bontranger, B. (2004b). Strategic enrollment management: Core strategies and best practices. *Colleges and University, 79*(4), 9-15.

Bontranger B., & Clemsten, B. (2009). *Applying SEM at the community college*. AACRAO.

Botranger, B., & Green, T. (2015). Strategic enrollment planning. In D. Hossler and B. Botranger (Eds.) *Handbook of Strategic Enrollment Management* (pp.531-548). Jossey-Bass.

Bontrager, B., Ingersoll, D., & Ingersoll, R. (2012). *Strategic enrollment management: Transforming higher education.* AACRAO.

Boyatzis, R. E. (1982). *The competent manager: A model for effective performance.* Wiley.

Bradley, J. M. (2014). Systems theory based framework for competency models. (Doctoral Dissertation). DigitalCommons. https://digitalcommons.odu.edu/emse_etds/46/

Bryant, P., & Crockett, K. (1993). The admissions office goes scientific. *Planning for Higher Education, 22*(1), 1-8.

Bryson, J. (2004). *Strategic planning for public and nonprofit organizations: A guide to strengthening and sustaining organizational achievement*. Jossey-Bass.

Buckland R. (2009). Private and public sector models for strategies in universities. *British Journal of Management, 20*(4), 524-536.

Burke, S. (2016). *Confidence intervals of the median and other percentiles: best practice.* Scientific Test and Analysis Techniques Center of Excellence. https://www.afit.edu/stat/statcoe_files/CI_for_Population_Median.pdf

Burns, J. M. (1978). *Leadership.* Harper and Row.

Cajigas, T. J., & McGrath, J. A. (2015). Formalizing a talent management strategy through a competency model framework. *Strategic Enrollment Management Quarterly, 3*(2), 132-144.

Callegaro, M. (2020). Social desirability. In P.J. Lavrakas (Ed). *Encyclopedia of Survey Research Methods.* https://sk.sagepub.com/reference/survey/n537.xml

Campbell, C. D., & Smith, J. (2014). Crossing the GEM frontier: Graduate admissions professionals' participation in enrollment management. *College and University, 89*(3), 2.

Campion, M. A., Fink, A. A., Ruggeberg, B. J., Carr, L., Phillips, G. M., & Odman, R. B. (2011). Doing competencies well: Best practices in competency modeling. *Personnel Psychology, 64*(1), 225-262.

Campion, M. A., Schepker, D. J. & Sanchez (2019). Competency modeling: A theoretical and empirical examination of the strategy dissemination process. *Human Resources Management, 59*(3), 291-304.

Castrellon, L. E. (2021). As soon as they hear ‘undocumented’,’ they stop advising: Theorizing a (sub)conscious evasion of responsibility from institutional agents to undocumented students. *Educational Studies, 57(*3), 269-286.

Chouhan, V. S., & Srivastava, S. (2014). Understanding competencies and competency modeling: A literature survey. *IOSR Journal of Business and Management, 16*(1), 14-22.

Cook, V. S. (2004). *Exploration of leadership competencies needed by future Illinois community college presidents: A Delphi study.* (Doctoral dissertation). ProQuest (Order No. 3127210).

Coomes, M. D. (2002). The historical roots of enrollment management. *New Directions for Student Services, 2000*(89), 5-18.

Craig, R. (2017). College silos must die for students to thrive. *Forbes (online).* https://www.forbes.com/sites/ryancraig/2017/04/14/college-silos-must-die-for-students-to-thrive/

Creswell, J. W., & Creswell, J. D. (2018). *Research design. Qualitative, quantitative, and mixed methods* (5th ed.) Sage.

Croteau, L. M., & Maginnis, H. A. (2005). Admissions, enrollment management and student affairs: Creating the seamless transition. *The Vermont Connection*, 26(2). https://scholarworks.uvm.edu/tvc/vol26/iss1/2

Curs, B. R., & Signell, L. D. (2010). Aim high or go low? Pricing strategies and enrollment effects when the net pricing elasticity varies with need ability. *The Journal of Higher Education, 81*(4), 516-543.

Cypress, B. (2015). Qualitative research. The "What", "Why", "Who", and "How". *Dimensions of Critical Care Nursing, 34*, 356-361.

DeAngelo, L., Mason, J, & Winters, D. (2015). Faculty engagement in mentoring undergraduate students: How institutional environments, regulate and promote extra-role behavior. *Innovative Higher Education, 41*(4), 317-332.

Dennis, M. J. (1998). *A practical guide to enrollment and retention management in higher education.* Bergin & Garvy.

Dennis, M. J. (2012). Anticipatory enrollment management: Another level of enrollment management. *College and University, 88*(1), 10-16.

Dennis, M. J. (2018). The impact of technology on U.S. and worldwide higher education. *Enrollment Management Report, 21*(10), 1-3.

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, mail, and mixed-mode surveys: The Tailored Design Method* (3rd ed.). John Wiley & Sons.

Dolence, M. G. (1993). *Strategic enrollment management: A primer for campus administrators*. AACRAO.

Dutschke, J. (2003). *Chief enrollment manager leadership style and performance: A correlation study*. (Doctoral dissertation). ProQuest (Order No. 3190084).

Eddy, P.L. (2013). Developing leaders: The role of competencies in rural community colleges. *Community College Review, 4*(1), 20-43.

