Chapter 1 - Developing Graduate Students' Academic and Workforce Skills: A Framework for Designing a Technology-Supported Graduate Student Peer and Professional Mentoring Program

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Chapter Highlights

- This chapter describes the design of a model peer and professional mentoring program based on the Community of Inquiry Framework and centered on academic and professional development for graduate students enrolled in online and hybrid courses in the Master of Science in Administration program at a regional comprehensive university.
- The peer and professional mentoring program framework is centered on the strategic integration of technology, specified in the program's design, goals, content, and evaluation plans. The framework is grounded in empirical research and informed by multiple sources of data and a needs analysis.
- Through technology-supported learning, along with the engagement and leadership of peer and professional mentors, the program centers on supporting and developing students by providing connections to enhance students' learning experiences, revealing the hidden curriculum, fostering academic support, and developing professional and workforce skills.
- The design and development of this program provides a research-based, technology-enhanced framework for institutions seeking to design similar programs to support students academically and professionally.

Introduction

Researchers in the field of higher education have consistently demonstrated the centrality of the learning community to the development of student discourse, learning, and achievement (Garrison & Arbaugh, 2007; Rourke et al., 2001). Also critical to student learning and professional development are effective support structures outside the classroom, including e-mentoring programs (Gafni-Lachte et al., 2021). For graduate students, technology-supported mentoring, which is both present-focused and future-focused, provides academic support as students navigate the realm of graduate school and future-focused as many students prepare to transition to professional roles post-degree.

Despite the benefits in supporting students academically and professionally through mentorship program with both peer and professional mentors, a gap exists in the literature in this area, as researchers found no model programs with a peer and professional combination in the literature. As such, the purpose of this research is to capitalize on this opportunity to fill the gap in the literature by developing a mentorship program to serve the academic and professional needs of students of graduate students enrolled in a Master of Science in Administration comprised of campus-based and online students with one of 14 different areas of concentration. The Community of Inquiry Framework (CoI) (Garrison, et al., 2000), a theory of online learning centered on connections stemming from the learning experience, provides the theoretical underpinnings of this chapter.

The Master of Science in Administration Program at Central Michigan University is a multimodal program offered in hybrid and online formats whose students come from diverse countries, backgrounds, and abilities, not unlike many programs serving diverse student populations. With a distance education legacy spanning nearly fifty years, this 36-credit program has over 40,000 alumni in leadership positions across the globe. In order to drive innovation in a competitive marketplace of master's degree programs, massive open online courses (MOOCs) and low-cost online certificate courses, such as the recently launched Grow with Google Program, the uniqueness of CMU's MSA program stands apart because of the authentic connections students form with faculty, staff, and students in the program.

To enhance opportunities for connectedness across time and distance, as well as provide additional academic support and professional development opportunities to MSA students,

the development of a technology-supported e-mentoring program would deepen student connections, provide support for students' academic and professional success, and showcase the uniqueness of the MSA program. This chapter provides a theoretical and research-based framework for this novel peer and professional mentoring program designed to support students in and beyond their program of study. The mentoring program framework, based on the CoI Framework, created in developing this e-mentoring program can inform academic leaders and faculty whose graduate programs serve diverse student populations at various institutions, providing a niche offering and strengthening points of connection for the students the programs serve.

Theoretical Framework

The Community of Inquiry (CoI) Framework is an established theory of online learning situated in the collaborative-constructivist paradigm and centered on the creation of meaningful connections (Garrison, 2000). The collaborative-constructivist approach, the framework's roots in describing connections inherent in technology-supported learning environments, as well as the centrality of the student learning experience positions the CoI as a relevant theoretical framework from which to position the examination of this study and its aims of developing a framework for creating a technology-supported peer and professional mentoring program for online and on-campus graduate students. At the core of the CoI Framework lies the student educational experience.

The student educational experience is affected by the degree and development of three presences: *social presence*, which is the ability of learners to present themselves and connect authentically with others through technology (Rourke et al., 2001), in other words, the student-to-student connection; *cognitive presence*, which is the ways in which learners connect meaning to course content (Garrison et al., 2001), in other words, the student-to-content connection; and *teaching presence*, which is the "design, facilitation, and cognitive direction of cognitive and social presences for the purpose of realizing personally meaningful and educational worthwhile learning outcomes" (Garrison et al., 2001), in other words the student-to-instructor connection. The CoI Framework is centered around the students' educational experience and the intersections of three presences: social, cognitive, and teaching (Garrison, 2021).

