

DEGREE ATTAINMENT: PRIOR PRE-COLLEGE PROGRAM STUDENTS'  
REALITY

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The Degree of  
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By  
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DEGREE ATTAINMENT: PRIOR PRE-COLLEGE PROGRAM STUDENTS'  
REALITY

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EXECUTIVE SUMMARY  
DEGREE ATTAINMENT: PRIOR PRE-COLLEGE PROGRAM STUDENTS'  
REALITY

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The Upward Bound Math Science (UBMS) program is a 100% federally funded grant program from the U.S. Department of Education designed to serve first-generation and low-income students by providing pre-college programming. The program has six objectives, the final objective being degree attainment for past participants. This action research study focuses on Tinto's (1988) longitudinal model of institutional departure, along with grounded theory which shows how the participants responded to transitional changes from high school to college, and produces findings that may answer the research question of "*Why are students not graduating with an associate or bachelor's degree within six years, and what resources are needed?*"

The implementation of a suggested action plan, designed from the data collected in the interviews, includes social and emotional intelligence, increased participant contacts, and professional development for staff. An analysis of organizational change and leadership best practices is also reviewed. The implications of this study show that first-generation and low-income students are resilient, but also face major life changes, which again, supports Tinto's theory that transition from high school to college is indeed linear. It also shows that prior participants need the continual support of their UBMS program to guide them throughout their college careers.

Dedicated to my son Keeton Brown, my daughter Ashtyn Brown, and my life partner  
Candy Frazier. I could not have done this without your love and support.

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## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	3
ACKNOWLEDGMENTS .....	5
LIST OF FIGURES .....	9
LIST OF TABLES .....	10
LIST OF ABBREVIATIONS .....	11
CHAPTER ONE: PROBLEM OF PRACTICE.....	12
Statement of the Problem.....	12
Topic .....	12
The Problem of Practice.....	12
Justification of the Problem .....	13
Deficiencies in the Organizational Knowledge Record .....	14
Audience .....	14
Overview of Framework .....	15
Methods.....	15
Research question(s) .....	16
Limitations .....	16
Review of Related Literature .....	16
Framework(s) Informing the Study.....	16
Related research .....	19
Action Research and Design Methods.....	22
Action Research .....	22

Site or population selection.....	23
Researcher role and positionality .....	23
Data Collection Methods.....	26
Data Analysis .....	28
Interviews .....	28
Qualitative Data Trustworthiness.....	29
CHAPTER TWO: RESULTS OF RESEARCH.....	33
Participants.....	33
Qualitative Data Collection.....	34
Qualitative Findings .....	35
Summary of Findings.....	43
Action Plan.....	45
CHAPTER THREE: DESCRIPTION OF THE CHANGE PROCESS .....	49
Description of the Change Process .....	49
Analysis of Implementation.....	57
Current Services .....	57
Action Plan Services .....	59
Analysis of Organizational Change & Leadership Practice .....	60
Organizational Change.....	61
Implications for Practice & Future Research.....	63
Conclusion .....	64
REFERENCES .....	66



## APPENDICES

A. Invitation to Participate in Research .....	73
B. Prior UBMS Student Interview Questions .....	75
C. Email to Participants.....	76
D. University of Dayton IRB Approval .....	77

## LIST OF FIGURES

Figure 1 Audit Trail .....	30
Figure 2 Emotional and Social Intelligence Leadership Model.....	55

## LIST OF TABLES

Table 1. Interview Codes Example.....	28
Table 2.1 Participants Demographic and College Attainment Status Information.....	34
Table 2.2 Open Coding.....	37
Table 2.3 Action Plan Logic Model.....	48

## LIST OF ABBREVIATIONS

CTOL	Critical Theory of Love
EI	Emotional Intelligence
ELE	Everybody Loves Everybody
FAFSA	Free Application for Federal Student Aid
LASSI	Learning and Study Strategies Inventory
SEL	Social Emotional Learning
SI	Social Intelligence
SSS	Student Support Services
STEM	Science Technology Engineering Math
TIC	Trauma-Informed Care
UBMS	Upward Bound Math Science

## CHAPTER ONE: PROBLEM OF PRACTICE

### **Statement of the Problem**

#### **Topic**

Students who are selected to participate in the Upward Bound Math Science (UBMS) program must meet six objectives to be considered a successful participant. One of these objectives requires the student to successfully graduate with an associate or bachelor's degree within six years after graduating high school. Although UBMS participants received college preparation guidance while in the program, a significant number still do not meet this final objective.

#### **The Problem of Practice**

The problem of practice this study sought to address is the UBMS students' failure to complete an associate or bachelor's degree within six years post high school graduation, and what resources may be needed to ensure they are graduating on time with a degree.

Students must go through a rigorous application process. They must fill out an application that asks questions pertaining to income, family size, grades, extracurricular activities, interest in college and career, and first-generation college student status. Two-thirds of the participants must be both low-income, and a first-generation college student. All students who are interested in the program must complete all sections of the application, write an essay, receive two letters of recommendation, and participate in an interview. Once they have been selected for the program, students are notified via phone, email, letter, or in person.

The UBMS program is meeting its other objectives of academic progression, high school retention, high school graduation, entering their first semester of college within six months of graduating high school, and passing standardized tests. Unfortunately, many programs are failing to meet its end goal that prior UBMS students complete an associate or bachelor's degree within six years after graduating high school.

### **Justification of the Problem**

While there is a surge in first-generation and low-income college students matriculating into college, many are not completing their degrees due to social anxiety, lack of emotional and financial support, homesickness, and social capital (Wilson, 2019). Studies have also shown a lack of autonomy of first-generation and low-income students, especially commuter students who still live at home, causing students to feel less motivated about attending college (Kim, 2019; Means, & Pyne, 2017; Michel & Durdella, 2019; Mitchall & Jaeger, 2018; Parnes et al, 2020).

Students who struggle the most with entering college for their first year are those who are first-generation, low-income, and/or are other minority students (Kim, 2019; Means & Pyne, 2017; Michel & Durdella, 2019; Mitchall & Jaeger, 2018; Nichols & Valle, 2019; Parnes et al, 2020; Plaskett et al, 2018; Roksa & Kinsley, 2017; Schutze & Bartyn, 2020; Wilson, 2019). First-generation students often miss home, the support from family and friends, and the structure they had before college (Michel & Durdella, 2019; Mitchall & Jaeger, 2018; Wilson, 2019). Additionally, because first-generation students are the first in their families to attend college, they may feel their parents are not able to share about what to expect, or what resources are even available to them, so they are frequently left to navigate college on their own, or seek direction from someone else

(Means & Pyne, 2017; Michel & Durdella, 2019; Mitchall & Jaeger, 2018; Parnes et al, 2020; Schutze & Bartyn, 2020).

### **Deficiencies in the Organizational Knowledge Record**

Aside from the phenomena provided above related to first-year college students, little is known regarding the persistence of UBMS students. All UBMS programs must find ways to correct this unmet goal. To date, no universal corrective actions that focus on the failure of prior UBMS students to complete a college degree within six years following high school graduation have been put into place.

### **Audience**

The stakeholders who this study will benefit are current UBMS students from across the United States, parents, postsecondary institutions that accept prior UBMS students, local communities that invest in UBMS students, and the U.S. Department of Education.

Current UBMS students will benefit from this study as it will strengthen the program which will lead to increasing graduation completion. Postsecondary institutions that accept prior UBMS students will greatly benefit from this research because they will end up with graduating students, which will positively affect their retention and graduation rates.

For a UBMS program to be funded, they must reach out to their communities to receive letters of support from local schools, municipalities, and county leaders. Therefore, this study will also greatly affect communities that support the UBMS program as the program will fulfill its commitment to the communities it promised to serve.

Finally, the U.S. Department of Education will benefit from this study financially as they are the funders of the UBMS program. They will also be fulfilling their obligations to companies and investors who need employees that are educated in math and science fields.

### **Overview of Framework**

To better understand the transitions of prior UBMS students from college to graduation, I used Tinto's (1988) longitudinal model of institutional departure. Tinto's model states there are three phases that a student will endure which are "separation, transition, and incorporation" (Tinto, 1988). I also applied grounded theory as I aimed "not only to uncover relevant conditions, but also to determine how the actors respond to changing conditions and to the consequences of their actions" (Corbin & Strauss, 1990, p. 5). Applying these two frameworks guided the research so I could better understand why a significant number of prior UBMS students are not graduating with their associate or bachelor's degree.

### **Methods**

This pragmatic action research (PAR) approach consisted of a qualitative methodology that involved a single interview with prior UBMS students. Conducting an interview "generated in action and reflection on action in order to address particular problems" brought forth answers to why prior UBMS students are not graduating with their associate or bachelor's degree (Hammond, 2013, p. 607).



**Research question(s)**

The research question this study aimed to address was: “*Why are students not graduating with an associate or bachelor’s degree within six years and what resources are needed?*”

**Limitations**

This study focused on prior Upward Bound Math Science students who completed their first four years of the program while in high school and who graduated with their desired associate or bachelor’s degree, who did not complete their degree, and who chose not to obtain a degree. This study may not be a true representation of all first-generation students as they may not have participated in a pre-college program such as UBMS. Furthermore, UBMS serves hard to reach and underrepresented students which may not reflect students in larger state and private postsecondary institutions.

**Review of Related Literature****Framework(s) Informing the Study**

Students are at the heart of Tinto’s longitudinal model. Corbin and Strauss (1990) state that “phenomena” are ever changing (p. 5). Like Tinto, Corbin and Strauss believe that change is longitudinal, therefore, students’ perception of social integration and faculty disconnect will too, change. Tinto states the “first six months of college are an especially important period in student persistence” (Tinto, 1988, p. 439). It is also noted that the student’s commitment to the institution and which institution they attend plays a vital role in the student’s success (Braxton et al, 2000; Clayton et al, 2019; Holland, 2020; Ishitani, 2016; Millea et al, 2018). Tinto believes there are three stages a college student will go through as they progress through college. These stages are separation, transition, and incorporation (Tinto, 1988, p. 440).

