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Using the CIPP Evaluation Model to Examine a Bachelor of Science in Health Systems Management Program

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Using the CIPP Evaluation Model to Examine a
Bachelor of Science in Health Systems Management Program

by

Somer Goad Burke

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Education
with a concentration in Program Development and Educational Innovation
Department of Language, Literacy, Ed.D., Exceptional Education, and Physical Education
College of Education
University of South Florida

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Keywords: Student Success, COVID-19, Involuntary Major-Reselection

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Dedication

I dedicate this dissertation to my amazing children, Miles and Tinsley. Find your happiness, work hard, be kind, challenge yourself, explore the world, and never stop learning. I am proud of you and love you most.
Acknowledgements

I would like to acknowledge the support and guidance of my wonderful committee. I offer my sincere appreciation to my committee co-chair, Dr. Elizabeth Shaunessy-Dedrick, for her positive leadership, reassuring words, and thoughtful recommendations that guided me through the program and this dissertation process. Thank you to Dr. Howard Johnston, my committee co-chair, for pushing me to think deeper, and to Dr. Veselina Lambrev for embracing my work and sharing her kind guidance. Lastly, my deep appreciation for Dr. Melinda Forthofer encompasses twenty years of mentorship, leading up to and through this dissertation. My gratitude for her wisdom, guidance, cheerleading, and friendship cannot be overstated.

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Abstract

The purpose of this formative evaluation was to explore the effectiveness of a Bachelor of Science in Health Systems Management (BS HSMT) program in supporting student success through gathering information that led to recommendations for program improvement. The evaluation setting was a public university in the southeastern United States that began enrolling students in the BS HSMT in the fall semester 2017. The BS HSMT was developed to meet the local workforce need for professionals trained in health management and to offer a non-clinical bachelor’s degree for students not competitive or not admitted to their first-choice selective major (described in the evaluation as involuntary major-reselection). The evaluation was guided by Daniel Stufflebeam’s decision-oriented CIPP Evaluation Model including the use of a logic model and strong input from the program stakeholders throughout the evaluation. Data were collected from current students and alumni through an online survey ($n = 118$) and interviews ($n = 6$). Data were analyzed using Qualtrics XM, SPSS 26, and MAXQDA 2020. The evaluation questions explored barriers to student success, programmatic strategies to support student success, and the extent the COVID-19 pandemic exacerbated barriers for students. Overall, findings of the evaluation indicated that students and alumni have positive experiences in the program. Barriers identified include poor experiences with faculty or staff, class scheduling, outside responsibilities, issues with poor advising, and large class size. Programmatic strategies to support student success indicated a strong interest in career preparation including internships. Additional strategies included listening to students, offering more classes in the major, and
strong faculty and staff support. Lastly, the evaluation found half of students reported the coronavirus pandemic had a negative effect on their experience, with additional barriers including financial problems, looking for employment, trying to take care of family, and having to work more. Findings from the data collection led to ten recommendations for program improvements.
Chapter 1: Introduction

Institutions of higher education are responsible for ensuring undergraduate students have a successful experience, graduate within a specified time period (often six years), and become the professionals they hope to become. In 2016, the six-year graduation rate for full-time undergraduate students in the United States was 60 percent, up only one percentage point (from 59 percent) since 2011 (National Center for Education Statistics, 2018). For the Class of 2017, 63.7% of bachelor’s degree graduates found employment within 6 months, 17.5% pursued additional education, and 15.4% were still seeking opportunities (National Association for Colleges and Employers, 2018). Significant research and resources have been aimed at improving time-to-degree, graduation rates, employment rates, and student success (Mayhew et al., 2016). The university’s responsibility is intensified when the students are from higher-need groups including first generation students, lower income students, transfer students, and students not admitted into their first choice of major. This evaluation study will examine a newly-developed program designed to offer a non-clinical health science major as an alternative to students not admitted into their preferred major in clinical health science, many of whom are from underrepresented backgrounds.

Background of the Study

The setting for this evaluation study was a large public university in the southeastern United States. The university enrolls 29,000 students, includes seven colleges, and offers 77 bachelor’s degree programs. This evaluation study focused on students within one department in one of the seven colleges. The department was approved to establish a new Bachelor of Science
in Health Systems Management (BS HSMT) in late 2016. The BS HSMT program was designed to address two important needs within the Department. The first identified need was to provide a bachelor’s degree opportunity to a large number of pre-major students unable to gain admission to their first-choice major primarily due to space restraints. The program also seeks to address an identified workforce need for graduates educated in healthcare management (health systems management). The degree program welcomed its first students in Fall 2017 anticipating enrollment of 100 students per year. Enrollment greatly exceeded expectations and within the first year program enrollment was at nearly 700 students and current enrollment is over 1000 students. The first cohort of students graduated in Spring 2019.

Students enter into the College as a pre-major student of their designated major (i.e. pre-major public health or pre-major nursing). During their second year, students must apply to the major of their choice. The majors are limited-capacity restrictive programs with insufficient space for the large number of pre-major students that apply. The space limitation was due to restraints imposed by the accrediting agencies usually related to defined faculty-student ratios. In Fall 2014, more than 850 pre-major students were not being admitted into one of the College’s majors due to program capacity. These students are forced to reselect a college major and career path. The BS HSMT was designed to meet the needs of this population of students who seek careers in the health and human services fields, but whom many are unable to matriculate into their first-choice major. The BS HSMT is unrestricted, allowing interested students to declare the major without an application process.

**Statement of the Problem**

While assessment components are weaved throughout the program a comprehensive program evaluation had not been conducted to understand the program’s effectiveness. The
program had been very successful in recruiting students to enter the major. However, the extent to which the program was contributing to academic success for the students or preparing them for work in the health systems management workforce was unexplored. While success can be measured in different ways, for the purpose of this evaluation study, college success was defined by graduating high percentages of students within specific time periods (time to degree) and alumni attainment of careers in the field of study. Of specific interest were the diverse subgroups of students and their unique experiences. The subgroups explored include the high number of students required to reselect a major after being denied admission to their preferred major as well as varied student groups including first generation students, transfer students, English as a second language students, students who are parents, students with disabilities, working students, and students from lower socioeconomic status. The experiences of students from different races/ethnicities, ages, and genders were explored. This evaluation study examined program components, early program outcomes, and student perceptions about the program in order to understand the program’s effectiveness in serving these student populations.

During the Spring 2020 semester, the program was unexpectedly moved to a fully-online format due to the COVID-19 pandemic. A program evaluation following this type of transition must account for the changing student experience. Therefore, the evaluation study also examined the student experience surrounding the changes associated with the COVID-19 pandemic, with specific interest in how the pandemic affected challenges and barriers that existed before the pandemic.

**Purpose**

“The most important purpose of evaluation is not to prove, but to improve” (Stufflebeam, 2000, p. 283). A formative evaluation’s intended purpose is program improvement and
optimizing program effectiveness (Scriven, 1981). The purpose of this formative evaluation was to explore the effectiveness of the BS HSMT to support students to graduation within defined time periods and to a career in their alternative-choice major field (health systems management) through gathering information to support program improvement.

**Evaluation Questions**

This evaluation is guided by the following questions:

1. What barriers do BS HSMT students face in completing the program?
2. What are programmatic strategies the BS HSMT program can use to support student success?
3. To what extent has the disruption of the COVID-19 pandemic exacerbated barriers for BS HSMT students?

**Evaluation Design**

This formative evaluation was conducted using a decision-oriented evaluation approach. Decision-oriented approaches are one of four categories of orientation for evaluation approaches: comprehensive judgements of the quality of the program, focus on the characteristics of the program, focus on decisions to be made about the program, and participation of stakeholders (Fitzpatrick et al., 2011). Decision-oriented approaches were designed to meet the needs of the decision makers, such as program administrators, in order for the evaluation to be most effective and to encourage utilization of the results (Fitzpatrick et al., 2011).

The specific management-oriented model for this evaluation was Daniel Stufflebeam’s CIPP Evaluation Model (2000). Stufflebeam describes the CIPP Model as a systems approach with four core concepts: context, input, process, and product evaluation; he describes these concepts as:
Context Evaluations assess needs, problems, and opportunities as bases for defining goals and priorities and judging the significance of outcomes. Input evaluations assess alternative approaches to meeting needs as a means of planning programs and allocating resources. Process evaluations assess the implementation of plans to guide activities and later to help explain outcomes. Product evaluations identify intended and unintended outcomes both to help keep the process on track and to determine effectiveness. (p. 279)

The CIPP Model was originally designed to provide information for decision making and was considered a proactive approach to evaluation. However, in the 1970s Stufflebeam began to also describe the CIPP model as a method of accountability of those decisions, thus a retroactive approach to evaluation (Stufflebeam, 1971). Today, the CIPP Model can be used during difference stages of program development and implementation. It can be used to assist with planning a program or it can be used to assess a program’s outcomes. Stufflebeam (2000, pg. 304) states, “a study can justifiably be retrospective, prospective, or both.” For this evaluation, the CIPP Model served in a primarily retrospective capacity as the program had already been developed and implemented. Early impact of the program’s effectiveness (product evaluation) was of interest in addition to a retrospective look at the program through a process evaluation.

The evaluation used qualitative and quantitative data collection and analysis. Data was collected from and about currently enrolled students and recent alumni of the program. The alumni of interest were students graduating in Spring 2019 (first cohort) through Fall 2019. Students enrolled in Spring 2020 were the students of interest. The evaluation collected data from current students and recent alumni through the use of an online survey (Qualtrics) and interviews.
The evaluation was conducted under the ethical practice guidance of the American Evaluation Association’s Guiding Principles (2018):

- **Systematic Inquiry**: Evaluators conduct data-based inquiries that are thorough, methodical, and contextually relevant.
- **Competence**: Evaluators provide skilled professional services to stakeholders.
- **Integrity**: Evaluators behave with honesty and transparency in order to ensure the integrity of the evaluation.
- **Respect for People**: Evaluators honor the dignity, well-being and self-worth of individuals and acknowledge the influence of culture within and across groups.
- **Common Good and Equity**: Evaluators strive to contribute to the common good and advancement of an equitable and just society. (p. 1)

**Stakeholders and Audience**

Because of the underlying tenet that evaluation is meant to improve, the role of the stakeholders is vital to the success of an evaluation using the CIPP Model. For this evaluation, two primary stakeholders were identified. The first was the Department Chair. The Department Chair was in the role of chair during the approval and initial implementation of the program. The Chair was the key faculty responsible for the submission of the prospectus to the Southern Association of Colleges and Schools Commission on Colleges. The second key faculty is the Program Director of the BS HSMT program. The Department Chair and the Program Director moved into new roles near the end of the evaluation. They continue to teach in the program and contribute to decision-making about the future of the program. The audience for the evaluation includes the aforementioned stakeholders, faculty, instructors, and staff within the department.
Significance of the Study

The evaluation aims to provide information to be used by program administrators (stakeholders) in programmatic decision-making. The information will serve as guidance in improving the BS HSMT program’s ability to support students towards graduation and prepare students for entry into the workplace. The results may also be used to define recommendations for other programs (current or future) within the department.

Limitations and Delimitations

The limitations of the study included the number of students and alumni willing to participate in the data collection (self-selection bias), the accuracy of the self-reported data, the quality of the student management system’s data, and the evaluator’s access to students and data needed to complete the evaluation. The statistically significant difference between the larger proportion of participants in the study identifying as White/Caucasian than in the program population was an additional limitation.

The delimitations of the study were the students enrolled in the BS HSMT program (Spring 2020) and recent alumni (graduates from Spring 2019 – Fall 2019) of the BS HSMT program at the defined university, and the CIPP Evaluation Model. The CIPP model establishes the boundaries of the evaluation, including the topics of interest.

Definition of Terms

In this evaluation study, terms are defined as the following:

- Alternative-choice major – This term refers to the major students select once they are denied admission to their preferred major.
• Involuntary major-reselection – This term refers to the event of being required to select a new major because of denied admission or lack of competitiveness to the preferred/first-choice major.

• Limited-capacity major/program – This term refers to college majors/programs that must limit acceptance and enrollment to the program due to limited program capacity often because of accreditation-defined faculty-to-student ratios. This term is interchangeable with selective or restrictive major.

• Major reselection – This term refers to the event of changing from one major to another.

• Preferred or First-choice major – This term refers to the student’s first choice major or the major of their choice (i.e. nursing for the pre-nursing student or public health for the pre-public health student).

• Retention – This term refers to maintaining student enrollment in college.

• Stakeholders – “Those persons who are intended to use the findings, persons who may otherwise be affected by the evaluation, and those expected to contribute to the evaluation” (Stufflebeam, 2000).

• Time to degree – This term refers to the time it takes to complete a bachelor’s degree.

Organization of the Study

This evaluation study worked closely with program stakeholders utilizing the CIPP Evaluation Model to determine the effectiveness of the BS HSMT program to support students to graduation and into their career in the health systems management field. Of particular interest was the program’s effectiveness at meeting the needs of a diverse student population. This includes students who were required to reselect a college major after being denied admission to their preferred major (involuntary major reselection), transfer students, first generation students,
students with disabilities, students who work or parent, students who speak English as a second language, students from lower socioeconomic backgrounds, as well as students of different races/ethnicities, genders, and ages.

Summary

Chapter 1 has provided the study background, problem, purpose, and significance. Additionally, Chapter 1 reviewed the evaluation design (CIPP Evaluation Model) and definitions of terms important during this evaluation study. Chapter 2 will offer a review of the literature on topics pertinent to the understanding of this evaluation including student success, major reselection, involuntary major-reselection, and program evaluation using the CIPP Evaluation Model. Chapter 3 will describe the methods for conducting the study. Results and discussion of the findings will follow.
Chapter 2: Literature Review

The purpose of this formative evaluation was to explore the effectiveness of the BS HSMT program to support students towards graduation and a career in health systems management. The evaluation includes an exploration of students who were required to reselect a major after being denied admission to their preferred major. Of concern are measures of success such as the graduation rate, time to graduation, and achievement of a job in the field. The overarching purpose of the evaluation was to provide information for program improvement.

This chapter is a review of the literature pertinent to understanding the problem and the context of the evaluation. This review will explore what is known about major selection and reselection and students who are required to reselect a major after a denial of admission (involuntary major-reselection). It will also explore what is known about advising and programming for this group. Finally, the review will explore program evaluation with the use of the CIPP model for educational programs in higher education.

Approach

This literature review is aimed at understanding students required to involuntarily reselect a college major and the academic programs supporting those students. The sources used for this literature review were ERIC (EBSCOhost), Education Source, Google Scholar, NACADA, ProQuest, and SAGE. The key descriptive terms included college success, student success, college major change, major reselection, major changers, persistence in major, selective majors, competitive majors, limited-capacity majors, alternative advising, major selection, and CIPP
Model program evaluation. Text located included books, dissertations, and peer-reviewed journal articles relevant to the topic and written in English.

The literature review is structured through an inverted pyramid design to give a frame of student success followed by an understanding of the broad area of college-major selection (initial major choice-making) followed by the phenomenon of major reselection. From there the review explores the limited research available about the group of students who are required to reselect a college major (involuntary major-reselection). An understanding of specific advising needs and institutional programming to support the involuntary major-reselection students are provided.

Additionally, theoretical frameworks relevant to both student success and college major selection are discussed. While this evaluation was conducted using Stufflebeam’s CIPP Evaluation Model (1984) as a framework, a broad understanding of the theories that guide research into student success and college major selection are important to survey question development, analysis of the results, and offering recommendations to the program.

**Student Success**

This evaluation used graduation rate, time to degree, and job attainment as indicators of success and it will explore student perceptions about program attributes contributing to success. Definitions that equate student success with desired outcomes (graduation and job attainment) are productivity centered and are common in government initiatives including higher education where accountability (evidence that investments produce desired outcomes) is valued (Grites et al., 2016). It is important to clarify that the literature related to student success and college success is vast and complex. This review does not attempt to cover the breadth of the field. However, to frame the review it is important to understand student success from a broad perspective. Much of this overview of student success literature is based on work by Pascarella
and Tereninzi’s two volumes of *How College Affects Students* (1991, 2005). Their work is considered the “definitive source on the impact of college on student outcomes” (Kuh et al., 2006, p. 75). Mayhew et al. (2016) built on the previous works by Pascarella and Terenzini and reviewed thousands of studies for the third edition of *How College Affects Students* to draw some conclusions important to this review.

Some factors positively associated with educational attainment (graduation from a bachelor’s degree program) include student behaviors such as starting at a four-year school and staying there as well as institutional factors, such as more selective enrollment criteria and lower faculty-to-student ratios. One area consistently showing a positive association with graduation is social connection, such as student relationships and friendships with peers. The greatest predictor of success is student academic achievement, their grades, even when accounting for the numerous other areas that can affect grades. Financial resources and overall higher institutional expenditures (such as additional funds for faculty and teaching) are also positively related to graduation in four-year schools (Mayhew et al., 2016).

Higher education program characteristics may affect educational attainment. Mayhew et al. (2016) report research around broad areas of programmatic interventions including remedial/developmental classes, first-year seminars/experiences, student support services (including advising, tutoring, mentoring, disability services, and supplemental education), student learning communities, and interactions with faculty with mixed results, ranging from not showing a significant relationship to showing a modest positive relationship. Overall, social and academic integration increases retention and graduation. Student involvement in student organizations, athletics, and attending college full time are associated with increased college retention and graduation rates (Mayhew et al., 2016). Financial aid is another well-researched
area with mixed results; however, most studies find receiving financial aid, especially scholarships and grants, has a positive impact on educational attainment (Mayhew et al., 2016; Millea et al., 2018).

Five required conditions are necessary at the institution level for student success (Tinto & Pusser, 2006). The most important condition is an institutional commitment to the goal of increasing student success, especially for higher-risk students, which includes dedication of resources. The second condition is a culture of setting high expectations for student success for all students and including formal advising for all students, especially those who are undecided about their major or change their major. The third condition is student support in the areas of academics, social life, and finances. The fourth condition is monitoring and feedback for students on their performance. This feedback can include classroom assessments, early monitoring systems, and the use of portfolios. The final condition is involvement both in academics and social settings. Tinto (2012) later reiterated his position on the importance of the institution’s role in student success through the development of the Framework for Institutional Action. The framework will be discussed in more detail in the theoretical-framework section below.

Some factors not related to graduation outcomes include institutional size nor whether the institution is public or private (Mayhew et al., 2016). Another area with little to no effect on success is performance-based funding. Performance-based funding uses institutions’ six-year graduation rates to determine the level of funding support for state institutions. It was implemented to encourage universities and colleges to improve graduation rates. Tandberg and Hillman (2014) reviewed 20 states that implemented performance-based funding between 1990 and 2010. They found no significant improvement in completion of bachelor’s degrees in the early years. However, beginning at the seventh year post-implementation small improvements
were noted. Thus, it is possible that with continued use states may begin to see improved graduation outcomes.

There are many obstacles affecting a student’s timely progression to graduation. The obstacles create problems despite the majority of students’ intentions to graduate on time. The most common obstacle perceived by students is limited course availability. Other obstacles states by students include personal issues, difficulty selecting a major, and changing one’s major (Moore & Tan, 2018). One area consistently shown to have a negative effect on graduation is student employment and the negative effect increases as students work more hours each week (Mayhew et al., 2016).

Students from various demographic groups enter college at a statistical disadvantage for progressing to graduation, making them vulnerable to leaving college before completing their degree. For example, first-generation students are less likely to complete their degree because of various reasons including pre-college characteristics, and social and academic challenges (Woosley & Shepler, 2011). Students who are both low income and first-generation are four times more likely to leave college after the first year (Engle & Tinto, 2008). The National Center for Educational Statistics (2017a) report a significant gap in graduation rates for students of different ethnicities. Overall, the six-year graduation rate for all four-year institutions in the U.S. was 59.8 with 63.9 for White, 39.5 for Black, 53.6 for Hispanic, 72.3 for Asian/Pacific Islander, and 38.8 for American Indian/Alaska Native students.

The literature related to the impacts of college on a student’s future career is also vast and varied. For this review, it is important to understand the benefits of obtaining a college degree as well as programming available to assist college students towards successful careers. Mayhew et al. (2016) provide a thorough overview of the historical and recent literature in this area.
Postsecondary education “benefits include improved likelihood of employment, greater opportunity to work more hours, higher growth in occupational status among bachelor’s degree holders, increased probability of overall job satisfaction, and significantly higher earnings and private rates of return” (Mayhew et al., 2016, p. 478). Overall, Mayhew et al. (2016) made several conclusions about the effects of college on career development, employment outcomes, and earnings. For career development, the authors conclude career-oriented courses are important to influencing developmental outcomes including career decidedness, retention, and graduation. Their review found an important role for faculty interaction with students for career preparation. There is varied evidence concluding whether social involvement and extracurricular involvement positively affect areas of career development.

College-major selection is important to a student’s employment outcomes, with majors teaching general skills having a higher likelihood of career mismatch and majors with specific or applied skills having the lowest likelihood of mismatch (Mayhew et al., 2016). College major is not significantly related to overall job satisfaction, and the relationship that does exist is mediated by job earnings. College majors producing the highest earnings are majors with “a well-defined body of content knowledge, center on quantitative or scientific skills, and have a direct functional alignment with specific occupations” (Mayhew et al., 2016, p. 482). The difference between high-earning majors and low-earning majors can be as high as 50%, have remained stable over many years, and may increase with career seniority. A student’s GPA in college has a small positive effect on earnings and working while in college has a significant positive effect (Mayhew et al., 2016).

Three broad categories of factors that relate to student retention and graduation rates: institutional factors, student attributes, and financial concerns (Millea et al., 2018). The literature
on student success in these three areas was presented in this chapter. While no one factor or category of factors guarantees student success, much is known about student success. This review provides a broad overview of success to frame the discussion around involuntary major-reselection.

Theoretical Frameworks Relevant to Student Success

Theoretical frameworks for student success come from various perspectives including sociological, organizational, psychological, cultural, and economic (Kuh et al., 2006). “No one theoretical perspective is comprehensive enough to account for all the factors that influence student success in college” (Kuh et al., 2006, p. 16). This review will briefly introduce the most widely cited theories relevant to student success: Tinto’s Theory of Departure (1975), and Tinto’s Framework for Institutional Action (2012).

In 1975, Tinto proposed students drop out of college because of a lack of quality in their academic and social experiences leading to lack of integration into college life: “Given individual characteristics, prior experiences and commitments…it is the individual’s integration into the academic and social systems of the college that directly relates to his continuance in that college” (Tinto, 1975, p. 96). Tinto (1975) viewed leaving college as a process that occurs based on interactions between the student and the institution’s systems. Tinto (1993) proposed students need to move through three stages to integrate into college and he describes the three stages for higher education as separation from past communities (families, high school, etc.), transition between communities, and incorporation into college community.

The theory was revised for Tinto’s book *Leaving College: Rethinking the Causes and Cures of Student Attrition* (1987, 1993). Newer editions of the theory added concepts of intentions and external commitments (Tinto, 1993). Tinto (1993) found that uncertainty about
educational intentions is common through the process and is a regular part of development. Students also have many external commitments (work, family, health, etc.) they must balance and those commitments can alter the student’s intentions. Tinto addressed application of the theory to non-traditional students, students of color, four-year colleges, and two-year colleges.

Tinto’s Framework for Institutional Action was later developed to emphasize the importance of the institution’s role in student success (Tinto, 2012). Tinto (2012) places the classroom at the center of importance, thus success starts in the classroom. Sequencing of classes that build success from one class to the next, student pathways to graduation, and faculty skills and knowledge to engage students’ experiences lead to student success. Due to the importance of faculty’s role, Tinto recommends strong faculty professional development and onboarding to train faculty to help students succeed. Tinto’s framework recommends actions institutions should do such as access student experience, invest in program development, establish early warning systems, and provide academic advising to all students including those who change majors (Tinto, 2012).