Eddy, P. L., & Rao, M. (2009). Leadership development in higher education programs. *Community College Enterprise, 15*(2), 7-26.

Eddy, P. L. & K. E. VanDerLinden. (2006). Emerging definitions of leadership in higher education: New visions of leadership or the same old "hero" leader? *Community College Review, 34*(1), 5-26.

Eekhout, I., de Vet, H.C., Twisk, J.W., Brand, J. P., de Boer, M. R., & Heymans, M.W. (2014). Missing data in a multi-item instrument were best handled by multiple imputation at the item score level. *Journal of Clinical Epidemiology, 6* (3), 335–342.

Emery, L. (2020). Strengthening strategic enrollment management through institutional strategic planning and assessment. *Strategic Enrollment Management Quarterly, 8*(3), 3-10.

Enders, C. K. (2003). Using expectation maximization algorithm to estimate coefficient alpha for scales with item-level missing data. *Psychological Methods, 8*(3), 322-337.

Enders, C. K. (2010). *Applied missing data*. Guilford Press.

Flanigan M. S. (2016). Diagnosing and changing organizational culture in strategic enrollment management. *Strategic Enrollment Management Quarterly, 4*(3), 117-129.

Friesen, N., Henriksson, C., & Saevi, T. (2012). *Hermeneutical phenomenology in education.* Sense Publishers.

Gawes, N. D. (2018). *Demographics and the demand for higher education*. John Hopkins University Press.

Gilliland, D., & Melfi, V. (2010). A note on confidence interval estimation and margin of error. *Journal of Statistics Education, 18*(1), 1-8.

Grant C. & Osanloo, A. (2014). Understanding, selecting and integrating a theoretical framework in dissertation research: Creating the blueprint for your "house." *Administrative Issues Journal: Connecting Education, Practice, and Research, 4*(2), 12-26.

Groff, J. (2004). *Critical realism, post-positivism and the possibility of knowledge*. Routhledge.

Guillen, D.E.F. (2019). Qualitative research: Hermeneutical phenomenological method. *Advances in Qualitative Research in Education, 7*(1), 201-229.

Hagedorn, L. (2005). How to define retention: A new look at an old problem. In Seidman (Ed.), *College student retention: Formula for student success* (pp. 129-153). Praeger Publishers.

Harris, T. (2010). *Enrollment management professionals in community colleges: An exploratory study of their influence on student recruitment and retention.* (Doctoral dissertation). ProQuest (Order No. 3397208).

Hart Bucher, K. (2010). *Critical components of community college enrollment management planning*. (Doctoral dissertation). DigitalCommons (DOI: 10.25777/mws7-wg07).

Haynes, S. M. (2016). Competency modeling as an organizational development intervention. (Doctoral dissertation). https://vialibrary.depaul.edu/csh_etd/171.

Heisserer, N., Maestas, S. McClure J., McDowell, S., & Taylor, K. (2020). Putting the SEM endorsement to work: Perspectives from the enrollment management field. *Colleges and University, 95*(2), 57-58.

Henderson, S. E. (2001). On the brink of a profession: A history of enrollment management. In J. Black (Ed.) *The strategic enrollment revolution* (pp. 3-36). AACRAO.

Henderson S. E. (2005). Refocusing enrollment management: Losing structure and finding academic context. *College and University*, *80*(3), 3-8.

Henderson, S. E. (2015). *Core concepts of strategic enrollment management (SEM).* AACRAO Consulting, Conference presentation at Wichita State University, Wichita, KS. https://blogs.wichita.edu/sem/wp-content/uploads/2016/09/Wichita-State-SEM-Workshop-Presentation-Oct-2015.pdf.

Hillman, N. W., Tandberg, D.A., & Fryar, A. H. (2014). Evaluating the impacts of "new" performance funding in higher education. *Educational Evaluation and Policy Analysis, 37*(4), 501-519.

Hoff, K. (1999). Leaders and managers: Essential skills required within American higher education. *American Higher Education, 38*(3), 311-331.

Hoffman, J. L., & Bresciani, M. J. (2010). Identifying what student affairs professionals value: A mixed methods analysis of professional competencies listed in job descriptions. *Research and Practice in Assessment, 7*(1), 26-40.

Hope, J. (2017). Create an enrollment management structure to support recruitment, retention goals. *Enrollment Management Report, 20*(12), 1-5.

Hossler, D. (1984). *Enrollment management: an integrated approach*. College Board.

Hossler, D. (1985). Managing institutional vitality. *The College Board Review, 137*, 26-29.

Hossler, D. (2002). The role of financial aid in enrollment management. *New Directions for Student Services, 2000*(89), 77-90.

Hossler, D., & Bean, J. P. (1990). *The strategic management of college enrollments.* Jossey-Bass.

Hossler, D., & Bontrager, B. (2015). *The handbook of strategic enrollment management*. Jossey-Bass.

Hossler, D., & Kalsbeek, D. (2010). Enrollment management: Perspectives on student retention, Part I. *College and University, 85*(3), 2-11.

Hossler, D., & Kalsbeek, D. (2013). Enrollment management and managing enrollments: Revisiting the context for institutional strategy. *Strategic Enrollment Management Quarterly, 1*(1), 5-25.

Huddleston, T. (2000). Enrollment management. *New Directions for Higher Education, 111*, 65-73).