Like all other college students, UBMS students face obstacles and go through many stages of change as they transition from high school to college, especially during their first year of college. However, each student faces different challenges as they come from different cultures, family dynamics, economic status, geographic locations, and all-around educational backgrounds. These challenges can shape the future of the student and whether they will stay in college.

The first stage, separation, involves the student separating themselves from all the experiences they had during their participation in the program. The program was a constant service providing advising, tutoring, personal development, solidarity, college preparation, and a lending ear. Students not only worked hard towards their educational aspirations, but also their social relationships. Unfortunately, when a UBMS student graduates high school, they are no longer part of the program and do not receive all those services mentioned. This can be a very difficult process for the student, especially since they were socially integrated in the program and now feeling as though they must start over, which is why choosing the right college to attend is so important (Braxton et al, 2000; Holland, 2020; Ishitani, 2016; Tinto, 1988).

The second stage, transition, should aid a UBMS student with feeling comfortable as they start their college career. The UBMS program provides a minimum of five college visits across the United States each year the student participates in the program. Students take tours, participate in recruitment presentations, meet the presidents of each university where their program is housed, visit the specific programs they are interested in, receive financial aid education, speak with current students who attend that specific college. Students also participate in a six-week summer residential program conducted on

the campus of the program's host institution where they live in the dorms and live the life of a college student. With all those activities, a UBMS student should be fully prepared to transition into college. However, with the separation of friends and family, meeting new instructors and professors, having to obtain a job for the first time to help pay for college and living expenses, discovering different groups such as fraternities and sororities, and learning the geographical layout of their campus and new community, it can be extremely overwhelming. Attending college is like a community within a community. Even though the student may be familiar with the outside community, learning the ways of the campus community can be daunting without the right support (Clayton et al, 2019; Ishitani, 2016; Millea et al, 2018).

The third stage, incorporation, is the acceptance of the new life as a college student. Like all stages of life, especially in young adults, change, growth, and acceptance into new groups is inevitable. When a new student enters college and has learned the operations of the classroom, the layout of the university, joins groups, and attends campus events, they begin to become accepted into that campus society. Once accepted, they accept the terms and conditions of that society and are then shaped to fit that mold, this is what is meant by incorporation (Shapiro & Stekovich, 2016; Tinto, 1988). Furthermore, participating in and accepting how the university operates, the student is agreeing to a social contract where they agree to participate in that society, which comes with certain protections from other students, faculty, staff, and the university, but also says they may have to give up some things from past social contracts they were part of before attending college (Shapiro & Stefkovich, 2016). This contract promotes security, something UBMS students are used to when they were participating in the program. Once

a student has fully transitioned into this new society and incorporates it into their lives, they can then begin to bring some of their past into their present lives (Tinto, 1988).

### **Related research**

In framing the research question, I reviewed recent literature and found that there are two common themes related to students having negative first-year experiences, and leaving college before graduating; social integration, and faculty disconnect.

### ***Social Integration***

Having access to many social media platforms, students can talk to friends and family at any given moment, without physical contact. While this could be a benefit for many students who live on campus and are away from their families, it may separate those students from other students on campus, and from growing socially. Having immediate access to family sounds like it could be beneficial, first-generation students may need a much larger support system (Ishitani, 2016; Mitchall & Jaeger, 2018). First-generation students cannot solely rely on their families to guide them through college because of the lack of wherewithal about the processes and events that take place in a college student's life (Michel & Durdella, 2019). First-generation students need to have that support from other students, faculty and staff on campus who live the same life. Therefore, social integration is what will help a student to feel as though they belong to the university and begin feeling as though they are part of something greater.

According to Pratt et al. (2019), social integration begins with “belongingness, competence, and security” (p. 115). A student's well-being should be on the forefront of every faculty member and staff member. When a first-generation student leaves their home to go to college, they are often leaving their family and friends behind, often

causing the student to feel regret which could ultimately cause the student to leave college and go back home (Clayton et al, 2019; Ishitani, 2016; Pratt et al, 2019; Wilson, 2019). The UBMS program attempts to not only educate the students on these concerns of leaving home, but also their families by providing students with a residential component where the student lives on campus for six weeks during the summer to gain college experience.

Social integration into a new society, such as college, can be difficult as students may feel as though they are leaving everything and everyone behind (Pratt et al, 2019). Therefore, it is advantageous for staff and faculty to ensure all students feel welcome on the student's very first day (Clayton et al, 2019; Ishitani, 2016; Kniess, 2020; Pratt et al, 2019; Roksa et al, 2018). It may take time for a student to feel a sense of belonging, especially if they are attending a large university, therefore, it is important for a student to immediately begin participating in student organizations, clubs, sporting events, study groups, and any other form of student lead event (Ishitani, 2016).

### ***Faculty Disconnect***

According to Wilson (2019), when first-generation and low-income students attend college, they do not feel as though their professors care about them as students. Students also feel if they draw attention to themselves that it will confirm stereotypes that first-generation and low-income students are not prepared for a higher education (Michel & Durdella, 2019; Parnes et al, 2020). This also plays a major role in social integration. If a student does not feel comfortable interacting in class, they will not feel as though they belong, therefore leaving college (Ishitani, 2016; Millea et al, 2018; Wilson, 2019).

Another concern regarding faculty disconnect is class size. Many first-year students are required to take introduction courses where class size is double, sometimes triple the number of students. Many of these courses are taught by adjunct faculty, which can be an issue because they are not able to build relationships with their students as their positions are contractual, potentially resulting in a lack of psychosocial development (Wilson, 2019). Many students who take introductory courses may lose interest in furthering their education as they need to feel that connection with their professors by being able to communicate with them. Research found that having that connection with their professors proved to be advantageous in their transition (Michel & Durdella, 2019).

Many college students may not feel as though they may be part of the college classroom. First-generation and low-income students are no exception. High school students are used to having support systems within their high schools. Many of those students have always felt comfortable asking for assistance from their teachers, or counselors (Kim, 2019; Means & Pyne, 2017; Michel & Durdella, 2019; Parnes et al, 2020; Wilson, 2019). This is understandable as they have been with those same teachers through their high school careers. Furthermore, with many schools rebuilding, smaller communities are merging K-12 into the same building, which may allow students to grow up with the same teachers as they progress. It has been found that social capital including friends, family, and faculty all aid in a student reaching their graduation goal (Parnes et al, 2020).

When a student loses such capital, they can easily lose focus of what they want to achieve. As previously mentioned, a UBMS student receives constant and consistent advising and encouragement all throughout their participation in the four-year program.

The student is fully aware that all they must do is contact a UBMS staff member, and they will have immediate help. When a UBMS student graduates from high school, they are no longer part of the program and cannot receive services. This could possibly be a major setback for the students, resulting in the UBMS program not meeting their graduation objective.

Research has proven that mentoring programs, and student support service programs have helped exponentially in student retention and graduation (Grace-Odeleye & Santiago, 2019; Means & Pyne, 2017; Parnes et al, 2020; Plaskett et al, 2019; Quinn et al, 2019; Schelbe et al, 2019; Schutze & Bartyn, 2020). These programs and services that are set up for first-generation students, such as UBMS students, provide the very same services the UBMS program provided. However, space is often limited, and funding is not readily available to serve all a college's first-generation students.

### **Action Research and Design Methods**

#### **Action Research**

This study used a pragmatic action research approach. This form of research was chosen because there is a “specific educational problem to solve” (Creswell & Guetterman, 2019, p. 587; Mertler, 2020). The specific problem in this study is that not all prior UBMS students are completing an associate or bachelor's degree within six years after graduating high school. Additionally, the research format chosen allowed me to focus on the possible issue, investigate activities and practices, and consider the effects on all the stakeholders (Creswell & Guetterman, 2019; Mertler, 2020).

### **Site or population selection**

This study focused on prior UBMS students from the Appalachian region who graduated college, left college before graduating, or did not go to college. The selection of multiple UBMS populations allowed me as the researcher to obtain different perspectives from three different types of prior UBMS students.

### **Researcher role and positionality**

#### ***Access***

I used social media platforms such as Facebook and Instagram to post a request for participation for this important research study. Once I reached interested candidates, I then sent them an email requesting their participation in this research study.

#### ***Influence***

I was cognizant of my position as the researcher, so I did not influence the participants and their answers. For instance, my demographics as a White, single, straight male can intimidate others due to my privilege. I had to minimize my privilege through empathy. Furthermore, I too am first-generation, and was part of a low-income family, a requirement of UBMS participants, therefore, I understood the hardships the students went through. I was careful that I did not bring in my own experiences into the case study. To address those concerns, I explained to the participants that the informed consent form they signed was a written contract between me and the participants. As such, I was legally bound to respect their privacy and all confidential information they conveyed during the interviews.

Another concern was that I am the Program Director of an Upward Bound Math Science program. I may have built relationships with some of the participants over the



course of their high school careers and may have mentored them in preparation for college. I was aware this could have been a benefit as the students may have felt comfortable sharing their experiences with me. Be that as it may, I did not want them sharing things with me that were not true due to fear that I would be disappointed.

I was also conscious that my position as a director can come across as authoritative. I explained to the participants that I was the researcher, and not the Director, and that I wanted to fully understand the struggles they may have gone through because of being first-generation and low-income so as to provide a more conducive experience for other UBMS students.

As the researcher, I was the one who gained consent from the IRB, and from all participants. Furthermore, I was the one who conducted all interviews and collected data. Finally, I used my University of Dayton email for all communications. This aided in the separation of being a Director of a UBMS program, and the researcher.