**College Major Selection**

**Initial selection.** Selecting a college major is an important aspect of higher education and has long-term effects on a student’s career path. Students entering college may or may not have decided on a college major; however, all students must eventually choose a major in order to successfully progress in higher education. Multiple factors affect college major selection and when it occurs. Research has found connections between selection of college major and student personality and political views (Porter & Umbach, 2006; Austin, 1993), economic factors (Montmarquette et al., 2002) and person-environment fit (Holland, 1973; Porter & Umbach, 2006).
Students who are undecided upon entering college were found to frequently fall into one of two categories: tentatively undecided or developmentally undecided (Gordon, 2007). Tentatively undecided students are ready to decide and feel comfortable in their place in the process. Developmentally undecided students are still gathering information and will likely become decided as they mature and develop decision-making skills. There are three main reasons some students have not yet decided on a college major. They may lack information or the developmental and decision-making skills they need to make the decision. They may also have personal or social concerns leaving them feeling conflicted. For instance, a student may wish to be a teacher while their family desires them to pursue medicine or they may want to earn a high salary but they are interested in lower-paying careers/majors (Gordon, 2007).

Applying Holland’s Theory of Vocational Choice (Holland, 1973) as a framework for research on college student major choice, Porter and Umbach (2006), found personality, as described by Holland’s types, to be “extremely predicative of student major choice” (p. 445). They also corroborated Astin’s (1984) previous finding, that political orientation is a predictor of college major choice. Their study pointed to students within majors having similar political orientations and personalities. They recommend knowledge of personalities and politics as an important way to match students to a major in effort to increase student satisfaction and success. Holland developed tools to assist in this process (Porter & Umbach, 2006).

As completion of a degree in a specific major provides a pathway to a career, expected earnings of a particular college major is an important factor in college-major selection (Montmarquette et al., 2002). Montmarquette et al. (2002) define expected earnings through three areas: probability of success in the major, amount of effort to complete the major, and
expected earnings after graduation. Their findings were different based on student gender and race. Women and whites were less influenced by expected earnings than men and nonwhites.

**Reselection.** More than 75-80% of college students change their major (Gordon, 2007; National Center for Education Statistics, 2017b). Gordon (2007) categorized major changers as Drifters (students who know they need to change but have not explored their options), Closet Changers (students who make the decision to change to a new major but do not take the steps to make an official change), Externals (students who frequently change majors and ask for advice from a wide range of people), Up-tighters (students whose desired major becomes unattainable or unrealistic because of selective admissions or poor performance and they resist seeking alternatives), Experts (students who know everything and do not request help), and Systematics (students who realize initial major was the wrong choice and they seek professional assistance to reselect a major). Theophilides et al.’s (1984) often-cited longitudinal study on freshman and sophomores found students fall into categories: non-changers, early changers, late changers, and constant changers. Those categories are significantly related to the college experience.

Identifying a gap in the literature, Firmin and MacKillop (2008) led a study to explore the reasons students change their majors. Their study focused on students who changed their major multiple times to explore intrinsic and extrinsic factors around why the changes occurred. The extrinsic factors “involved a general lack of input from sources outside of the student” (Firmin & MacKillop, 2008, p. 8). The students in the study had determined they were not in the right major thus had reselected a major. They reported lack of meaningful counsel from parents; lack of information about the majors before they selected them despite the information being available to them via the college catalog, career center, and advising center; and lack or dismissal of input from sources other than their family (guidance counselors or career-inventory testing).
The intrinsic factors affecting the students’ decisions to change majors included difficulty in making decisions with long-term effects, trouble identifying a major that will be the best fit, and their lack of self-awareness.

Noting a lack of research about why students become dissatisfied with their major, Milsom and Coughlin (2015) developed The College Major Satisfaction Model to depict the process of students realizing satisfaction or dissatisfaction with their selected major. The model shows opportunities such as interaction with instructors, talking with advisors, talking with peers, internships, and class performance provide the basis for students to gain self and career awareness. Reflection on their new self-awareness and career-awareness leads to satisfaction or dissatisfaction with their selected major.

Advising major-reselection students. Students may desire major reselection as they move through college because their ideas about the major or career changes. Some initially chose a major based on extrinsic pressure and their minds change as they learn more about the major. Changing a major should not be discouraged, as it can be beneficial decision (Gordon, 2007). Research has found graduation rates are increased in students who have changed their major (Micceri, 2001; Vinet, 2016). Foraker (2016) similarly found students who change their major within the first two years or who come in as undecided and move to a major within the first two years have no negative effects on their graduation.

Academic advising plays a vital role in helping students make decisions about their college major and supporting students who are changing their majors. Halasz et al. (2012) highlight the important role advisors play for students who are changing majors through the often difficult process. They indicate advisors are often the go-to person on campus for the student. Advisors can assist students who feel rejection from their previous major and need guidance to
navigate their new major. Advisors must proactively step in to help students during the transition and Halasz et al. (2012) recommend the use of William Bridges’s Transition Model (Bridges, 2003) as a framework.

The Bridges’s Transition Model (Bridges, 2003) was adapted to academic advising to support students in the major-reselection process (Halasz et al., 2012). During phase one, Endings, academic advisors are able to help students recognize what is happening to them and acknowledge the loss. Advisors can walk students through self-reflections and prepare them for the confusion ahead of them as they move into the neutral zone. They can also point the students to available resources to move them towards a new beginning (Halasz et al., 2012).

In phase two, Neutral Zone, advisors can work with students to understand the confusion as an important part of moving through the transition. Halasz et al. (2012) recommend several ways for an advisor to help a student in the Neutral Zone: (a) encourage the student to reflect on the change’s impact; (b) encourage the student to reflect on how their past is influencing the present; (c) assist the student to symbolically mark the change from the old to the new major; and (d) help the student identify new sources of support in the new major.

Phase three, New Beginnings, of Bridges Transition Model (Bridges, 2003) is an opportunity for advisors to help students view themselves as new people with a new role. Halasz et al. (2012) recommend advisors encourage students to do something bold such as a join a club in their new major. The advisor should show the student confidence in their choice and ability in the new major. It is also helpful to encourage the student to find ways to help other students going through a college-major change. When used as a framework, advisors can understand their students’ transitions through changing majors (Halasz et al., 2012).
Thephilides et al.’s (1984) findings from their work with understanding when and why students change majors “underscore the importance of student counseling and advisement” (p. 277). Colleges and universities are responsible for making students aware of the pressures of the first two years of college. They also recommend colleges and universities assist students to deal with early discouragement that can lead them to make major-change decisions without guidance. Milsom and Coughlin’s (2015) work highlights an advisor’s role in encouraging a student to explore a variety of courses and firsthand experiences early in their program, facilitating student self-reflection, and collaborating with others on campus in support of student satisfaction with their major choice. Working with undecided students requires advisors to spend more time exploring careers and offering connections to career-exploration opportunities (Kuh et al., 2016; Milsom & Coughlin, 2015). Elliot and Elliot (1985) stress the importance of having current information available to the student at the critical time in the decision process.

Tinto (2012) states within his Framework for Institutional Action institutions should do specific advising activities (among other institutional actions) to enhance student success. Among his varied list, he concludes institutions need to provide advising to all incoming students with required developmental advising for undecided students. He also determines advising centers should be staffed by professional advisors, and students should begin with a professional advisor and then move to a faculty advisor in their chosen major. He recommends the use of technology and a separate office for advising major-reselection students.

Advising approaches must continue to evolve. In an innovative approach to advising students who are changing their majors, The University of Arizona (Kyte, 2019) applied student data analysis to identify what they called “tried-and-true” pathways. These pathways are the results of examining historical information about student major-reselection to find new majors
which are both commonly selected and allow students to continue to graduation within four years. For example, the data allowed them to show 31% of psychology majors at their university change their major and they can provide a list of the new majors students move to with a successful outcome (graduation). Based on the findings, advisors are able to assist students through major reselection as well as use the information during orientation, when helping undecided students, and while parallel planning for struggling students (Kyte, 2019).

Involuntary major-reselection. Of the students changing their college major, there is a special group of students required to do so. These students are not admitted into their preferred major and thus must involuntarily reselect a major in order to continue in pursuit of a post-secondary degree. Some of these students do not meet the academic requirements of their preferred program (specific GPA or completion of certain prerequisite coursework) while others of them meet the academic requirements but because of limited capacity within the major they are not admitted.

Limited-capacity, selective college-majors are a significant concern for higher education. In the early 1980s, Ohio State acknowledged they had thousands of students being affected due to limited-capacity, selective college-majors. Certain student groups, including pre-business or engineering majors, were more likely to experience trouble with admissions (Gordon, 1994). The California State University system considers a college major “impacted” if there are more qualified student applicants than spaces in the major (Leal, 2015). In 2015, six universities in the system were at capacity across all majors, and eight other schools had at least five majors impacted (Leal, 2015). The American Association of Colleges of Nursing (2019) reported in 2018-2019 more than 75,000 eligible applicants were denied to undergraduate and graduate nursing programs in the US.
In the earliest research on the topic, Gordon and Polson (1985) described how a growing concern about advising students who were required to reselect a major (alternative advising) was a topic of discussion at the 1983 National Academic Advising Association (NACADA) Conference. Following the conference, the NACADA Research Committee with senior author Gordon surveyed all NACADA members. NACADA members are faculty and professional advisors, counselors, student affairs personnel, and administrators of advising programs. The results of the survey were divided into large universities, medium-sized universities, small colleges and community colleges. In estimating the percentage of students at their institution in this category the majority of small colleges reported less than 10% of their students, medium-sized institutions reported 25% or less of their students needed alternative advising support. With large universities, one third reported less than 10% of their students and another third of the universities reported at least 15% of their students needed support. The results are important to understanding the prevalence (at the time) of this unique type of student.

Advising involuntary major-reselection students. Among the limited research available about students required to reselect a major after being denied admission, the focus is on advising these students and the advisors responsible for the students. Advising students through involuntary major-reselection is unique from advising voluntary major-reselection students. Advisors of these students are encouraged to assist students deal with a sense of loss and grief associated with the change (Freedman, 2017; Halasz et al., 2012; Reynolds, 2004). Freedman (2017) recommends deferring parallel planning (creating an academic back-up plan) until after addressing the grief. Halasz et al. (2012) recommend advisors rely on theories of grief and loss to support their students. Similarly, advisors must develop practices to help the students cope with “disconfirmed expectations” and prepare themselves for students’ psychological and behavioral
responses to possible feelings of disillusionment and alienation caused by the denial of admission to the preferred major (Barber, 2014, p. 153).

**Programming for involuntary major-reselection students.** To build a foundation of knowledge about what colleges and universities can do to support students who are required to reselect a major after being denied admission, Gordon and Polson (1985) examined questions from their 1983 survey. Fifty-two percent of the colleges surveyed had no office to identify these students, thus the responsibility of supporting these students fell to academic affairs, student affairs, or an advising center. Their results identified students in a business major to be the most frequently affected, with health professions, pre-professional programs, and computer sciences majors also affected. When asked about why students needed alternative advising (to assist with major reselection) 88% of respondents selected students needed it because of poor academic performance, 54% because of tightening of entry requirements, and 29% noted students being rejected from traditionally selective admissions (for example nursing, pre-med, pre-law). Twelve percent of respondents reported no services existed. Also explored in the study were existing programs for this population of students. Most students are referred to a preexisting resource such as a major without admissions criteria, but other students were referred to specially trained advisors, special academic sessions, to a credit courses designed for this group, group sessions following the rejection letters, and special workshops for academic difficulty. One other programmatic approach was to implement an early warning system to identify students having trouble earlier.

One of the first coordinated programs for students required involuntarily reselecting a major was the Academic Alternatives Advising Program at Ohio State (Gordon & Steele, 1992). Prior to the program at Ohio State “no specific advising or counseling program targeted only to
this special population has been described” (Gordon & Steele, 1992, p. 22). The Ohio program was implemented to assist the nearly 1000 students denied admissions to selective majors each year. The program included an early warning system and assignment to a new advisor who specialized in alternative advising. These special advisors were paid higher wages and trained as generalists with a strong background in student development and career counseling. They also maintained a smaller student/advisor ratio of 150:1 versus the normal ratio at Ohio State of 375:1. The program offered three main components: individual advising, group advising, and an academic alternatives course. Early evaluation of the program showed success in stabilizing students into a new major and graduation rates (Gordon & Steele, 1992).

McKenzie, Tan, Fletcher, and Jackson-Williams (2017) evaluated an advising program for students at a large research university which allowed student self-referrals to academic advising. Similar to findings from Gordon and Steele (1992), this program relies on experienced generalist-advisors trained in both career and mental health counseling who use a developmental advising approach (McKenzie et al., 2017). A developmental advising approach was first defined by Crookston (1972) as “concerned not only with a specific personal or vocational decision but also with facilitating the student’s rational processes, environmental and interpersonal interactions, behavioral awareness, and problem-solving, decision-making, and evaluation skills” (p. 12). McKenzie, et al. found students who participated in the program had higher GPAs than students in the control group. The most common reasons for major reselection were loss of interest and difficulty with courses. Being denied to the preferred major was stated by 4% of respondents (McKenzie et al., 2017).

Key findings from a recent research study seeking to understand the resources used by students transitioning from selective majors to new majors identified four key findings important
to programming for involuntary major-reselection students: support is most often from family, students perceive a lack of university support during the process, the most valuable resource is the support they receive from others, and being content at their university is most influential in their decision to remain at the university after the change (Halasz & Bloom, 2019). Halasz and Bloom (2019) developed their interview protocol based on Schlossberg’s Transition Framework’s (described below) 4 S system of support, situation, strategies, and self. Their programmatic recommendations for working with students transitioning from selective majors to a new major including: “strategize major retention, develop and strengthen family partnerships, improve the major-changing process, increase personal attention, and centralize advising for students in transition” (Halasz & Bloom, 2019, p. 83). Halasz and Bloom’s recommendation for centralized advising supports earlier programs’ (Gordon & Steele, 1992; McKenzie et al., 2017) decisions to use advising generalists to support students who are changing majors.

**Effectiveness of programming for involuntary major-reselection students.** The Alternative Advising Program at Ohio State was evaluated two years after it was implemented. The program’s purpose was to support students who were unable to remain on their degree path because of rejection/denial from a selective or oversubscribed major or because of undecidedness. The program was found to be successful in supporting sophomores and juniors to graduation and retaining them in a stable major. Students not in the program were less likely to graduate and more likely to withdraw (Steele, Kennedy, & Gordon, 1993). Steele et al. (1993) offer recommendations based on their findings, including university awareness about upper-class students in transition who need to be recognized; the authors offered a holistic approach including specialized advising and a separate advising program. Advisors to these students need
to have a broad knowledge base of many programs and alternatives, have special training, and have career counseling skills.

**Relevant Theoretical Frameworks for Major Selection and Reselection**

Selecting from the many relevant theories for research and practice in higher education, college major selection, and for advising major-reselection students, this review highlights a few of the most relevant-to-major-reselection theories. These include one for career-decision making, Holland’s Theory of Vocational Choices (Holland, 1973), and two for assisting people through transitions: Schlossberg’s Transition Theory (Gordon et al., 2006) and Bridges’s Transition Model (Bridges, 2003).

Holland’s Theory of Vocational Choice was first introduced in 1959 and is cited as the most influential model of vocational choice-making (Brown, 2002). The theory assumes human personalities are grouped into types and careers are grouped into environment types corresponding to personality types. People tend to seek and select career environments to match their personality (person-fit environments). The interaction between the personality and the environments results in human behavior (Holland, 1973). Holland offered six personality types and six environmental types (with the same names), often abbreviated as RIASEC: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional.

William Bridges’s (2003) work with organizational-change leadership is the basis for the Bridges’s Transition Model. Bridges (2003) states “it isn’t the changes that do you in, it’s the transitions. Change is situational…Transition, on the other hand, is psychological; it is a three-phase process that people go through as they internalize and come to terms with the details of the new situation that the change brings about” (p. 3). The first phase of this model is an ending and letting go of one’s old identity. This phase requires leaders to help people deal with loss. The
second phase is a neutral zone where the old is gone but the new identity isn’t yet developed. The last phase is the new beginning, where a student develops their new identity and purpose following the change (Bridges, 2003). Bridges points out that people may progress through the phases quickly or the phases may happen simultaneously.

Originally developed in 1981, Schlossberg’s Transition Framework (1984) defines a transition as “any event or non-event that results in change in relationships, routines, assumptions, and/or roles” (p. 43). Schlossberg’s Transition Framework has three components: approaching transitions, taking stock of coping resources, and taking charge (Goodman et al., 2006). During the approaching transitions phase, the type of transition, the context, and the impact of the transition need to be identified. There are three types of transitions: anticipated, unanticipated, and non-event transitions (Goodman et al., 2006).

Using the CIPP Evaluation Model to Assess Program Effectiveness

The CIPP Model, developed by Daniel Stufflebeam (2000), is described by Hintze (2018) in the SAGE Encyclopedia of Educational Research, Measurement, and Evaluation as an evaluation approach for helping program administrators make decisions. The CIPP model can be used as a framework for “formative or summative evaluations of programs, projects, personnel, products, and organizations by focusing on context, input, process, and product” (Hintze, 2018, p. 272). The CIPP Evaluation Model (Stufflebeam, 2000) has been proven to be a valuable tool for evaluating programs in higher education (for examples see: Donald, 1971; Lippe & Carter, 2017; Mirzazadeh et al., 2016; Shi, 2018; Singh, 2004). Donald (1971) applied the CIPP Model to a complex program in higher education and concluded his work “[demonstrates] the CIPP can be adapted flexibly and effectively (at least conceptually) to mission orientated organizations with complex program structures” (p. 47).
In a recent study, Harrell and Reglin (2018) used the CIPP Model to evaluate a faculty-based advising program within a community college’s nursing degree to determine if the program was effective in improving retention of students. The authors used two of the model’s components, process and product, to assess the students’ satisfaction and retention. The CIPP Model led to the development of research questions and guided data collection and analysis. High levels of student satisfaction and high retention in semesters where students were in the program were identified (Harrell & Reglin, 2018).

In an eight-year study on the redesign of an undergraduate medical program, Mirazadeh et al. (2016) specifically researched how the CIPP Model helped to manage the stakeholder’s reactions and to determine the most appropriate model to use. Following this investigation, Mirazadeh et al. recommend its use to guide all aspects of a developing education program. The authors also found the CIPP Model provided the stakeholders/decision-makers with ongoing information. Notably, Mirazadeh et al. found the CIPP model to be a time-consuming and demanding process, especially the collection and analysis of data from multiple sources.

Summary

In this chapter, literature on student success, major selection, reselection, and involuntary major-reselection was reviewed. For both voluntary and involuntary major-reselection, the literature concerning the academic advising of students undergoing major reselection was examined. Advising students for involuntary major reselection requires professional advisors with specific skills and the ability to assist students through feelings of loss after being denied from their preferred majors. This same type of advising is not required for voluntary major reselection. Programs and program effectiveness for these types of students was also discussed. Relevant theoretical frameworks for student success and major selection and reselection add
context for understanding these topics. This evaluation study utilized the CIPP Evaluation Model (Stufflebeam, 2000). Therefore, the literature supporting the use of the CIPP Evaluation Model in higher education was also reviewed.
Chapter 3: Methodology

A large public university in the southeastern portion of the United States established a new bachelor’s degree in 2017. The degree was designed to offer a non-clinical health science major as an alternative to meet the needs of a large population of pre-major students that were not admitted into their preferred major in a clinical health science field and to meet workforce development needs in the surrounding community. While very successful at recruiting students into the program (over 1,000 students had enrolled by Spring of 2019), the program administrators were unaware of the extent to which the program was effective at meeting the needs of the diverse groups of students, including the involuntary major-reselection students and the local community. This evaluation sought to understand the program and provide recommendations for program improvement. The study methodology is described in this chapter.

Choice of Method

This formative evaluation was conducted using Stufflebeam’s (2000) CIPP Evaluation Model as the framework. The CIPP Evaluation Model is a systems approach to evaluation with four core concepts: context, input, process, and product evaluation (Stufflebeam, 2000). The CIPP Evaluation Model is a decision-oriented approach designed to meet the needs of the decision makers to guide program improvement (Fitzpatrick, Sanders, & Worthen, 2011). This model was selected for its relevance to the purpose of this formative evaluation, which was to guide program improvement by exploring the effectiveness of the BS HSMT to support student graduation and career attainment in health systems management.
Context/Setting

The setting for this evaluation study was an academic program that awards the BS HSMT. One aim of the program is to provide a bachelor’s degree option to a large number of students searching for a new college major after being denied admission to their first-choice major (involuntary major-reselection). The program is housed within a department that sits in one of seven colleges of a large public university in the southeastern United States that enrolls 29,000 students.

The department gained approval to develop a new Bachelor of Science in Health Systems Management (BS HSMT) in 2016. Prior to the development of the BS HSMT, which began in Fall 2017, there were approximately 850 students facing involuntary major-reselection each year in this College. An evaluation of this program allowed a broad exploration of the students affected and the program’s contributions to their success.

Evaluator’s Positionality

As the external evaluator, I did not have any authority over the students, staff, faculty, or alumni related to this evaluation study. Access to the students, student data, program administrators, and program components was available to me through a long-standing professional relationship with the Department Chair. The CIPP Evaluation Model is designed to elicit input throughout the evaluation process from the key stakeholders (Stufflebeam, 2000). The Department Chair and a Program Director were identified as the key stakeholders for this evaluation and the relationship served as a benefit to the evaluation. In addition, my fifteen years of experience in higher education administration affords me a general understanding of the program and the higher education system in which it operates.
**Evaluation Questions**

This evaluation was guided by the following questions:

1. What barriers do BS HSMT students face in completing the program?
2. What are programmatic strategies the BS HSMT program can use to support student success?
3. To what extent has the disruption of the COVID-19 pandemic exacerbated barriers for BS HSMT students?

**Study Design**

Qualitative and quantitative data collection contributed to the evaluation assessment through the use of a web-based survey, analysis of student and alumni data, and interviews. Quantitative data gathered from university’s student management system was analyzed for demographic and descriptive information. An electronic web-based survey was used to collect quantitative and qualitative data through multiple choice, Likert-type, matrix table, and open-ended questions. Qualitative data was collected through interviews with current students and recent alumni. The study design was shared with the key stakeholders via the Evaluation Plan (Appendix A).

**Participants**

Current students and recent alumni were the target population for this evaluation. Eligible alumni graduated from the BS HSMT between Spring 2019 (the first semester the program graduated students) though Fall 2019. Eligible students were those who were enrolled in the BS HSMT in Spring 2020. The sample was limited to students enrolled in 3000-level or higher courses, indicating they were at least in their second semester of the BS HSMT coursework. All eligible participants were contacted via a text invitation to participate in the survey. The survey
introduction served as the written informed consent, assuring confidentiality and describing any risks (no known) associated with participation.

At the end of the survey, participants were invited to participate in an interview. The interviews included eligible students and alumni from the same population of participants as the survey. Individuals who agreed to participate shared their contact information and were given additional information about the logistics of the interview. All interviews were conducted remotely, via technology. Zoom and MS Teams were used. Verbal informed consent was collected from the participants before the interviews began.