Hughes, T. G. (2005). *Identification of leadership style of enrollment management professionals in post-secondary institutions in the southern United States*. (Doctoral dissertation). https://ttu-ir.tdl.org/handle/2346/1357.

Jabbar A. A., & Hussein, A. M. (2017). The role of leadership in strategic management. *International Journal of Research-Granthaalayah, 5*(5), 99-106.

Jamieson, S. (2004). Likert scales: how to (ab)use them. *Medical Education, 38,* 1117-1118.

Jenkins, S. P. (2020). Comparing distributions of ordinal data. *The Stata Journal, 20*(3), 505-531.

Johnson, A. W. (2016). Balancing data, time and expectation: The complex decision-making environments of enrollment management. *Strategic Enrollment Management Quarterly, 4*(1), 14-26.

Jones, P. (2003). Enrollment management: A new leadership paradigm in higher education. *College and University Journal, 78*(4), 39-43.

Julien-Molineaux, G. L. (2015). *Enrollment management structures, processes, and strategies for academic programs in complimentary and integrative health*. (Doctoral dissertation). ProQuest (Order No. 3726466).

Kalsbeek, D. H. (2006). Some reflections on SEM structures and strategies: (Part One). *College and University, 81*(3), 3.

Kalsbeek, D. H., & Hossler, D. (2010). Enrollment management: Perspectives on student

retention. *Colleges and University, 85*(3), 2-11.

Kerlin, C. (2008). A community college roadmap for the enrollment management journey. *College and University. 83*(4), 10-14.

Komives, S. R. (2010). Rethinking leadership practices in a complex, multicultural, and global environment: New concepts and models for higher education. *The Review of Higher Education, 34*(1), 186-188.

Kremer, F. Baldridge, J. V., & Green, K. (1984). *Strategies for effective enrollment management.* American Association of State Colleges and Universities.

Kurz, R. & Bartram D. (2002) Competency and individual performance: Modeling the world of work. In T. Robertson, M, Callinan, and D. Bartram (Eds.), *Organizational Effectiveness: The Role of Psychology* (pp. 227-255). Wiley.

Langston, R., & Scheid, J. (2014). Strategic enrollment in the age of austerity and changing demographics: Managing recruitment, leveraging, revenue, an access in challenging economic times. *Strategic Enrollment Management Quarterly, 2*(3), 191-210.

Langston, R., Wyant, R., & Scheid, J. (2016). Strategic enrollment management for chief enrollment officers: Practical use of statistical and mathematical data in forecasting first year and transfer college enrollment. *Strategic Enrollment Management Quarterly, 4*(2), 74-89.

Lassila, N. E. (2011). Effects of tuition, price, grant aid, and institutional revenue on low-income student enrollment. *Journal of Student Financial Aid, 41*(3), 2.

Lederman, D. (2015, July 24). The shrinking sector. *Inside Higher Ed.* https://www.insidehighered.com/news/2015/07/24/number-profit-colleges-declines-enrollments-wither.

Lehmacher, A. (2013). Successful practices and models of enrollment management in Illinois

community colleges: An explanatory mixed-methods research case study. *Counterpoints, 436*, 189-203.

Liddell, T. M., & Kruschke, J. K. (2018). Analyzing ordinal data with metric models: What could possibly go wrong? *Journal of Experimental Social Psychology, 79*, 328-348.

Liedtke, R. (2013). *The indispensable leader: The study of leadership qualities of the chief enrollment management officer.* (Doctoral dissertation). ProQuest (Order No. 3590542).

Loomis Hubbel, L. W., Massa, R. J., & Lapovsky, L. (2002). Using benchmarking to influence tuition and fee decisions. *New Directions for Higher Education, 2002*(118), 39-64.

Lovell, C. D., & Kosten, L. A. (2000). Skills, knowledge, and personal traits necessary for success as a student affairs administrator: A meta-analysis of thirty years of research. *NAPSA Journal, 37*(4), 553-572.

Luna, G. (2012). Planning fo ran American higher education leadership crisis. *International Leadership Journal, 4*(1), 56-79.

Maguire, J. (1976). To the organized go the students. *Bridge Magazine, 39*, 16-20.

Manly, B. F. J., Navarro, J. A., & Navarro A. (2020). *Randomization, bootstrap and Monte Carlo methods* (4th ed.). Chapman & Hall/CRC Press.

Manly C. A. & Wells, R. S. (2015). Reporting the use of multiple imputation for missing data in higher education research, *Research in Higher Education, 56*, 397-409.

Marrelli, A. F. (1998). An introduction to competency and modeling. *Performance Improvement, 37*(5), 8-17.

Mauer, R. (2019). *Make better hires with competency models*. https://www.shrm.org/

McClelland, D. C. (1973). Testing for competence rather than for intelligence. *American Psychologist, 28*(1), 1-14.

Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological Methods, 17(3),* 437-455.

Mendez, T. A. (2018*). Enrollment leaders a phenomenological study of leadership styles of enrollment management leaders.* (Doctoral dissertation). ProQuest (Publication No. 10933619)

Miles, M. B., Huberman, A. M., & Saldana J. (2014). *Qualitative data analysis*. Sage.

Miller, K. (2019) Leading change to increase success and completion. *Strategic Enrollment Management Quarterly, 6*(4), 1-4.