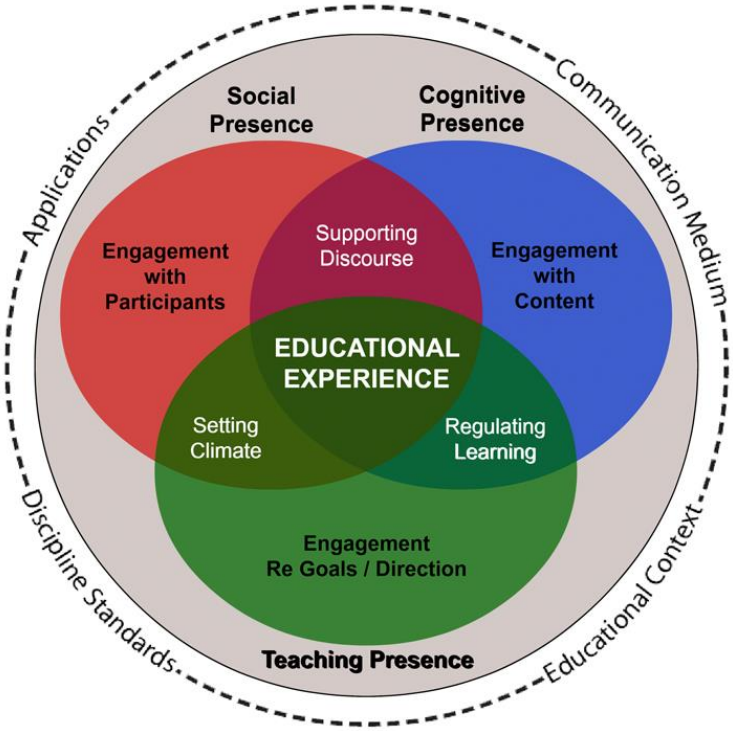

Figure 1. Community of Inquiry Framework

Literature Review

Mentorship for Graduate Students

The relationships students develop in graduate school can have a profound impact on their experience at the university and beyond. Mentoring has advantages for both new graduate students and current graduate students. Usually, a peer, a member of the faculty, or a professional in the student's field of study can serve as a mentor. Many successful professionals have multiple mentors, who may differ depending on the stage of their careers. Mentors and professional contacts are frequently essential in identifying and pursuing academic and professional objectives. Universities throughout the world are still focused on ensuring their students possess the endurance in finishing degrees. Lorenzetti (2020) indicated that the peer mentoring has positive impacts on creating a strong relationship and help on knowledge acquisition, skill development, and degree persistence. Success of students and alumni is more closely correlated with how they attended college than with where they attended. Students will succeed more in college and in their jobs if they have emotionally supportive relationships. According to researchers, these powerful connections can develop naturally, if enough time and effort is given to students (Livingston, 2018).

Graduate students seek more effective mentoring compared to other students, regardless of their racial or ethnic background, gender, sexual orientation, age, place of origin, academic area, or departmental affiliation. Good mentoring may help all students learn more efficiently, and that should be the major goal of any university. Advisors and personal tutors must possess a variety of abilities and traits, including good communication, empathy, knowledge of the subject, and teamwork (McGill et al., 2020). McGill contended an academic advisers must wear several hats to be able to read and understand students to support students in this fashion. They must be able to identify both the challenges students are presenting and those that are hidden from view. This procedure is an integrative art form. McGill's findings showed that caring for students, wanting to work with a varied group of students, dedication to student achievement, and service orientation are crucial traits that advising professionals should exhibit.

Academic Support through Peer Mentorship

According to the research of Lorenzetti et al. (2020), peer-mentoring interactions can improve knowledge acquisition, skill development, and support degree persistence. According to their study, graduate students who participated in the research reported that peer mentoring encouraged the growth of learning settings that prioritized community, collaboration, and shared purpose. Students felt that peer mentors helped them build academic and research abilities and reach significant academic milestones by making it easier for them to obtain critical procedural and disciplinary knowledge. The development of abilities was a recurring theme in the authors' research findings. Students participated in the research reported they were able to build three functional and interpersonal qualities through peer mentoring: which include developing research, relationship management, and honing career skills.

Sarker (2021) discussed the employment crisis. This study can be an effective tool to bring attention to educational institutions, policymakers, and students to emphasize more explicitly on building soft skills for job opportunities and professional development. Sarker noted that the lack of industry-academia collaboration is the primary cause of unemployment for graduates (Sarker et al., 2021). The purpose of this study was to better understand employability enhancement strategies for students and recent graduates, as well as the function mentorship plays in fostering employability. In addition, the objective of the study

was to improve the mentorship and career services already offered by the case organization to better address the many facets of employability. Using service design methodology, the development work was carried out as a service design process. The mentors, protégés, and the entire business can all profit from a carefully thought-out mentoring arrangement. A company culture that supports the development of its young workers will benefit from effective mentoring connections.

Traditional mentoring relationships are unlikely to give students the psychosocial support they benefit from in peer mentoring relationships (Grant-Vallone & Ensher, 2000). According to research on peer mentoring, mentees are more prone to express vulnerability when dealing with peer mentors than when they do with traditional mentors (McManus and Russell 2008). According to a study by Rockinson-Szapkiw et al. (2019), racial and ethnic minority women mentees supported participation in virtual STEM peer mentoring was advantageous for fostering a sense of community, interest in STEM, STEM identity, fostering STEM self-efficacy, and, ultimately, fostering STEM persistence. Peer mentoring, which disregards conventional hierarchies, may be easier to reach for underrepresented groups, such as women and minorities (Cree-Green et al., 2020).

Student mental health is becoming an increasingly important concern on university campuses throughout the world. Peer mentorship enhances graduate education's social, psychological, intellectual, and professional aspects (Paolucci et al.,2021). According to Paolucci's study, peer mentoring connections provides mentees with emotional support, encouragement, and a feeling of community while also providing mentors with chances for personal growth and fulfillment. Mayo, & Le's (2021) study discovered that poor mentor connections and a lack of academic proficiency had an impact on the connection between perceived prejudice and mental health. Moreover, according to the study increased perceived prejudice specifically predicted lower mentorship support, a decline in academic self-concept, and worsened general mental health. The author's research suggests that reducing discriminatory encounters, expanding mentorship opportunities, and promoting a good academic self-concept may all be used as preventative approaches for mental health issues among college students.