**Survey Participants.** Participants composing the sample \( n = 118 \) ranged in age from 19-50 with a mean age of 23.8. Participants were more likely to be female (77%) and speak English as their primary language (91%). The participants’ self-identified racial and ethnic identities are reported in Table 1. All participants reported being in good academic standing with the university and major.

The survey participants represent diverse student populations and characteristics. The majority of participants were transfer students (62%) and have changed their major (69%). Participants included individuals that had declared a pre-major for an upper-division restricted major (34%) and of those who had declared a pre-major, 24% were denied (involuntary major-reselection students). The participants identified as first-generation students (45%), Federal Pell Grant eligible (37%), parents (13%), and diagnosed with a disability or impairment (11%). Most current students work while in the program (84%) with 30% working full-time.
Table 1

Demographics of Survey Participants with Comparison to Population and Incomplete Surveys

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<th>Students N = 64</th>
<th>Incomplete N = 116</th>
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<tr>
<td>Asian</td>
<td>11 9</td>
<td>6 11</td>
<td>5 8</td>
<td>12 10</td>
<td>145 10</td>
</tr>
<tr>
<td>Black/African American</td>
<td>28 25</td>
<td>13 23</td>
<td>15 23</td>
<td>42 39</td>
<td>481 32</td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>67 61</td>
<td>27 48</td>
<td>40 62</td>
<td>45 41</td>
<td>633 42</td>
</tr>
<tr>
<td>Other Race</td>
<td>5 6</td>
<td>3 5</td>
<td>2 2</td>
<td>9 11</td>
<td>237 17</td>
</tr>
<tr>
<td>Language</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English Not Primary Language</td>
<td>11 9</td>
<td>7 13</td>
<td>4 6</td>
<td>9 9</td>
<td>NA</td>
</tr>
<tr>
<td>Student Characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disability</td>
<td>13 11</td>
<td>5 9</td>
<td>8 13</td>
<td>5 6</td>
<td>NA</td>
</tr>
<tr>
<td>Transfer student</td>
<td>72 62</td>
<td>34 63</td>
<td>38 60</td>
<td>58 55</td>
<td>820 54</td>
</tr>
<tr>
<td>First Generation</td>
<td>53 45</td>
<td>25 46</td>
<td>28 44</td>
<td>44 43</td>
<td>NA</td>
</tr>
<tr>
<td>Pell Grant Eligible</td>
<td>44 37</td>
<td>18 33</td>
<td>26 41</td>
<td>48 47</td>
<td>NA</td>
</tr>
<tr>
<td>Parent of a Minor</td>
<td>9 8</td>
<td>1 2</td>
<td>8 13</td>
<td>7 7</td>
<td>NA</td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part-Time Student</td>
<td>NA</td>
<td>NA</td>
<td>8 13</td>
<td>10 14</td>
<td>151 14</td>
</tr>
<tr>
<td>Work Full-time</td>
<td>NA</td>
<td>NA</td>
<td>19 30</td>
<td>21 31</td>
<td>NA</td>
</tr>
<tr>
<td>Work Part-time</td>
<td>NA</td>
<td>NA</td>
<td>35 54</td>
<td>40 53</td>
<td>NA</td>
</tr>
<tr>
<td>Does Not Work</td>
<td>NA</td>
<td>NA</td>
<td>10 16</td>
<td>12 16</td>
<td>NA</td>
</tr>
<tr>
<td>Major Characteristics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Major is HSMT</td>
<td>36 31</td>
<td>8 15</td>
<td>28 44</td>
<td>24 26</td>
<td>NA</td>
</tr>
<tr>
<td>Changed Major Once</td>
<td>67 57</td>
<td>33 62</td>
<td>34 53</td>
<td>53 58</td>
<td>NA</td>
</tr>
<tr>
<td>Changed Major More</td>
<td>14 12</td>
<td>12 23</td>
<td>2 3</td>
<td>15 16</td>
<td>NA</td>
</tr>
<tr>
<td>Changed – Denied</td>
<td>14 12</td>
<td>7 15</td>
<td>3 8</td>
<td>6 9</td>
<td>NA</td>
</tr>
<tr>
<td>Changed – Not Competitive</td>
<td>22 27</td>
<td>11 26</td>
<td>10 28</td>
<td>11 16</td>
<td>NA</td>
</tr>
<tr>
<td>Declared a Pre-Major</td>
<td>40 34</td>
<td>23 44</td>
<td>17 27</td>
<td>33 38</td>
<td>NA</td>
</tr>
<tr>
<td>Denied from Pre-Major</td>
<td>10 24</td>
<td>9 38</td>
<td>1 6</td>
<td>10 34</td>
<td>NA</td>
</tr>
</tbody>
</table>

Note. Significant differences in column proportions are identified in bold.
Involuntary major-reselection. The HSMT program was designed to provide a bachelor’s degree opportunity to a large number of pre-major students unable to gain admission to their first-choice major. These students were identified in this evaluation through responses to a series of questions about major selection. First, participants were asked if HSMT was their first major. The majority of students had changed their major (69%) with 57% changing their major once and 12% changing their major more than once. Examples of first majors included Public Health, Exercise Science, Biology, Chemistry, Social Work, and Pre-Nursing. When asked why they changed their major 12% responded they had not been admitted and 27% indicated their grades were not competitive for their first-choice major. Therefore, 39% of major changers in this evaluation sample are involuntary major-changers and 27% of the overall participants in this sample are involuntary major-changers. Next, on a more specific question, 34% of survey participants indicated they had declared a pre-major for an upper-division restricted major. Examples of pre-majors included Pre-Nursing, Pre-Public Health, and Pre-Kinesiology. That group of participants was asked if they were admitted or denied to the upper-division restricted major with 24% being denied and 49% did not apply. Those denied from upper-division restricted majors, with involuntary major-reselection experience, make up 8% of the sample. Those who chose not to apply for the upper division of their first-choice restricted major comprised 17% of the sample. Both groups of involuntary-major changers (denied or not competitive for their first-choice major and denied from a pre-major in a restricted major) are included in the study findings.

Comparison of Survey Sample to Population and Incomplete Surveys. The survey sample was composed of participants that agreed to participate and fully completed the survey (n = 118). This sample was compared to the population of students and alumni in the university’s
database and the participants that agreed to participate but did not fully complete the survey (n = 116). Crosstabs, Pearson Chi Squared and the test of column proportions (z-test) were used to explore any potential relationships between the demographics of one category of data with the demographics of another. (Significant findings are noted in Table 1). There was a statistically significant relationship with race (p < .001) identified with the chi-square tests. Subsequently, the z-test identified there to be a significantly greater proportion of White/Caucasian participants between the survey sample (61%) and the population (42%). There was also a significantly greater proportion of participants identifying as one of the categories condensed into “other” in the population (17%) than in the study sample (6%). Additional categories that were assessed include age, gender, ethnicity, transfer status. No significant relationships or discernable differences in proportions were identified.

The sample of participants who completed the survey (the survey sample used for this evaluation) was compared to the participants who do not complete the survey. A statistically significant relationship (p = .028) existed with race. There was a significantly higher proportion of complete-survey respondents identifying as white (61%) as incomplete-survey respondents identifying as white (41%). A significantly higher proportion of incomplete-survey respondents identified as Black or African American (39%) than completed-survey respondents identified as Black or African American (25%). A significant relationship between completed and incomplete surveys existed with generation in college (p = .04). There was a significantly greater proportion of participants who had been denied from their first-choice major in the completed surveys (sample) than in the incomplete surveys. No significant relationships or discernable differences in proportions were identified in the other demographic categories, nor participants who changed majors, declared a pre-major, nor whether they were denied or admitted to the pre-major.
Alumni and Student Databases

The university maintains student and alumni databases with information about demographics, transfer status, previous majors, time to graduation, and other key pieces of student academic information. I requested the data from the key stakeholder to compare the survey sample with the population of students and alumni from the HSMT program. The key stakeholder provided de-identified data via Excel spreadsheets for analysis. Analysis were completed using SPSS (software). Results of the comparison are discussed below.

Survey

The CIPP Evaluation Model (Stufflebeam, 2000), as well as an understanding of theories associated with student success, guided development of survey questions in order to address the broad evaluation questions. The questions assessed demographic information, program evaluation, barriers and support, the impact of the COVID-19 pandemic, and career readiness from current students and alumni. The survey was developed with Qualtrics (2020), a web-based survey tool. Recommendations and best practices in survey development from the Tailored Design Method were incorporated (Dillman, Smyth, & Christian, 2014). Specifically, many of the 32 Guidelines for Designing Web and Mobile Questions including recommendations such as offering a questionnaire designed for use on mobile phones, not requiring responses unless absolutely necessary, and obtaining expert review and cognitive interviews to pilot the survey were implemented (Dillman, Smyth, & Christian, 2014)

The survey was pretested for clarity, ease of use, and understanding of the questions. The survey was pilot tested with a group of students ($n = 31$) enrolled in an entry-level health science course. Details of the pretest and pilot test are available in Appendix B. Edits and improvements
were made to finalize the survey for use in the evaluation. The final survey is available in Appendix C.

The evaluation survey was available to participants on their cell phone or through any electronic device with web access. The survey had questions that are common to both alumni and current students as well as a subset of questions for each group. Multiple choice questions, Likert-scale statements, and open-ended questions are included. The survey obtained Informed Consent from each participant prior to beginning the questioning.

Analysis of data collected via the survey was completed using the Qualtrics reporting and analysis tools. Analysis of the multiple-choice and Likert-Scale questions resulted in quantifiable descriptive information. Crosstabs and chi-squared statistics were used in the analysis. The open-ended survey questions were qualitatively analyzed using the text coding tools within Qualtrics. Deductive and inductive coding (a codebook was created) was used to identify themes within the data relevant to the program evaluation (Grbich, 2013).

**Interviews**

Interviewing is a qualitative research method using talk instead of written data to gather insights and understanding from the participants to answer research questions (Roulston, 2010). Interviews were used in this evaluation to supplement the information obtained during the surveys and to gain a deeper understanding of the participants’ experiences. Semi-structured interviews (Roulston, 2010) were conducted with current students and recent alumni. Semi-structured interviews were conducted using an interview guide with broad open-ended questions. The interviewer used the guide to structure the interview, but also used probing follow-up questions based on the responses received. Verbal informed-consent was obtained prior to starting the interviews. Data gathered during the survey aided in the development of the
interview questions. The interviews consisted of broad questions to gain an understanding of the perceptions of the students/alumni. The interviews were recorded via Zoom or MS Teams and the recordings were transcribed by My Kultara MediaSpace Video Portal (software). The transcripts were reviewed against the interview recordings for accuracy. The recordings and transcriptions were secured and remain confidential. The transcriptions were analyzed using qualitative data analysis software MAXQDA 2020 (software) using deductive and inductive coding. Through thematic analysis, themes were identified relevant to the program evaluation.

Summary

In this chapter, the methods used in the formative evaluation of an undergraduate degree program were described. Stufflebeam’s (2000) CIPP Evaluation Model served as the conceptual framework. The evaluation questions described in this chapter were answered with quantitative and qualitative data in concordance with the CIPP Evaluation Model and the methods described within, including a survey, individual interviews, and analysis of data in the student and alumni databases. Results from the data analysis helped to make recommendations for program improvement.
Chapter 4: Evaluation Findings

This formative evaluation of the Health Systems Management undergraduate degree program was designed to provide the key stakeholders with program-improvement guidance. To answer the evaluation questions, an online survey and semi-structured interviews were conducted following a logic model as the structural guide. The data analysis is presented based upon the following evaluation questions:

1. What barriers do BS HSMT students face in completing the program?
2. What are programmatic strategies the BS HSMT can use to support student success?
3. To what extent has the disruption of the COVID-19 pandemic exacerbated barriers for BS HSMT students?

Survey

The survey was completed online through Qualtrics. The link to the survey was sent via the university’s text messaging system via the program’s Department Chair. The program had prior success using the text messaging system as the students’ preferred method of contact. The Department Chair (key stakeholder) sent the initial message to students and alumni with a brief message encouraging participation and included the survey link. Following the Tailored Design Method (Dillman, Smyth, & Christian, 2014) for online surveys, two follow-up reminder texts were sent, each one week apart. The messages on the reminders varied each time.

Survey Response. The survey invitation was sent to 1,223 potential participants on three separate occasions at one week intervals. This number of participants included 947 students enrolled in the Spring 2020 semester and 276 program alumni who graduated from Spring 2019
(the first semester with program graduates) through Fall 2019. The total number of survey participants was 234 and the response rate for the survey was 19%. Survey responses are presented in Table 2. The response rate percentage includes participants that responded to at least one survey question. The number of fully complete surveys was 118 with 54 alumni participants and 64 student participants.

**Table 2**

*Survey Responses*

<table>
<thead>
<tr>
<th>Responses</th>
<th>N</th>
<th>% Responses</th>
<th>% of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>234</td>
<td>-</td>
<td>19</td>
</tr>
<tr>
<td>Fully Complete</td>
<td>118</td>
<td>50</td>
<td>10</td>
</tr>
<tr>
<td>Alumni</td>
<td>80</td>
<td>-</td>
<td>29</td>
</tr>
<tr>
<td>Alumni Fully Complete</td>
<td>54</td>
<td>68</td>
<td>20</td>
</tr>
<tr>
<td>Student Responses</td>
<td>137</td>
<td>-</td>
<td>14</td>
</tr>
<tr>
<td>Student Fully Complete</td>
<td>64</td>
<td>47</td>
<td>7</td>
</tr>
</tbody>
</table>

**Incomplete Surveys.** The survey had a high percentage (50%) of incomplete responses. Five participants only responded yes to agreeing to participate and did not move forward. Most participants of incomplete surveys completed less than half of the questions (72%). Responses from incomplete surveys were not analyzed for the survey’s quantifiable questions. However, responses to open-ended survey questions were included in the qualitative analysis.

**Survey Results**

The results of the survey’s multiple choice, Likert-scale, and open-ended questions are presented below. The questions were developed based on Logic Model (Appendix D) with
questions addressing inputs, activities, outputs, and outcomes. The impact of the program was not assessed, as it is beyond the scope of this evaluation. The evaluation focused on the student experience; therefore, the key inputs are the students in the program.

This section of the chapter describes results from the activities, outputs, and outcomes levels of the Logic Model. Activities include assessment of advising, the applied-learning opportunities, the professional development opportunities, and the curriculum. The survey did not include questions about the courses or quality of teaching. The outputs include the level of support students feel, their professional/career skill development, and progression towards the degree. Finally, the outcomes results explore graduation within a 6-year time period, attainment of a job, and career-readiness. General experiences with the program are discussed first to establish an overall viewpoint, and the students’ unique experience facing the coronavirus pandemic will conclude the section.

**General/Overall.** Three Likert scale survey questions provided a broad view of the participants’ overall experiences with the HSMT program. A visual representation of the finding are presented in Figure 1. In response to “How happy are you that you made the decision to major in HSMT”, the majority of participants replied that they are extremely happy (36%) or somewhat happy (37%). Smaller percentages of participants responded that they were extremely unhappy (6%) or somewhat unhappy (9%). Eleven percent of responses were neither happy nor unhappy.
Participants were asked in an open-ended comment boxes why they chose the HSMT major. Many reasons were identified with the most common theme being the major will help them reach a career goal or career interest with 46 responses such as “I would like to work in the administrative field of healthcare post graduation,” “best fit for career,” and “I thought it would correlate well with my career choice.” Other common responses were that the major is in a healthcare-related field (25 responses) and more specifically, the major was a non-clinical healthcare-related option (25 responses). Accordingly, participant comments addressed these non-clinical facets of healthcare including comments such as “I enjoy the management side of healthcare rather than the clinical” and “[HMST] gave me the opportunity to be in healthcare but not on the clinical side.” There were four additional response themes noted. Responses such as “I want to help people. I also find the major interesting” noted the idea that HSMT is an interesting field (18 responses). Another theme found students selected HSMT because they
were unsuccessful with their first-choice major (14 responses). An example of a comment with this theme was “I thought it would be a great option for me. I wanted to work in a hospital setting but I didn’t get accepted into the nursing program so I felt like this would be a great option for me.” Participants selected HSMT because of their desire to help people (9 responses) with responses such as “I want to have knowledge useful for me to help people in the world.” The final theme for this area was that the HSMT major offered many job opportunities in the field (8 responses), with responses such as “more job opportunities after college.”

Replies to “How satisfied are you OVERALL with your experience in the HSMT program so far?” for students and “How satisfied were you OVERALL with your experience in the HSMT program?” for alumni were commonly positive replies. Most participants were extremely satisfied or somewhat satisfied. However, 19% of participants responded they are somewhat unsatisfied and 8% indicated they are extremely unsatisfied. Eight percent of participants were neither satisfied nor unsatisfied. Findings are presented in Figure 2.

Figure 2

*Overall Satisfaction with the HSMT Program*
Participants were asked “How could the HSMT program improve your experience?” Participants cited internships (27 responses) as the best way to improve their experience, “provide an internship versus a capstone course” and “Requiring/encouraging an internship to get our foot in the door with some experience. It would have helped after graduation to have a possibly job opportunity or at least some experience.” The second most common theme was that having better faculty would improve the experience (22 responses), “Additionally, professors could have been more prepared with teaching the curriculum,” “better teacher,” and “more involved faculty.” Three additional response themes from the participants included providing career assistance (12 responses), offering harder/more in-depth classes (12 responses), and offering hands-on real-world experiences (8 responses).

The majority of participants (77%) indicated that they would recommend the HSMT program to their friends and colleagues. In contrast, 18% of participants would probably not recommend the program and 6% would definitely not recommend the program. Of the positive recommendations, 41% would definitely recommend the program and 36% would probably recommend the program.

Figure 3
Recommend HSMT Program to a Colleague or Friend
Activities - Program Aspects. A Likert scale survey tool was used to assess the activities listed in the Logic Model by exploring the helpfulness of various aspects of the HSMT program. There were eight program aspects reviewed as extremely helpful, somewhat helpful, neither helpful nor unhelpful, somewhat unhelpful, and extremely unhelpful. Findings are reported in Table 3. All program aspects were more likely to be rated as helpful (including extremely helpful and somewhat helpful) than as unhelpful (including extremely unhelpful and somewhat unhelpful), with the exception of group advising. Participants found group advising to be neither helpful nor unhelpful or responded as not applicable. (Group advising was a new aspect of the program.) The most helpful aspect of the program was identified as interaction with diverse groups of people. Opportunities to learn outside of the classroom had mixed reviews as 40% of participants indicated it is helpful, but 31% found it unhelpful. An open-ended question asked current students if there are other aspects of the program that are helpful to student success. The participant responses varied, with several themes emerging. The most common replies were about the helpfulness of the professors (13 responses). Participants shared several examples of how professors were supportive, including “The professors and their devotion to helping students to be successful” and “Most of the professors are very experienced and know what they’re talking about. They’re also happy to help us succeed.” Another helpful area identified was good communication (6 responses). Participants commented on good communication with comments such as “Having a phone call with one of my professors at the beginning of the semester was great. To have a one on one conversation as to who they were and the career itself” and “receiving emails about jobs and internships.” Connection between students or between students and faculty was another theme (5 comments). One participant commented, “The other students inside the major became close friends of mine and we helped
each other stay on top of due dates and encouraged each other to keep moving forward to get our degrees.” Another participant commented on the relationships forged in the program: “I like how we have discussion groups that can help us reach out to other HSMT students and make study groups. We also have older HSMT majors that are “peer advisors” helping you choose what class works with the other, getting it from a student perceptive which I find more helpful.”

**Table 3**

*Helpfulness of HSMT Program Aspects*

<table>
<thead>
<tr>
<th>Program Aspect</th>
<th>Extremely helpful</th>
<th>Somewhat helpful</th>
<th>Neither helpful nor unhelpful</th>
<th>Somewhat unhelpful</th>
<th>Extremely unhelpful</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Advising</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Group Advising</td>
<td>35</td>
<td>30</td>
<td>40</td>
<td>34</td>
<td>20</td>
<td>17</td>
</tr>
<tr>
<td>Interaction with Faculty</td>
<td>18</td>
<td>16</td>
<td>19</td>
<td>16</td>
<td>32</td>
<td>28</td>
</tr>
<tr>
<td>Professional Development/Career Training</td>
<td>27</td>
<td>23</td>
<td>52</td>
<td>45</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>Opportunities to Learn OUTSIDE of the Classroom</td>
<td>29</td>
<td>25</td>
<td>37</td>
<td>32</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td>Opportunities to Apply Learning to Real-World Issues</td>
<td>22</td>
<td>19</td>
<td>24</td>
<td>21</td>
<td>21</td>
<td>18</td>
</tr>
<tr>
<td>Health Systems Management Student Organization</td>
<td>37</td>
<td>31</td>
<td>35</td>
<td>30</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Interaction with Diverse Groups of People</td>
<td>46</td>
<td>39</td>
<td>36</td>
<td>31</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>Health Systems Management Student Organization</td>
<td>25</td>
<td>21</td>
<td>22</td>
<td>19</td>
<td>26</td>
<td>22</td>
</tr>
</tbody>
</table>
**Output - Program Goals.** One area of the Logic Model’s outputs explored five HSMT program goals (identified by the key stakeholders) with the survey questions “To what extent do you feel your experience in the HSMT contributed to your growth or development in each of the following areas: 1) Your ability to communicate effectively in writing; 2) Your ability to communicate effectively orally (verbally); 3) Your ability to work well in teams; 4) Your ability to think critically; and 5) Your ability to effectively lead a team.” While 5 – 9% of participants reported that the HSMT program did not contribute to their growth or development in each of the goals, the majority of participants replied that the program contributed *a lot or a great deal* to their growth and development in each goal (see Figure 4 for responses).

![Program Contributions to Growth in Program Goals](image)

**Figure 4**

_Extent the HSMT Program Contributed to Growth in the Program Goals_
Output - Barriers to Graduation. With an open-ended question, the survey queried students to identify any barriers to graduation. Barriers are closely related to successful progression towards degree (a Logic Model output). For this question, the responses of none and not applicable were combined as they carry the same meaning. Together, none and not applicable were responsible for the majority of responses (77 responses). The second theme identified was the class scheduling with 11 responses such as “The way the HSMT classes are separated per semester makes it harder for me to graduate sooner rather than later” and “Classes not available in the evening for working adult students.” Another common theme reported by participants was faculty and/or staff (10 responses). Examples of this theme included statements such as “Some professors weren’t helpful or offering assistance to help understand course material” and “I was very successful but felt some professors were not fair.” Other themes that received between three to five mentions each include COVID-19, the requirements of their minor, being a working student, mental health, anxiety about finding a job post-graduation, poor academic advising, family responsibilities, and financial barriers. Two alumni noted the shooting that took place on campus in April, 2019.

A separate open-ended question asked the participants “What can the HSMT program do to help students overcome barriers to graduation?” One theme, improvements in academic advising, was noted in 14 comments such as “Encourage quarterly meetings with advisors to ensure students are on the right path to graduation,” “Provide more advisors for specifically the major itself” and “Make advising accessible and easy.” Other participants replied that having more variation in the class schedule (17 responses) would help students overcome barriers to graduation. Participant responses included “I am a mom who didn’t always have childcare. There weren’t a lot of options for class times, but I made it work,” “Ensure classes are available
for different times and different student situations,” and “Offer more classes in the summer and online.” Themes around additional ways the HSMT could help students overcome barriers to graduation included improve communication, demonstrate understanding towards students, offer scholarships, and offer academic support/tutoring. Refer to Table 4 for examples of responses given when asked how the program could help students overcome barriers.