Muhammad R., & McManus, K. (2018). Charting the course: Using data analytics to assist with strategic enrollment management. *Strategic Enrollment Management Quarterly, 6*(1), 35-40.

Norris, D. M. (2008). *Metrics and Analysis in Strategic Enrollment Management*. SEM Works.

National Association of Student Financial Aid and Administrators. (n.d.). *NASFAA on the record* http://www.nasfaa.org/NASFAA_on_the_Record

Omair, A. (2014). Sample size estimation and sampling techniques for selecting a representative sample. *Journal of Health Specialty, 2,* 142-147.

Osborne J. W. (2012). *Best practices in data cleaning: A complete guide to everything you need to do before and after collecting your data*. Sage Publications.

Padilla-Diaz, M. (2015). Phenomenology in educational qualitative research: Philosophy as science or philosophical science? *International Journal of Educational Excellence, 1*(2), 101-110.

Parks, R., & Taylor, A. (2019). The emerging role of the registrar in enrollment management. *College and University, 94*(2), 25-29.

Pearl, J., Glymour, M., & Jewell, N. P. (2016). *Causal inference in statistics: A primer*. Wiley.

Perez-Vergara, K. (2019). Higher education enrollment theories: Setting context for enrollment projections. *Strategic Enrollment Quarterly, 7*(2), 13-33.

Phair, J. (2014). *Career paths for admission officers: A survey report*. NACAC. https://www.nacacnet.org/globalassets/documents/publications/research/careerpaths2014.pdf

Pirius, L. K. (2014). A data-driven approach to SEM development at a two-year college. *Strategic Enrollment Management Quarterly, 1*(4), 251–262.

Pollock, K. (2012). SEM Leadership. *College and University, 8*(2), 40-47.

Pollock, K. Schwartz, C. M., & Buck, D. (2017). IT: A strategic student success partner in design, implementation, and assessment. *Strategic Enrollment Management Quarterly, 5*(3), 96-103.

Pope. J. S. (2017). *How the leadership of one nationally accredited career-oriented, for profit college navigated turbulence and change: A basic qualitative study*. (Doctoral dissertation). ProQuest (Order No. 10602525).

Power, K. (2019). *Data strategy in colleges and universities: From understanding to implementation.* Routledge.

Presswood, K. R. (2011). *Leadership attributes of enrollment managers in higher education institutions in the United States*. (Doctoral dissertation). http://ufdcimages.uflib.ufl.edu/UF/E0/04/27/73/00001/presswood_k.pdf.

Pulliman, N. & Bartek, S. (2017). College career readiness in elementary schools. *International Electronic Journal of Elementary Education, 10*(3), 355-360.

Purdue Online Writing Lab (n.d.), https://owl.purdue.edu/research_and_citation/using_research/writing_with_statistics/descriptive_statistics.html.

Purdue University Office of Enrollment Management Annual Report (2016-2017). https://www.purdue.edu/enrollmentmanagement/data-reports/annual-report/2016-17/index.php

Qualtrics. (2022). *Your guide to margin of error (with calculator)*. https://www.qualtrics.com/experience-management/research/margin-of-error/

Richard, J. & Kang, E. (2018). *Culture, competencies, and compensation: A framework for pay for performance incentives, 18*(4), 33-48.

Romano, C., & Connell, J. F. (2015). Faculty's role in retention: A case study of change management at Ramapo College. *Strategic Enrollment Quarterly, 3*(3), 184-201.

Ruger, K. (2020). Strategic enrollment in medical education, *Strategic Enrollment Management Quarterly, 8*(2), 11-17.

Salkind, N. J. (2010). *Encyclopedia of research design*. Sage Publications Inc. https://us.sagepub.com/en-us/nam/encyclopedia-of-research-design/book232149

Sanchez, J., & Levine E. L. (2009). What is (or should be) the difference between competency modeling and traditional job analysis? *Human Resource Management Review, 19*, 53-65.

Scannell, J. (2013). Where do enrollment managers fit in the campus organization? *University Business Magazine, 16*(16), 54-56. https://www.nxtbook.com/nxtbooks/pmg/ub201306/index.php#/p/54

Schreiner, L. A., Noel, P., Anderson, E., & Cantwell, L. (2011). The impact of faculty and staff on high-risk college student persistence. *Journal of College Student Development, 52*, 321-338.

Schultz, A. S., & Lucindo, J. (2011). Who we are: An in-depth look at the educational backgrounds, career paths and development needs of chief admission officers and enrollment managers. *Journal of College Admissions, Spring*, 14-20.

Schultz, K. G. (2019). The impact of leadership development programming on the career pathways of females in higher education. (Doctoral dissertation). DigitalUNE (Order No, 239).

Schuttinga, B. J. (2011). *Enrollment management strategies: Effectiveness and usage at member institutions of the council of Christian colleges and universities.* (Doctoral dissertation). ISU Digital Repository (Order No. 13067).

Shriner, K. N. (2022). *6 Elements of an effective graduate enrollment management plan-and why you need to build one.* https://eab.com/insights/blogs/adult-learner/graduate-enrollment-management-plan/

Sigler, W. (2017). *SEM core concepts: Building blocks for institutional and student success.* AACRAO.

Sneyers, E. & De Witte (2018). Interventions in higher education and their effect on student success: a meta-analysis, *Educational Review, 70*(2), 208-228.