Colvin and Ashman (2010) assert that the openness and empathy displayed by peer mentors and mentees creates a variety of essential support roles. Working closely and informally with

program participants, peer mentors can monitor mentee growth and inform faculty mentors of any issues. In this sense, the peer mentor serves as a link between the faculty and the participants.

e-Mentoring

Due to the growth of online graduate programs and, more recently, the higher education institutions' change to online interactions as a response of the COVID-19 crisis, graduate student mentoring is becoming increasingly prevalent online. The challenges, strategies, and outcomes associated with online mentoring of graduate students are of the utmost importance for the participants of a mentoring dyad as well as for universities that offer online or blended graduate education. Promoting cutting-edge teaching strategies requires a strong culture of community engagement and cooperation Voldsund & Bragelien (2022). Online mentoring can be just as successful and beneficial as traditional mentoring, serving the same purposes (Welch, 2017). Numerous research on students' experiences with peer groups and online mentoring have found that they are very satisfied with both (Jacobs et al., 2015). Online mentoring can be utilized to coach graduate students in their research as well as areas of professional development (Doyle et al., 2016). Online mentoring has the capacity to get over challenges of distance and time, which is one logistical advantage over traditional mentoring. Onat & Bertiz (2022) found the use of instant messaging apps in e-mentoring programs bridges distance and creates a sense of community,

E-mentoring is a method of creating a structured mentoring relationship through the internet or via digital mediums. With the means of e-mentoring, participants may communicate whenever it is convenient for them and across time zones thanks to technology, which removes the necessity that they be in the same physical location (Dikilitas et al., 2018). E-mentoring may maintain face-to-face engagement by using video conversation services like FaceTime, Google Hangouts, Skype, Zoom, Meets, etc. Online mentoring benefits professors by giving them chances for professional development and the improvement of their mentoring abilities, chances to learn from students' ideas, and opportunities to rediscover a passion for their areas of specialization (Broome et al., 2011). According to Lerman's (2020) research, face-to-face mentoring interactions are not always feasible owing to financial and geographic limitations. Moreover, virtual mentoring removes such obstacles while still providing a community learning opportunity. According to the study, online

learning is more effective than face-to-face learning in imparting crucial leadership qualities to students. Virtual gatherings also make it possible to reach disenfranchised groups who would not normally be present.

The fast spread of e-mentoring systems demonstrates several significant benefits to these programs. Ensher et al., (2003) highlighted five major advantages for e-mentoring which include (a) easier access to mentors since distance and time constraints are less of an issue with e-mentoring. (b) lower expenses for carrying out training, running the mentoring program, and generating materials. (c) Because the medium is less intimidating, status disparities or stark distinctions are diminished. (d) a lesser focus placed on demographics, as participants in e-mentoring programs sometimes lack a firm understanding of each other's age, ethnicity, or other physical traits at first. and (e) a conversation log.

Individuals can overcome personality hurdles such as low assertiveness, poor social skills, or simply shyness or fear of initiating contact with the help of e-mentoring. The electronic media can make these initial contacts far less dangerous than a face-to-face initiation. Ensher et al. (2003) contended with the support of e-mentoring, individuals may overcome personality barriers such as low assertiveness, weak social skills, or simply shyness or fear of starting contact. These early encounters can be significantly less harmful than face-to-face initiations thanks to electronic media.

Revealing the "Hidden Curriculum" for Graduate Students

The term "hidden curriculum" (HC) refers to spontaneous, ad hoc learning that takes place outside of the conventional, prescribed curriculum and has a significant impact on students' professional growth (Neve & Collett, 2017). Although this learning might be beneficial, it can be at odds with what is being taught in the official curriculum. While medical schools take several measures to minimize these detrimental consequences, students are frequently unaware of the concept's existence or what it entails (Neve & Collett, 2017). To thrive in graduate school and prepare for the next professional step, many students must master skills and methods that they did not learn during their undergraduate studies. These abilities include not just scientific writing and teaching, but also negotiating professional relationships and ethical issues. The "hidden academic curriculum" refers to methods for gaining the non-technical abilities and perceptions essential for success in graduate school.

Higher education's "hidden curriculum" supports colonialism and other repressive social norms by promoting unspoken expectations that exclude already marginalized populations. These unwritten standards are rarely openly articulated, especially within graduate education, making it difficult to navigate resources, translate academic jargon, and even understand expectations (Villanueva et al., 2018). Navigating these unwritten rules adds to an already heavy load, and juggling multiple responsibilities can make it harder to feel connected. Graduate students face unique challenges that most of their undergraduate counterparts do not, such as balancing their studies with a career and/or family responsibilities. Additionally, some graduate students may need to learn or re-learn the standards since they are returning to a postsecondary setting after a long absence (Erin, 2022).

Professional Development through Professional Mentorship

Akinla et al. (2018) define near-peer mentoring as a method of encouraging professional and personal growth. Many companies, including Google, Microsoft, IBM, and Apple, are including mentoring programs into their professional development strategies. According to Cooper and Miller (1998), the benefits of mentoring include faster more successful integration of new workers; retention of quality professionals; greater transfer of skills from one generation to the next; increases in productivity and performance; increased learning through professional development programs; enhanced communication, dedication, and motivation; and a stabilizing force during times of transition.