### ***Reciprocity***

Research is very important for pre-college programs like UBMS as it proves the effectiveness of such programs. Furthermore, institutions that host these types of programs want to know if they are worth the effort. Maiter et al, (2008) states that reciprocity between the institution and researcher is continuous and is needed to provide ethical research while sharing vital information with said institution.

Information this research sought was about the participant's experiences as a college student, financial aid, academic integration, social integration, classroom size, and why they chose the postsecondary institution they attended, if they attended one. This research also gained knowledge about the student's activities off campus, such as

employment, familial responsibilities, whether they were a commuter student, their marital status, and if they had any dependents.

### ***Trust***

To gain the trust of the participants, it was vital for me to be reflexive. Reflexivity in research allowed me to be open about who I was as a researcher, and what my intent of the research was so that all involved would feel venerated (Creswell & Guetterman, 2019). Sharing progress and findings throughout the research indeed created trust.

### ***Rapport***

Once a UBMS participant graduates high school, they are no longer part of the program. Having only been the Director of a UBMS program for the past three years, I did not meet many of the participants who was part of this study. Therefore, it was advantageous that I began to build rapport with each participant. Participants had access to my University of Dayton email for correspondence. Furthermore, during the interviews, I was able to share parts of my story as a first-generation college student as it related to the questions asked. I also allowed the participants to provide a place to meet for the interview if it would help them to feel more comfortable. Finally, through member checking, I allowed the participants to view their responses to validate them and bring comfort that what they said would be used correctly.

### ***Ethical & political considerations***

Politics play a heavy role in the UBMS program as it is a federally funded program through the U.S. Department of Education. The UBMS program is funded every five years via a grant paid by taxpayers. Therefore, this research was very important in providing answers as to why taxpayers should continue to fund projects like UBMS.

Local, state, and federal politicians must fight for the continuation of funding, or many first-generation students will not have as good of a chance to go to college and earn a degree, which in turn could negatively impact their lives and not have a good enough career to support their families.

### ***Treatment of the Participants***

All participants signed an informed consent form that notified them that they may end the research at any given moment during the research. This created safety for the participant knowing they have control. I also informed the participant that no personal identifiers would be used during the study, or in the findings. Finally, all participants were notified before each interview that they did not have to answer any questions they did not feel comfortable answering.

### **Data Collection Methods**

I collected qualitative data for this study through the use of semi-structured interviews. Interviews were selected as the main form of data collection as it enables the participant to feel comfortable and free to answer openly and honestly (Creswell & Guetterman, 2019). Because the goal of this study is increasing graduation rates for UBMS students, it was imperative that this qualitative data collection supported students in sharing honest reasons for their postsecondary outcomes.

Each interview consisted of a set number of predetermined questions that allowed me as the researcher to follow up with probing questions (Mertler, 2020). All questions were written based on reviewed literature, and concern for the efficacy of the activities conducted in the UBMS program. Participants are protected by the informed consent form (See Appendix A) that they signed before they participated. Each participant was

also informed a second time, right before the interview process, that their participation was voluntary. All collected data, including the consent form, was stored in a secure location at my home.

### ***Interviews***

I identified twelve participants via a mass recruiting email (See Appendix C) requesting participation in this study. I conducted one 60-minute semi-structured interview with each participant. Due to the COVID-19 pandemic, each interview was conducted via Zoom to protect the participants and myself. Each participant was given the choice to use pseudonyms of their choice. Each interview was recorded on Zoom. A total of 16 questions were asked based on topics determined by an interview guide prior to creating the interview questions, paying special attention to markers during the interview which led to probing sub-questions, further strengthening the relationship between the participant and myself (Hesse-Biber, 2017). Those topics included, but were not limited to support systems, experiences during their first year of college, academic and social integration, financial aid, responsibilities, commuter status, and overall satisfaction of the UBMS program. Participants also discussed their interactions with their professors, such as availability, approachability, and response time. Finally, participants explained what they were doing to prepare for graduation, and their career. Interviews were transcribed by a third party. Once the transcriptions were complete, they were sent to the appropriate participant for member checking (Hesse-Biber, 2017).

## Data Analysis

### Interviews

I employed grounded theory as my guide to data analysis. Hesse-Biber (2017), and Corbin and Strauss (1990) described grounded theory as a type of data analysis that enables a researcher to delve deeper into the meanings of the participant's responses during an interview that aligned with the topics set prior to the interviews. Upon completion of the interviews, transcribing took place by a third party who possessed no knowledge of the participants' true identities. Each transcript was coded, paying special attention to the memoing performed during the interview, and understanding that "codes can take on many different forms" such as "descriptive", "categorical", and/or "analytical", and then compared to the topics determined in the interview guide (Hesse-Biber, 2017, p. 315).

As I kept the problem of practice at the forefront of analyzing the data that prior UBMS students are not graduating with an associate or bachelor's degree within six years of graduating high school, I began circling key words and phrases in the transcripts and used them as codes (Hesse-Biber, 2017). All codes were typed into a coding document (see Table 2) (Hesse-Biber, 2017, p. 320).

**Table 1**

#### *Interview Codes Example*

Excerpt	Initial Code	Analytical Code
"...so much that you don't care what people..."	"Don't care what others say"	"Internal self-assessment: ignores external"

This iterative approach allowed me to locate the themes that aid in understanding experiences of academic and social integration for prior UBMS students (Hesse-Biber,

2017). This type of coding also allowed me to go back to the transcripts and reread the codes to ensure I was in fact interpreting the codes accurately, credibly, and dependably resulting in discovered themes that aided in answering my research question: “*Why are students not graduating with an associate or bachelor’s degree within six years and what resources are needed?*” (Mertler, 2020). Finally, I had a third-party who was qualified in qualitative research to conduct a peer review of the coding and themes to verify credibility.

## **Qualitative Data Trustworthiness**

### ***Dependability***

The researcher’s role and positionality portion of this study provided potential risks of biases that could have interfered with the research (Hesse-Biber, 2017).

According to Shenton (2004), if another researcher were to conduct the same type of research, utilizing the same methods that I conducted in this study, they too shall obtain the same results. To ensure this happened, Shenton (2004) states the research must have sections that include research design and implementation, data collection, and actions taken to collect said data, just as it was stated earlier.

### ***Confirmability***

As the Program Director for a UBMS program, it was advantageous that I stated possible biases, and any potential interferences that could skew the findings of this study.

To further confirmability, I conducted literature reviews and found key concepts.

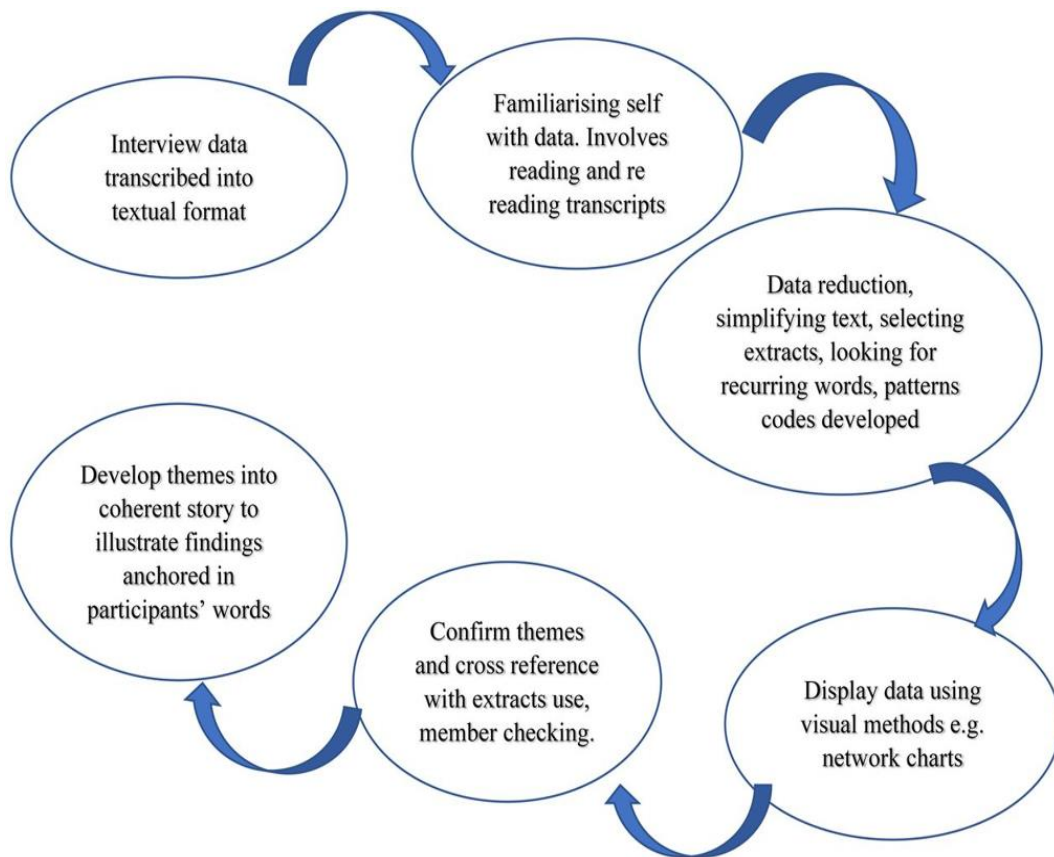
Furthermore, I used those concepts as evidence for promoting the topics for the questions in the interviews and asked questions as they related to those topics (Hesse-Biber, 2017).

According to Hesse-Biber (2017) and Shenton (2004), I first had to have the interviews

transcribed and given back to the participants to verify what they said was in fact what was transcribed. This is known as member checking. I then shared the themes and codes with the participants to ensure that what I interpreted as codes and themes was in fact what the participant meant with their given answers in the interview. Finally, an audit trail is provided in this study utilizing a data-oriented approach, see Figure 1 (Moorley & Cathala, 2019; Shenton, 2004). The furtherance of these steps in this section provided triangulation.