**Table 4**

*Helping Students Overcome Barriers - Themes*

<table>
<thead>
<tr>
<th>Theme</th>
<th>Number</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offer Variation in Class Schedule</td>
<td>17</td>
<td>“Ensure classes are available for different times and different student situations”</td>
</tr>
<tr>
<td>Improve Academic Advising</td>
<td>14</td>
<td>“Make advising accessible and easy”</td>
</tr>
<tr>
<td>Improve Communication</td>
<td>6</td>
<td>“Communicate requirements better and be more flexible”</td>
</tr>
<tr>
<td>Demonstrate Understanding</td>
<td>5</td>
<td>“Be flexible and understanding”</td>
</tr>
<tr>
<td>Offer Scholarships</td>
<td>4</td>
<td>“Help create scholarships to help students”</td>
</tr>
<tr>
<td>Offer Academic Support/Tutoring</td>
<td>3</td>
<td>“Reach out to students who seem to be struggling in classes”</td>
</tr>
</tbody>
</table>

**Output - Supporting Student Success.** Respondents were asked to recommend what the program could do to support student success. The theme that emerged centered on career preparation through internships, real-world learning, connection to employers, and curriculum alignment with future job. For example, among the 16 respondents who mentioned internships, one suggested that the program “implement an internship program/requirement.” Another said, “I would really like a way to gain experience working in healthcare even though I understand internships for everyone might not be realistic. Maybe some further guidance in how to gain
experience in healthcare in our own would be enough. It’s really hard to get a non clinical job in healthcare without any experience.”

Twelve respondents requested hands-on, real-world learning with responses such as “promote gaining experience and have more real world projects to prepare us to go into the world and be a healthcare boss” and “more real world simulations, so we can apply our knowledge.” Another example mentioned providing connections to employers:

Help connect students with local health facilities. Make a partnership with local health facilities. A lot of students have struggled to find a job when graduating with this major. Charlotte has 2 major medical facilities in Charlotte. A connection with Charlotte, Atrium, and Novant woulda benefit students. As well as a required internship to help students build connections.

Participants were also interested in the HSMT program better aligning the curriculum (coursework or certifications) to the future job market in the field. One respondent suggested that the program “Offer licenses and certifications that will give a leg up upon graduation.” Another suggested that the program “Create more classes for coding or billing and insurance, a class to be able to get certified in something,” while another “Work on course content and structure to ensure it is applicable to the types of careers many of us will have.”

Outputs - Career Preparation. Several survey items sought information about the HSMT program and career preparation. The results are presented in Figure 5. When asked “To what extend has your experience in the HSMT program contributed to your understanding of the career field of health systems management?” most participants found the program contributed to their understanding of the career field (29% a great deal; 20% a lot; and 31% a moderate amount). A second question asked participants the extent the HMST program contributed to
preparing them for a career in health systems management. Fifteen percent of respondents replied that the program is not contributing to preparations for a career in health systems management (*none at all*) and 19% replied it is contributing *a little*. Most participants felt that the HSMT program contributed to preparing them for a career in the field (19% *a great deal*; 22% *a lot*; and 24% *a moderate amount*).

**Figure 5**

*Extent of HSMT Contribution to Understanding the Career Field and Preparing for Career Field*

A follow-up, open-ended item asked “How has/did the HSMT program prepared you for a career in health systems management?” The most common single response themes (22 of the 112 responses) was that the program did not prepare them for a career in health systems management. Common response themes were the program provided the basic understandings or foundations of the field, taught leadership or management skills, provided real-world learning, and taught good communication skills. Refer to Table 5 for themes and examples.
Table 5

**HSMT Prepared Students for Career - Themes**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Number</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program did not prepare them for a career</td>
<td>22</td>
<td>“it didn’t”</td>
</tr>
<tr>
<td>in HSMT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic Understanding</td>
<td>19</td>
<td>“Learning the different aspects of HSM as a career and what all is involved and required to get into the career””</td>
</tr>
<tr>
<td>Taught Leadership/Management Skills</td>
<td>19</td>
<td>“It has prepared me to know what makes a good leader and all of the skills I will need in order to do that.”</td>
</tr>
<tr>
<td>Taught Good Communication</td>
<td>9</td>
<td>“I have learned how to improve my verbal communication skills tremendously and learn how to effectively lead a team.”</td>
</tr>
<tr>
<td>Provide Real-World Learning</td>
<td>8</td>
<td>“The program give real-world problems that we would face in our future careers.”</td>
</tr>
</tbody>
</table>

A final open-ended survey question asked participants to provide strategies that the program could implement to better prepare students for their careers. Two themes emerged related to internships (26 replies) and real-world learning experiences (20 replies), which constituted approximately half of all replies. While related, the internship theme included only comments where an internship was specifically mentioned such as “providing more experience/internship opportunities.” Recommendations for real-world learning experiences included simulations, case studies, service-learning, shadowing, and guest speakers from health systems organizations. Additional themes included asking the program to establish connections between students and local employers (11 responses) and providing more information about career paths that are possible with the HSMT degree (9 responses).
Outcomes. The outcomes of interest to the evaluation, as noted via the Logic Model, are graduation within a six-year maximum time period, attainment of a job in the health systems management career-field, and graduates are career-ready. In response to an item about time to degree, no students expected it to take six years or more to graduate. Seven percent of responding alumni indicted six years to time to degree and one alumni reported more than seven years’ time to degree.

Alumni, all of whom had graduated within 15 months of the evaluation survey, were asked to indicate job attainment in the health systems management career-field. Alumni reported being employed full-time (49%), employed part-time (9%), as well as continuing their education (23%), and seeking employment or continuing education (19%). The working alumni reported being employed in a healthcare organization (50%) or a for-profit business (23%). Of the alumni that are employed, 43% describe their current job as situated within the field of health systems management.

Students were asked to indicate their career preparedness. The student participants indicated they feel well prepared (17% extremely; 30% very well; and 33% moderately) for their future career in health systems management. The alumni participants were asked a similar question, “At graduation, how well prepared did you feel for your career in health systems management?” One third of the alumni (33%) replied that they were not well prepared at all and 19% replied they were slightly well prepared. Approximately half of all respondents felt well prepared (ranging from moderately well-prepared to extremely well-prepared) at graduation for their career in health systems management (see Figure 6).
Figure 6

Career Preparedness Responses

Experience with COVID-19

Students \((n = 64)\) were asked about the unique situation of experiencing the Coronavirus pandemic during spring semester 2020. Figure 7 displays the responses. As indicated on a Likert-scale survey item, experiences among students varied between the pandemic has greatly affected my HSMT in a positive way to the pandemic has greatly affected my HSMT in a negative way with the majority of students indicating a negative effect (52%) or no effect (31%) from the pandemic.

Student participants were also asked four open-ended survey questions about their experiences in the HSMT program during the Coronavirus pandemic. The first item asked “How did the required shift to online courses affect your experience in the HSMT Program?” Of the 69 comments received, 19 students indicated the required shift to online learning did not affect their experience. Other students reported positive effects from the required shift to online learning,
with common themes including being easier to be online and a smooth transition to the online format. The comments were more likely to reflect negative effects from the required shift to online. Common themes indicating negative effects included missing in-person interactions, a harder workload, and difficulty communicating. See Table 6 for example responses within each theme.

![Figure 7]

**Figure 7**

*Extent of Effect of the Pandemic on Student Experience in HSMT Program*

Participants were asked to consider the effect of the pandemic on their graduation from the program. More than half of the respondents (34 of 62) replied that it will have no effect. Another six responses expressed their hope for no effect: “Hopefully it will not have an effect on my graduation,” and “provided I don’t get sick and have to drop out…I’ll be able to finish up and graduate.” A concern commonly expressed was that there would not be an in-person graduation ceremony. One student mentioned “[Not] Getting the opportunity to have a traditional graduation in front of all of my family and friends.” Another student replied that they
expect to graduate sooner, while three students indicated they expect a graduation delay, and one student indicated he will not return to finish school.

**Table 6**

*Effect of Required Shift to Online Due to COVID-19 Pandemic – Response Examples*

<table>
<thead>
<tr>
<th>Positive Effect on Experience</th>
<th>Negative Effect on Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easier to be Online:</td>
<td>Harder Workload:</td>
</tr>
<tr>
<td>“made it a lot easier to attend class and complete assignments”</td>
<td>“Online classes are far more difficult and demanding in my opinion.”</td>
</tr>
<tr>
<td>“It had a positive impact because I was able to continue to work”</td>
<td>“I struggle with keeping track of my workload when it is online, and finding due dates online.”</td>
</tr>
<tr>
<td>Smooth Transition to Online:</td>
<td>Missing in-person interactions:</td>
</tr>
<tr>
<td>“The shift was smooth and each professor did a great job with the</td>
<td>“I was not able to attend an actual face-to-face course and interact with other HSMT enrollees”</td>
</tr>
<tr>
<td>transition.”</td>
<td></td>
</tr>
<tr>
<td>“UNCC did an excellent job transitioning and making the best of a</td>
<td>“I did not get the personal, face-to-face interactions”</td>
</tr>
<tr>
<td>crappy situation.”</td>
<td></td>
</tr>
<tr>
<td>Difficulty Communicating:</td>
<td></td>
</tr>
<tr>
<td>“For me it was hard to communicate effectively with other students and the teachers about assignments. I’m the type of person that likes in person communication.”</td>
<td></td>
</tr>
</tbody>
</table>
Participants were also asked to discuss additional barriers to graduation from the program. Thirty-six of the 44 comments were none or not applicable. No additional common themes were found. Individual student comments addressed financial issues, employment, self-care, family care, and remote learning.

In a final open-ended survey item, participants were asked what the program could do to support students in navigating barriers posed by the pandemic. The most common response was that the program should be understanding. Respondents indicated that the program could “Maybe, be understanding of parents who are at home with kids due to the shutdown” and for example change due dates to “midnight instead of middle of day.” Similarly, a respondent suggested the program offer “support and understand this is a hard time for all” and another requested the program “ensure resources are communicated to students so that we [students] are aware.” Communication emerged as another common theme with a respondent offering a recommendation for the program: “checking in on the students and sending updates about what’s going on and what the HSMT program is doing to help and support its students.”

Another respondent replied the program could “increase communication from professors, allow assignments to be submitted during a window for those who work or assist others during class time” by requesting “flexibility in due dates and assignment lengths.”

**Relationship of Responses to Participant Characteristics**

The relationship between self-reported participant characteristics and their responses to the survey questions was explored. Statistical analysis using crosstabs, chi-squared test, and proportions test (z-test) were completed using Qualtrics’s data and analytics program and SPSS 26. “The chi-squared test compares expected frequencies, assuming the null is true, with the observed frequencies from the study” and the proportions test (z-test) tests “whether the
proportions of two populations differ significantly with respect to one characteristic” (statstutor, n.d.)

In some categories there were very small sample sizes, not meeting the assumptions of the statistical tests. Prior to performing the analysis, the categories were combined or collapsed into other categories or excluded from analysis. For the question obtaining self-reported race, American Indian/Alaskan Native (1 participant) and students reporting two or more races (4 participants) were combined with the “other” category. The three gender non-binary cases were not included in the analysis for gender.

**General/Overall.** Participant responses to questions establishing the participants’ overall experiences with the HSMT program were examined for significant relationships with participant characteristics. In response to “How happy are you that you made the decision to major in HSMT?” no significant relationship was found for primary language, parenting, generation in college, major selection, transfer status, ethnicity, work status, or involuntary major reselection. A statistically significant relationship was found for gender (p = .047) and disability status (p = .029). Participants without a disability were statistically less likely to indicate they were unhappy with their decision (12%) than participants with a disability (39%). Participants identifying as Hispanic or Latino (36%) were significantly more likely than non-Hispanics (13%) to be unhappy with their decision to major in HSMT.

Overall satisfaction with the HSMT program was obtained and identified a statistically significant relationship with whether or not HSMT was the participant’s first major or not (p = .012) when responses were consolidated into satisfied/neither/dissatisfied. A significant difference exists with parenting (67%) participants more likely to be extremely satisfied with their experience than non-parenting participants and Hispanic participants (21%) more like to be
extremely dissatisfied than non-Hispanic participants. Women were less likely to respond with “neither satisfied nor unsatisfied” than men.

Responses to the statement “I would recommend the HSMT program to a friend or colleague” identified a statistically significant relationship with whether a participant had been admitted, denied, or did not apply to an upper-division restricted major ($p = .049$). Participants who were admitted (18%) or denied (10%) were significantly less likely to respond “definitely yes” than participants that did not apply (55%). One additional significant finding was that non-parents (38%) were less likely than parents (78%) to reply with “definitely yes”.

Table 7

**Significant Relationships between Program Aspect and Student Characteristic**

<table>
<thead>
<tr>
<th>Program Aspect</th>
<th>Significant Relationship/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Advising</td>
<td>First Generation Status ($p = .024$)</td>
</tr>
<tr>
<td>Group Advising</td>
<td></td>
</tr>
<tr>
<td>Interaction with Faculty</td>
<td></td>
</tr>
<tr>
<td>Professional Development/Career Training</td>
<td>Primary language ($p &lt; .001$)</td>
</tr>
<tr>
<td></td>
<td>Transfer status ($p &lt; .001$)</td>
</tr>
<tr>
<td></td>
<td>Disability status ($p = .005$)</td>
</tr>
<tr>
<td>Opportunities to Learn OUTSIDE of the Classroom</td>
<td>Parenting status ($p = .004$)</td>
</tr>
<tr>
<td>Opportunities to Apply Learning to Real-World Issues</td>
<td>First major status ($p &lt; .001$)</td>
</tr>
<tr>
<td></td>
<td>Application to restricted major status ($p = .004$)</td>
</tr>
<tr>
<td></td>
<td>Student Employment Status ($p = .032$)</td>
</tr>
<tr>
<td>Interaction with Diverse Groups of People</td>
<td>Application to restricted major status ($p &lt; .001$)</td>
</tr>
<tr>
<td>Health Systems Management Student Organization</td>
<td></td>
</tr>
</tbody>
</table>
Program Aspects. To explore relationships between the program aspects and the participant characteristics, the responses were grouped as helpful, not helpful, or neither helpful nor unhelpful. Not applicable responses were not included in the analysis. Statistically significant relationships identified with a chi-squared statistical test are characterized in Table 7.

Significant differences for the various participant characteristics for each program aspect were found using the z-test for proportions and are reported in Table 8. Several significant findings were individual advising were found. First, transfer students and students employed full-time were more likely to find it neither helpful nor unhelpful. Secondly, first-generation students were more likely to find individual advising unhelpful. Lastly, participants who did not change their major and participants who are parents were more likely to find individual advising helpful.

With group advising and interaction with faculty, significant differences in proportions were found in some participant characteristic categories. Male respondents were more likely to state group advising is unhelpful than female respondents and participants who are parents were more likely to find it helpful than non-parenting participants. First-generation participants were significantly more likely than non-first-generation participants to find interaction with faculty as helpful.

The helpfulness of professional development/career training had significant findings with some characteristics. Professional development/career training was more likely to be identified as helpful by parenting participants and participants without a disability. Participants without a disability were less likely than participants with a disability to find professional development/career training not helpful or neither helpful/unhelpful.

The helpfulness of opportunities to learn outside of the classroom, to apply learning to real-world issues, and interactions with diverse groups of people had significant findings. Parents
were more likely to find opportunities to learn outside of the classroom helpful than non-parents. Participants that did not apply to a restricted major were less likely to find it unhelpful than those who were denied from a restricted major. Students not employed were more likely to find opportunities to learn outside of the classroom unhelpful than students employed part-time. Participants more likely to reply that opportunities to apply learning to real-world issues were helpful include those with HSMT as their first major, parenting participants, and those who did not apply to a restricted major. Students not employed or employed full-time were more likely that students employed part time to find real-world opportunities unhelpful as were students that had been denied to their first-choice restricted major (involuntary major reselection students). Participants denied from a restricted major (involuntary major reselection) were more likely to find interactions with diverse groups of people unhelpful than students that had been admitted or did not apply. No discernable differences existed with the helpfulness of the HSMT Student Organization between student characteristic groups.

**Program Goals.** Participants were asked to rate their feelings about the program contributing to growth in written communication, oral communication, working well in teams, thinking critically, and leading a team. A significant relationship was identified between four of the five goals and student parent status and one of the goals and student working status (see Table 9). In the four goals with a significant relationship, parenting participants were more likely to respond that the HSMT program had contributed *a great deal* to their growth than non-parenting participants. Unemployed students were more likely than students employed part-time to respond that the program had no effect on their ability to communicate in writing. Additional significant differences include Hispanics were more likely than non-Hispanics to reply that the
HSMT program did not contribute at all to their growth to work well in teams, think critically, or effectively lead a team.

**Table 8**

*Significant Differences in the Proportions of Responses between Participant Characteristics for each Program Aspect*

<table>
<thead>
<tr>
<th>Program Aspect</th>
<th>Helpful</th>
<th>Unhelpful</th>
<th>Neither</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Advising</td>
<td>Did Not Change Major (78%)/</td>
<td>First Generation (21%)/</td>
<td>Transfer students (24%)/</td>
</tr>
<tr>
<td></td>
<td>Changed Major (58%)/</td>
<td>Not First Generation (8%)</td>
<td>Non-transfer students (7%)</td>
</tr>
<tr>
<td></td>
<td>Parents (100%)/</td>
<td></td>
<td>Students employed full-time (26%)/</td>
</tr>
<tr>
<td></td>
<td>Non-Parents (61%)</td>
<td></td>
<td>Students employed part-time (6%)</td>
</tr>
<tr>
<td>Group Advising</td>
<td>Parents (67%)/</td>
<td>Men (30%)/</td>
<td>Disability (39%)/</td>
</tr>
<tr>
<td></td>
<td>Non-Parents (29%)</td>
<td>Women (9%)</td>
<td>No Disability (16%)</td>
</tr>
<tr>
<td>Interaction with Faculty</td>
<td>First Generation (77%)/</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not First Generation (60%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Development/Career Training</td>
<td>Parents (100%)/</td>
<td>Disability (46%)/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-Parents (53%)</td>
<td>No Disability (18%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No Disability (62%)/</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Disability (15%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunities to Learn OUTSIDE of the Classroom</td>
<td>Parents (100%)/</td>
<td>Involuntary Major-Change -denied to restricted major (67%)/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-Parents (53%)</td>
<td>Did not apply to restricted major (15%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unemployed Students (40%)/</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Students employed part-time (6%)</td>
<td></td>
</tr>
</tbody>
</table>
Table 8. (Continued)

<table>
<thead>
<tr>
<th>Opportunities to Apply Learning to Real-World Issues</th>
<th>Did not change major (78%)/ Changed major (54%)</th>
<th>Students Not Employed (30%)/ Students Employed Full-time (16%)/ Students Employed Part-Time (0%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents (100%)/Non-Parents (58%)/</td>
<td>Did not apply to restricted major (80%)/</td>
<td>Involuntary Major-Change-Denied to a restricted major (70%)/</td>
</tr>
<tr>
<td>🔊 Decision__________________________________________</td>
<td>Admitted to a restricted major (36%)/</td>
<td>Did not apply to restricted major (15%)/</td>
</tr>
<tr>
<td>Involuntary Major-Change-Denied to a restricted major (30%)</td>
<td></td>
<td>Admitted to a restricted major (18%)</td>
</tr>
<tr>
<td>Interaction with Diverse Groups of People</td>
<td>Involuntary Major-Change-Denied to a restricted major (60%)/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Did not apply to restricted major (5%)/</td>
<td>Admitted to a restricted major (9%)</td>
</tr>
<tr>
<td>Health Systems Management Student Organization</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Career Preparation.** Participants were asked to what extent their experience in HSMT contributed to the understanding of the career-field of health systems management. Their responses in consideration with their characteristics had a significant relationship (\( p = .028 \)) with whether they had been admitted, denied, or did not apply to an upper-division restricted major. Men (17%) were significantly more likely to reply “none at all” than women and gender non-binary participants. Similarly, participants were asked to what extent the program contributed to preparing them for a career in health systems management. A significant relationship was
identified with parenting/non-parenting status \((p = .042)\) with parents (89%) being more likely to rate the preparation as “a great deal” than non-parents (34%).

**Table 9**

*Significant Relationships between Program Goals and Participant Characteristics*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Goal</th>
<th>Significant Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parenting Status</td>
<td>Communicate effectively in writing</td>
<td>(p = .015)</td>
</tr>
<tr>
<td>Parenting Status</td>
<td>Communicate effectively orally</td>
<td>(p = .019)</td>
</tr>
<tr>
<td>Parenting Status</td>
<td>Think critically</td>
<td>(p = .012)</td>
</tr>
<tr>
<td>Parenting Status</td>
<td>Effectively lead a team</td>
<td>(p = .025)</td>
</tr>
<tr>
<td>Student Working Status</td>
<td>Communicate effectively in writing</td>
<td>(p = .011)</td>
</tr>
</tbody>
</table>

Students \((n = 64)\) were asked how well prepared they feel for their future career in health systems management. There are statically significant relationships between the responses and participants’ selection of HSMT as first major (major-change status) \((p = .012)\) and parenting status \((p = .003)\). Students who selected HSMT as their first major were more likely to state that they were *very well prepared* and also that they were *not well prepared at all* than students that had changed majors. Parenting students were more likely to reply they felt *extremely well prepared* than non-parenting students. Unemployed students were more likely than students employed part-time to feel *not well prepared at all*. Alumni \((n = 54)\) were asked how well
prepared they felt at graduation for their career in health care management, there were no statistically significant differences.

**Experience with COVID – 19.** A small percentage (18%) of respondents indicated the pandemic positively affected their program experience. Men, individuals identifying as Hispanic, individuals identifying as Asian, transfer students, first generation in college students, Pell Grant eligible students, non-parenting students, working students, and students without a disability were more likely to report that the pandemic had a positive effect on their program experience than other respondent groups. The only statistically significant relationship identified was with primary language spoken ($p = .003$). Students who speak English as their primary language (12%) were significantly less likely than non-native-English speakers (75%) to describe the effect as positive.

**Interviews**

At the end of the survey, participants were invited to participate in brief interviews designed to further explore their experiences with the HSMT program. A small gift card was offered as a token of appreciation for participation. Interested participants responded via email. Nine individuals volunteered to participate, eight scheduled an interview time, and six completed interviews. Demographic information was requested, but not required of the interviewees. The collected information is provided in Table 10. The participants were current students (two male and two female) and alumni (two females) from the HSMT program.

The interviews were semi-structured using an interview guide to lead the discussion (see Appendix E). Prior to beginning the interview, the project was described and the project purpose, to understand their experiences in the program in an effort to make program recommendations, was disclosed. The interview guide consisted of ten questions for student interviewees and nine
for alumni interviewees. (The COVID-19 question was not asked of the alumni.) The interviews ranged from 14 to 35 minutes. Interviews were conducted and recorded with participant permission using Zoom or MS Teams. They were transcribed using My Kaltura MediaSpace Video Portal, manually reviewed for accuracy and corrected as needed, and analyzed with MAXQDA 2020.