Mentoring substantially improves a person's capacity to reach their actual potential in their field of interest. Having a competent mentor may assist and assure a positive outcome in the highly competitive field of technology. One’s mentor can assist their mentee in effectively navigating the academics and advancing professionally by offering advice, support, and advocacy. A mentor's attention, knowledge, strategic guidance, and support, along with mentees own realistic goal setting and proactive engagement in one’s mentoring relationship, can give mentee compelling prospects for personal growth and professional progress. Mentoring relationships are a crucial part of professional growth in many industries, including education (Hansford et al., 2004). Such relationships can help with retention and work satisfaction (O'Meara, 2015). Traditional mentorship is good. Peer mentorship, on the other hand, may be a significantly more beneficial choice if done correctly. When workers

work together to support and encourage one another, the company creates strong teams and a strong culture. In companies when there aren't enough senior executives or workers to teach junior team members, peer mentoring can be very beneficial. As a result, pairing peers to mentor one another is a practical approach. Peer mentorship programs allow company staff to learn and grow from one another. This encourages newcomers to succeed while simultaneously giving a space for established employees to reflect.

Mentoring fosters a community in which skills are developed, issues are addressed, and growth occurs. One of the most significant advantages of peer mentoring is that it promotes professional growth. Mentees may expand their abilities and expertise, while mentors can take joy in assisting others and passing on their knowledge. It's a win-win situation for everyone. Peer mentorship can also help to build workplace community. Employees are more likely to be engaged and effective when they feel like they are a member of a team and have colleagues they can rely on. Peer mentorship programs foster an environment in which individuals may gather to share their experiences and support one another. Single and Single (2005) expand on these concepts by claiming that e-mentoring offers two additional distinct advantages: impartiality and interorganizational connections.

Method

Following a detailed literature review, our data collection methods consisted of the following: a landscape analysis of graduate student academic mentoring programs and professional mentoring programs; SWOT (strengths, weaknesses, opportunities, and threats) analysis of the MSA program; and document analysis of the 2022 MSA Program mission, goals, learning outcomes, and learning targets. We also developed a student survey for future distribution to MSA students to capture their interests in developing various academic and workforce skills.
In conducting the landscape analysis, institutions with graduate student mentorship opportunities were selected based on the description of the existence and type of these programs listed on the institutions' Web sites. Criteria for inclusion in the landscape analysis consisted of 1.) Existence of a peer or professional mentoring program or information about mentorship for graduate students. 2.) The source of the mentorship program or mentorship information was a U.S.-based graduate school. 3.) The goals of the program explicitly centered on the academic and/or professional development of students enrolled in the graduate program.

MSA faculty and administrators conducted the SWOT analysis in December of 2022 in collaboration with the MSA Advisory Committee, a committee of MSA alumni working in leadership roles in a variety of industries. The SWOT analysis provided strategic perspectives, revealing the strengths, weaknesses, opportunities, and threats facing the MSA Program. Of particular interest within the context of peer and professional mentorship were the strengths that could be capitalized on in the creation of the program, as well as the opportunities available for growth and deepening the student experience.

We also conducted a document analysis of the MSA program mission, goals, learning outcomes, and learning targets (MSA Mission & Vision, 2022), which program administrators and faculty recently drafted as they are in the process of completing program updates. We thematized the content of the document into four main themes: workforce skills, academic skills, content knowledge, and areas of growth. The purpose of analyzing the mission, goals, learning outcomes, and learning targets was to provide context within the direction and focus of the programs core documents related to the areas of focus for the program and for students enrolled in the program.

Finally, we created for future distribution, a 22-item survey in Qualtrics to disseminate to MSA students, comprised of closed-ended and open-ended questions and organized into three sections: a demographics section with questions about the individual, their concentration, and their future plans; an academic and professional skills section with questions related to students goals and competencies within a range of academic and professional skills (e.g., communication, presentation, leadership); and finally, a mentorship section to gauge their level of interest in a peer and professional mentorship program, preferred modality, and the qualities in a mentor they would find most beneficial.

Results

The results of the landscape analysis of graduate student academic mentoring programs and professional mentoring programs, SWOT analysis of the MSA program, document analysis of the 2022 MSA Program mission, goals, learning outcomes, and learning targets are detailed in this section. Collectively, this data revealed the unique opportunity a technology-supported peer and professional mentoring program has the potential to fill in helping students succeed academically and adjust to the rigor and expectations of graduate school, as

well as support students in transitioning to professional leadership roles within organizations upon completion of the program. The results have been used to develop the design of the framework described in the discussion section, which provides an effective model for the development of a technology-supported peer and professional mentoring program for graduate students enrolled online or on-campus in the Master of Science in Administration Program at Central Michigan University. Following the discussion section, the conclusions and recommendations sections restate the key findings of the study and discus next steps for the study and development of peer and professional mentoring programs in graduate education programs in a variety of disciplinary and institutional contexts.

Discussion

The results of the landscape analysis of graduate student academic mentoring programs and professional mentoring programs, SWOT (strengths, weaknesses, opportunities, and threats) analysis of the MSA program, document analysis of the 2022 MSA Program mission, goals, learning outcomes, and learning targets, have been used to develop the design of the framework described in this section. As such, this section provides an effective model for the development of a technology-supported peer and professional mentoring program for graduate students enrolled online or on-campus in the Master of Science in Administration Program at Central Michigan University.