**Figure 1**

*Audit Trail*



### ***Credibility***

As the researcher, I ensured credibility was met as it is argued to be “one of the most important factors in establishing trustworthiness (Shenton, 2004, p. 64). To establish credibility, I was upfront and forthright with the participants about my role as the researcher, and not as a Program Director of a UBMS program. To do so, I mentioned my roles, responsibilities, and possible biases within my researcher’s role and positionality section of this study (Shenton, 2004).

I also reminded participants that this study was voluntary which provided me with participants who truly wanted to participate in the study, and in turn provided honest responses (Mertler, 2020). I then used the interview checklist from Creswell and Guetterman (2019) to guide my interviews. Next, I had the participants reflect on their experiences during their time in a UBMS program as a best practice when I conducted interviews (Shenton, 2004).

By having multiple participants in this study, I was able to compare each participant’s responses to their interviews against one another’s. This created a larger picture of issues, concerns, and best practices of the UBMS program, and any future need to encourage students to persist and graduate with a college degree.

### ***Transferability***

Shenton (2004) provides an explanation that transferability is not only for the participants of the study but can be used for the greater good within an organization, or for multiple organizations, including other types of students. This study specifically focused on prior UBMS students who were first-generation and low-income. I then ensured that the reader was aware that I am only retrieving data from twelve prior UBMS



students through one sixty-minute semi-structured interview. Because first-generation students are present at most post-secondary institutions, this study produced transferable results (Shenton 2004).

## CHAPTER TWO: RESULTS OF RESEARCH

The purpose of this pragmatic action research study while using a grounded theory methodology was to bring to light the reasons that some prior UBMS students did not obtain an associate or bachelor's degree within six years after graduating high school, and to identify resources needed to ensure students are graduating on time. Pragmatic action research and grounded theory, specifically, were used to “uncover the antecedently real” knowledge of what is preventing prior UBMS students from reaching the goal of degree attainment and the changes that can be made to ensure precollege programs like UBMS can implement to ensure success (Corbin & Strauss, 1990; Pansiri, 2005, p. 196). By conducting semi-structured interviews, I was able to delve deeper into the reasons why some prior UBMS students did not complete or obtain a degree.

### **Participants**

The twelve participants in this study included five prior UBMS students who went to college and obtained a degree, four who went to college but did not obtain a degree, and three who chose not to attend college. Participants were interviewed via Zoom over a span of five months as participants were not easily accessible due to schedules, COVID-19, and willingness by those who did not obtain a degree. All participants successfully completed a UBMS program within the Appalachian region. The participants chosen pseudonym, gender, race, post-secondary enrollment, degree attainment, first-generation status, and low-income status were collected (see Table 2.1).

**Table 2.1***Participants Demographic and College Attainment Status Information*

<b>Pseudonym</b>	<b>Gender</b>	<b>Race</b>	<b>Post- Secondary Enrollment</b>	<b>Degree Attainment</b>	<b>First-Gen Status</b>	<b>Low- Income Status</b>
Jordan	M	W	No	No	Yes	Yes
Tristen	M	W	No	No	Yes	Yes
Liz	F	W	Yes	Yes	Yes	Yes
Julia	F	W	Yes	Yes	Yes	Yes
Alexis	F	W	Yes	Yes	Yes	Yes
Sophia	F	W	Yes	Yes	Yes	Yes
Chy	F	W	Yes	Yes	No	Yes
Matthew	M	W	Yes	No	Yes	Yes
Lily	F	W	Yes	No	Yes	Yes
Jade	F	W	Yes	No	Yes	Yes
Billy	M	W	Yes	No	Yes	Yes
Dayle	F	W	No	No	Yes	Yes

**Qualitative Data Collection**

After receiving approval from the University of Dayton’s Institutional Review Board (IRB) (see Appendix D), I posted a flyer on social media outlets such as Facebook to locate participants. Through word-of-mouth, participants were located and the “Invitation to Participate” document was emailed, using my University of Dayton email,

to interested candidates. A purposive sample was generated based on the participant's characteristic of being a prior UBMS student (Hesse-Biber, 2017). To ensure credibility of this research, I selected five participants that enrolled in a post-secondary institution and obtained a degree, and seven participants that did not obtain a degree. This allowed me as the researcher to compare, analyze, and code responses to find common themes.

After receiving a signed copy of the "Consent to Participate" document, which detailed participant confidentiality and voluntary participation in this research, I scheduled Zoom interviews with each participant. Each interview was recorded in a private location ensuring confidentiality. At the start of each interview, participants were once again notified about the purpose of the study and that their participation was confidential and voluntary. Each interview consisted of semi-structured questions, allowing for sub-questions to be asked. Using qualitative methods to capture each participant's story, all interviews lasted approximately thirty-five minutes, ending with a reminder that their answers were confidential and voluntary.

### **Qualitative Findings**

All twelve recorded interviews were transcribed via Zoom and cleaned to ensure clarity of questions and responses. To member check, each transcript was then emailed to each participant to ensure their responses were in fact what they stated. Once I received the participant's approval, I then began reading each transcript and underlined important statements the participant gave. To analyze the data correctly, I utilized grounded theory's method of open, axial, and selective coding (Corbin & Strauss, 1990).

The first step was open coding. Corbin and Strauss (1990) state that a major component to grounded theory is open coding where the researcher gathers all relevant

data from the participants. These codes allowed me as the researcher to eliminate any type of bias as I coded each participant's transcripts. Open coding resulted in eight common themes (see Table 2.2).

**Table 2.2***Open Coding*

<b>Participant</b>	<b>Support</b>	<b>UBMS Support</b>	<b>First-Gen Status</b>	<b>Low- Income Status</b>	<b>Job Before Enrollment</b>	<b>Financial Aid</b>	<b>Mental Health</b>	<b>COVID</b>
Jordan	X	X	X	X	X	X	X	X
Tristen	X	X	X	X	X			X
Liz	X	X	X	X	X	X	X	
Julia	X	X	X	X	X	X	X	
Alexis	X	X	X	X		X	X	
Sophia	X	X	X	X	X	X	X	X
Chy	X	X		X	X		X	X
Matthew	X	X	X	X	X	X		X
Lily	X	X	X	X	X	X	X	X
Jade	X	X	X	X	X	X		X
Billy	X	X	X	X	X	X	X	
Dayle		X	X	X	X		X	X

The second step was axial coding where I connected the codes I found in open coding, and put them into groups (Corbin & Strauss, 1990). These groups resulted in four categories that consisted of a support system, financial responsibilities, mental health stressors, and COVID-19. Each category was present in at least seven of the twelve participants.

The third and final step was selective coding. This step required me to take the four main categories that I discovered and categorized them into one main theme (Corbin & Strauss, 1990). The one theme that brings everything together was poor mental health. To confirm the main theme that poor mental health has a negative impact on degree attainment, I explain the four categories by providing excerpts from the participants' interviews (Corbin & Strauss, 1990).

### ***Importance of Support Systems***

The first main theme evident from the participants' interviews was support systems. Participants were asked to describe their support systems and who, if any, they were to the participant. Alexis, who graduated with a degree, stated, "I did not have like that kind of parental backing, but my grandmother, she always made sure I had whatever I needed." Alexis also stated that she "had my little sister who would help me study for like exams by just doing flashcards with me." Sophia graduated with a degree and gave credit to her family stating, "They were really great, honestly, I don't know if I would have got where I am without them." She also stated that UBMS was a contributing factor, "I was really lucky in that aspect and having you guys there."

Liz, who also graduated with a degree, stated, "I had a lot of support, thankfully, and I still had support from like friends and family back home, which was super nice."

Dayle did not attend college, but gave credit to her UBMS staff stating, “All of them were really nice and you can talk to them, you can open up to them at certain points.” Billy only completed two semesters of college and did not have immediate support either but gave credit to his UBMS program stating that “UBMS did help me get out of my shell a lot because whenever I was in high school, I stayed close to a small group of friends.” Jordan did not attend college, but also gave credit to his UBMS program and stated that “I feel as if the staff was able to reach out, there’s a lot of things that they could either explain, or possibly guide you towards help.” Matthew’s main support system was credited to his UBMS program stating that “UBMS actually showed me a way to love school that I didn’t have in high school.” Matthew went on to state “God, that program changed my life for the better!” Unfortunately, Matthew did not complete his first semester of college. Tristen chose not to go to college, but also gave credit to his UBMS program stating that “I definitely say during the program there was a lot of support, both from the director and everyone that was like staff with UBMS.” Tristen went on further stating UBMS “tried to make sure that I was doing good while I was in the program...making sure I was staying on track and just making sure I was still going down the right path.” Finally, Chy, who did earn a college degree, stated that “I think I had a pretty good support system.” Chy also stated that her “mom went to college, but my dad didn’t, and my dad always wanted better for us than what he had” and that “he was like don’t worry about the price because that’s something we were always worried about.” Julia stated, “The better part of my support system at that time is the people or the friends that I maintained through UBMS.” Julia also stated that her [family] “were more of a detriment, so really that’s part of the reason why I appreciate the UBMS family so



much.” Jade stated that “going through the program you get like that safe space with all the people there that you’ve met so it’d be a lot easier to ask them for help.” Lily stated her main support systems were “myself and my grandma.” She went on to say, “My school faculty left much to be desired, especially the counselors.” The support systems these participants shared with me shows the importance of having familial and UBMS support which could be a positive contributing factor in degree attainment.