Table 10

Interview Participants

<table>
<thead>
<tr>
<th>Interviewee Name</th>
<th>Alumni or Student</th>
<th>Additional demographics</th>
</tr>
</thead>
<tbody>
<tr>
<td>GG</td>
<td>Alumni</td>
<td>Female</td>
</tr>
<tr>
<td>SS</td>
<td>Alumni</td>
<td>Female, 31, White, English Primary, Pell Grant Eligible, Parent, First Generation, Transfer Student, Changed Major, Involuntary Major-Changer</td>
</tr>
<tr>
<td>JJ</td>
<td>Student</td>
<td>Male, 22, Black, Non-Hispanic, English Primary, Pell Grant Eligible, Changed Major</td>
</tr>
<tr>
<td>EE</td>
<td>Student</td>
<td>Male, 20, Hispanic, Spanish Primary, First Generation, Pell Grant Eligible, Changed Major</td>
</tr>
<tr>
<td>KK</td>
<td>Student</td>
<td>Female</td>
</tr>
<tr>
<td>AA</td>
<td>Student</td>
<td>Female</td>
</tr>
</tbody>
</table>

Evaluation Question #1 - Barriers

The interview guide had one question to explore interviewee responses to the barriers that they face or they see their classmates face in moving towards graduation. The responses varied between the interviewees, with four themes emerging: outside responsibilities, issues with poor advising, negative experiences with faculty, and class size.

The most common theme for the interviewees was barriers caused by having responsibilities outside of school. Five out of six participants spoke about outside commitments such as work and family either for themselves or for classmates, “a lot of them are married, a lot of them have kids...some of them are already working” (KK). Balance between school and outside responsibilities was mentioned as a barrier; JJ stated “And so just balancing, you know,
that just work, school, life balance is difficult at times.” One interviewee, EE, was a parent of a toddler and told a story about her child getting sick, leaving her with an unexcused absence and missing quiz grade.

Issues with poor or lacking academic advising was the second most common theme within the interviews. Advising from faculty and staff about the job opportunities available to students in the HSMT program was a barrier for two of the interviewees. The interviewees also needed advising about how to secure internships or get experience in the field. One interviewee, AA, discussed an experience with an advisor (staff) not clarifying program requirements resulting in additional time in the program.

*I feel like sometimes they’re [advisors] not sure exactly where to place students in what class. So for example, one time I wanted I wanted to have a minor for this major, I didn’t know that we were supposed to have like two minors or double major to graduate. So because of that I was almost, like I could’ve finished the program like a semester go. And I thought that was when I was supposed to graduate. But as a bachelor of science, you’re supposed to have two majors in this program or two minors, so it was a little confusing and I didn’t know which ones to sign up for. And they just kept giving me just random ones but didn’t really match like what I wanted to do. So it’s a kind of clarity about the program requirements. Yeah. I think that would have helped a lot, like before entering if they would’ve told us that.*

Negative experiences with faculty were discussed by half of the interviewees. Mismatch of teaching and learning styles were discussed. One story was about a personal experience with a professor while the other two spoke about witnessing negative experiences. AA stated, “Some of my friends’ barriers are the teachers because there’s only like one class for certain classes and
only one teacher for that class. But it doesn’t necessarily match their learning style, so they struggled with all those types of situations.” One interviewee discussed a negative experience with a professor:

And she just didn’t and didn’t seem to care about us learning. It was more about follow my rules, don’t disrespect me. And it just created a really toxic environment for us. And it sucks because we had to have it for a whole semester. And this wasn’t the only professor that I’ve had to deal with sort of toxic environments because students will be outraged because they felt like they weren't learning anything. I think that's truly one of the biggest barriers is that for professors are so focused on the structure of the class and how students are responding to them, how they educate and how they lecture. But they never really sit down and listen to what the students want. Like. Whoa, whoa, why isn’t she connecting well and paying attention during lecture? Why are you on your phone? Is it enough information? Am I teaching you the correct information? Is there a different way I can do it? They're never interested in that. (KK)

The final theme around barriers to success was class size with two interviewees expressing strong dislike against large class sizes in the upper-level courses. They noted it was harder to concentrate or participate and students didn’t learn as much. EE commented, “I feel like my biggest pet peeve in the upper division courses has been the class sizes.” KK also spoke against large class sizes:

But the bigger lecture halls, I did not learn much. It was more of just, you know, let's go over this from page, blah, blah, blah. And it was just reading off slides and just not really getting down into the nitty-gritty of like how can you become an efficient and good health care professional? And I am a 110% sure that a lot of other students feel the same way.
Evaluation Question #2 – Supporting Student Success

Multiple questions were asked during the interview that resulted in responses that address the evaluation question seeking strategies to support student success. Early survey results indicated that students felt that an internship would be an important component of the program leading to student success. After asking the interviewees for activities that support student success, I asked a question about internships specifically. Similarly, a question based on preliminary survey results indicating an interest in career preparations to support student success was asked. Therefore, internships and career preparation, the most common themes by a large percentage, will be discussed later in this section.

Broadly, interviewees offered several recommendation themes for supporting student success including listening to students, more classes in the major, and good program faculty and staff. Four of the interviewees spoke to the need to listen to students, from using mid-semester surveys to ask student options, to trusting students have good intentions with their comments or complaints, and to making accommodations for students when they ask. SS reported a faculty making an accommodation for her, “I talked to her about it and they ended up adding another study session. And that made it work, not just for me but for other students.”

A comment from KK expressed her desire for her feedback to be trusted as having a good intention:

_They're [students are] crazy, but sometimes they're not crazy. And they're telling you the truth. And it's not because they want to get back at the professor that, you know, gave a B instead of an A. It's like truly because I want this as much as you want this and like I truly want this major to get better._
Another common theme around student success was offering more classes in the major. Half of the interviewees, including GG, requested additional classes with comments such as

_Maybe you just add a couple of my courses because it’s [the HSMT program] pretty short. And a lot of students how to add extra electives or another major, another minor. But I think that adding a few courses would have helped you understand the major more._

Comments about the importance of good faculty and staff were made by half of the interviewees. Two interviewees talked about specific faculty they credit with leading them towards success through being a good teacher and believing in them. One comment from KK demonstrates the positive experience with faculty, “There are always those few golden apples that just like really, truly care about you and your well-being.” One student, EE, credited the administration for his success:

_“I think how personable the administration is and the HSMT program is really helpful because well, I guess I don’t understand the specific topic that I need to be successful. I could always just shoot them an email and set up a time frame for us to talk about it. I think that’s one of the, has been one of the biggest helps for me.”_

**Internships/Practice Experience.** Internships were a major topic for the conversations around student success. Four of the six interviewees felt that an optional internship should be a part of the program while the other two interviewees felt an internship should be a required part of the program. Optional internships should be offered for credit or as an elective. Interviewees believed that internships require support from the HSMT program to assist with identifying locations, preparing students for applying, or placing students into internships. One interviewee, JJ, commented:
If the program requires an internship, they should help find it. They should place us, should place the internship. I think, I think the internships should be recommended. And then they give a list of places where they can go to find internships. That's what I think. I take that back. I don't think it should be required, some people are too busy because I know a lot of students that are older because for some reason a lot of students in the program are older students. And so they have more like real life things going on and so to force them to have an internship might change how they, might mess up their actual work and how they pay for school and all that stuff to be conscious of that. So I think it's I think it's recommending it and been offering places where you can go and find if that's what you choose. And I think that would be the best option.

Alternatives to traditional internships were also explored. The interviewees had many ideas about alternatives that would provide real-world experience. Some examples include shadowing HSMT or university faulty or staff in management positions, help faculty with their research, required professional education, guest speakers from healthcare management positions, students working in healthcare settings could do hours at their place of employment to meet internship requirements, case-based learning with real-world scenarios, and shadowing professionals in the field.

Career Preparation. Interviewee comments about incorporating more career preparation to support student success were numerous. One common theme was about aligning the curriculum with the future job requirements. Interviewee, KK, suggested, “Go over in class the different jobs that you want to do and then have an assignment based on the jobs in detailing why you want to do it, why are you qualified.” Interviewees requested more information about what they can do with the major and what the career will look like incorporated into classwork.
Interviewee, JJ, offered an example of a class where the career preparation course met his needs:

“I think that leadership and ethics class was a really good example because it was, we had guest speakers and it was, it was tailored to what the environment will look like once you get there.”

A second theme around student success was about incorporating professional-skills development into the program. One interviewee talked about the helpfulness of learning professional communication skills through professional emails and discussions with faculty with her comments: “The teachers making us write professionally even in emails to them that helps because now you don’t really have to think about it. You just do it” and “she [professor] would always want us to come up and talk to her...helps because it teaches you how to do those types of conversations where you’re kind of learning but also sharing.” Other interviewees desired opportunities to learn about time management and how to run a professional meeting. An example of these types of desired opportunities was found in EE’s response:

I think would be really beneficial if we intertwined kind of like the adult skills, time-management and stuff like that into the actual courses. If they were to like, kind of talk about a little bit more stuff that we would see in the real world and learn how to manage certain things, but then timeframes on how to meet deadlines, stuff like that.

Interviewees also wanted job-search skills such as how to interview, create a resume, and training on LinkedIn. Two interviewees said positive things about the University’s Career Center and two said they had attended on-campus career fairs. The career fairs were described as nerve-wrecking.

Evaluation Question #3 – COVID - 19

Student interviewees (n = 4) were asked broadly about how COVID-19 had affected their experience in the program. Most interviewees expressed both positive and negative experiences
with COVID-19 and their program. The range of themes, including negative experiences or barriers to a positive experience, all center around challenges associated with the online learning format, with two sub-themes surfacing - faculty challenges and the difficulty of online learning. Faculty concerns that centered on faculty struggles with the technology and organization of an online course, lack of connection with faculty, increased difficulty communicating with faculty, and faculty who did not want to have live/synchronous classes once the courses moved online. One interviewee’s comment about her professor not holding live/synchronous classes helps to explain the concern:

_I feel sometimes it was hard when teachers wouldn't want to have meetings every class period. Personally, I find I found it a little bit more difficult because it's harder to get motivated or, you know, be able to understand the concepts that you're learning about or even set like that learning time aside when you don't have those meetings or even any homework._ (AA)

Online learning, or more specifically, learning online was discussed as a negative effect of the COVID-19 pandemic. Two interviewees reported that their level of learning had decreased. One interviewee felt that the lack of a division between home and school made it harder to concentrate and learn from home, while the other felt that not having regular interactions with the class made it harder to learn the material and stay motivated. One interviewee indicated the difficulties had affected his GPA:

_I'm not even going to lie. A lot of the higher-level HSMT courses are thick in information. And doing that from an online perspective has not been the easiest thing in the world. It's definitely infringed on my beautiful GPA. But yeah, it's, it's really challenging to be able to stay on topic with all the information._ (EE)
Student interviewees all reported the same theme as the positive effect of the pandemic – more time. The four interviewees all noted the benefit of having more time during the pandemic. The interviewees appreciated the additional time to complete their tasks, flexible time to work for income, and time to re-review materials as needed. One student interviewee, AA, stated she felt less anxious taking tests online because she could take her time: “I mean, there's less stress definitely because you're in your house and you can like plan time accordingly, you have more time. Basically, I have a lot more time than I would if Covid wasn't here.”

Summary

In this chapter, the findings from the analysis of the survey and interviews were presented. The results were described following analysis with Qualtrics (survey responses and coding open-ended textbox replied), SPSS 26, and/or MAXQDA 2020. The survey findings were presented using the components of the Logic Model, developed as a primary component of Stufflebeam’s (2000) CIPP Evaluation Model, as a guide. The findings from the interviews were presented in response to the evaluation questions. In the next chapter, the findings are discussed.
Chapter 5: Summary and Recommendations

The purpose of this formative program evaluation was to explore the effectiveness of the BS HSMT program to support students towards graduation, with the intention of providing the key stakeholders (program administrators) information for program improvement. The CIPP Evaluation model is a systems approach to evaluation that includes four concepts: context, input, process, and product evaluations (Stufflebeam, 2000). For this evaluation, the CIPP Evaluation Model served as a guide to understand the early impact of the program’s effectiveness using Process and Product evaluations. Consistent with the CIPP Model, input from the key stakeholders was solicited throughout the evaluation and a Logic Model of the program guided decisions about the design of the survey and interview questions and interpretation of the findings. The following evaluation questions guided the study:

1. What barriers do BS HSMT students face in completing the program?
2. What are programmatic strategies the BS HSMT program can use to support student success?
3. To what extent has the disruption of the COVID-19 pandemic exacerbated barriers for BS HSMT students?

In this chapter, the evaluation questions are answered through summarizing the integrated evaluation findings. Connections between the findings and the literature are provided, and recommendations for the program are offered. Finally, the chapter culminates with recommendations for future practice, research, and evaluation.
Summary of Integrated Findings

This evaluation was informed by data from the program population, a survey completed by students and alumni of the program ($n = 118$), and interviews with students and alumni of the program ($n = 6$). The interviews were designed to provide deeper insights into topical areas explored within the survey. The triangulation of data from multiple sources allowed for a deeper understanding of the evaluation findings (Flick, 2018).

The survey sample was representative of many student characteristics and groups of special interest in this evaluation including transfer students, students who had changed their major, first generation students, parenting students, working students, students with a disability, and low income students. The sample of interviewees consisted of two alumni and four current students. Of important note, when the survey sample was compared in areas where data was available (age, race, gender, ethnicity, or transfer status) to the overall population of students in the program, the only characteristic that was statistically different between the sample and the population was race ($p = .001$) with a higher percentage of participants in the survey sample (60%) than from the population of students (42%) identifying as White/Caucasian. No other significant differences were identified in the areas assessed.

The HSMT program was designed to offer a non-clinical health sciences major to meet the needs of a large population of pre-major students that were not admitted to their first-choice major (involuntary major-reselection). The evaluation sample included students who are considered involuntary major-reselection students based on the evaluation’s definition. The evaluation defines involuntary major-reselection as being required to select a new major because of denied admission or lack of competitiveness to the preferred/first-choice major.
Of students that changed their major, 39% did so involuntarily. This accounted for 27% of the total sample of participants.

**Overall Program Findings**

Overall, findings of the evaluation indicate that participants are happy they chose HSMT as their major (73%), they are satisfied with the program (66%), and they would recommend the HSMT program to their friends or colleagues (77%). The interviewees also relayed positive experiences with the HSMT program. The most common reasons respondents provided for selecting HSMT as their major were career goal/interest, HSMT was recommended by an advisor, HSMT is an option in a healthcare-related field, and HSMT is an option in a non-clinical healthcare-related field.

Participant characteristics were associated with responses in the overall categories in a few statistically significant ways. Participants with a disability were more likely to be unhappy with their decision to major in HSMT. With respect to program satisfaction, parenting students were more likely than non-parenting participants to be extremely satisfied with their experience in the program, participants identifying as Hispanic were more likely than non-Hispanic participants to be extremely unsatisfied with their experience, and women were less likely to respond *neither satisfied nor unsatisfied* than men. Finally, participants who did not apply to an upper-division restricted major were more likely to select *definitely yes* when asked if they would recommend the program to a friend than students that applied regardless of whether they were admitted or denied. Parents were more likely than non-parents to indicate *definitely yes* when asked if they would recommend the program.

During the initial planning meeting held in August 2018, the key stakeholders and I discussed areas of focus and interest for the evaluation. The key stakeholders identified HSMT
program goals as one area of interest. A survey question explored participants’ perceptions on
the extent to which the HSMT program contributed to growth or development in each program
goal: ability to communicate effectively in writing, ability to communicate effectively orally, the
ability to work well in teams, the ability to think critically, and the ability to lead a team. Most
participants expressed that the HSMT program contributed a lot or a great deal to their growth
and development in each program goal.

One participant characteristic had a statistically significant relationship with responses to
the questions about the program goals, parenting status. Parenting was significant with four of
the five goals: communicate effectively in writing, communicate effectively orally, think
critically, and effectively lead a team. Parents were more likely to respond that the HSMT
program contributed “a great deal” to their growth and development in the four goals than non-
parenting participants. Also, Hispanic respondents were more likely than non-Hispanic
respondents to reply that the HSMT program did not contribute at all to their ability to work well
in teams, think critically, or effectively lead a team.

**Evaluation Question #1 – Barriers**

To address the first evaluation question, “What barriers do HSMT students face in
completing the program?” analysis of the survey’s open-ended question and the interview’s
question about barriers revealed one common theme. The common barrier to completing the
program was poor experiences with faculty or staff. Additional barriers that were noted included
class scheduling, outside responsibilities, issues with poor advising, and large class-size.

**Evaluation Question #2 – Supporting Student Success**

The second evaluation question is, “What are programmatic strategies the BS HSMT
program can use to support student success?” Multiple questions in the survey and in the
interview helped to gather participant experiences with program aspects and their recommendations for improving support for student success. Participants indicated how helpful different program aspects were. More participants found interactions with diverse groups of people helpful than any of the other program aspects. However, individual advising, interaction with faculty, professional development/career training, opportunities to learn outside of the classroom, and opportunities to apply learning to real-world issues were all rated as helpful. An open-ended survey question added that the helpfulness of the professors, good communication, and connections between students or between students and faculty were all helpful aspects of the HSMT program.

Participant characteristics were statistically significant to the relationships between: individual advising and first generation status and race; professional development/career training and primary language spoken, transfer status, and disability status; opportunities to learn outside of the classroom and parenting status; opportunities to apply learning to real-world issues and first major status, student employment status, application to a restricted major status; and interaction with diverse groups of people and application to a restricted major status. Using the z-test of proportions, the characteristics that had the statistically significant greater proportions are reported in Table 11.
Table 11

*Participant Characteristics with Greater Proportions of Responses to Helpfulness of Program Aspects*

<table>
<thead>
<tr>
<th>Program Aspect</th>
<th>Helpful</th>
<th>Not Helpful</th>
<th>Neither</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Advising</td>
<td>Students who did not change major</td>
<td>First Generation</td>
<td>Transfer students</td>
</tr>
<tr>
<td></td>
<td>Parents</td>
<td>White/Caucasian</td>
<td>Employed Full Time</td>
</tr>
<tr>
<td>Group Advising</td>
<td>Parents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction with Faculty</td>
<td>First Generation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Development/Career Training</td>
<td>Participants without a Disability</td>
<td>Participants with a Disability</td>
<td>Participants with a Disability</td>
</tr>
<tr>
<td></td>
<td>Parents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opportunities to Learn OUTSIDE of the Classroom</td>
<td>Parents</td>
<td>Involuntary Major-Reselection Participants</td>
<td>Not employed</td>
</tr>
<tr>
<td>Opportunities to Apply Learning to Real-World Issues</td>
<td>Students who did not change major</td>
<td>Employed Full Time</td>
<td>Not employed</td>
</tr>
<tr>
<td></td>
<td>Parents</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Participants who did not apply to a restricted major</td>
<td>Involuntary Major-Reselection Participants</td>
<td></td>
</tr>
<tr>
<td>Interaction with Diverse Groups of People</td>
<td>Involuntary Major-Reselection Participants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health Systems Management Student Organization</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Initial review of early survey results indicated that there was a great interest in professional/career information and internships. Additionally, professional development/career training was one of the most helpful program aspects identified. The interview guide contained questions related to both topics for more clarity on the subjects. Therefore, the most common themes for student support strategies were career preparation and internships. Survey responses
most often found real-world learning, connection to employers, and alignment of the curriculum to job skills as most supportive of student success. Beyond career preparations and internships (or real-world alternatives to internships), the interviews also found supporting student success through listening to students, offering more classes in the major, and strong faculty and staff to be the best strategies. The importance of a strong faculty and staff was corroborated in the survey as well with “interaction with faculty” being rated as a very helpful program asset, as noted above.

**Career Preparation.** Survey participants had mixed reviews for their experiences with career preparation in the HSMT program. While the majority of participants felt the program contributed to their understanding of the career field and to preparing them for a career in the field, there were participants that did not agree (7% and 15% respectively). As career preparation was noted as a key aspect of supporting student success, responses to open-ended and interview questions are important to the evaluation findings. Participants stated that the program provided basic understanding or the foundations of the field, taught leadership or management skills, provided real-world learning, and taught good communication skills. To support student success in the area of career preparation, participants recommended the program establish connections with local employers, provide more information about career possibilities, provide internships (discussed below), and provide real-world learning experiences such as simulations, case studies, service-learning, shadowing, and guest speakers from health systems organizations.

Survey responses to the questions about understanding of the career field and preparation for the career field had significant findings in respect to student characteristics. For understanding the career field, there was a statistically significant relationship between whether
the participant had been admitted, denied, or did not apply to an upper-division restricted major. Additionally, women were less likely than men or gender non-binary to indicate the program had not contributed to their understanding of the career field. With preparation for the career field, a significant relationship with parenting status was found. Parents are more likely to rate the HSMT program as contributing a great deal to their career preparation. A statically significant relationship between how well-prepared for their future career students feel and major-change status and parenting status exists. Parenting students were more likely to indicate they felt extremely well prepared.

**Internships and Alternatives to Internships.** In this evaluation, internships are a subset of career preparation, noted many times throughout the evaluation, as key to supporting student success. The interviews were used as a tool to understand participants’ interest in internship and to explore alternatives. Four of the six interviewees felt that an internship should be an option (for credit or as an elective) in the program while the other two interviewees felt it should be a required component. Interviewees requested support from the HSMT program to identify internship locations, prepare students to apply, or place students into internships. Interviewees offered many ideas about alternatives to traditional internships to support student success including case-based learning, shadowing faculty or professionals in the field, helping faculty with research, required professional education, and guest speakers.

**Academic advising.** Academic advising, while not standing out as the top theme in any one area, was common across survey responses and interview responses. The survey questions about program aspects designed to support student success found individual advising to be among the most helpful. During open-ended survey questions, improving the program’s
academic advising was a strong theme when asked about helping students overcome barriers. (Poor academic advising was commonly noted as a barrier.)

**Evaluation Question #3 – COVID-19**

Students enrolled in Spring 2020 had the unique situation of experiencing the Coronavirus pandemic which caused a sudden move to a fully-online format for all HSMT courses. A program evaluation during this extraordinary time period must explore student experiences with the pandemic, therefore the final evaluation question is “To what extent has the COVID pandemic exacerbated barriers for students?” In response to the survey, half of student participants (52%) indicated that the pandemic had a negative effect and 31% said the pandemic had no effect on their program. The only statistically significant relationship with a participant characteristic was with primary language spoken as non-native English speakers were more likely than English primary-language participants to describe the effect as positive. Interviewees often expressed both positive and negative experiences.

Common negative effects were missing in-person interactions, online learning is harder/more difficult, faculty challenges with the online format, and difficulty communicating. Most participants did not expect or were hopeful that the pandemic would not affect their graduation timeline, although there was concern noted that there would not be an in-person graduation ceremony. Of the 62 responses, only one student indicated they may graduate earlier, three students expected a delay to their graduation, and one student indicated he will not return to finish school. When specially asked about additional barriers to graduation caused by the pandemic, the majority (81%) of survey respondents said there were none. Some additional barriers noted were financial problem, looking for employment, trying to take care of family, having to work more, and online classes are not as good as in person classes.
Connection to Relevant Research

The evaluation findings align with previous research in several areas. The literature commonly uses time to degree and job attainment as indicators of success, especially in higher education where accountability is valued (Grites et al., 2016). While this evaluation did not measure program success outcomes (graduation within a 6-year maximum time period, attainment of a job in HSMT, and graduates are career-ready), some preliminary findings may help guide future planning or evaluation. At the time of the evaluation, which was between 7 and 14 months post-graduation, 43% of program alumni indicated they were employed in the health systems management career-field and no current students expected it to take them six years or longer to reach graduation.

The first evaluation question explored barriers to program completion and found poor experiences with faculty or staff, class scheduling, outside responsibilities (including work and family), issues with poor advising, and large class-size to be the most common barriers. These findings support previous research. Working during college consistently has a negative effect on graduation (Mayhew et al., 2016) and course availability and personal issues are obstacles to graduation (Moore & Tan, 2018). Tinto’s (1993) Theory of Departure explores students’ many outside responsibilities and how those responsibilities can alter the students’ intention to be successful in college. The Framework for Institutional Action (Tinto, 2012) includes the faculty’s role and recommends strong faculty development and training to help students succeed along with providing academic advising to all students. This evaluation supports those recommendations.