The technology-supported peer and professional mentoring program is thus designed with several specific goals in mind grounded in the literature and derived from the study findings. Broadly, these goals are aimed at providing mentees with a rich and comprehensive educational experience centered on creating connections, in alignment with the CoI Framework, the theoretical perspective framing this study. This educational experience will help students build skills and knowledge that will ensure their success academically and professionally in the realm of leadership and management within specific sectors ranging from human resources administration to healthcare administration to project management to engineering management, among other fields. These connections will foster mentees' professional growth and development by providing opportunities for self-reflection, goal setting, and skill building.

Through interactions with experienced mentors, the program is designed to provide mentees

exposure to practices and real-life experiences to support their success in graduate school and to prepare them for success in a leadership role in a professional context. In addition, the peer and professional mentorship program seeks to create a supportive, inclusive community for graduate students studying administration, promoting peer-to-peer learning and collaboration, thereby increasing student support, and potentially enhancing retention and graduation rates. Additionally, we designed the program to enhance mentees' professional networks with potential employers and colleagues in a variety of professional sectors and roles and to help mentees develop a personal development plan. Furthermore, connections with professional mentors provide mentees support for achieving their goals and providing strategies for securing job opportunities to establish or advance their careers. Finally, we designed this mentorship program to promote diversity, equity, and inclusion for future administration professionals by offering mentorship to historically minoritized students, including the programs robust population of international students and first-generation college students.

To accomplish these goals, we designed the program around explicit goals and learning outcomes. The learning outcomes are connected to relevant knowledge in the field of administration and aligned with the program goals. The goals and learning outcomes represent the knowledge students should be able to demonstrate upon completion of the peer and professional mentorship program. Table 1 provides an overview of connected program goals and learning outcomes.

Table 1. Program Goals & Learning Outcomes

PROGRAM GOAL	LEARNİNG OUTCOME
PROVİDE MENTEES WİTH EXPOSURE TO ACADEMİC SKİLLS, ADMİNİSTRATİON PRACTİCES, AND REAL-LİFE EXPERİENCES THROUGH İNTERACTİON WİTH EXPERİENCED MENTORS.	Upon completion of the program, mentees will be able to articulate and apply key leadership and management theories, practices, and real-life experiences gained through their interactions with experienced mentors.
SUPPORT MENTEES İN DEVELOPİNG AND REFİNİNG	Upon completion of the program, mentees will be able to demonstrate improved leadership and

PROGRAM GOAL	LEARNİNG OUTCOME
THEİR LEADERSHİP AND PROFESSİONAL SKİLLS THROUGH PERSONALİZED FEEDBACK AND GUİDANCE.	management skills through personalized feedback and guidance from their mentors.
ENHANCE MENTEES' PROFESSİONAL NETWORKS AND CONNECT THEM WİTH POTENTİAL EMPLOYERS AND COLLEAGUES İN THE FİELD İN A VARİETY OF SECTORS RELATED TO MENTEES' CONCENTRATİON AREA.	Upon completion of the program, mentees will have established a professional network and established connections with potential employers and colleagues in the field of leadership and management.
FOSTER MENTEES' PROFESSİONAL GROWTH AND DEVELOPMENT BY PROVİDİNG OPPORTUNİTİES FOR SELF-REFLECTİON, GOAL SETTİNG, AND SKİLL BUİLDİNG.	Upon completion of the program, mentees will have engaged in self-reflection, goal setting, and skill building opportunities, leading to their professional growth and development.
CREATE A SUPPORTİVE AND İNCLUSİVE COMMUNİTY FOR GRADUATE STUDENTS WHİLE PROMOTİNG PEER-TO-PEER LEARNİNG AND COLLABORATİON AND PROFESSİONAL-TO-STUDENT COLLABORATİON.	Upon completion of the program, mentees will have participated in a supportive and inclusive community of graduate students in administration, promoting peer-to-peer learning, professional-to-student learning, and collaboration.
INCREASE THE RETENTİON AND GRADUATİON RATES OF GRADUATE STUDENTS İN THE MSA PROGRAM THROUGH THE PROVİSİON OF ONGOİNG SUPPORT AND GUİDANCE.	Upon completion of the program, mentees will have a higher rate of retention and graduation the MSA program, because of ongoing support and guidance received through the mentoring program.

PROGRAM GOAL	LEARNİNG OUTCOME
HELP MENTEES İDENTİFY THEİR CAREER GOALS AND DEVELOP A PERSONAL DEVELOPMENT PLAN FOR ACHİEVİNG THEM, İNCLUDİNG STRATEGİES FOR SECURİNG JOB OPPORTUNİTİES, AND ADVANCİNG THEİR CAREERS.	Upon completion of the program, mentees will have identified their career goals and developed a personal development plan for achieving them, including strategies for securing job opportunities, and advancing their careers.
PROMOTE DİVERSİTY, EQUİTY, AND İNCLUSİON WİTHİN THE FİELD OF ADMİNİSTRATİON BY OFFERİNG MENTORSHİP OPPORTUNİTİES TO UNDERREPRESENTED GROUPS.	Upon completion of the program, mentees will understand the importance of diversity, equity, and inclusion within the field of administration, and have participated in mentorship opportunities designed to support underrepresented groups.