### ***Financial Responsibilities***

All participants, excluding Alexis, had a job while in high school and after. Jordan stated, “I planned on going [to college] but got a job instead.” Chy stated that she worked at “McDonald’s since I was fifteen.” Tristen stated, “Throughout high school, I worked as a chef member at Taco Bell. Matthew stated, “I ended up going on a year break [after high school] and decided I’m making \$40,000 a year just starting out at this factory job” and that “I didn’t see the reason why to go out and get student loans and stuff like that.” Billy stated he “had to get a job right after high school.” Dayle stated she has a job “working at Wendy’s as a shift leader.” Liz attended a university where she was required “to work all four years” and was also a “peer mentor to high school students.” Like Liz, Julia also “worked all four years while on campus, and that it was all part of some agreement they had with giving us a scholarship, so we worked for what is it, \$4-\$6 an hour.” Sophia stated she “started working at Walmart part time and I’ve been there ever since.” Jade, while in college, stated, “I was working full time also.” Lily stated she’s “working now to pay [loans] off so I can go back to college.”

### ***Mental Health Stressors***

All participants, excluding Tristen, explained mental health stressors that really affected their lives before and during college, some ultimately causing them to leave college, or not even attempt to go to college. Alexis stated, “When it came to like the mental health aspect of college, though, I kind of felt like I lacked that a lot, getting through.” Liz stated, “I had really great professors and great labor advisors...who were helpful and very supportive of me through my many crises and just like day-to-day stuff.” Billy stated he “Had monetary issues between my grandma and my dad and stuff and I was going to become homeless.”

Jade described her stressors to be related to her professors stating, “they weren’t the best,” “class size,” and “being thrown into groups.” Lily explained that “I had no motivation and was tired,” which leads one to believe Lily may have been experiencing depression. Finally, Julia stated that I survived high school, the only reason that I am probably alive right now is because of UBMS, because it provided an escape.”

Julia stated, “I grew up in poverty as a lot of kids do.” Julia went on to state that “it was an abusive situation; a lot of therapy went into fixing like what happened in my childhood.” Sophia stated her stressors were related to “have to pick my own classes without an advisor,” “working at Walmart to pay off my student loans from when I lived on campus my first semester,” “I was the valedictorian,” and “I took CCP courses throughout high school, participated in UBMS, and studied all the time,” and “I never felt like I had a break.”

Dayle stated she could not go to college because “my papaw passed away and my mom got sick, then fell and broke her femur and I had to take care of her, and then just at

the beginning of this year in January, my mom finally passed from kidney failure.” Dayle went on to say, “my dad works a full-time job working on big trucks and my brother went to school, so that left me taking care of my mom in the mornings and going to work in the evenings so I could help pay the bills and stuff like that.” Jordan did not give much information about his stressors other than “I have a lot of stress and anxiety.”

Matthew described his stress after graduating high school as it related to “a funeral I had to attend.” Matthew went on to state that his “attendance during my first semester was not good so I got a message from the dean that I needed to return my books and after that, I was a little bit like well this kind of sucks!” Chy described her stressors as they related to “being a pretty anxious person,” not having “a laptop until my junior year because we could not afford one,” and “I would work Monday through Thursday on campus and go home on the weekends and work.”

### ***COVID-19***

The COVID-19 pandemic has taken a toll on the world and has caused many issues economically, socially, and emotionally. As it relates to this study, more than half the participants explain how COVID-19 has affected them. Lily stated, “To be honest with you, COVID really hurt a lot of people and motivation for people just wasn’t there in online school. Lily continued stating that “it’s not for everybody, it takes special people to be able to do that.” Jade was affected by COVID-19 stating, “Everything was online and that’s hard for me, as it is, I’m not really a techie person so trying to like sit up in my room at seven o’clock in the morning and stay awake and really gripping on what I’m trying to learn, it just didn’t work for me.” Chy stated fear was a contributing factor of COVID stating “after COVID, I was so scared that it [school] was just going to be

online and I was never going to have interactions with children.” Tristen stated that “I was the class of 2020, obviously graduated while COVID was going on, so it was just kind of hard to find my grounding in a time where none of us have really been through something like this and everybody was just trying to adjust.” Tristen went on further stating “I would say COVID definitely fully affected me, in some ways good, in some ways bad.” Matthew stated that “one thing that COVID has taught us now is that we’ve got to be patient; we have administrators as advisors, deans, to understand that life happens and sometimes when life happens, you know, we have to be lenient, grade on a curve, or something if you will.” Sophia described her experiences by stating, “...[classes] went online because that’s when COVID started, so, I mean I emailed them [advisors and professors] if I had to [contact them] and they were all nice, but other than that, I was just emailing them and then them just posting the work that we need to do.” Sophia went on to say that her “last semester was all online and met on Zoom.” Dayle contributed by stating that COVID-19 “made me have to work more because there weren’t enough people working.”

### **Summary of Findings**

All twelve participants interviewed described their positive and negative experiences in detail. While five of the participants obtained a college degree, they too shared many of the same experiences of those who did not receive their degree or attend college. The common factors most of them shared had some form of negative impact on their lives. All but one participant was the result of social and emotional stress.

All participants contributed many of their successes to the UBMS program. All participants felt they could at any point contact UBMS staff for guidance, even though

they are no longer in the program. All participants explained that their UBMS staff were there for them at many points during their high school careers. Coronella (2018); Parnes et al (2018); Pratt et al (2019) states that guidance is paramount as it relates to degree attainment. Students who participated in a UBMS program went from having access to their staff all four years of their time in the program, to not having them for immediate guidance.

Finally, all participants gave credit to the UBMS program for giving them the opportunity to be socially integrated. All of the participants in this study made a statement referring to making and maintaining relationships with other students who shared similar interests, familial backgrounds, and common stressors. Many of the participants quoted the same phrase of “ELE” which stood for “Everyone Loves Everyone.” All participants stated one of the hardest parts about graduating high school was not knowing if they would ever see or hear from one another outside of the UBMS program, and that making new friends like they had in the UBMS program would be insurmountable. Tinto (1988) stated the first of three stages new college students face is separation. This separation can greatly affect one’s ability to apply, attend, and graduate from college, which is why it is important for prior UBMS students to attend a postsecondary institution where there are other prior UBMS students, or where their prior UBMS family is attending (Braxton et al, 2000; Holland, 2020; Ishitani, 2016; Tinto, 1988).

The social and emotional stress the participants described in their interviews was the main theme found in this study. All participants described stress from having to work through high school and/or college, taking care of loved ones, school and extracurricular

activities schedules, death of loved ones, pregnancy, COVID-19, loss of the UBMS program and its many components of support, social integration, and access. These social and emotional stressors could be the reason prior UBMS students are not graduating college with an associate or bachelor's degree.

### **Action Plan**

The following action plan provides improvements that UBMS programs may be able to utilize to meet the needs of increasing degree attainment for prior UBMS students. This action plan will address the following objectives: 1) Tracking prior UBMS graduates; 2) Improve programming that will allow for increased social, emotional learning, as well as trauma-informed care, cultural experiences; and 3) Improving college readiness. This segment will describe the objectives, tasks, responsible staff, location, resources, and the timeline to complete each objective.

#### *Objective 1*

As previously mentioned, once a UBMS student graduates high school, they also graduate from the program. Services and interactions with the program are no longer provided as the program is a pre-college program and is only provided enough funding for that specific purpose. However, there is enough funding to provide general services to track prior participants.

Although each UBMS program serves different populations within their geographical area, each program has the same desired outcomes, even though the percentage of graduates may differ. Fortunately, the following actions may aid in postsecondary enrollment, retention, and graduation rates of those students. The first step would be to gain permission to access prior UBMS students' transcripts from their

postsecondary institutions, and gain access to the student's advisor, being alerted of any important actions. The second step would be to circulate an alumni questionnaire that will allow the student to update contact information, current educational and work status, and their GPA and major field of study. The third step would be to use social media and email which will provide quick, free access to information that can be maintained in alumni files. The fourth step would be to hold an alumni day where they will be able to visit the host campus and meet with current UBMS students and provide opportunities for each one to speak to participants in a group setting about college experiences and careers.

### ***Objective 2***

Each UBMS program could improve their programming by increasing college visits, inviting special speakers from different college admissions departments, professors, including UBMS alumni who received their degrees, and creating an accountability worksheet that will help keep the student on track to degree attainment. These changes will increase the student's understanding of what is required of a college student from the perspective of leadership at a college, and that of a prior UBMS student. These significant changes will also allow current students to learn from experienced staff and college students how to navigate an unfamiliar environment that will promote social and emotional intelligence, as well as break the chain of trauma caused by past experiences so they too may persist.

To address the issues of financial stress mentioned by the participants, each program could improve their financial literacy service. This improvement would provide extending coursework that would strengthen the students' understanding of grants, scholarships, and work study programs. Furthermore, UBMS programs could create

financial planning calendars that will allow the student to stay on target with FAFSA applications, scholarship deadlines, and monthly payments should the student be paying their own tuition. Finally, create a worksheet discussing work study, careers that offer loan forgiveness, and how to search and apply for such programs. This objective can be implemented immediately and may require additional funding of \$2,500.

### ***Objective 3***

The third objective will require improving college readiness. This improvement will require conducting a survey of what current UBMS students believe is to be expected of them as a college student. Second, programs can improve senior meetings by increasing frequency of individual advising sessions, creating information documents for their desired college, and desired program of study. As Dumlao (2018) and Singhai et al. (2021) states, communication is the backbone to building relationships and empowering the student to reach their goal of degree attainment. This should commence immediately at each host institution. These changes may require more funding in the sum of \$2,500 for document production, internet, printing services, and computers. The following logic model (See Table 2.3) will provide an outline of the events that will promote degree attainment.