Snowden, M. L. (2013). Enrollment logics and discourses: Toward developing an enrollment knowledge framework. *Strategic Enrollment Management Quarterly, 1*(1), 26-51.

Snowden, M. (2016). Refocusing, losing, finding: Beyond SEM structures, functions, and administrative contexts. *Strategic Enrollment Management Quarterly, 3*(4), 240-260.

Spendlove, M. (2007). Competencies for effective leadership in higher education. *International Journal of Educational Management, 21*(5), 407-417.

Stangor, C. (2015). *Research methods for the behavioral sciences* (5th. ed.). Houghton Mifflin.

Stefanie, N. (2012). *The chief enrollment officer position: How the hiring process illuminates the competencies required to lead an enrollment management division*. (Doctoral dissertation). ProQuest (Order No. 3530094).

Stewart, G. (2004). Defining the enrollment manager: Visionary, facilitator, and

collaborator. *Journal of College Admissions*, 21-25.

Strickland, K. H. (2011). *Preparing future leaders: A study of leadership skills among chief enrollment managers at small, private, religiously affiliated institutions*. (Doctoral dissertation). ProQuest (Order No. 3443836).

Stumo, K. (2017). *Core professional and leadership competencies of chief enrollment officers.* (Doctoral dissertation). ProQuest. (Order No. 2365059360).

Sue, V. M., & Ritter, L. (2012). *Conducting online surveys*. Sage.

Talbert, P. Y. (2012). Strategies to increase enrollment, retention, and graduation rates. *Journal of Developmental Education, 36*(1), 22–36.

Tremblay, C. W. (2015). Certifying enrollment management professionals. *Strategic Enrollment Quarterly, 3*(1), 62-81.

U.S. Department of Education (n.d.). *Family Educational Rights and Privacy Act (FERPA). https://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html*

Vander Schee, B. A. (2009). Embracing enrollment management: A comprehensive approach to college student marketing. *Academy of Marketing Studies Journal, 13*(1), 1-24.

Vitangcol Regoso, A. (2020, Feb. 24). Field notes: *The Registrar's emerging role in data governance*. https://www.aacrao.org/resources/newsletters-blogs/aacrao-connect/article/field-notes-the-registrar's-emerging-role-in-data-governance

Wallace-Hulecki, L. (2009). *Reframing strategic enrollment management from the academic lens: Theory in practice.* Semworks.net.

Wallace-Hulucki, L., & Seagren, A. T. (2014). *Managing change with strategic enrollment management.* Presented at International Leadership conference, in St. Louis, 2014. Chair Academy.

Ward, J. (2005). Enrollment management: Key elements for building and implementing an

enrollment plan. *College and University Journal, 80*(4), 7-12.

Wildman, A. J. (2016). *The lived experiences of conditionally admitted college student.* (Doctoral dissertation). ScholarWorks (Order No. 1942).

Wohlgemuth, D. (2013). Estimating the market demand and elasticity for enrollment at an institution. *Strategic Enrollment Management Quarterly, 1*(1), 67-74.

Woolf, M. N. (2012). *Competencies for financial aid officers: A competency model for professional development.* (Doctoral dissertation). ProQuest. (Order No. 3523735).

Wright, D. B., & Field, A. P. (2009). Methods: Giving your data the bootstrap. *The Psychologist, 22*(5), 412- 413.

Zumeta, W. (2009). State support of higher education: The roller coaster plunges downward yet again. *Journal of Collective Bargaining the Academy, 1*(4), 1-16.

Appendix A

Survey Instrument

Competency Use and Development in Strategic Enrollment Management (SEM)

Start of Block: Introduction: survey summary and consent

Introduction

Please read information below regarding survey consent before beginning.

Western Michigan University
Department of Educational Leadership, Research and Technology

Principal Investigator: Louann Bierlein Palmer, Ed.D.
Student Investigator: Jodi Ward, doctoral candidate
Title of Study: Competency Development, Usage, and Career Pathways in Strategic Enrollment Management (SEM)

STUDY SUMMARY: This consent form is part of an informed consent process for a research study and it will provide information that will help you decide whether you want to take part in this study. Participation in this study is completely voluntary. The purpose of the research is to: to better understand the career competencies used by current (HE) professionals whose job responsibilities are related to a SEM function and the career path to that role, as well as the competency development opportunities and barriers that exist for HE professionals aspiring to such a position. and will serve as Jodi Ward's dissertation research for the requirements of the Doctor of Philosophy. If you take part in the research, you will be asked to complete an online survey. Your time in the study will take approximately 5-7 minutes. Beyond taking time to complete the survey, there are no known possible risks or costs to you and there are no direct benefits or compensation for your participation. The online survey is the is the only method for taking part in the study, an alternative to taking part in the research is not available. Your identity will not be associated with your answers to the survey. All data will be aggregated in the dissertation findings. The information collected about you for this research will not be used by or distributed to investigators for other research.

The following information in this consent form will provide more detail about the research study. Please ask any questions if you need more clarification and to assist you in deciding if you wish to participate in the research study. You are not giving up any of your legal rights by agreeing to take part in this research or by signing this consent form.