Program Structure, Staffing, and Mentor-Matching

Structurally, the peer and professional mentoring program will bookend students' learning experience in the MSA program. During their first semester enrolled in the MSA program, mentees will be matched with an academic mentor, who is a second year MSA graduate assistant, who can orient them to academic expectations and to nuances of graduate school and of the MSA program. Throughout the students' tenure in the MSA program, student success seminars, led by the MSA administrative staff, will connect students to continuing lessons regarding academic and professional preparation and success. The professional mentorship piece will punctuate the student experience during their final semester of the MSA program.

The peer and professional mentoring program coordinator will solicit, hire, and train academic mentors who are MSA program graduate assistants. Academic mentors will engage with mentees up to one hour each week for a period of sixteen weeks. The peer and professional mentoring program coordinator will provide a digital credential to graduate student assistant mentors at the conclusion of the sixteen weeks to document their

participation in leading mentees.

The peer and professional mentoring program coordinator will also solicit volunteers from a pool of 3,467 members of MSA program alumni who are members of the Central Michigan University – MSA Program Students and Alumni group on LinkedIn. The mentoring program coordinator will develop a group of professional volunteers via the creation of a smaller LinkedIn group Central Michigan University – MSA Student Professional Mentors. To be enrolled in the group, the mentoring program coordinator will train and ensure volunteers are committed to engaging weekly with mentees for up to one hour per week for a period of sixteen weeks. The mentoring program coordinator will provide a digital credential to professional volunteers at the conclusion of the sixteen weeks to document their participation in leading mentees.

The mentoring program coordinator will also develop and enforce guidelines to ensure mentorship engagements are taking place each week and to ensure the matches are of high quality to mentors and mentees. The guidelines will include orientation, training sessions, and regular check-ins with academic and professional mentors. The mentoring program coordinator will adjust mentor/mentee matches, if necessary, and provide support, as needed, throughout the duration of the program to ensure mentors and mentees are receiving benefits from the match and the program. Finally, the mentoring program coordinator will offer structured and open opportunities for feedback and suggestions from mentors and mentees to ensure the continued success of the program. For a sample program budget, including staffing needs, see Appendix B: Sample Budget Template.

Program Content

The content in Tables 3 and 4 detail suggested program content for the academic and professional components of the peer and professional mentorship program. The program content is derived from the program goals and learning outcomes and provides a suggested weekly outline of mentorship topics. The mentorship coordinator will also use the program content to scaffold academic and professional mentor orientation and training.

Table 2. Academic Mentoring Component

WEEK	*ACADEMİC SKİLL*	*MENTOR FOCUS*	*MENTEE FOCUS*
1-2	Time Management	Discuss strategies for managing time effectively, including prioritizing tasks and reducing distractions.	Reflect on their current time management practices and identify areas for improvement.
3-4	Effective Reading	Discuss tips for effectively reading academic material, including skimming, summarizing, and taking notes.	Practice reading academic material using effective strategies and seek feedback from mentors.
5-6	Effective Writing	Discuss best practices for writing academic papers, including outlining, drafting, and revising.	Write an academic paper using effective writing strategies and seek feedback from mentors or peers.
7-8	Presentation Skills	Discuss strategies for delivering effective presentations, including preparing and practicing.	Deliver a presentation and seek feedback from mentors or peers.
9-10	Critical Thinking and Problem Solving	Discuss the importance of critical thinking and problem solving in academic and professional contexts.	Practice critical thinking and problem solving skills and seek feedback from mentors or peers.
11-12	Effective Study Habits	Discuss strategies for studying effectively, including creating a study schedule and seeking out help when needed.	Reflect on their current study habits and identify areas for improvement.
13-14	Research Methods	Discuss best practices for conducting academic research, including using library resources and avoiding plagiarism.	Conduct research using effective research methods and seek feedback from mentors or peers.
15-16	Exam Preparation and Test Taking	Discuss tips for preparing for and taking exams, including practicing time management, and reducing test anxiety.	Prepare for and take a mock exam, seeking feedback from mentors or peers on their performance.

Table 3. Professional Mentoring Component

Week	***Professional Topic***	***Mentor Focus***	***Mentee Focus***
1-4	Self-awareness and Personal Branding	Discuss the importance of understanding one's strengths, weaknesses, values, and brand.	Reflect on personal values, strengths, and weaknesses and consider how they will build their personal brand.
5-8	Communication and Interpersonal Skills	Address the various forms of communication, active listening, and conflict resolution.	Seek out opportunities to practice communication skills and work on resolving conflicts in a professional setting.
9-11	Diversity, Equity, Inclusion, and Emotional Intelligence	Discuss best practices for promoting diversity, equity, and inclusion in the workplace, and the importance of emotional intelligence in leadership.	Reflect on personal beliefs and biases and seek out resources on diversity, equity, inclusion, and emotional intelligence in the workplace.
12	Time Management and Productivity	Discuss tips for prioritizing tasks, setting, and achieving goals, and balancing work and personal life.	Consider using tools like calendars, to-do lists, and apps to help with time management and productivity.
13	Career Development	Address issues such as networking, resume writing, and job searching. Offer insights into finding job opportunities and reaching career goals.	Consider attending networking events, creating a professional online profile, and seeking out informational interviews.
14	Leadership and Team Management	Share best practices for leading and managing teams, including delegation, conflict resolution, and motivating employees.	Reflect on their leadership style and seek out opportunities to put their skills into practice.