**Table 2.3***Action Plan Logic Model*

<b>Objective</b>	<b>Task/s</b>	<b>Person/s</b>	<b>Time</b>	<b>Location</b>	<b>Resources</b>	<b>Funds</b>	<b>Outcomes</b>
Increase tracking of prior UBMS participants	Permission to access Alumni questionnaire Social media access	Project Director  Program Assistant	August of each year	UBMS host institution	Internet Computer Permission to access form	U.S. Dept. of Education Grant	100% of all prior UBMS students will be reached and receive advising to promote retention and degree attainment
Improve programming to include social and emotional intelligence assessments for students, and professional development for staff in social emotional learning and trauma-informed care	Increase college visits  Invite special speakers  Create an accountability worksheet  Professional Development	Project Director  Program Assistant  UBMS alumni  College staff and professors	August through May of each year	UBMS host institution	Transportation  Internet  Computer	U.S. Dept. of Education Grant	100% of all current UBMS students will be prepared to graduate high school and 100% of all staff will be trained and certified in social and emotional intelligence
Improve college readiness	Surveys  Improve and increase senior meetings	Project Director  Program Assistant	August of each year	UBMS host institution	Internet Computer Printer	U. S. Dept. of Education Grant	100% of all prior students will be prepared for college

### CHAPTER THREE: DESCRIPTION OF THE CHANGE PROCESS

This chapter will focus on the application of the action plan mentioned in Chapter Two. Furthermore, it will examine the implications of this action research to attract further research by other scholars and research practitioners who want to improve upon other pre-college and Upward Bound programs. The first section will focus on what program directors must, or may do, to improve the outcomes of their programs. The second section will support the theoretical framework used in Chapter One, including research conducted on organizational theory to support the need of the action plan. The third section of this chapter will focus on the leadership within the program, and further analyze the need for any additional organizational change. The fourth and final section of this chapter will discuss further implications for practice and future research. Finally, it will bring to fruition further questions raised by this action research project to further entice scholars to answer the question regarding degree attainment of prior Upward Bound Math Science participants.

#### **Description of the Change Process**

The plan of action for this action research dissertation highlights the importance of follow-through. After a participant graduates high school, they are no longer part of the active UBMS program. This proves troublesome since directors must track prior participants for up to six years after graduating high school. Directors must get very creative with how they should monitor prior participants' successes. The steps contained within this action plan will support degree attainment while also promoting communication, and a continuation of a sense of still belonging to the UBMS program.

## **Increase and Improve Tracking**

The first step to securing information of prior participants will be to have students complete an exit interview detailing what college or university they plan to attend, the major they want to pursue, housing plans, and current contact information. This exit interview should be conducted halfway through their senior year. This will ensure that participants are indeed going to college. The interviews conducted in this action research study supported the findings of other research that stated degree attainment was linear and that tracking prior pre-college participants is a necessity, while also collecting important data for future program needs (Alvarado et al, 2017; Moreu & Brauer, 2022; Tinto, 1988).

The next step to increase and improve tracking will be to implement an alumni questionnaire that will focus on what prior participants are doing with their personal and academic time, including job/s, socializing with friends and family, and any other time-consuming activities. Marlon (2022), notes that during the COVID-19 pandemic, students had a higher dropout rate due to time constraints during their first year of college which too supports the data collected in this research. Not only will this questionnaire gather information for UBMS programs, but it will also provide an opportunity for directors to develop networking opportunities for prior participants. These networking events will provide the opportunity for prior participants to share related stories, discuss strategies to secure their degrees, all the while potentially opening the doors to collaborate on entrepreneurship, hiring, and provide social integration. While UBMS programs cannot invest financially into prior students, they can hold the events during a current participant event. This will allow current participants the opportunity to hear stories, receive

guidance, and help them to gain the knowledge of what to expect their first year during college by allowing prior participants to share their experiences. It will also have a countereffect on prior participants as they will once again have that connection to the program. These events will support the step of the action plan which includes improving college readiness.

### **Improving College Readiness**

The next step in the action plan is to improve college readiness, which is the sole purpose of the UBMS program. Research has shown that first-generation and low-income students do not have the same advantages of non-first-generation students (Alvarado et al, 2017; Kezar & Holcombe, 2020). Further research has shown that less than 12% of first-generation and low-income students graduate with a degree (Bryant, 2022). This action step will require support from all UBMS staff, parents/caregivers, target schools, in-school coordinators, principals, and the faculty and staff from host institutions.

UBMS staff will be required to provide curriculum that supports and provides opportunities to challenge each participant in a rigorous course that improves their understanding and abilities of college courses. These opportunities may include college credit courses, courses that are taught by college professors and those currently working in the student's interested field, campus clubs and organizations, and cultural trips that will provide experiences many first-generation and low-income students would not receive if it was not for the UBMS program.

To continue improving college readiness, an increase in points of contact will allow more time to implement assessments such as personality traits, Learning and Study Strategies Inventory (LASSI), and Conover's The Success Profiler. These assessments

will provide pertinent data to gauge where students are on each level. They will also provide learning opportunities for students to learn about themselves and areas they may improve upon.

Improved college readiness will also include surveys that will gather information about the colleges and universities participants plan on attending. This information will guide all staff, target schools, in-school coordinators, and host institutions on where students will be seeking their degrees after high school. Possessing this information will provide opportunities to research other institutions and why the students chose that institution, allow for UBMS staff to research that college, and learn about degrees and programs to better prepare each student, and provide tours and admission counseling for those specific colleges and universities.

Because UBMS is part of the U.S. Department of Education's TRiO programs, they have the unique opportunity to showcase postsecondary institutions that have other TRiO programs such as Student Support Services (SSS), and McNair programs, which also have the same entrance requirements for UBMS participants. These programs are designed to be a steppingstone in the linear progression model that Tinto (1988) discussed, and has an ultimate objective of retention and degree attainment (U.S. Dept. of Education, 2022). SSS provides services that include tutoring, financial literacy, counseling, academic advising, connecting students to resources on and off campus, as well as career services such as application and resume assistance, career coaching, and opportunities to gain cultural experience (U.S. Dept. of Education, 2022).

The last step for improving college readiness will require increased senior meetings where staff meet individually with each high school senior participating in the

UBMS program. These meetings will include advising on financial aid, scholarships, admissions, applications and essays to the universities of their choice, along with individual counseling. This step will encourage the student to continue to focus on the next task to progress to their very first semester in college. This too supports the linear progression model Tinto (1988) describes, along with social and academic integration.

### **Social and Emotional Intelligence and Trauma-Informed Care**

The last step in the action plan will include social and emotional learning (SEL) assessments, as well as trauma-informed care best-practices, as previously mentioned in the college readiness action step, along with promoting professional development for UBMS staff, faculty, and in-school coordinators. Emotional intelligence is “the ability to monitor one’s own and other people’s emotions, to discriminate between different emotions and label them appropriately, and to use emotional information to guide thinking and behavior” (Holland, 2021, p. 62). Trauma-informed care best-practices will provide students and staff the opportunity to be vigilant of triggers and other stressors that may cause post-traumatic stress and guidance on how to prepare students and staff to address such concerns (Barros-Lane et al, 2021; Carello & Butler; 2015; Davidson, 2017).

Students must understand their own EI which will guide them as they communicate with others (Anderson, 2021; Holland, 2021). Holland (2021) asserts that having a solid understanding of emotional intelligence will also improve self-awareness. Because UBMS is a pre-college program, staff work directly with freshman through seniors and many of the students are not self-aware of their own emotions, cognition, and actions, let alone someone else’s. Promoting EI will aid in the students’ understanding of

how to handle situations on a personal level, and within group settings, which will support social and academic integration (Holland, 2021; Tinto, 1988).

Staff should also increase their number of contacts with each participant. This increased frequency will promote social and emotional intelligence, which is vital to successfully graduating on time, and obtaining their college degree (Alvarado et al, 2017; Holland, 2021; Means & Pyne, 2017; Sankhayeva et al, 2021). Lastly, it will improve motivation, which will be the driving force to degree attainment. Once a student understands who they are emotionally, they will understand their relationships with themselves and others, while also having higher aspirations for themselves (Alvarado et al, 2017; Anderson, 2021; Holland, 2021).

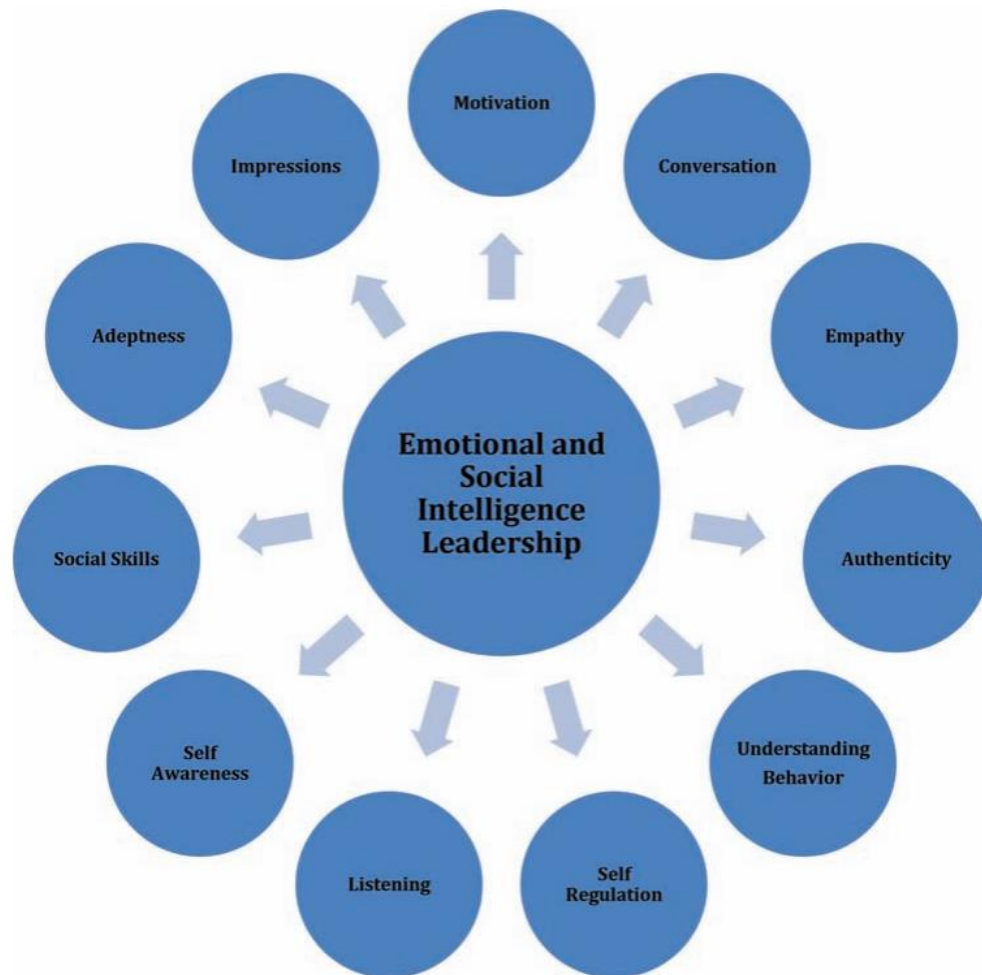
Holland (2021) describes social intelligence (SI) as “effective listening, fluency in conversational skills, understanding the behavior of others, and an awareness of one’s impression upon others (p. 64). SI also provides the necessary tool of “effective listening,” which requires patience (Holland, 2021, p. 64). Furthermore, SI promotes compassion, and empathy. These skills are important for first-generation and low-income students to practice as they will be attending a college or university where they will be presented with multi-cultural experiences, different races and ethnicities, and individuals from different socioeconomic backgrounds. It will also aid in social and academic integration and will guide them in class participation and discussions that take place within the classroom and small groups.