The purpose of the research is to better understand the career competencies used by current (HE) professionals whose job responsibilities are related to a SEM function and the career path to that role, as well as the competency development opportunities and barriers that exist for HE

professionals aspiring to such a position. The study is available to HE professionals that hold memberships in professional organizations, American Association of Collegiate Registrars and Admissions Officers and National Association of Student Personnel Administrators. This study will be administered via online survey and collected through encrypted transmission on the survey platform, Qualtrics. The survey's time commitment is approximately 5-7 minutes to complete the questionnaire.

The findings will include measures of frequency, measures of central tendency and measures of dispersion or variation. The empirical finding will be used to portray the central tendencies and variability within the set of data that are representative of the sample captured in this study. The quantitative descriptive analysis will depict the findings regarding opportunities to participate in specific SEM competency development activities, competency use and competency development opportunities, barriers to competency development opportunities, as well as highest education completed, academic area, and career pathways. There are no known risks to your participation in the study. All data collected will be coded in a manner that ensures privacy and does not connect the participant's responses to their identity. Confidentiality will be protected by having the data stored on the PC/Co-Investigator's device that will confirm the user's identity with two-factor authentication.

The information collected about you for this research will not be used by or distributed to investigators for other research. You can choose to stop participating in the study at any time for any reason. You will not suffer any prejudice or penalty by your decision to stop your participation. You will experience NO consequences either academically or personally if you choose to withdraw from this study. The investigator can also decide to stop your participation in the study without your consent.

Should you have any questions prior to or during the study, you can contact principal investigator, Dr. Louann Bierlein Palmer, at (269) 387-3896 or louann.birelein@wmich.edu or the student investigator, Jodi Ward at (269) 387-8253 or jodi.ward@wmich.edu. You may also contact the Chair, Institutional Review Board at 269-387-8293 or the Vice President for Research and Innovation at 269-387-8298 if questions arise during the course of the study.

This study was approved by the Western Michigan University Institutional Review Board (WMU IRB) on 4.13.2022., IRB-2021-57.

Participating in this survey online indicates your consent for use of the answers you supply

Q1 In your current position, what is your primary area of responsibility? Select the best one.

- ○ Academic Services (1)
- ○ Admissions and Recruitment (2)
- ○ Enrollment Management (3)
- ○ Enrollment Services (4)
- ○ Faculty (5)
- ○ Financial Aid (6)
- ○ Registration and Records (7)
- ○ Student Services (8)
- ○ Student Success/Retention (9)
- ○ Other (please specify) (10) _____

End of Block: Introduction: survey summary and consent

Start of Block: Current Position Block

Q2 Which level of employment best describes your current position? Select the best one.

- ○ Executive level (1)
- ○ Dean level (2)
- ○ Faculty level (3)
- ○ Director level (4)
- ○ Associate Director level (5)
- ○ Assistant Director level (6)
- ○ Entry level (7)
- ○ Student employee (8)

Q3 In your current position, to what degree are your job responsibilities related to major SEM functions (e.g., planning, organizing, leading or supporting recruitment, enrollment, persistence, retention, and/or graduation activities/efforts for potential and/or current students)?

- ○ Completely SEM-related (1)
- ○ Primarily SEM-related (2)
- ○ Somewhat SEM-related (3)
- ○ Not at all SEM-related (4)

Skip To: End of Block If In your current position, to what degree are your job responsibilities related to major SEM funct... = Completely SEM-related

Skip To: End of Block If In your current position, to what degree are your job responsibilities related to major SEM funct... = Primarily SEM-related

Q4 When considering your future career options, to what degree do you have aspiration for a job that is primarily or completely SEM-related? Select one.

- ○ To a high degree (1)
- ○ To a moderate degree (2)
- ○ To a small degree (3)
- ○ To no degree (4)

Skip To: End of Block If When considering your future career options, to what degree do you have aspiration for a job that... = To a high degree

Skip To: End of Block If When considering your future career options, to what degree do you have aspiration for a job that... = To a moderate degree

Skip To: End of Block If When considering your future career options, to what degree do you have aspiration for a job that... = To a small degree

Skip To: End of Survey If When considering your future career options, to what degree do you have aspiration for a job that... = To no degree

End of Block: Current Position Block

Start of Block: Training/Development Activities Block

Q5 How often have you been able to participate in these specific activities to develop SEM-related competencies?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Attend conference (Q5_1)	○	○	○	○	○
Career networking (Q5_2)	○	○	○	○	○
Continuing education course (Q5_3)	○	○	○	○	○
Contribute to academic/association journal (Q5_4)	○	○	○	○	○
Participate in professional organization meeting (Q5_5)	○	○	○	○	○
SEM Endorsement program (Q5_6)	○	○	○	○	○
Serve on association committee (Q5_7)	○	○	○	○	○

End of Block: Training/Development Activities Block

Start of Block: Competency Use Block

Q6 For these **change management** competencies, how often do you engage in such activities?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Identify the need for change within an organization based on data analysis and/or environmental scans. (Q6_1)	○	○	○	○	○
Execute a communication plan that conveys the urgency and status of change to the campus community. (Q6_2)	○	○	○	○	○

Q7 For these **collaborative decision-making and consensus building** competencies, how often do you engage in such activities?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Facilitate stakeholder involvement through the stages of collective and effective solutions. (Q7_1)	○	○	○	○	○
Work effectively with diverse groups. (Q7_2)	○	○	○	○	○