Week	*Professional Topic*	*Mentor Focus*	*Mentee Focus*
15	Ethical Considerations	Discuss ethical considerations in the workplace, such as workplace harassment, and data privacy.	Reflect on personal ethical beliefs and seek out resources on ethical considerations in the workplace.
16	Continuous Learning and Growth	Discuss the importance of lifelong learning and professional development.	Identify areas of interest for continued learning and growth and set personal goals for professional development.

Technology-Supported Communication Best Practices

To appropriately convey the content and facilitate student learning for on-campus and online students, effective technology-supported communication is a crucial mentoring program component. Effective technology-supported communication will foster rapport and trust between mentors and mentees and ensure the development of beneficial professional relationships. In the peer and professional mentorship program, a variety of technology-supported communication tools will be utilized to support the development of the mentor/mentee relationship and to foster student learning, including possibly through email and video conferencing, and most explicitly through LinkedIn. The use of LinkedIn groups and LinkedIn messaging will provide the primary platform for sharing information and resources and as a point of connection for mentors and mentees. The program coordinator will develop and communicate guidelines for using these tools to ensure clarity is communicated about the frequency, duration, focus, format of communication, and best practices for communication in a virtual setting.

Technology-supported communication best practices should include the following:

- Clear guidelines about the frequency, duration, focus, and format of communication.
- Ensure focused attention occurs during virtual meetings by focusing only on the meeting/individuals at hand.
- Use a high-speed internet connection and ensure access to a quiet meeting area.
- Set specific goals for the purpose of asynchronous and synchronous communication to ensure program goals are met.

- Adhere to specific goals/program content for each meeting to ensure program goals are met.
- Adhere to the specified schedule/duration of interactions to ensure program goals are met.
- For mentors: be personable and supportive by sharing academic and/or professional experiences and stories as they relate to the content and goals of the interactions.
- For mentees: be professional and personal by practicing good listening and responsiveness skills, as well as by asking relevant questions.

Program Evaluation

To ensure the achievement of program goals and learning outcomes, a comprehensive program evaluation plan should be developed at the onset of the program and implemented by the mentoring program coordinator throughout the program. The program evaluation plan will reveal program successes and areas for improvement. To effectively assess the efficacy of the program, the mentoring program coordinator should design a variety of ongoing evaluation tools to collect data from academic mentors, professional mentors, and student mentees throughout the program. These tools should include surveys, focus groups, and ongoing individual assessments of mentor/mentee satisfaction. Individual assessments of mentor/mentee satisfaction will allow the mentoring program coordinator to track the quality of the mentor/mentee matches and to gauge the success of the mentors and mentees in meeting the program goals. Assessments should occur at least twice throughout each 16-week semester to provide real-time information about the efficacy of the matches and the development of the mentor/mentee relationship. The mentoring program coordinator may pair these assessments with check-in meetings with mentors/mentees for an in-depth discussion about their experiences, goals, and progress. In addition, surveys will be distributed at the conclusion of the academic mentoring semester (students' first semester in the MSA program) and at the conclusion of the professional mentoring semester (students' final semester in the MSA program. A sample survey can be found in Appendix A: Sample Survey for Program Evaluation. Data should be collected, analyzed, and reviewed to make data-driven changes and improvements to the program over time. Program coordinators will use the survey results to ensure program continues to meet the needs of mentors and mentees, as well as facilitate the achievement of the program goals and learning outcomes.

Recommendations

The implications for practice for administrators or faculty serving diverse students in online and on-campus graduate programs are described in this section. Administrators or faculty interested in utilizing this framework should take care to develop it to reflect the goals, learning outcomes, and nuances of their own programs and students, as well as ensure to program can be launched and maintained with adequate staffing and resources. To begin adapting this framework, administrators or faculty should begin by gathering data through a survey, or other data collection method(s) on their own campuses about the academic and professional skills students perceive they most need, as well as students' receptiveness to a proposed peer and professional mentoring program. The survey results can inform administrators and faculty as they work through the steps of the program framework that follows:

Adaptable Program Framework

This adaptable program framework can help administrators and faculty design and launch a peer and professional mentoring program for graduate students enrolled in a specific program in on-campus or online modalities.

Program Goals & Learning Outcomes

After collecting and analyzing survey data, administrators and faculty should use the data to help them defining the purpose and objectives of the mentoring program, which is a critical first step for the program's success. The goals and outcomes are aligned and aim to providing mentees with a rich, comprehensive educational experience that will help them build the skills and knowledge they need to succeed in the field of leadership and management.

Program Revenue & Budget

Following the development of program goals and learning outcomes, administrators and faculty must work to develop a program budget, that accounts for available revenue through tuition, grants, and donations, as well as expenses, including personnel, technology, certificates, marketing and promotion, mentor training, and administrative supplies. A sample

budget template can be found in Appendix B.

Mentor Selection and Training

Next, administrators and faculty should determine the processes they will use for mentor selection and training for academic mentors and professional mentors. Processes should include hiring, onboarding, and training to orient mentors to the goals and outcomes of the program, program content, and evaluation plans.