The next step will be professional development on SI and EI for UBMS staff and faculty, as well as students. Holland (2021) asserts that, SI and EI for leadership can be

the difference between great leaders from good leaders and presents the following leadership model.

**Figure 2**

*Emotional and Social Intelligence Leadership Model*



The model displays characteristics that can be taught in leadership training, and in the classroom. These important skills are advantageous to growth as a maturing adult, while also becoming a great leader within an organization to create change. Furthermore, these characteristics can be taken into any social and/or academic setting within a university, or even a students' respective community.



The last step deals with trauma-informed care best practices. Davidson (2017) states that SEL and TIC go together and provide the necessary learned skills to cope as they progress throughout their college careers. UBMS programs and other pre-college programs have a duty to provide the best environments and opportunities for their students to progress to the next secondary school year, as well as into college. Most of the participants in this study mentioned some form of major stress, and trauma, whether it was a death in the family, personal mental illness, finances, and COVID-19.

Paving a direct path to degree attainment for present and past UBMS students, as well as other pre-college programs, will require knowledgeable staff in TIC to provide “safe spaces,” “counseling” services, academic support, financial literacy, and transitional support services (Barros-Lane et al, 2021; Carello & Butler; 2015; Davidson, 2017). It should also be mentioned that postsecondary institutions have a responsibility to provide these services to students who have trauma. If they are going to accept first-generation and low-income students then they need to be ready to accept and affirm their lived experiences, and provide the necessary supports mentioned above.

One thing that stands out in this research is that the participants are resilient. Almost all of the participants found a way to move forward with their degrees, or made a plan to eventually go to, or go back to college. The participants that left college before receiving their degrees found a way to adapt to their situation. While it may not have been the correct answer to their solution, they did what they thought was necessary in the moment. According to Davidson (2017), the answer they chose may have been a “misapplied survival skill” as what they chose to do may have been a reaction to what they have always done, and that is to go back to what they know, as it may provide

comfort in the moment (pp. 13). The “answers” the participants chose may be considered a false safe place as the environment they know may be the environment that produced the trauma.

### **Analysis of Implementation**

This section focuses on parts of the action plan that has already been implemented, as well as what is already in place. The first part of this section analyzes what the UBMS program already does well by discussing its objectives in detail as it also relates to the findings in Chapter Two. Finally, this section concludes with a discussion of how the action plan was guided by Tinto’s longitudinal model of institutional departure, and grounded theory.

### **Current Services**

All services that the UBMS program provides are research based and have been proven to aid in the success of first-generation and low-income students graduating with an associate or bachelor’s degree (U.S. Department of Education, 2022). While each program has a base of services they must provide, each one is unique as they serve diverse populations across the United States. These services include cultural exposure, rigorous academic course completion, academic and financial counseling, tutoring, mentorship, post-secondary immersion, assistance with college and job applications, and exam preparation.

Currently, students are exposed to cultural activities that include museums, musical arts, introduction to culinary arts taught by international students from host institutions, sporting events, presentations by leaders in STEM industries, college level courses taught by professors at the host institution, and internships. Students are expected

to complete rigorous courses in math and science fields, including English and humanities, and a foreign language.

Students and their parents are also required to take financial literacy classes/courses to promote socioeconomic stability and growth. Staff also provide assistance completing the Free Application for Federal Student Aid (FAFSA) form, scholarship research, and entrance applications. Each program also provides individual tutoring for any subject the student may be struggling with, or to help raise their ACT scores.

One of the most vital services provided by the staff of the UBMS Program is through peer and staff mentorship. As one of the participants in this study had mentioned, along with research conducted, mentoring is vital to a first-generation and low-income student as it builds social equity, improved understanding of what college life will be like, and that overall sense of having someone by their side to go to for help (Day et al, 2018; Grace-Odeleye & Santiago, 2019; Means & Pyne, 2017; Parnes et al, 2020; Plaskett et al, 2019; Quinn et al, 2019; Schelbe et al, 2019; Schutze & Bartyn, 2020).

The last service already provided is a summer residential program where students live on campus of their host institution for six weeks. During this time, students participate in college courses related to experiential STEM courses, including English and humanity courses, and a foreign language. Participants also travel once a week to different colleges and universities within their region, visit STEM career businesses where they meet leaders of the businesses to learn firsthand what they do. During these weekly trips, students also attend cultural events, delve deep into city and campus culture, along with other venues such as sporting events, plays, and zoos. The last week of the

summer program is a five-day trip to a different city and state such as Washington D.C., Florida, Chicago, New York City, San Francisco, and Seattle. These opportunities provide many first experiences for students to travel far distances without parents or guardians, and learn how to socially integrate with other peers, staff, and members of communities where they may have never had the opportunity to visit if it was not for the UBMS program. Students also visit colleges and universities they would have never dreamt of visiting or having the opportunity to attend. These opportunities support the need for social integration training of staff and student. It takes strong networking and collaboration to understand the needs of this diverse population and it will require strong leaders to make these programs survive (Brookover et al, 2021; Day, 2018; Sankhayeve et al, 2021).

### **Action Plan Services**

The services mentioned in the action plan already exist, however, they may need revisited, or revised. Many UBMS programs have a very small team of just a director and a program assistant, along with contracted staff during the summer component of the program. These staff are vital to the growth and success of the program. Research presented by Braxton et al (2000) found that Tinto's model can be reduced from 13 variables of departure to only four, even though Tinto mentioned three that are most notable; separation, transition, and incorporation (Tinto, 1988). Tinto's model supports the need for the action plan services to be implemented as they are longitudinal services.

The four that Braxton et al (2000) suggests are family background, individual attributes, pre-college programming, and institutional commitment (Braxton, 2000). Family background may include income and college degree status. Individual attributes

may include academic capacity, race and gender. Pre-college programming may include college credit plus courses, TRiO programs like Upward Bound, Upward Bound Math Science, or Talent Search. Finally, institutional commitment which may include the commitment of the students, or the commitment of the institution itself (Braxton et al, 2000). These services align with and support the need to improve upon existing services, along with the improved services mentioned in the action plan to support degree attainment.

Finally, using grounded theory allowed me to design questions for the interviews that participants answered, and led to the action plan services. It also provided opportunities for the participants to justify what is currently working, what should remain, and what should be implemented. The interviews exposed the need for staff development, increased number of contacts, and social and emotional intelligence assessments for students and professional development for staff.

### **Analysis of Organizational Change & Leadership Practice**

This section provides an analysis of organizational change, and leadership practice that may aid in the objective of degree attainment. It will continue to illustrate and support the findings of the action plan by applying organizational approaches such as top-down vs. bottom-up approaches, as well as supporting the need for critical theory of love which also supports the emotional and social intelligence leadership model and an increase in contacts suggested in the Description of Action/Intervention/Change Process section of this chapter.

## **Organizational Change**

Hatch (2018) discusses how organizations are not simply shaped by those working in, but by those within it and outside of it, such as consumers and stakeholders, and all other facets surrounding the organization. Weick and Quinn (1999) support this definition as they promote organizational change as continuous, which Tinto (1988) also states, based on changes of individuals, frameworks, analysis, and need. Thus, for an organization to be prosperous, it must change with its surroundings and influencers.

Positive influences, experiences, and excellent leadership will ensure success by promoting a positive environment where staff feel encouraged, valuable, welcomed, and heard (Hyde, 2012). The very same can be said for the students. The main goal of the UBMS program is to prepare first-generation and low-income students for a successful and productive college life resulting in obtaining an associate or bachelor's degree. The action plan suggested will allow for an increase of positive influences through mentors and guest speakers, increase in contacts of prior participants, and professional development for staff, and rising student leaders. This design will promote communication, collaboration, and an organization that has the student's success at the forefront of what they do by integrating proven and effective programming (Kezar & Holcombe, 2020).

Another key opportunity for UBMS programs and organizations to succeed would be to recruit and hire prior program participants. Doing so will bring a bottom-up approach as prior participants understand what it was like to be a student. Once they become a staff member, they will also be able to bring a top-down approach to the program. They understand the challenges students go through as first-generation and low-income

students. This will provide a stronger and more meaningful opportunity to advocate for this population. Lipsky (2010) confirms this by stating advocates can bring their personal experiences and knowledge to fight for the best possible services and outcomes for current participants.