The second evaluation question found several programmatic strategies that the HSMT program can use to support student success. The evaluation findings suggest a strong desire for
professional development and career preparation which connects with Mayhew et al.’s (2016) conclusion, after review of thousands of studies, that career-oriented courses and faculty interaction with students for career preparation are important influencers of student success. The evaluation findings support Mayhew et al.’s conclusion. The literature also points to disparities in college success outcomes based on student characteristics or demographics such as first generation, low income, and race/ethnicity (Engle & Tinto, 2008; National Center for Educational Statistics, 2017a; Woosley & Shepler, 2011). This literature informed my desire to explore student characteristics in relation to student experience.

Academic advising was discussed in this evaluation’s literature review because of advising’s important role in assisting students who were changing their major, voluntarily or involuntarily (Elliot & Elliot, 1985; Gordon, 2007; Kuh et al., 2016; Kyte, 2019; Milsom & Coughlin, 2015; Theophilides et al., 1984). In the literature, little was known about involuntary major-reselection students and the work that had been done was focused on advising them through the transition while dealing with the loss and grief associated with the change (Freedman, 2017; Halasz et al., 2012; Reynolds, 2004). A majority (69%) of participants in this evaluation had changed their major and 27% were involuntary major-reselection students. Evaluation participants noted the helpfulness of academic advising in supporting student success. A significant difference was found in the perception of helpfulness of individual advising between students that had changed majors and those that had selected HSMT as their first-choice major. Students that did not change majors were more likely to find individual advising helpful. No significant difference was identified between involuntary major-reselection students and those students who were not. Participants responded that poor academic advising or lack of academic advising are barriers to student success. The evaluation participants recommended
improvements in advising as a key way the HSMT program could help students overcome barriers to graduation. However, these findings were in respect to the need for strong academic advising in the major for all students versus the need for advising major-changing students during or through a major reselection as noted in the literature. Further research in this area is noted in the future research section below.

**Recommendations for the HSMT Program**

The CIPP Evaluation Model (Stufflebeam, 2000) is a decision-oriented evaluation model developed to provide the program administrators or stakeholders with information to guide program decisions. This evaluation was developed following the model in order to provide information to the stakeholders with the goal of informing program improvements. To that goal, this evaluation gathered data within the structure of the BS HSMT Logic Model to complete two parts of the CIPP Evaluation Model: process (program activities) and product (program outputs) evaluations. Evaluation recommendations were provided to the key stakeholder via the Evaluation Report (Appendix F).

Before making recommendations for program improvement, it is important to note that in many ways the program should continue doing what it has been doing. Evaluation participants, students and alumni, are satisfied and would recommend the program to their friends. Most respondents found the HSMT program to contribute to their growth and development in the program’s goals: oral and written communication, teamwork, critical thinking, and leadership. Additionally, the various program aspects such as diverse group interactions, individual advising, interaction with faculty, professional development/career training, opportunities to learn outside of the classroom and to apply real-world learning were all declared helpful by a majority of the
participants. The HSMT program was particularly well received with parenting students. Overall, the majority of participants in this evaluation study report positive experiences with the program.

**Context and Input Evaluations.** This evaluation did not serve to evaluate/assess the context or program inputs; however, a clear understanding of the program’s students as inputs was explored. No other areas such as faculty, staff, university support services, nor the curriculum were specifically assessed through survey or interview questions. Nevertheless, participants’ open-ended comments and interview responses described their experiences with these inputs and the experiences were considered during the evaluation and as part of the recommendations.

The program administrators were aware of the diverse characteristics of their student population. They shared an interest in understanding if or how student characteristics affected their experience in the program. The sample of students and alumni that participated in the evaluation were a good representation of the student population in areas that could be compared (race, age, gender, ethnicity, and transfer status). The participants also represented several groups or categories of students that are often considered as higher-risk populations including students who do not speak English as a primary language, transfer students, first generation students, low income students (as evidenced through Pell Grant eligibility), parenting students, working students, students with disabilities, students who changed their major, students who were denied or not competitive to their first choice major, students that declared pre-major to a restricted major, and students denied to the restricted major.

Recommendation: Plan courses, experiences, services, and all aspects of the HSMT program with the diverse student body’s needs considered and characteristics represented. Work closely
with university offices that provide support to specific students (i.e. transfer students, financial aid, disability services) to ensure coordination between the services and the HSMT program.

**Process Evaluation.** The CIPP Evaluation Model designer, Daniel Stufflebeam (2000), recommends process evaluation to assess the program activities or what the program does (referred to as ‘program aspects’ in the survey). Overall, the program activities were well received, with some variation between different groups of students. However, the implementation of the various program aspects left room for potential improvement.

Recommendations for program activities follow.

**Academic Advising (Individual or Group).** Participants rated the program’s individual advising as helpful. The new option of group advising was not applicable to many of the participants, but was found more helpful than unhelpful by those with experience with it. Participants want advice in course selection, how to secure an internship or experience in the field, career opportunities open to them, and clarifying program requirements to avoid delays in graduation. They requested more advisors for the major, well-trained advisors, and for advising to be easily accessible.

Recommendation: Ensure access to accurate advising information is widely available whether it be through traditional advising appointments or through alternative formats such as electronic resources, online office hours, video recordings of popular questions and answers, and cross-training additional staff to serve as contacts for simple advising questions. Specific support for students changing into the HSMT major or considering a change into the major is recommended to ensure understanding of the program requirements and progression towards graduation from the onset.
**Applied Learning Experiences.** One of the most requested areas to support students’ success was through providing applied learning experiences outside and inside the classroom through internships, alternatives to internships that provide real-world experience, and classroom learning through real-world issues. These are a component of the broader professional development/career preparation area with enough interest to necessitate specific attention. Participants want to gain experience, learn professional skills, and make connections through an internship. However, the feasibility of internships for all students was not supported. Thus alternatives to internships were explored as were classroom-based options. Specific courses and faculty were noted during the evaluation as exemplary representatives of offering real-world learning in the classroom and those will be shared with program stakeholders as requested.

Recommendation: Develop an internship program for HSMT students. Internships should be optional and credit-bearing (an elective) or completed voluntarily. The HSMT program can establish relationships with local employers that can offer a set number of mutually-beneficial internships each semester, provide guidance on applying for internships, provide support in finding other internship opportunities as needed, monitor safety and security of internships, and provide support to organizations that work with HSMT students and the interns while they are in the field.

Recommendation: Provide opportunities for students to gain real-world job-relevant experiences and skills outside of the classroom. The HSMT program can build a portfolio of experiential options such as volunteering with local health organizations, assisting with faculty research experiences, student leadership positions, chances for job shadowing health service professionals or university administrators, service-learning or community-based coursework, and networking events with local organizations.
Recommendation: Incorporate real-world learning into all HSMT courses. Professional development for faculty/instructors around innovative ways to use cases, simulations, guest speakers, current events, technology, and projects should be mandatory.

**Professional Development/Career Preparation.** Participant requests for career preparation outweighed all other areas in the evaluation. Participants want a clear understanding of the careers available to them as HSMT graduations and they want support in obtaining those careers. They desire a curriculum, courses, and experiences that are pragmatically aligned with their future career.

Recommendation: Prioritize students’ professional development and career preparation. Strengthen connections to campus career services and provide convenient resources for the students to access. Structure all courses in the major to simulate opportunities to learn and practice professional development skills such as requiring group projects with identified leaders, require students meetings to produce an agenda and meeting minutes, required project management timelines, classroom presentations with professional dress codes, and required professional written and verbal communications. Incorporate professional licenses or certifications (i.e. coding and billing, project management) into the program when possible.

Recommendation: Create a clearly articulated description of the HSMT’s career pipeline. Create marketing materials that can be shared with advisors, faculty, staff, current students, and potential students about the careers available to HSMT graduates. Administrators and course faculty/instructors must align and explain the alignment of the overall curriculum and course requirements to specific job knowledge and skills.

**Product Evaluation.** The products of this evaluation are the outputs identified: progression towards degree, successful course completion, students feel supported, and
professional skill development. During this evaluation, success course completion as evidenced by course grades was not assessed. Professional skill development was assessed through participant self-assessment; however, recommendations in this area were provided during the process evaluation. Barriers to graduation were used to explore progression towards degree and the identification of barriers identified potential areas for program improvement. The unique and often negative experience of being a student during the coronavirus pandemic were also explored as a factor in progression towards degree.

Recommendation: Class development and scheduling should reflect student needs, desires, and learning styles. Offer more sections of each course with different faculty to accommodate differences in teaching/learning fit. Limit class size whenever possible. Offer classes more frequently, in various formats, and at various times to prevent delays in graduation. Develop more classes in the major to meet students’ desire for additional major-related skills and prevent them from needing an additional major or minors to graduate.

Recommendation: Involve students in all aspects of program planning, implementation, and evaluation. Solicit student input through the HSMT student organization, student surveys, and including students in program decision-making. Invite a student representative sit on program committees. Identify a confidential process for hearing student complaints. Listen to students’ concerns around outside responsibilities and collaborate on solutions or accommodations.

Recommendation: As the coronavirus pandemic continues to affect college students, make the online format a positive experience for all. Provide technical support to faculty, instructors, and students teaching or learning online. Require faculty and instructors professional development in best practices for online teaching and learning. Require face-to-face interactions and regular
opportunities for communication between students and faculty with other students. Encourage a culture of support and understanding as the pandemic adds additional challenges.

**Recommendations for Future Evaluation and Research**

This evaluation was conducted about one bachelor’s of science in health systems management program with the purpose of offering recommendations for program improvement to the program’s stakeholders. However, the findings may offer some value beyond the program of review and point to areas of interest where future evaluation or research could benefit higher-education practice. The first recommendation is additional research on involuntary major-reselection students. This evaluation identified a few areas where these students experience the program differently, but further research is needed to understand their unique needs and the best way to support them after they have moved into the new major. Available literature focuses on the transition period between majors, but a focus on supporting the students after they select the alternative major is warranted.

The second recommendation is to explore the importance of career preparation to students in the health sciences. This evaluation found that professional development/career preparation was the main desire and expectation of the participants. Future research to explore this phenomenon with other students could lead to generalizable recommendations for colleges planning programs in this area.

The final recommendation is for further research on alternatives to traditional internships. Traditional internships are not practical for many students, are challenging for programs to implement, and in times of a global pandemic, may be impossible. Experiential education experts should develop innovative approaches to meeting the needs of students to have practical experiences that are alternatives to the traditional internship. Dissemination of these new
approaches could benefit an unlimited number of faculty, program administrators, and students while better preparing the future workforce.

Summary

Chapter 5 serves as an executive summary of the program evaluation. The integrated evaluation findings to answer the evaluation questions were summarized and presented. The connections of relevant literature to the evaluation findings are noted. Using the Process and Product aspects of Stufflebeam’s (2000) CIPP Evaluation Model, recommendations for the program are given with the hope of providing information that promotes program improvement. Finally, three recommendations for practice, future evaluation and research were discussed.
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b=true&ct=display&fn=search&doc=ETOCRN306869680&indx=1&recIds=ETOCRN30
6869680.
Appendix A: Evaluation Plan

Evaluation Report
Bachelor of Science in Health Systems Management

Prepared by:
Somer Goad Burke, MPH, CPH
The following evaluation proposal outlines the planned components for a formative evaluation of the Bachelor of Science in Health Systems Management Program, a large public university in the southeastern United States. The proposal includes seven major sections:

1. Background and Context
2. Logic Model
3. Parameters
4. Evaluation Plan
5. Timeline
6. Budget
7. Reporting and Dissemination

Background and Context

The setting for this evaluation study is a large public university in the southeastern United States. The university enrolls 29,000 diverse students, includes seven colleges, and offers 77
bachelor’s degree programs. This evaluation study will focus on a bachelor’s degree offered in the College of Health and Human Services Department of Public Health Sciences. The department was approved to establish a new Bachelor of Science in Health Systems Management (BS HSMT) in late 2016. The BS HSMT program was designed to address two important needs within the department. The first identified need is to provide a bachelor’s degree opportunity to a large number of pre-major students unable to gain admission to their first-choice major primarily due to space restraints. The program also seeks to address an identified workforce need for graduates educated in healthcare management (health systems management). The degree program welcomed its first students in Fall 2017, anticipating enrollment of 100 students per year. Enrollment greatly exceeded expectations, and within the first two years program enrollment was at 1009 students. The first cohort of students graduated in Spring 2019.

Most students enter into the College as a pre-major student of their designated major (i.e. pre-major public health or pre-major nursing). During their second year, students must apply to the major of their choice. The majors are limited-capacity selective programs with insufficient space for the large number of pre-major students that apply. The space limitation is due to restraints imposed by the accrediting agencies usually related to defined faculty-student ratios. In Fall 2014, more than 850 pre-major students were not admitted into one of the College’s majors due to program capacity. These students are required to reselect a college major and career path. The BS HSMT was designed to meet the needs of this population of students who seek careers in the health and human services fields, but whom are unable to matriculate into their first-choice major. The major can also be chosen by students as a first-choice, although the numbers of students who do so are lower. Students in the major come from diverse backgrounds, including
students from higher-need populations including first generation students, transfer students, students from lower socioeconomic families, and non-traditional students.

Logic Model

Logic Model
Bachelor of Science in Health Systems Management

Context
The Bachelor of Science in Health Systems Management (BS HSMT) was designed to meet the needs of a large number of pre-major students in the College of Health and Human Services. The degree prepares students for generalist positions in the health systems management field. The program started in Fall 2017 and had over 1000 students enrolled in Spring 2020.

Theory of Change
The logic model below articulates the program’s theory of change including the inputs and activities that are in place in order for the long-term impact to occur.

Inputs
In order to successfully offer the program activities, the program needs faculty (instructors), program administrators, research about best practices, a strong curriculum, and support from established university initiatives (counseling center, disability services, career center, etc.).

Activities
The program will provide activities that support the program goals of graduation and preparation for a career in health systems management. These activities include student academic advising,
quality teaching/instruction of the program curriculum, opportunities for applied learning, and professional development services.

**Outputs**
Students in the program are expected to gain from participating in the activities. Areas where they will see gains include progression towards graduation/degree obtainment, successful course completions, and the development of professional skills. Students will also feel supported in their endeavors.

**Outcomes**
The short term outcomes that are expected for students participating in the program include graduation within defined time periods (6 year maximum), attainment of a job in the health systems management field, and graduates are career-ready.

**Impact**
The program’s long term impact is expected to be evidenced by meeting the local and state workforce needs with program alumni.

**Assumptions**
In order for the theory of change to work as expected, there are basic assumptions that must be true. These assumptions are that undergraduate students are motivated to graduate, undergraduate students desire careers in Health Systems Management, program administrator are concerned with student outcomes, and faculty possess leadership skills and expertise in teaching.
External Factors
The two primary external factors identified are the competing roles of program administration and faculty as well as the challenges associated with meeting the needs of a higher-need student population.
### Logic Model:
**Bachelor of Science in Health Systems Management (BS HSMT)**

#### Inputs
- 34 Faculty
- 1000+ Students
- Program Administrators
- Research
- University Support Initiatives
- Curriculum (In-person)

#### Activities
- Advising
- Teaching/ Curriculum
- Applied-learning Opportunities
- Professional Development Services

#### Outputs
- Progression towards degree
- Successful course/s completion
- Students feel supported
- Professional skills development

#### Outcomes (Short and Interim)
- Graduation within 6-year maximum time period
- Attainment of job in HSMT
- Graduates are career-ready

#### Impact
- Local and state workforce needs are met with program alumni

#### Assumptions
- Undergraduate students are motivated to graduate
- Undergraduate students desire careers in Health Systems Management
- Program administrators are concerned with student outcomes
- Faculty have leadership skills and expertise in teaching

#### External Factors
- Higher-need student population
- Competing roles of program administrators/faculty
Parameters

**Evaluator**
The external evaluator is Somer Goad Burke, MPH, CPH.

**Key Stakeholders**
The key stakeholders are Melinda Forthofer, Ph.D., Department Chair, and Chelsea Demarest, MPH, Director of the BS-HSMT.

**Audience**
For the purpose of this evaluation, the primary audience identified are the Department’s Department Chair and the BS-HSMT Director. Additional audiences may be selected at the discretion of the key stakeholders.

**Evaluation Purpose**
The purpose of this proposed formative evaluation is to explore the effectiveness of the BS HSMT program to support students to graduation within defined time periods and to a career in the health systems management field with the intention of gathering information that will support program improvement. Attention will be given to the effectiveness of the program to address the needs of a diverse student population.

**Evaluation Approaches**
This formative evaluation will be conducted using a decision-oriented evaluation approach. Decision-oriented approaches were designed to meet the needs of the decision makers, such as program administrators, in order for the evaluation to be most effective and to encourage utilization of the results (Fitzpatrick, Sanders, & Worthen, 2011). The specific management-
oriented model for this evaluation is Stufflebeam’s (2000) CIPP Evaluation Model. For this evaluation, the CIPP Model will serve in a primarily retrospective capacity as the program has already been developed and implemented. Early impact of the program’s effectiveness will be of interest in addition to a retrospective look at the program’s context, input, and process.

**Limitations and Delimitations**

The limitations of the study include the number of students willing to participate in the qualitative data collection (self-selection bias), the quality of the student management system’s data, and the evaluator’s access to students and data needed to complete the evaluation. The delimitations of the study are the students enrolled in the BS HSMT program (Spring 2020) and recent alumni (graduates from Spring 2019 – Fall 2019) of the BS HSMT program at the defined university, and the CIPP Evaluation Model.

**Deliverables**

To ensure accountability and transparency of the evaluation, a status report will be provided via email at the end of each month and will include an update on the progress of the evaluation. Any foreseen obstacles that could delay the final report of the evaluation will be brought immediately to the attention of the Department Chair and BS HSMT Director and will be included in a status report.

A written draft report will be made available to the Department Chair and BS HSMT Director by August 1, 2020. Feedback will be requested from the key stakeholders on the draft report.

A final written report will be submitted by September 15, 2020. An oral presentation will be scheduled to present the results of the evaluation at the request of the key stakeholders.
Evaluation Plan

Evaluation Questions
In consultation with the key stakeholders, evaluation questions were developed. The broad questions guiding this evaluation are:

1. What barriers do BS HSMT students face in completing the program?
2. What are programmatic strategies the BS HSMT program can use to support student success?
3. To what extent has the disruption of the COVID-19 pandemic exacerbated barriers for BS HSMT students?

Data Collection Methods and Sources
The evaluation will use qualitative and quantitative data collection and analysis. Data will be collected from and about currently enrolled students and recent alumni of the program. The alumni of interest are students graduating in Spring 2019 (first cohort) through Fall 2019. Students enrolled in Spring 2020 will be the students of interest.

The evaluation will collect quantitative and qualitative data from current students and recent alumni through the use of an online survey (produced with Qualtrics) as well as interviews. The survey and interviews will explore perceptions on how the BS HSMT program components contributed to their success and readiness to enter the health systems management workforce. Quantitative data and statistics will be used to discuss student demographics in relation to their graduation timeline and early job attainment. These data are collected through the university’s student management system. Data are available in areas such as gender, ethnicity, socioeconomic
indicators, first-generation indicators, grade point average, time-to-graduation, number of previous majors, and utilization of student support services.

Quantitative Data – Records Review: The evaluator will be given access to the university’s student data to analyze. Descriptive statistics will be used to analyze the demographic information. Significance to graduation and early job attainment will be assessed. The data will be used to identify subgroups of the student population that are of interest to the evaluation and to ensure that the evaluation sample is representative of the student body.

Survey Questionnaire: A Qualtrics Survey (administered online) will be developed and shared with alumni and enrolled students. The survey questions will address the overall evaluation questions and will use the CIPP Evaluation Model to guide the question development. The survey will be administered to the approximate 1000 students that are enrolled in the BS HSMT program in Spring 2020. Alumni of the program (approximately 200 that graduated from Spring 2019 to Fall 2019) will also receive the survey. The survey questionnaire will be shared in advance with the key stakeholders for feedback. It is anticipated that this survey will take approximately 15 minutes to complete.

Interviews: At the end of each survey, students and alumni will be asked to volunteer to participate in an interview conducted by the external evaluator. Semi-structured interviews will be conducted following Interview Guides (one for alumni and one for students). The guides will be shared in advance with the key stakeholders for feedback. It is anticipated each interview will take 45-60 minutes. The interviews will be recorded and transcribed.
Timeline

The following timeline assumes no significant delay from surveys and interviews, access to data, or feedback from key stakeholders. Any anticipated delays will be communicated to the key stakeholders in a monthly status report.

| AUG  | • Initial Meeting with Key Stakeholders  
|      | • Develop Evaluation Outline and Obtain Stakeholder Feedback |
| OCT  | • Survey Development |
| NOV  | • Finalize Evaluation Plan |
| DEC  | • Share the Evaluation Plan and Survey with the Key Stakeholders |
| JAN  | • Pilot Survey |
| MAY  | • IRB Process with USF  
|      | • IRB Process with UNCC |
| JUN  | • Data Collection - Survey and Interviews |
| JUL  | • Analyze Data  
|      | • Prepare Report |
| AUG  | • Draft Final Report Submitted to Key Stakeholders (August 1)  
|      | • Stakeholder’s Feedback on Final Report Received |
| SEP  | • Final Report Submitted and Presented (if requested) (September 15) |
Description of Timeline Activities

**Initial Planning with Key Stakeholders and Develop Evaluation Outline (August 2019):**
Share Proposed Evaluation Plan; Identify additional stakeholders; Gather information regarding the program; Confirm the evaluation purpose; Identify sources of data including access to student and alumni populations; Finalize evaluation questions

**Survey Development (October 2019):** Develop (in consultation with the key stakeholders) the questionnaire based on the overall evaluation questions

**Finalize the Evaluation Plan (November 2019):** Finalize the evaluation plan and share with stakeholders

**Pilot the Survey (January 2020):** Pilot the survey questionnaire; Make revisions to survey as needed

**Complete IRB Process with UNCC and USF (May 2020):** Apply for IRB approval through the UNCC system; Obtain approval; Apply for IRB approval through the USF system; Obtain approval

**Data Collection (June 2020):** Send the survey to students and alumni in select semesters; Conduct interviews; Collect data from the UNCC student and alumni databases

**Data Analysis – Qualitative and Quantitative (July 2020):** Code and analyze survey questionnaire replies; Code and analyze interviews; Analyze student data from the database review

**Prepare Evaluation Report (July 2020):** Prepare the evaluation report
Draft Final Report Submitted and Receive Feedback from Key Stakeholders (August 2020): Prepare and submit a draft final report to key stakeholders; Receive feedback including questions or suggestions on the draft from the key stakeholders

Final Report Submitted (September 2020): Submit the final Evaluation Report to the key stakeholders by September 15, 2020; Oral presentation of the final report will be conducted at the stakeholders’ request

Progress Reports (Monthly): A progress report will be submitted to the key stakeholders at the end of each month. This brief memo will reflect the status of data collected and the general progress of the evaluation.

Budget

This project will be conducted as a dissertation project of a University of South Florida College of Education doctoral student. All work will be completed as an in-kind contribution of the evaluator and all expenses will be covered by the evaluator. Access to Qualtrics (for survey development and data collection) and SAS (for data analysis) is provided through USF.