Q8 For these **diversity and inclusion** competencies, how often do you engage in such activities?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Promote the expansion of ideas, perspectives, and understanding that comes from a diverse and inclusive community. (Q8_1)	○	○	○	○	○
Identify and mitigate systemic barriers to equality and inclusiveness. (Q8_2)	○	○	○	○	○

Q9 For these **holistic and systemic thinking** competencies, how often do you engage in such activities?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Analyze and understand the interconnectedness of systems, cultures and processes. (Q9_1)	○	○	○	○	○
Understand the applications of systems thinking to the academic mission, goals, and values of an institution. (Q9_2)	○	○	○	○	○

Q10 For these **interpretation and application of institutional and external data** competencies, how often do you engage in such activities?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Interpret and apply institutional and external data for the purposes of short-term and long-range planning. (Q10_1)	○	○	○	○	○
Use data to support decision-making and create a culture of evidence for short and long-term objectives. (Q10_2)	○	○	○	○	○

Q11 For these **leadership and management** competencies, how often do you engage in such activities?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Identify the business processes necessary to operate an office, develop a budget, and build a staff to conduct the activities. (Q11_1)	○	○	○	○	○
Identify and operationalize customer and student best practices. (Q11_2)	○	○	○	○	○

Q12 For these **problem solving** competencies, how often do you engage in such activities?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Employ an analytical and creative approach to address problems. (Q12_1)	○	○	○	○	○
Understand foundational practices and uses various problem-solving techniques. (Q12_2)	○	○	○	○	○

Q13 For these **professional integrity** competencies, how often do you engage in such activities?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Carry out career activities in an honest, professional, and ethical manner. (Q13_1)	○	○	○	○	○
Balance institutional policy, practices, and resources with appropriate and ethical data-driven decisions. (Q13_2)	○	○	○	○	○

Q14 For these **communication** competencies, how often do you engage in such activities?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Utilize verbal and non-verbal communication and listening skills to draw information from others. (Q14_1)	○	○	○	○	○
Use business etiquette, negotiation tactics, consensus-building, and situational awareness when communicating. (Q14_2)	○	○	○	○	○

Q15 For these **technological knowledge** competencies, how often do you engage in such activities?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Utilize appropriate technology applications for tasks. (Q15_1)	○	○	○	○	○
Improve or redesign processes using technical solutions. (Q15_2)	○	○	○	○	○

Q16 For these **professional development and contributions to the field** competencies, how often do you engage in such activities?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Use professional development opportunities to remain current regarding trends and innovations in higher education. (Q16_1)	○	○	○	○	○
Support professional development of one's self and others to advance enrollment services practice and foster innovation. (Q16_2)	○	○	○	○	○

End of Block: Competency Use Block

Start of Block: Education Block

Q17 What is your highest level of education completed?

- ○ High school diploma or GED (1)
- ○ Associates Degree (2)
- ○ Bachelor's degree (3)
- ○ Master's Degree (4)
- ○ Doctoral Degree (5)

Skip To: End of Survey If What is your highest level of education completed? = High school diploma or GED

Skip To: End of Survey If What is your highest level of education completed? = Associates Degree

Q18 What academic area was your highest degree completed in?

- ○ Business (1)
- ○ Education (2)
- ○ Liberal Arts (3)
- ○ Sciences (4)
- ○ Social Sciences (5)
- ○ Other (6) _____

End of Block: Education Block

Start of Block: Career Pathway Block

Q19 What is your current position?

_____

Q20 How long have you been employed in your current position? Round to the nearest year.

_____

Q21 List your previous two positions in higher education (HE), if applicable.

- ○ Previous HE position (1) _____
- ○ Position prior in to above (2) _____

Q22 How long in total have you been employed in a higher education (HE) career? Round to the nearest year.

_____

End of Block: Career Pathway Block

Start of Block: Competency Development Block

Q23 For these **change management** competencies, how often do you have opportunities to develop your ability to do the following?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Identify the need for change within an organization based on data analysis and/or environmental scans. (Q23_1)	○	○	○	○	○
Execute a communication plan that conveys the urgency and status of change to the campus community. (Q23_2)	○	○	○	○	○

Q24 For these **collaborative decision-making and consensus building** competencies, how often do you have opportunities to develop your ability to do the following?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Facilitate stakeholder involvement through the stages of collective and effective solutions. (Q24_1)	○	○	○	○	○
Work effectively with diverse groups on consensus building. (Q24_2)	○	○	○	○	○

Q25 For these **diversity and inclusion** competencies, how often do you have opportunities to develop your ability to do the following?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Promote the expansion of ideas, perspectives, and understanding that comes from a diverse and inclusive community. (Q25_1)	○	○	○	○	○
Identify and mitigate systemic barriers to equality and inclusiveness. (Q25_2)	○	○	○	○	○

Q26 For these **holistic and systemic thinking** competencies, how often do you have opportunities to develop your ability to do the following?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Analyze and understand the interconnectedness of systems, cultures and processes. (Q26_1)	○	○	○	○	○
Understand the applications of systems thinking to the academic mission, goals, and values of an institution. (Q26_2)	○	○	○	○	○

Q27 For these interpretation and application of institutional and external data competencies, how often do you have opportunities to develop your ability to do the following?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Interpret and apply institutional and external data for the purposes of short-term and long-range planning. (Q27_1)	○	○	○	○	○
Use data to support decision-making and create a culture of evidence for short and long-term objectives. (Q27_2)	○	○	○	○	○