Positions prior students could assume would be summer resident advisors, peer mentors, tutors, and office assistants. These are all entry level positions and positions they could acquire while still attending college. Once the prior student graduates with their degree, it could possibly open the door for them to direct their own UBMS program, or direct one that is in operation. Furthermore, there are many opportunities to rise within other TRiO programs, or nonprofit organizations that provide access to minorities, or even greater positions such as the United States Secretary of Education, a position currently being led by a prior TRiO student, Dr. Miguel Cardona. This opportunity too supports Braxton et al (2000) and Tinto's (1988, 1993) models of institutional departure, and that, changes, are linear, which said changes could unquestionably lead to greater outcomes, including advocacy and top careers.

Lastly, understanding and having a true appreciation for serving this population will require more than simply scratching the surface of what all they endure. Research has indicated that a much deeper understanding for minority students will require love, especially within education (Brooks, 2017). Furthermore, Brooks (2017), states that critical theory of love conceptualizes the need to understand those served to bring equity and equality to minority students, so they too have opportunities to succeed.

Participants in this study confirms the idea of critical theory of love by stating the phrase "everyone loves everyone" (ELE). The presence of such admiration for one

another and the program is undoubtedly needed for their success within the program, and all throughout their college journey. It is not just about loving one another, but having the love and support from their staff. This change within the organization also supports the need for the suggested action plan by supporting the need for more contacts during and after the program, and professional development for staff and faculty in social and emotional intelligence, as well as trauma-informed care.

### **Implications for Practice & Future Research**

The findings in this research are valuable to any precollege program, especially those serving first-generation and low-income students. Each participant in this research described their time in the UBMS program as intimate, feeling as though they belong to a large family that “supports,” “encourages,” and “was very close.” Even though not all of the participants in this study graduated with a degree, they all gave credit to the UBMS program for their successful completion of high school, both academically and socially.

These findings suggest that social integration and social and emotional intelligence, as well as trauma-informed care best practices are a guiding factor to degree attainment. Pre-college programs, especially those housed in a college or university, must find ways to build important relationships with first-generation and low-income students, and write policies that will hold all faculty and staff accountable. Such relationships are vital to the success of students, but they cannot be done without caring for them, or having a love for teaching, administering, and directing in programs such as UBMS. This research implies that a critical theory of love must be at the heart of all faculty and staff to ensure students continue to feel the close relationships they had while in the UBMS



program. Love for the program is the relationship needed between staff and participants that will keep everything grounded in the commitment to serve each student.

Be as it may, there will not be a single answer to degree attainment, especially with this underserved, underrepresented population, it will take a holistic approach to meeting the goal of degree attainment, and an understanding that social and academic integration, followed by degree attainment, is and will be linear which supports the need to encourage students to attend colleges and universities with other TRiO programs (Tinto, 1993). Activities, such as prior student reunions, will be a great way to follow-up with prior participants. It will also provide opportunities for prior students to meet active participants which could lead to mentorship. Furthermore, it will allow for past participants to feel as though they still belong to the program, which is what many of the research participants stated they wish they still had. The reunion could also serve as an opportunity to find new resident advisors for the summer residential program, as well as future full-time employees.

### **Conclusion**

The purpose of this study was to discover why prior Upward Bound Math Science participants were not graduating college with an associate or bachelor's degree within six years after graduating high school. It also served as a tool to discover what may be needed to fulfill the objective of degree attainment. The findings of this research present that there is a need of increased contacts with prior participants, as well as a need for a smoother transition into college, which will require preparing active participants by discovering their social and emotional intelligence levels through assessments, trauma-informed care best practices, and participant and staff trainings. Furthermore, this

research shows there is a need for increased tracking of prior participants. This study also shows there is a need to improve college readiness. While programs like the UBMS program are designed to prepare students for college, it will be advantageous for the programs to strengthen their readiness activities such as auditing a college class, participating in college student activities, meeting with faculty in the student's desired degree, and potentially having a monthly meeting during regular college hours where participants can see college students navigating campus life.

The action plan is just a starting point to reaching the ultimate goal of degree attainment for first-generation and low-income students within the UBMS program, and possibly in other precollege programs, not just in Appalachia where this study was held, but throughout the United States. Faculty and staff at colleges and universities, as well as staff in UBMS and other precollege programs, should begin to utilize the emotional and social intelligence leadership model, as well as assessments, implement TIC best practices as a guide to build students' personal growth, as well as strengthening faculty and staff leadership skills. These changes are not the only answer to increasing degree attainment, but they will enhance the student's experiences in a precollege program, and as a college student, which may increase the ultimate goal of degree attainment.

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## APPENDIX A

### Invitation to Participate in Research

#### Surveys and Interviews

Research Project Title: Degree Attainment: Prior Pre-College Program Students' Experiences.

You have been asked to participate in a research project conducted by Gabriel Brown from the University of Dayton, in the Department of Education.

The purpose of the project is: The problem of practice this study seeks to address is that students are not graduating with an associate or bachelor's degree within six years after graduating high school.

**You should read the information below, and ask questions about anything you do not understand, before deciding whether to participate.**

- Your participation in this research is voluntary. You have the right not to answer any question and to stop participating at any time for any reason. Answering the questions will take about 60 minutes.
- You will not be compensated for your participation.
- All the information you tell us will be confidential.
- If this is a recorded interview, only the researcher and faculty advisor will have access to the recording and kept in a secure place.
- If this is a written or online survey, only the researcher and faculty advisor will have access to your responses. If you are participating in an online survey: We will not collect identifying information, but we cannot guarantee the security of the computer you use or the security of data transfer between that computer and our data collection point. We urge you to consider this carefully when responding to these questions.
- I understand that I am ONLY eligible to participate if I am over the age of 18.

**Please contact the following investigators with any questions or concerns:**

Gabriel Brown, [browng21@udayton.edu](mailto:browng21@udayton.edu), 740-961-1253

*James Olive, [jolive1@udayton.edu](mailto:jolive1@udayton.edu), 614-285-5466*

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Participant Name (Print)

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Participant Signature

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Date

**If you feel you have been treated unfairly, or you have questions regarding your rights as a research participant, please email [IRB@udayton.edu](mailto:IRB@udayton.edu) or call (937) 229-3515.**

## APPENDIX B

### **Prior UBMS Student Interview Questions**

1. Tell me about your living situation when you were in college?
2. How would you describe those who were in your support system?
3. Explain how your support system that you mentioned supported you.
4. Where were you employed?
5. Who helped you to plan and schedule your classes?
6. What types of financial aid did you receive, if any, and did you receive scholarships?
7. What were your interactions with your professors like?
8. How comfortable did you feel speaking up in class?
9. How did you spend your personal time while in college?
10. What types of student clubs or organizations did you participate in on campus?
11. Where and how did you spend your academic study time?
12. How many classes did you usually take each semester?
13. How did you stay motivated to graduate?
14. What activities do you feel were most beneficial during your participation in your UBMS program?
15. How do you feel your UBMS program prepared you for college?
16. How did you prepare for your career after college?

## APPENDIX C

### Email to Participants

Dear (Name),

My name is Gabriel Brown and I am a doctoral candidate in the Leadership for Organizations program at the University of Dayton, and a Program Director of Upward Bound Math Science at Shawnee State University. I am writing to request your participation in my research study. The purpose of my study is to identify why prior UBMS students may not be graduating with their associate or bachelor's degree and what resources are needed.

My study is a qualitative study that includes one, sixty-minute semi-structured interview with prior UBMS students who graduated college, left college before graduating, or did not attend college.

Participation in this study includes:

- One, sixty-minute interview with me via Zoom due to the COVID-19 pandemic
- Participants will be given the opportunity to use a pseudonym of their choice to protect their identity
- Zoom interviews will be recorded, and transcripts of the recording will be transcribed, and then reviewed by you for accuracy

Please feel free to share this invitation with anyone who meets the criteria mentioned. If you have any questions regarding this study, please contact me via email at [browng21@udayton.edu](mailto:browng21@udayton.edu) or 740-961-1254. If you are interested in participating in this important study, please contact me via email. All information will be confidential in accordance with the University of Dayton's Institutional Review Board (IRB).

## APPENDIX D

### University of Dayton IRB Approval

Danita Nelson updated this service request on Fri 3/25/22 4:27 PM Eastern Daylight Time.

Comments: Changed Status from **New** to **Approved**.

EXEMPT (d)(2); Approved Thu 3/24/22 7:58 PM Eastern Daylight Time

RESEARCHER: Gabriel Brown

PROJECT TITLE: Degree Attainment: Prior Pre-College Program Students' Experiences

The Institutional Review Board has reviewed the subject proposal and has found this research protocol is exempt from continuing IRB oversight as described in 45 CFR 46.104(d)(2).<sup>\*</sup> Therefore, you have approval to proceed with the study.

#### REMINDERS TO RESEARCHERS:

- As long as there are no changes to your methods, and you do not encounter any adverse events during data collection, you need not apply for continuing approval for this study.
- The IRB must approve all changes to the protocol prior to their implementation, unless such a delay would place your participants at an increased risk of harm. In such situations, the IRB is to be informed of the changes as soon as possible.
- The IRB is also to be informed immediately of any ethical issues that arise in your study.
- You must maintain all study records, including consent documents, for three years after the study closes. These records should always be stored securely on campus.

Please let me know if you have any questions. Best of luck in your research!

Best regards,

Danita Nelson  
IRB Administrator  
Office for Research  
University of Dayton  
300 College Park  
Dayton, OH 45469-7758  
937-620-2550  
Email: [IRB@udayton.edu](mailto:IRB@udayton.edu)  
Website: [go.udayton.edu/irb](http://go.udayton.edu/irb)

FWA00015321, expires 10/14/2025

\*Exempt under 45CFR46.104(d)(2): Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: (i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or (iii) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).