Reporting and Dissemination

Final Report and Editing
The evaluator will be responsible for authoring and editing the final evaluation report. The final report will be designed to communicate the evaluation results with the key stakeholders and audiences they select to share the report with.
Format of the Final Report

The following items are planned components evaluator’s final report:

a. Executive Summary

b. Introduction (e.g., purpose of the evaluation, audiences)

c. Evaluation plan and procedures (e.g., methods of data collection and analysis)

d. Evaluation results (e.g., summary of evaluation findings)

e. Conclusions and recommendations

f. Appendices (if any)

Delivery Schedule

The external evaluator will deliver the final report on September 15, 2020 unless an updated timeline is discussed and approved by all parties.
References


Appendix B: Pre-testing and Piloting the Survey

Pre-testing and Piloting the Survey

The survey instrument was pre-tested and pilot tested in preparation for the evaluation’s data collection. During development and the pre-test period, the survey was shared with the key stakeholders and colleagues with expertise in student assessment. The key stakeholders are the experts on the program, students, and alumni that will use the instrument. They are the decision makers for which the evaluation is designed. The stakeholders reviewed and edited the survey questions for clarity, appropriateness of terminology, and applicability to the student and alumni population of the program. Colleagues of the evaluator with expertise in college-student assessment were consulted in question development and also offered editing recommendations. The survey instrument was prepared within Qualtrics (2020). Additional colleagues with knowledge and experience using Qualtrics pre-tested the survey instrument to assure accuracy in the design of the instrument including survey skip patterns and testing of textboxes.

The survey was piloted tested with students in an introductory-level health science course at a separate university from the evaluation location. The course has several online sections, with a total student population of 700. The survey was sent by the course instructor via the learning management system’s (Canvas) email system once on January 17, 2020. Students were given information about the purpose of the pilot study, assured anonymity, and asked if they agreed to participate as the first question. No incentive was offered. A short window was given for survey responses (January 17, 2020 to January 22, 2020). Surveys were completed, on average, in under
ten minutes. Those who completed this pilot survey were asked if they would be willing to participate in a focus group about the survey. They were told that there would be a small incentive for participation in the focus group. They indicated their willingness to participate by providing their email address at the end of the survey.

The nine students who agreed to be contacted were invited to a focus group on January 24, 2020. Only one student came to the focus group. Thus, the student was asked to review the survey during a cognitive interview using the Think-Aloud Cognitive Method (Collins, 2001). The Think-Aloud Method asks the participant to talk through their thinking as they respond to questions on the survey in order for the researcher to reduce measurement errors with the survey (Collins, 2001). The technique was used again with a second student who offered to meet on a different day because she was unavailable for the initial focus group time. One additional student agreed to meet, but scheduling challenges prevented that meeting from taking place during the pilot-test period. Each of the students were given a $10 gift card for their participation.

Results

Response rates of surveys conducted with college students vary widely. The National Survey of Student Engagement (NSSE), conducted annually on hundreds of campuses, reports response rates that range from 5-77% with the average response rate of 29% (National Survey of Student Engagement, 2016). Similarly, the University of California system reported an average response rate of 33% when surveying undergraduate students in 2018 (University of California, 2020). The response rate of this pilot survey was 12% (see Table 1). The response rate includes students that responded to at least one survey question. While lower than average, the response rate exceeded expectations for a pilot survey of students with no connection to the survey topic.
or outcomes. Additionally, the email invitation to participate was only sent one time and no incentive was offered. Multiple attempts will be made with the final survey and the connection and value of the survey will be described to the potential respondents.

Table 1A

Survey Responses

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responses</td>
<td>83</td>
<td>12% of pilot population</td>
</tr>
<tr>
<td>Fully completed surveys</td>
<td>31</td>
<td>37% of responses</td>
</tr>
<tr>
<td>Agreed to be contacted for focus group</td>
<td>9</td>
<td>29% of completed surveys</td>
</tr>
<tr>
<td>Participated in individual review of survey</td>
<td>2</td>
<td>22% of those who agreed to be contacted</td>
</tr>
</tbody>
</table>

The survey respondents ranged in age from 18-49 with the average age of 21. They were more likely to be women (77%), full-time students (95%), and in good academic standing (94%). The respondents represented diverse groups including first generation students (48%), lower socioeconomic, Pell Grant eligible students (38%), working students (57%), parenting students (5%), students who do not speak English as their primary language (6%). and students with disabilities (7%). They self-identified as Hispanic (33%), American Indian (1%), Asian (2%), Black or African American (15%), Caucasian (77%), and Other (5%) with one student writing in Middle Eastern.

Following the pilot, changes to the survey were made to address issues revealed during the pilot survey and cognitive interviews. Overall, data received from open-ended questions were the types of data expected of the survey item, demonstrating that the students interpreted the questions as intended. The cognitive interviews further clarified that the students understood the questions and their responses demonstrated the questions were collecting data as intended. The
interviews also explored specific word use, flow of survey, acceptability of the length of survey, and overall experience. Details of the changes are provided in Table 2.

Table 2A

*Question Changes following Pilot Study*

<table>
<thead>
<tr>
<th>Question</th>
<th>Updated Question</th>
<th>Reason for Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1.5 Are you (check all that apply): American Indian or Alaskan Native (1) Asian (2) Black or African American (3) Native Hawaiian or other Pacific Islander (4) White or Caucasian (5) Other: (6)</td>
<td>Do you identify as (check all that apply): American Indian or Alaskan Native (1) Asian (2) Black or African American (3) Native Hawaiian or other Pacific Islander (4) White or Caucasian (5) Other: (6) Prefer not to respond (7)</td>
<td>General to All Sixteen of the 52 survey participants (31%) that did not fully complete the survey quit after this question. To decrease the likelihood that a student will stop at this question, the option to not respond was added and the question wording was changed.</td>
</tr>
<tr>
<td>Q2.4 My job is: On-Campus (1) Off-Campus (2)</td>
<td>My job is: On-Campus (1) Off-Campus (2) Both (3)</td>
<td>Student Section Interviewee indicated she has both an on-campus and an off-campus job, requiring another response option.</td>
</tr>
<tr>
<td>Q3.6 How satisfied are you with your decision to major in HSMT?</td>
<td>How happy are you that you made the decision to major in HSMT?</td>
<td>Student Section</td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Extremely satisfied (1)</td>
<td>Extremely happy (1)</td>
<td>Interviewees wanted to emphasize the decision of choosing the major and recommended the use of the word happy over satisfied.</td>
</tr>
<tr>
<td>Somewhat satisfied (2)</td>
<td>Somewhat happy (2)</td>
<td></td>
</tr>
<tr>
<td>Neither satisfied nor dissatisfied (3)</td>
<td>Neither happy nor unhappy (3)</td>
<td></td>
</tr>
<tr>
<td>Somewhat dissatisfied (4)</td>
<td>Somewhat unhappy (4)</td>
<td></td>
</tr>
<tr>
<td>Extremely dissatisfied (5)</td>
<td>Extremely unhappy (5)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q5.10 How satisfied are you with your decision to major in HSMT?</th>
<th>How happy are you that you made the decision to major in HSMT?</th>
<th>Alumni Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely satisfied (1)</td>
<td>Extremely happy (1)</td>
<td>Same as above</td>
</tr>
<tr>
<td>Somewhat satisfied (2)</td>
<td>Somewhat happy (2)</td>
<td></td>
</tr>
<tr>
<td>Neither satisfied nor dissatisfied (3)</td>
<td>Neither happy nor unhappy (3)</td>
<td></td>
</tr>
<tr>
<td>Somewhat dissatisfied (4)</td>
<td>Somewhat unhappy (4)</td>
<td></td>
</tr>
<tr>
<td>Extremely dissatisfied (5)</td>
<td>Extremely unhappy (5)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q3.9 How satisfied are you with each of the following aspects of the HSMT program?</th>
<th>Question Removed</th>
<th>Student Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Advising (1)</td>
<td></td>
<td>Interviewees could not verbalize a significant difference between asking about satisfaction with the program aspects and asking if the program aspects were helpful.</td>
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<td>Q6.3 How satisfied are you with each of the following aspects of the HSMT program?</td>
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<th>Q3.11 Please describe any other aspects of the program that have been helpful to your success.</th>
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<td>Interviewees indicated the need to clarify the question is asking about additional aspects of the program, beyond what was listed in the previous question.</td>
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References


http://nsse.indiana.edu/pdf/Resp_Rate_FAQ.pdf

University of California. (2020). *Completion and response rates of UC surveys*.

https://www.universityofcalifornia.edu/infocenter/completion-and-response-rates-uc-surveys
Appendix C: Evaluation Survey

Evaluation Survey

Start of Block: Demographic Profile for ALL

Q1.1
This survey hopes to learn about your experiences in the Bachelor of Science in Health Systems Management at _____.

It will take about 15 minutes to complete. Your participation is voluntary and confidential. Your participation is also greatly appreciated.

☐ Yes, I agree to participate in this survey (1)

☐ No, I do not wish to continue (2)

Q1.2 What is your age?

________________________________________________________________
Q1.3 To which gender do you identify?

- Man (1)
- Woman (2)
- Gender non-binary (3)
- Not listed: (4) ________________________________________________

Q1.4 Are you:

- Hispanic or Latino (1)
- Not Hispanic or Latino (2)

Q1.5 Do you identify as (check all that apply):

- American Indian or Alaskan Native (1)
- Asian (2)
- Black or African American (3)
- Native Hawaiian or other Pacific Islander (4)
- White or Caucasian (5)
- Other: (6) ________________________________________________
- I prefer not to respond (7)

-------------------------------------------------------------------------------------------------------------
Q1.6 Is English your primary language?

- Yes (1)
- No, my primary language is: (2)

Q1.7 Did you begin college at UNCC?

- Yes (1)
- No, I transferred to UNCC from (please enter previous school/s) (2)

Q1.8 Did your parent or caregiver complete a 4-year college degree?

- Yes, both parents/caregivers (1)
- Yes, one parent/caregiver (2)
- No (3)
- I do not know (4)

Q1.9 Are you eligible for Pell Grants?

- Yes (1)
- No (2)
- I do not know (3)
Q1.10 Are you the parent or guardian of a child under the age of 18?

- Yes (1)
- No (2)

Q1.11 Which best describes your relationship with the Bachelor of Science in Health Systems Management (HSMT)?

- Current Student in the HSMT program (1)
- Alumni of the HSMT program (2)

Skip To: End of Block If Which best describes your relationship with the Bachelor of Science in Health Systems Management... = Alumni of the HSMT program

End of Block: Demographic Profile for ALL

Start of Block: STUDENT section

Q2.1 What is your current class standing?

- Freshman (1)
- Sophomore (2)
- Junior (3)
- Senior (4)

Q2.2 Are you currently enrolled in school part-time or full-time?

- Full-time (1)
- Part-time (2)
Q2.3 During the school year, how many hours a week do you spend working a job for pay?

- None (I do not have a job) (1)
- 1-10 hours (2)
- 11-20 hours (3)
- 21-31 hours (4)
- 32-40 hours (5)
- More than 40 hours (6)

(Question 2.5 Skip To: If During the school year, how many hours a week do you spend working a job for pay? = None (I do not have a job))

Q2.4 My job is:

- On-Campus (1)
- Off-Campus (2)
- Both (3)
Q2.5 What is your current GPA?

- 3.5 - 4.0 (1)
- 3.0 - 3.4 (2)
- 2.5 - 2.9 (3)
- 2.0 - 2.4 (4)
- Under 2.0 (5)

Q2.6 What is your current academic status? (select all that apply)

- Good academic standing (1)
- Academic probation for the University/University Academic Probation (2)
- Academic probation in the major/ Major Academic Probation (3)

Q2.7 Have you been diagnosed with any disability or impairment?

- Yes (1)
- No (2)

Skip To: End of Block If Have you been diagnosed with any disability or impairment? = No

Q2.8 Have you registered your disability with the UNCC Office of Disability Services?

- Yes (1)
- No (2)
Q3.1 Is the HSMT your first major at UNCC?

- Yes (1)
- No, I changed my major once (please indicate previous major) (2)
- No, I changed my major more than once (please indicate previous majors) (3)

Q3.2 Why did you change your major?

- My career interest changed (1)
- I applied but was not admitted into my first-choice major (2)
- My grades were not competitive for my first-choice major (3)
- Other (4) ________________________________

Q3.3 Have you ever declared a pre-major for an upper-division restricted major?

- Yes (please indicate the pre-major) (1)
- No (2)

Skip To: Q3.3 If Have you ever declared a pre-major for an upper-division restricted major? = Yes

Skip To: Q3.5 If Have you ever declared a pre-major for an upper-division restricted major? = No
Q3.4 Were you admitted or denied admission to the upper-division restricted major?

- Admitted (1)
- Denied (2)
- I did not apply (3)

Q3.5 Why did you choose the HSMT major?

________________________________________________________________

Q3.6 How happy are you that you made the decision to major in HSMT?

- Extremely happy (1)
- Somewhat happy (2)
- Neither happy nor unhappy (3)
- Somewhat unhappy (4)
- Extremely unhappy (5)
Q3.7 How satisfied are you OVERALL with your experience in the HSMT program so far?

- Extremely satisfied (1)
- Somewhat satisfied (2)
- Neither satisfied nor dissatisfied (3)
- Somewhat dissatisfied (4)
- Extremely dissatisfied (5)

Q3.8 What can the HSMT program do to improve your experience?

__________________________________________________________________________
Q3.9 How **helpful** are each of the following aspects of the HSMT program in moving you towards successfully meeting your goal of graduating with a bachelor's degree?

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Q3.10 In addition to the aspects listed above, please describe any other aspects of the program that have been helpful to your success.

______________________________________________________________________
Q3.11 What do you recommend the HSMT program do to support student success?


Q3.12 How long do you expect it will take for you to earn your bachelor's degree in HSMT?

- 4 years or less (1)
- 5 years (2)
- 6 years (3)
- 7 or more years (4)

Q3.13 What (if any) are the barriers to your graduation from the HSMT?


Q3.14 What can the HSMT program do to help students overcome barriers to graduation?


Q3.15 I would recommend the HSMT program to a friend or colleague.

- Definitely yes (1)
- Probably yes (2)
- Probably not (3)
- Definitely not (4)

End of Block: Evaluation Questions - STUDENT

Start of Block: Career Readiness - STUDENT

Q4.1 To what extent has your experience in the HSMT program contributed to your understanding of the career field of health systems management?

- A great deal (1)
- A lot (2)
- A moderate amount (3)
- A little (4)
- None at all (5)
Q4.2 To what extent has your experience in the HSMT contributed to preparing you for a career in health systems management?

- A great deal (1)
- A lot (2)
- A moderate amount (3)
- A little (4)
- None at all (5)

Q4.3 To what extent do you feel your experience in the HSMT is contributing to your growth or development in each of the following areas:

<table>
<thead>
<tr>
<th></th>
<th>A great deal (12)</th>
<th>A lot (13)</th>
<th>A moderate amount (14)</th>
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Q4.4 How has the HSMT program prepared you for your future career in health systems management?

________________________________________________________________

Q4.5 How well prepared do you feel for your future career in health systems management?

- Extremely well prepared (1)
- Very well prepared (2)
- Moderately well prepared (3)
- Slightly well prepared (4)
- Not well prepared at all (5)

Q4.6 How can the HSMT program better prepare students for their future careers?

________________________________________________________________
Q4.7 What is your desired type of employment situation following graduation?

- **Employed**: Employed in a full-time or part-time position (1)
- **Training Program Participant**: Participating in a fellowship or internship (2)
- **Volunteer Participant**: Participating in a volunteer or service program such as Peace Corps, AmeriCorps, or mission work (3)
- **Continuing/Graduate Education**: Plan to continue education in a program of further study or training (4)
- **Not Employed, Not Seeking**: Not employed nor pursuing employment, training, or continuing education (5)

Q4.8 How confident are you that you will secure your desired type of employment within 12 months after graduation?

- Extremely confident (1)
- Somewhat confident (2)
- Neither confident nor unconfident (3)
- Somewhat unconfident (4)
- Extremely unconfident (5)

End of Block: Career Readiness - STUDENT

Start of Block: ALUMNI section
Q5.1 When did you graduate from the HSMT Program?

- Spring 2019 (1)
- Summer 2019 (2)
- Fall 2019 (3)

Q5.2 What was your final GPA at graduation?

- 3.5 - 4.0 (1)
- 3.0 - 3.4 (2)
- 2.5 - 2.9 (3)
- 2.0 - 2.4 (4)
- Under 2.0 (5)

Q5.3 Have you been diagnosed with any disability or impairment?

- Yes (1)
- No (2)

*Skip To: Q5.5 if Have you been diagnosed with any disability or impairment? = No*
Q5.4 During your enrollment at UNCC, did you register your disability with the UNCC Office of Disability Services?

- Yes (1)
- No (2)

Q5.5 Was the HSMT your first major at UNCC?

- Yes (1)
- No, I changed my major once (please indicate previous major) (2)

- No, I changed my major more than once (please indicate previous majors) (3)

Skip To: Q5.7 If Was the HSMT your first major at UNCC? = Yes

Q5.6 Why did you change your major?

- My career interest changed (1)
- I applied but was not admitted into my first-choice major (2)
- My grades were not competitive for my first-choice major (3)
- Other (4) __________________________________________________________

Q5.7 Have you ever declared a pre-major for an upper-division restricted major?

- Yes (1)
- No (2)
Q5.8 Were you admitted or denied admission to the upper-division restricted major?

- Admitted (1)
- Denied (2)
- I did not apply (3)

Q5.9 Why did you choose the HSMT major?

________________________________________________________________

Q5.10 How happy are you that you made the decision to major in HSMT?

- Extremely happy (1)
- Somewhat happy (2)
- Neither happy nor unhappy (3)
- Somewhat unhappy (4)
- Extremely unhappy (5)
Q5.11 What best describes your current employment situation?

- **Employed Full-Time**: Employed in a full-time position (1)
- **Employed Part-Time**: Employed in a part-time position (2)
- **Training Program Participant**: Participating in a fellowship or internship (3)
- **Volunteer Participant**: Participating in a volunteer or service program such as Peace Corps, AmeriCorps, or mission work (4)
- **Continuing/Graduate Education**: Enrolled in a program of further study or training (please indicate the area of study/program you are enrolled in) (5)
- **Not Employed, Seeking Employment or Continuing Education**: Not employed and engaged in the job search process or applying to programs of further study (please indicate the type of position or educational program you are seeking) (6)
- **Not Employed, Not Seeking**: Not employed and not pursing employment, training, or continuing education (7)
Q5.12 Which of the following best describes your primary employment sector?

☐ **Academic Institution:** Includes elementary, secondary, or post-secondary institutions (1)

☐ **Government Agency:** Includes US Federal, State, Local, or Tribal government agency; US military; or non-US government (2)

☐ **Healthcare Organization:** Includes hospital or health-care provider, managed care organization, etc. (3)

☐ **For-Profit Business, Industrial, or Commercial Firm:** Includes health insurance or health IT company; consulting firm; marketing, public relations, or communications firm; pharmaceutical, bio-tech, or medical device firm, or other for-profit firm (4)

☐ **Non-Profit Organization:** Includes association, foundation, voluntary, NGO, non-profit health insurance, or other non-profit organizations (5)

☐ **Self-Employed** (6)

☐ **Other** (7) ________________________________________________

Q5.13 What is your job title?

________________________________________________________________

Q5.14 What is the name of the firm or organization you work for?

________________________________________________________________

Q5.15 Is your current job within the field of health systems management? (The HSMT describes health systems management positions as the following: Medical and health systems manager
positions entail planning, directing, or coordinating medical and health services in hospitals, clinics, managed care organizations, non-profit agencies, or similar organizations.)

- Yes (1)
- No (please indicate the career field you are working in) (2)

End of Block: ALUMNI section

Start of Block: Evaluation Questions - ALUMNI

Q6.1 How satisfied are you OVERALL with your experience in the HSMT program?

- Extremely satisfied (1)
- Somewhat satisfied (2)
- Neither satisfied nor dissatisfied (3)
- Somewhat dissatisfied (4)
- Extremely dissatisfied (5)

Q6.2 How could the HSMT program have improved your experience?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Q6.3 How helpful were each of the following aspects of the HSMT program in helping you successfully meet your goal of graduating with a bachelor's degree?

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Q6.4 In addition to the aspects listed above, please describe any other program aspects that would have helped you succeed.

________________________________________________________________
Q6.5 What do you recommend the HSMT do to support student success?

________________________________________________________________

Q6.6 How long did it take you to earn your bachelor's degree?

- 4 years or less (1)
- 5 years (2)
- 6 years (3)
- 7 or more years (4)

Q6.7 What (if any) were the barriers/challenges to your graduation from the HSMT program that you faced while you were a student?

________________________________________________________________

Q6.8 What can the HSMT program do to help students to overcome barriers to graduation?

________________________________________________________________
Q6.9 I would recommend the HSMT program to a friend or colleague.

- Definitely yes (1)
- Probably yes (2)
- Probably not (3)
- Definitely not (4)

End of Block: Evaluation Questions - ALUMNI

Start of Block: Career Readiness - Alumni

Q7.1 To what extent has your experience in the HSMT program contributed to your understanding of the career field of health systems management?

- A great deal (1)
- A lot (2)
- A moderate amount (3)
- A little (4)
- None at all (5)
Q7.2 To what extent did your experience in the HSMT contribute to preparing you for a career in health systems management?

- A great deal (1)
- A lot (2)
- A moderate amount (3)
- A little (4)
- None at all (5)

Q7.3 To what extent do you feel your experience in the HSMT contributed to your growth or development in each of the following areas:

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Q7.4 At graduation, how well prepared did you feel for your career in health systems management?

- Extremely well prepared (1)
- Very well prepared (2)
- Moderately well prepared (3)
- Slightly well prepared (4)
- Not well prepared at all (5)

Q7.5 How did the HSMT program prepare you for your career?

_________________________________________________________________

Q7.6 What can the HSMT program do to better prepare students for their future career in health systems management?

_________________________________________________________________

End of Block: Career Readiness - Alumni
Appendix D: Logic Model

Logic Model:
Bachelor of Science in Health Systems Management (BS HSMT)

Inputs
- 34 Faculty
- 1000+ Students
- Program Administrators
- Research
- University Support Initiatives
- Curriculum (In-person)

Activities
- Advising
- Teaching/Curriculum
- Applied-learning Opportunities
- Professional Development Services

Outputs
- Progression towards degree
- Successful course/completion
- Students feel supported
- Professional skills development

Outcomes (Short and Interim)
- Graduation within 6-year maximum time period
- Attainment of job in HSMT
- Graduates are career-ready

Impact
- Local and state workforce needs are met with program alumni

Assumptions
- Undergraduate students are motivated to graduate
- Undergraduate students desire careers in Health Systems Management
- Program administrators are concerned with student outcomes
- Faculty have leadership skills and expertise in teaching

External Factors
- Higher-need student population
- Competing roles of program administrators/faculty
Appendix E: Interview Guide

- Record date and time of interview
- Confirm Student/Alumni status
- Confirm permission to record

1. Tell me about how you decided to major in HSMT.
2. Please start by telling me your favorite memory from your time in the program thus far.
3. What are you finding to be most helpful in moving you towards success/graduation?
4. What are barriers that you are facing or that you see your classmates face?
5. What can the program do to help more students succeed?
6. What was most helpful in preparing you for your future career (often referred to as professional development)?
   - Probe: Do you participate in professional development activities outside of the regular courses or inside regular courses?
7. What do you think the program could do to better prepare students for their career?
8. One recommendation that was popular on the survey is including internships in the program.
   - Can you tell me a little about your thoughts on internships?
   - Probe: Required, Length/Duration, Placements, Alternatives to formal internships
9. **Student only** - Can you talk a little bit about how the COVID-19 pandemic has affected your HSMT program?
   - Probe: Change graduation plan, Additional or intensified barriers, Positives
10. Those are all the questions that I have for you. My goal for this project is to provide recommendations for improving the HSMT program. Is there anything else about the HSMT that you would like to share with me?
Appendix F: Evaluation Report

Evaluation Report

Bachelor of Science in Health Systems Management

Prepared by:

Somer Goad Burke, MPH, CPH
Evaluation Report

Bachelor of Science in Health Systems Management

Introduction

The following evaluation report provides the findings and recommendations from the formative evaluation of the Bachelor of Science in Health Systems Management Program at a large public university in the southeastern United States. The plan includes six major sections:

1. Background and Context
2. Logic Model
3. Parameters
4. Summary of Evaluation
5. Evaluation Findings
6. Recommendations

Background and Context

The setting for this evaluation study was a large public university in the southeastern United States. The university enrolls 29,000 diverse students, includes seven colleges, and offers 77 bachelor’s degree programs. This evaluation study focused on a bachelor’s degree offered in the College of Health and Human Services’s Department of Public Health Sciences. The
The department was approved to establish a new Bachelor of Science in Health Systems Management (BS HSMT) in late 2016. The BS HSMT program was designed to address two important needs within the department. The first identified need was to provide a bachelor’s degree opportunity to a large number of pre-major students unable to gain admission to their first-choice major primarily due to space restraints. The program also sought to address an identified workforce need for graduates educated in healthcare management (health systems management). The degree program welcomed its first students in Fall 2017, anticipating enrollment of 100 students per year. Enrollment greatly exceeded expectations and within the first two years program enrollment was at 1009 students. The first cohort of students graduated in Spring 2019.