Mentee Selection and Orientation

After mapping out plans for mentor selection and training, administrators and faculty should develop a process for selecting or enrolling mentees. Depending on the resources available and the number of students the program will be able to serve, some programs may limit the number of students in the program by prioritizing acceptance to students who have been historically underrepresented in academia. Administrators and faculty will also determine processes for orienting mentees to the program and providing them with the necessary resources and support to get the most out of the mentoring experience.

Matching Process

Following the development of mentee selection and orientation processes, administrators will work to determine the matching process, which is a critical component of the program, as it determines the compatibility of mentors and mentees. Some programs may include processes that allow students to self-select their mentors based on their academic and professional interests. Other programs may find manual matching by the program coordinator to be a more effective or efficient process. While there are benefits of each method to consider, administrators and faculty developing the program must choose whichever method will be most suitable for their program and its administration.

Content

Next, administrators and faculty must work to develop content that is aligned with the program goals and learning outcomes by developing separate content calendars for peer

mentors and professional mentors. See the sample topic ideas and calendars shown previously in Tables 3 and 4 for examples, but keep in mind it is essential the content be derived directly from the program goals and learning outcomes of the specific program being developed. Also note, the program framework is designed to bookend students' learning experiences. The peer and professional mentoring program organized in such a way to provide graduate students with the academic peer mentoring content during their first semester they are enrolled in their graduate program and with professional mentorship from their professional mentor during their final semester of graduate school.

Technology-Enhanced Communication Tools

Administrators and faculty will also need to evaluate and select specific technology-mediated communication tools they expect mentors and mentees to rely on to engage with one another as part of the program. Email and video conferencing are effective choices, as are social media and messaging platforms like LinkedIn or WhatsApp. Whichever technologies are selected should be featured in the training and orientation materials for mentors and mentees to ensure proficiency and clarity of expectations.

Program Evaluation Methods

Finally, administrators and faculty must develop necessary plans to assess the program and its impact, as well as identify areas for improvement. These evaluation plans should be closely aligned with the program goals, learning outcomes, and content of the program. Surveys, focus groups, and short check-ins with mentors would support the evaluation of the program. The program evaluation plans should also be communicated to academic and professional mentors to ensure transparency and clarity of goals and measurements.

Conclusion

As this program framework demonstrates, the potential of a combination peer and professional mentoring program to enhance opportunities for connectedness across time and distance, potentially increase students' academic success and retention, and enhance student's professional development and professional networks. This chapter is provided a theoretically and research-based framework for a model peer and professional mentoring program

designed to support students in and beyond their program of study. The program framework, based on the CoI Framework, and the centrality of the student learning experience and importance of the intentional development of connections in a technology-mediated environment provides an intentionally designed program for online and on-campus students that similarly centers the student learning experience and connection development. This significance of this program framework is in the potential it provides in creating a unique, foundational structural program design that could be applied to similar graduate programs at other institutions serving diverse students across modalities.

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Appendix A. Sample Survey for Evaluation

Mentors/Mentees: Please complete this short survey to help MSA staff evaluate the technology-supported graduate student peer and professional mentoring program.

1. Overall, how satisfied are you with the mentor/mentee matching process?
A. Very dissatisfied
B. Dissatisfied
C. Neutral
D. Satisfied
E. Very satisfied

2. To what extent do you feel your mentor/mentee relationship has met your expectations?
A. Not at all
B. Somewhat
C. Moderately
D. Very much
E. Completely

3. How often do you communicate with your mentor/mentee?
A. Rarely
B. Once every couple months
C. Monthly
D. Weekly
E. Daily

4. How would you rate the quality of communication in your mentor/mentee relationship?
A. Poor
B. Fair
C. Good
D. Very good
E. Excellent

5. To what extent has the mentor/mentee relationship helped you grow and develop in your academic goals?
A. Not at all

B. Somewhat
C. Moderately
D. Very much
E. Completely

6. To what extent has the mentor/mentee relationship helped you grow and develop in your professional goals?
A. Not at all
B. Somewhat
C. Moderately
D. Very much
E. Completely

7. To what extent have the skills and knowledge you have gained from the mentor/mentee relationship been useful in your academic and professional life?
A. Not at all
B. Somewhat
C. Moderately
D. Very much
E. Completely

8. How satisfied are you with the resources and support provided to you by the program?
A. Very dissatisfied
B. Dissatisfied
C. Neutral
D. Satisfied
E. Very satisfied

9. What, if anything, have you learned from the program that is, or will be, valuable to your success? (Open-ended question)

10. Is there anything the program could have done better to support your mentor/mentee relationship? (Open-ended question)

11. What additional comments or suggestions would you like to share about the program? (Open-ended question)

Appendix B. Sample Budget Template

BUDGET CATEGORY	*DESCRIPTION*	*ESTIMATED COST*	*REVENUE SOURCES*
PERSONNEL	Salary/course release for program coordinator, Graduate assistant academic mentor hourly costs		Grants, donations, program budget, tuition revenue
CERTIFICATES	Credly certificates for professional mentors		
TECHNOLOGY	Software licenses/hardware		
MARKETING AND PROMOTION	Advertising, outreach, and marketing materials via institutional Website and social media		
MENTOR TRAINING	Cost for mentor and mentee training and orientation, including food, drinks, materials		
PROGRAM ADMINISTRATION	Office supplies, meeting costs, and other administrative expenses		
TOTAL	$		

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