Q28 For these **leadership and management** competencies, how often do you have opportunities to develop your ability to do the following?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Identify the business processes necessary to operate an office, develop a budget, and build a staff to conduct the activities. (Q28_1)	○	○	○	○	○
Identify and operationalize customer and student best practices. (Q28_2)	○	○	○	○	○

Q29 For these **problem-solving** competencies, how often do you have opportunities to develop your ability to do the following?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Employ an analytical and creative approach to address problems. (Q29_1)	○	○	○	○	○
Understand foundational practices and uses various problem-solving techniques. (Q29_2)	○	○	○	○	○

Q30 For these **professional integrity** competencies, how often do you have opportunities to develop your ability in the following?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Carry out career activities in an honest, professional, and ethical manner. (Q30_1)	○	○	○	○	○
Balance institutional policy, practices, and resources with appropriate and ethical data-driven decisions. (Q30_2)	○	○	○	○	○

Q31 For these **communication** competencies, how often do you have opportunities to develop your ability in the following?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Utilize verbal and non-verbal communication and listening skills to draw information from others. (Q31_1)	○	○	○	○	○
Use business etiquette, negotiation tactics, consensus-building, and situational awareness when communicating. (Q31_2)	○	○	○	○	○

Q32 For these **technological knowledge** competencies, how often do you have opportunities to develop your ability in the following?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Utilize appropriate technology applications for tasks. (Q32_1)	○	○	○	○	○
Improve or redesign processes using technical solutions. (Q32_2)	○	○	○	○	○

Q33 For these **professional development and contributions to the field** competencies, how often do you have opportunities to develop your ability in the following?

	Never (1)	Rarely (2)	Occasionally (3)	Often (4)	All the time (5)
Use professional development opportunities to remain current regarding trends and innovations in higher education. (Q33_1)	○	○	○	○	○
Support professional development of one's self and others to advance enrollment services practice and foster innovation. (Q33_2)	○	○	○	○	○

Q34 What barriers have you experienced that hinder opportunities for SEM competency development?

_____

End of Block: Competency Development Block

Appendix B

Initial E-mail Invitation

Subject: Survey Invitation for Educational Leadership Dissertation Research

Dear Higher Education Colleague,

Greetings! You are invited to participate in the following research project: *"Competency Development, Usage, and Career Pathways in Strategic Enrollment Management (SEM)"*

The online survey will take approximately 5-7 minutes to complete.

Survey link: https://wmich.co1.qualtrics.com/jfe/form/SV_4NO6CIdMAj3dYv

Your responses to the questions will be kept confidential and will not be connected to your identity in the data analysis and findings section of the dissertation. All surveys must be completed and responses submitted prior to June 3, 2022 to be included in the study. I hope you will take a few minutes of your time to support my research.

Thank you,

Jodi Ward

Western Michigan University

Appendix C

Reminder E-mail

Subject: REMINDER: Survey Invitation for Educational Leadership Dissertation Research

Dear Higher Education Colleague,

Greetings again! This is a friendly reminder that you are invited to participate in a survey to support my dissertation research on the subject of "*Competency Development, Usage, and Career Pathways in Strategic Enrollment Management (SEM)"*

The online survey will take approximately 5- 7 minutes to complete.

Survey link**:** https://wmich.co1.qualtrics.com/jfe/form/SV_4NO6CIdMAj3dYv

Your responses to the questions will be kept confidential and will not be connected to your identity in the data analysis and findings section of the dissertation. All surveys must be completed and responses submitted prior to June 3, 2022 to be included in the study. I hope you will take a few minutes of your time to support my research.

Thank you,

Jodi Ward

Western Michigan University

Appendix D

HSIRB Approval Letter

WESTERN MICHIGAN UNIVERSITY

Human Subjects Institutional Review Board

Date: April 4, 2022

To: Louann Bierlein Palmer, Principal Investigator

Jodi Ward, Student Investigator for dissertation

Re: Initial - IRB-2021-57 Higher Education Professionals Involved in or Aspiring to Careers in Strategic Enrollment Management: Core Competencies Development, Usage, and Career Pathways

This letter will serve as confirmation that your research project titled Higher Education Professionals Involved in or Aspiring to Careers in Strategic Enrollment Management: Core Competencies Development, Usage, and Career Pathways has been **approved** under the **Exempt** Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.
category of review by the Western Michigan University Institutional Review Board (WMU IRB). The conditions and duration of this approval are specified in the policies of Western Michigan University. You may now begin to implement the research as described in the approval submission.

Please note: This research may **only** be conducted exactly in the form it was approved. You must seek specific board approval for any changes to this project (e.g., ***add an investigator, increase number of subjects beyond the number stated in your application, etc.***). Failure to obtain approval for changes will result in a protocol deviation.

In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the IRB or the Associate Director Research Compliance for consultation.

The Board wishes you success in the pursuit of your research goals.

Amy Naugle, Ph.D., WMU IRB Chair

For a study to remain open after one year, a Post Approval Monitoring report (please use the continuing review submission form) is required on or prior to (no more than 30 days**) April 2, 2023**
and each year thereafter until closing of the study. When this study closes, complete a Closure Submission.

Note: All research data must be kept in a secure location on the WMU campus for at least three (3) years after the study closes.