Most students enter into the College as a pre-major student of their designated major (i.e. pre-major public health or pre-major nursing). During their second year, students must apply to the major of their choice. The majors are limited-capacity selective programs with insufficient space for the large number of pre-major students that apply. The space limitation is due to restraints imposed by the accrediting agencies usually related to defined faculty-student ratios. In Fall 2014, more than 850 pre-major students were not admitted into one of the College’s majors due to program capacity. These students are required to reselect a college major and career path. The BS HSMT was designed to meet the needs of this population of students who seek careers in the health and human services fields, but whom are unable to matriculate into their first-choice major. The major can also be chosen by students as a first-choice, although the numbers of students who do so are lower. Students in the major come from diverse backgrounds, including students from higher-need populations including first generation students, transfer students, students from lower socioeconomic families, and non-traditional students.
Logic Model

Bachelor of Science in Health Systems Management

Context
The Bachelor of Science in Health Systems Management (BS HSMT) was designed to meet the needs of a large number of pre-major students in UNCC’s College of Health and Human Services. The degree prepares students for generalist positions in the health systems management field. The program started in Fall 2017 and has 1009 students enrolled as of Spring 2019.

Theory of Change
The logic model below articulates the program’s theory of change including the inputs and activities that are in place in order for the long-term impact to occur.

Inputs
In order to successfully offer the program activities, the program needs faculty (instructors), program administrators, research about best practices, a strong curriculum, and support from established university initiatives (counseling center, disability services, career center, etc.).

Activities
The program will provide activities that support the program goals of graduation and preparation for a career in health systems management. These activities include student academic advising, quality teaching/instruction of the program curriculum, opportunities for applied learning, and professional development services.
Outputs
Students in the program are expected to gain from participating in the activities. Areas where they will see gains include progression towards graduation/degree obtainment, successful course completions, and the development of professional skills. Students will also feel supported in their endeavors.

Outcomes
The short term outcomes that are expected for students participating in the program include graduation within defined time periods (6 year maximum), attainment of a job in the health systems management field, and graduates are career-ready.

Impact
The program’s long term impact is expected to be evidenced by meeting the local and state workforce needs with program alumni.

Assumptions
In order for the theory of change to work as expected, there are basic assumptions that must be true. These assumptions are that undergraduate students are motivated to graduate, undergraduate students desire careers in Health Systems Management, program administrator are concerned with student outcomes, and faculty possess leadership skills and expertise in teaching.

External Factors
The two primary external factors identified are the competing roles of program administration and faculty as well as the challenges associated with a meeting the needs of a higher-need student population.
**Logic Model:**

**Bachelor of Science in Health Systems Management (BS HSMT)**

### Inputs
- 34 Faculty
- 1000+ Students
- Program Administrators
- Research
- University Support Initiatives
- Curriculum (In-person)

### Activities
- Advising
- Teaching/Curriculum
- Applied-learning Opportunities
- Professional Development Services

### Outputs
- Progression towards degree
- Successful course/s completion
- Students feel supported
- Professional skills development

### Outcomes (Short and Interim)
- Graduation within 6 year maximum time period
- Attainment of job in HSMT
- Graduates are career-ready

### Impact
- Local and state workforce needs are met with program alumni

### Assumptions
- Undergraduate students are motivated to graduate
- Undergraduate students desire careers in Health Systems Management
- Program administrators are concerned with student outcomes
- Faculty have leadership skills and expertise in teaching

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**Evaluation Report**
Parameters

**Evaluator**
The external evaluator is Somer Goad Burke, MPH, CPH.

**Key Stakeholders**
The key stakeholders are the Melinda Forthofer, Ph.D., Department Chair, and Chelsea Demarest, MPH, Director of the BS-HSMT.

**Audience**
For the purpose of this evaluation, the primary audience identified are the Department’s Department Chair and the BS-HSMT Director. Additional audiences may be selected at the discretion of the key stakeholders.

**Evaluation Purpose**
The purpose of this proposed formative evaluation is to explore the effectiveness of the BS HSMT program to support students to graduation within defined time periods and to a career in the health systems management field with the intention of gathering information that will support program improvement. Attention will be given to the effectiveness of the program to address the needs of a diverse student population.

**Evaluation Approaches**
This formative evaluation was conducted using a decision-oriented evaluation approach. Decision-oriented approaches were designed to meet the needs of the decision makers, such as program administrators, in order for the evaluation to be most effective and to encourage utilization of the results (Fitzpatrick, Sanders, & Worthen, 2011). The specific management-
oriented model for this evaluation is Stufflebeam’s (2000) CIPP Evaluation Model. For this evaluation, the CIPP Model served in a primarily retrospective capacity as the program had already been developed and implemented. Early impact of the program’s effectiveness was interest in addition to a retrospective look at the program’s context, input, and process.

**Limitations and Delimitations**

The limitations of the study include the number of students willing to participate in the qualitative data collection (self-selection bias), the quality of the student management system’s data, and the evaluator’s access to students and data needed to complete the evaluation. The delimitations of the study are the students enrolled in the BS HSMT program (Fall 2019) and recent alumni (graduates from Spring and Summer 2019) of the BS HSMT program at the defined university, and the CIPP Evaluation Model.

**Deliverables**

To ensure accountability and transparency of the evaluation, a status report was provided via email at the end of each month and included update on the progress of the evaluation. Any foreseen obstacles that could delay the final report of the evaluation were brought immediately to the attention of the Department Chair and BS HSMT Director and included in a status report. A written draft report was made available to the Department Chair and BS HSMT Director by October 15, 2020. Feedback will be requested from the key stakeholders on the draft report. A final written report will be submitted by November 15, 2020. An oral presentation will be scheduled to present the results of the evaluation at the request of the key stakeholders.
Summary of Evaluation

Evaluation Questions
The broad questions guiding this evaluation were:

1. What barriers do BS HSMT students face in completing the program?
2. What programmatic strategies can the BS HSMT program use to support student success?
3. To what extent did the COVID-19 pandemic exacerbate barriers for students?

Data Collection Methods and Sources
The evaluation used qualitative and quantitative data collection and analysis. Data were collected from and about currently enrolled students and recent alumni of the program. The alumni of interest were students who graduated in Spring 2019 (first cohort), Summer 2019, and Fall 2019. Students enrolled in Spring 2020 were the students of interest.

The evaluation collected quantitative and qualitative data from current students and recent alumni through the use of an online survey (produced with Qualtrics) as well as individual interviews. The survey and interviews explored perceptions on how the BS HSMT program components contributed to their success, barriers to graduation, and experience with the pandemic. Data were collected through the university’s student management system in areas such as gender, ethnicity, grade point average, time-to-graduation, transfer status, and previous majors to ensure the sample was representative of the student population.

Survey Questionnaire: A Qualtrics Survey (administered online) was developed and shared with alumni and enrolled students. The survey questions addressed the overall evaluation questions and used the CIPP Evaluation Model to guide the question development. The survey was
distributed to 947 students that are enrolled in the BS HSMT program in Spring 2020 and 276 alumni that graduated in 2019. Data were collected from 118 participants.

**Interviews:** At the end of each survey, students and alumni were asked to volunteer to participate in an interview conducted by the external evaluator. Semi-structured interviews were conducted following Interview Guides (one for alumni and one for students). The interviews were recorded and transcribed.
Timeline

The proposed time was adjusted to accommodate delays primarily caused by COVID-19. The adjusted timeline:

- **AUG**: Initial Meeting with Key Stakeholders, Develop Evaluation Outline and Obtain Stakeholder Feedback
- **OCT**: Survey Development
- **NOV**: Finalize Evaluation Plan
- **JAN**: Pilot Survey
- **JUL**: IRP Process and designation of not human research, Data Collection - Survey
- **AUG**: Data Collection - Interviews
- **SEP**: Analyze Data, Prepare Draft Final Report for Key Stakeholders
- **OCT**: Stakeholder's Feedback on Final Report Received
- **NOV**: Final Report Submitted and Presented (upon request)

### Description of Timeline Activities

**Initial Planning with Key Stakeholders and Develop Evaluation Outline (August 2019):**

Share Proposed Evaluation Plan; Identify additional stakeholders; Gather information regarding
the program; Confirm the evaluation purpose; Identify sources of data including access to student and alumni populations; Finalize evaluation questions

**Survey Development (October 2019):** Develop (in consultation with the key stakeholders) the questionnaire based on the overall evaluation questions

**Finalize the Evaluation Plan (November 2019):** Finalize the evaluation plan and share with stakeholders

**Pilot the Survey (January 2020):** Pilot the survey questionnaire; Make revisions to survey as needed

**Complete IRB Process with USF (July 2020):** Apply for IRB approval through the USF system; Obtain designation of not human research; Send the survey to students and alumni

**Data Collection (August 2020):** Conduct interviews; Receive reports from the UNCC database

**Data Analysis – Qualitative and Quantitative (September 2020):** Code and analyze survey questionnaire replies; Code and analyze interviews; Analyze student data from the database report; Prepare draft report

**Receive Feedback from Key Stakeholders (October 2020):** Receive feedback including questions or suggestions on the draft from the key stakeholders

**Final Report Submitted (November 2020):** Submit the final Evaluation Report to the key stakeholders by November 15, 2020; Oral presentation of the final report will be conducted at the stakeholders’ request
**Progress Reports (Monthly):** A progress report will be submitted to the key stakeholders at the end of each month. This brief memo will reflect the status of data collected and the general progress of the evaluation.

**Evaluation Findings**

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**Overall Program Findings**

Overall, findings of the evaluation indicate that participants are happy they chose HSMT as their major (73%), they are satisfied with the program (66%), and they would recommend the HSMT program to their friends or colleagues (77%). The interviewees also relayed positive experiences with the HSMT program. The most common reasons respondents provided for selecting HSMT as their major were career goal/interest, HSMT was recommended by an advisor, HSMT is an option in a healthcare-related field, and HSMT is an option in a non-clinical healthcare-related field.

Participant characteristics were associated with responses in the overall categories in a few statistically significant ways. Participants with a disability were more likely to be unhappy with their decision to major in HSMT. With respect to program satisfaction, parenting students were more likely than non-parenting participants to be extremely satisfied with their experience in the program, participants identifying as Hispanic were more likely than non-Hispanic participants to be extremely unsatisfied with their experience, and women were less
likely to respond *neither satisfied nor unsatisfied* than men. Finally, participants who did not apply to an upper-division restricted major were more likely to select *definitely yes* when asked if they would recommend the program to a friend than students that applied regardless of whether they were admitted or denied. Parents were more likely than non-parents to indicate *definitely yes* when asked if they would recommend the program.

During the initial planning meeting held in August 2018, the key stakeholders and I discussed areas of focus and interest for the evaluation. The key stakeholders identified HSMT program goals as one area of interest. A survey question explored participants’ perceptions on the extent to which the HSMT program contributed to growth or development in each program goal: ability to communicate effectively in writing, ability to communicate effectively orally, the ability to work well in teams, the ability to think critically, and the ability to lead a team. Most participants expressed that the HSMT program contributed *a lot or a great deal* to their growth and development in each program goal.

One participant characteristic had a statistically significant relationship with responses to the questions about the program goals, parenting status. Parenting was significant with four of the five goals: communicate effectively in writing, communicate effectively orally, think critically, and effectively lead a team. Parents were more likely to respond that the HSMT program contributed “a great deal” to their growth and development in the four goals than non-parenting participants. Also, Hispanic respondents were more likely than non-Hispanic respondents to reply that the HSMT program did not contribute at all to their ability to work well in teams, think critically, or effectively lead a team.
The outcomes of interest to the evaluation, as noted via the Logic Model, are graduation within a six-year maximum time period, attainment of a job in the health systems management career-field, and graduates are career-ready. In response to an item about time to degree, no students expected it to take six years or more to graduate. Seven percent of responding alumni indicted six years to time to degree and one alumni reported more than seven years’ time to degree.

Alumni, all of whom had graduated within 15 months of the evaluation survey, were asked to indicate job attainment in the health systems management career-field. Alumni reported being employed full-time (49%), employed part-time (9%), as well as continuing their education (23%), and seeking employment or continuing education (19%). The working alumni reported being employed in a healthcare organization (50%) or a for-profit business (23%). Of the alumni that are employed, 43% describe their current job as situated within the field of health systems management.

**Evaluation Question #1 – Barriers**

The common barrier to completing the program was poor experiences with faculty or staff. Additional barriers that were noted included class scheduling, outside responsibilities, issues with poor advising, and large class-size.

**Evaluation Question #2 – Supporting Student Success**

Multiple questions in the survey and in the interview helped to gather participant experiences with program aspects and their recommendations for improving support for student success. Participants indicated how helpful different program aspects were. More participants found
interactions with diverse groups of people helpful than any of the other program aspects.

However, individual advising, interaction with faculty, professional development/career training, opportunities to learn outside of the classroom, and opportunities to apply learning to real-world issues were all rated as helpful. An open-ended survey question added that the helpfulness of the professors, good communication, and connections between students or between students and faculty were all helpful aspects of the HSMT program.

Participant characteristics were statistically significant to the relationships between: individual advising and first generation status and race; professional development/career training and primary language spoken, transfer status, and disability status; opportunities to learn outside of the classroom and parenting status; opportunities to apply learning to real-world issues and first major status, student employment status, application to a restricted major status; and interaction with diverse groups of people and application to a restricted major status. Using the z-test of proportions, the characteristics that had the statistically significant greater proportions are reported in Table 3A.

**Table 3A**

*Participant Characteristics with Greater Proportions of Responses to Helpfulness of Program Aspects*

<table>
<thead>
<tr>
<th>Program Aspect</th>
<th>Helpful</th>
<th>Not Helpful</th>
<th>Neither</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Advising</td>
<td>Students who did not change major Parents</td>
<td>First Generation</td>
<td>Transfer students Employed Full Time</td>
</tr>
<tr>
<td>Group Advising</td>
<td>Parents</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction with Faculty</td>
<td>First Generation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Initial review of early survey results indicated that there was a great interest in professional/career information and internships. Additionally, professional development/career training was one of the most helpful program aspects identified. The interview guide contained questions related to both topics for more clarity on the subjects. Therefore, the most common themes for student support strategies were career preparation and internships. Survey responses most often found real-world learning, connection to employers, and alignment of the curriculum to job skills as most supportive of student success. Beyond career preparations and internships (or real-world alternatives to internships), the interviews also found supporting student success through listening to students, offering more classes in the major, and strong faculty and staff to be the best strategies. The importance of a strong faculty and staff was corroborated in the survey as well with “interaction with faculty” being rated as a very helpful program asset, as noted above.
**Career Preparation.** Survey participants had mixed reviews for their experiences with career preparation in the HSMT program. While the majority of participants felt the program contributed to their understanding of the career field and to preparing them for a career in the field, there were participants that did not agree (7% and 15% respectively). As career preparation was noted as a key aspect of supporting student success, responses to open-ended and interview questions are important to the evaluation findings. Participants stated that the program provided basic understanding or the foundations of the field, taught leadership or management skills, provided real-world learning, and taught good communication skills. To support student success in the area of career preparation, participants recommended the program establish connections with local employers, provide more information about career possibilities, provide internships (discussed below), and provide real-world learning experiences such as simulations, case studies, service-learning, shadowing, and guest speakers from health systems organizations.

Survey responses to the questions about understanding of the career field and preparation for the career field had significant findings in respect to student characteristics. For understanding the career field, there was a statistically significant relationship between whether the participant had been admitted, denied, or did not apply to an upper-division restricted major. Additionally, women were less likely than men or gender non-binary to indicate the program had not contributed to their understanding of the career field. With preparation for the career field, a significant relationship with parenting status was found. Parents are more likely to rate the HSMT program as contributing *a great deal* to their career
preparation. A statically significant relationship between how well-prepared for their future career students feel and major-change status and parenting status exists. Parenting students were more likely to indicate they felt *extremely well prepared*.

**Internships and Alternatives to Internships.** In this evaluation, internships are a subset of career preparation, noted many times throughout the evaluation, as key to supporting student success. The interviews were used as a tool to understand participants’ interest in internship and to explore alternatives. Four of the six interviewees felt that an internship should be an option (for credit or as an elective) in the program while the other two interviewees felt it should be a required component. Interviewees requested support from the HSMT program to identify internship locations, prepare students to apply, or place students into internships. Interviewees offered many ideas about alternatives to traditional internships to support student success including case-based learning, shadowing faculty or professionals in the field, helping faculty with research, required professional education, and guest speakers.

**Academic advising.** Academic advising, while not standing out as the top theme in any one area, was common across survey responses and interview responses. The survey questions about program aspects designed to support student success found individual advising to be among the most helpful. During open-ended survey questions, improving the program’s academic advising was a strong theme when asked about helping students overcome barriers. (Poor academic advising was commonly noted as a barrier.)
Evaluation Question #3 – COVID-19

Students enrolled in Spring 2020 had the unique situation of experiencing the Coronavirus pandemic which caused a sudden move to a fully-online format for all HSMT courses. A program evaluation during this extraordinary time period must explore student experiences with the pandemic, therefore the final evaluation question is “To what extent has the COVID pandemic exacerbated barriers for students?” In responses to the survey, half of student participants (52%) indicated that the pandemic had a negative effect and 31% said the pandemic had no effect on their program. The only statistically significant relationship with a participant characteristic was with primary language spoken as non-native English speakers were more likely than English primary-language participants to describe the effect as positive. Interviewees often expressed both positive and negative experiences.

Common negative effects were missing in-person interactions, online learning is harder/more difficult, faculty challenges with the online format, and difficulty communicating. Most participants did not expect or were hopeful that the pandemic would not affect their graduation timeline, although there was concern noted that there would not be an in-person graduation ceremony. Of the 62 responses, only one student indicated they may graduate earlier, three students expected a delay to their graduation, and one student indicated he will not return to finish school. When specially asked about additional barriers to graduation caused by the pandemic, the majority (82%) of survey respondents said there were none. Some additional barriers noted were financial problem, looking for employment, trying to take care of family, having to work more, and online classes are not as good as in person classes.
Recommendations

Before making recommendations for program improvement, it is important to note that in many ways the program should continue doing what it has been doing. Evaluation participants, students and alumni, are satisfied and would recommend the program to their friends. Most respondents found the HSMT program to contribute to their growth and development in the program’s goals: oral and written communication, teamwork, critical thinking, and leadership. Additionally, the various program aspects such as diverse group interactions, individual advising, interaction with faculty, professional development/career training, opportunities to learn outside of the classroom and to apply real-world learning were all declared helpful by a majority of the participants. The HSMT program was particularly well received with parenting students. Overall, the majority of participants in this evaluation study report positive experiences with the program.

**Recommendation 1**
Plan courses, experiences, services, and all aspects of the HSMT program with the diverse student body’s needs considered and characteristics represented. Work closely with university offices that provide support to specific students (i.e. transfer students, financial aid, disability services) to ensure coordination between the services and the HSMT program.

**Recommendation 2**
Ensure access to accurate advising information is widely available whether it be through traditional advising appointments or through alternative formats such as electronic resources, online office hours, video recordings of popular questions and answers, and cross-training additional staff to serve as contacts for simple advising questions. Specific support for students
changing into the HSMT major or considering a change into the major is recommended to ensure understanding of the program requirements and progression towards graduation from the onset.

**Recommendation 3**
Develop an internship program for HSMT students. Internships should be optional and credit-bearing (an elective) or completed voluntarily. The HSMT program can establish relationships with local employers that can offer a set number of mutually-beneficial internships each semester, provide guidance on applying for internships, provide support in finding other internship opportunities as needed, monitor safety and security of internships, and provide support to organizations that work with HSMT students and the interns while they are in the field.

**Recommendation 4**
Provide opportunities for students to gain real-world job-relevant experiences and skills outside of the classroom. The HSMT program can build a portfolio of experiential options such as volunteering with local health organizations, assisting with faculty research experiences, student leadership positions, chances for job shadowing health service professionals or university administrators, service-learning or community-based coursework, and networking events with local organizations.

**Recommendation 5**
Incorporate real-world learning into all HSMT courses. Professional development for faculty/instructors around innovative ways to use cases, simulations, guest speakers, current events, technology, and projects should be mandatory.
Recommendation 6
Prioritize students’ professional development and career preparation. Strengthen connections to campus career services and provide convenient resources for the students to access. Structure all courses in the major to simulate opportunities to learn and practice professional development skills such as requiring group projects with identified leaders, require students meetings to produce an agenda and meeting minutes, required project management timelines, classroom presentations with professional dress codes, and required professional written and verbal communications. Incorporate professional licenses or certifications (i.e. coding and billing, project management) into the program when possible.

Recommendation 7
Create a clearly articulated description of the HSMT’s career pipeline. Create marketing materials that can be shared with advisors, faculty, staff, current students, and potential students about the careers available to HSMT graduates. Administrators and course faculty/instructors must align and explain the alignment of the overall curriculum and course requirements to specific job knowledge and skills.

Recommendation 8
Class development and scheduling should reflect student needs, desires, and learning styles. Offer more sections of each course with different faculty to accommodate differences in teaching/learning fit. Limit class size whenever possible. Offer classes more frequently, in various formats, and at various times to prevent delays in graduation. Develop more classes in the major to meet students’ desire for additional major-related skills and prevent them from needing an additional major or minors to graduate.
Recommendation 9
Involve students in all aspects of program planning, implementation, and evaluation. Solicit student input through the HSMT student organization, student surveys, and including students in program decision-making. Invite a student representative sit on program committees. Identify a confidential process for hearing student complaints. Listen to students’ concerns around outside responsibilities and collaborate on solutions or accommodations.

Recommendation 10
As the coronavirus pandemic continues to affect college students, make the online format a positive experience for all. Provide technical support to faculty, instructors, and students teaching or learning online. Require faculty and instructors professional development in best practices for online teaching and learning. Require face-to-face interactions and regular opportunities for communication between students and faculty with other students. Encourage a culture of support and understanding as the pandemic adds additional challenges.
References

