



Mentor Coaching and Entrepreneurial Outcomes

The Vanderbilt Wond'ry

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TABLE OF CONTENTS

Acknowledgements	3
Executive Summary	4
Introduction	6
Context	10
Research Questions and Conceptual Framework	19
Methods	25
Findings	30
Discussion and Limitations	46
Recommendations	48
Conclusion	57
References	59
Appendices	66

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EXECUTIVE SUMMARY

The Vanderbilt Innovation Center, called the Wond'ry, is a not for profit organization supported by the university that provides innovation and entrepreneur support to students, professors, alumni, staff, and community members. The purpose of the organization is to promote a “maker” culture and support transinstitutional collaboration across all schools, disciplines, and levels. The name of the Wond'ry is derived from the combination of the words ‘wonder’ and ‘foundry’, accurately capturing the center’s mission to be an epicenter of innovation that promotes intellectual curiosity, ideation, and creation.

A mentor coaching program is an important program offered by the Wond'ry that provides individualized support to entrepreneurs. Participants are matched with volunteer mentors who offer specific and customized advice based on their entrepreneurial journey and coaching needs. In the summer of 2020, the Wond'ry launched a new Innovation Portal that can help facilitate the connection process between mentors and program participants. As the Wond'ry continues to grow and develop, an assessment of the mentor coaching program will help program leaders refine the program so that it best meets the needs of all participants, including both the mentees and the mentor coaches.

This research initiative is a comprehensive program evaluation that was conducted in 2020 to gain insight into the effectiveness of the mentor program and determine which attributes of the program were viewed as most valuable by the participants. A mixed methods approach using a survey with quantitative and qualitative questions along with selected Master Mentor and program administrator interviews was used to conduct the assessment.

Findings provided meaningful insights into which mentor behaviors were most impactful to mentees and offered suggestions for further developing and growing the mentor program. Key findings from the synthesized data and qualitative discussions are listed below:

1. Mentees are solution-oriented and highly value the specific advice provided by mentors that can lead to discovering new opportunities. This is perceived as being more impactful than processing the emotions associated with entrepreneurship and innovation.
2. Providing direct information on how to solve problems and potential solutions is highly valuable to entrepreneurs.
3. Mentors currently engage in high-impact coaching behaviors.
4. The mentees are generally driven, highly motivated, and also willing to ask for assistance when needed.

5. Specific outcomes derived directly from mentor coaching are difficult to pinpoint, although program participants attribute their success in part to their mentors.
6. Overall, mentor program participants are highly satisfied with the mentor support they received.
7. Additional structure and training can be helpful for mentors so that they can be as effective as possible when guiding program participants.

Based on these overarching findings and taken in conjunction with the history and objectives of the Wond'ry, recommendations were developed to help the program continue to develop and improve. Detailed subsequently, primary recommendations include:

1. **Training** - Offer more formal training and support to mentors to increase effectiveness for entrepreneurs.
2. **Documentation** - Take a more structured approach to supporting mentees and documenting outcomes from mentor meetings to ensure needs are being met optimally.
3. **Coaching Model** - Consider implementing a solution-oriented coaching model such as the GROW Model to help frame mentor meetings and support mentees with meeting their specific goals.
4. **Continuous Improvement** - Conduct mentee and mentor satisfaction assessments to understand what is and is not effective on a regular basis, at least annually.

INTRODUCTION

Organization Background

The Vanderbilt University Wond'ry is a not for profit program supported by Vanderbilt that provides support to innovative and entrepreneurial students, professors, alumni, staff, and community members. The purpose of the organization is to promote and support transinstitutional collaboration across all schools, disciplines, and levels. Everyone from scientists to artists to engineers to social innovators is encouraged to participate in its program offerings. One of the objectives of the Wond'ry is to build a creative “maker” and innovator culture at Vanderbilt that encourages innovative thinking, design, and creation.

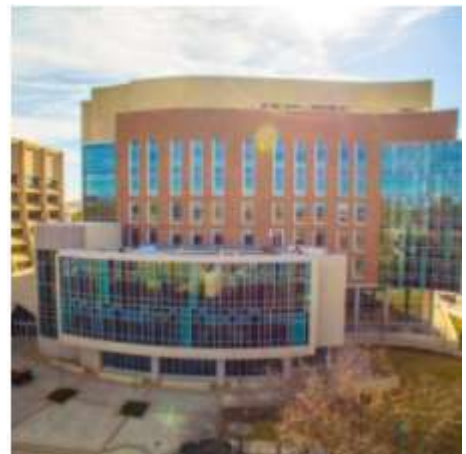
To accomplish its mission, the Wond'ry offers multiple opportunities for stakeholders to learn about innovation and become entrepreneurs. Workshops, speaking events, corporate partnerships, makerspaces, and interactive art exhibits are some of the programs the organization uses to support a culture of innovation and engage with community members.

The Wond'ry has a unique 13,000 square foot space that was intentionally designed to support discovery and collaboration between Vanderbilt students, faculty members, staff, alumni, and Nashville community members. Although there is a Nashville Entrepreneur Center that provides some similar services and programs, it was not meeting the specific needs of the Vanderbilt academic community. The Nashville Entrepreneur Center's programs were designed to meet the needs of a more general population and were not tailored to the innovation needs for an academic community - such as providing guidance on how to obtain a patent.

The launch of the Wond'ry aimed to fill that gap - promoting a culture of entrepreneurship and innovation both on campus and within the broader Nashville community. Having an innovation center that was conveniently located for the Vanderbilt community was important for fostering an increase in innovation-related activities and providing entrepreneurship resources to students on campus.

Visitors to the center are encouraged to explore the facilities and inevitably observe entrepreneurs at work, bringing their ideas to life. The Wond'ry center is described as “a place to dream, explore, experiment, and make”. This spirit and culture of innovation is promoted and captured by murals that encourage dreaming and risk-

The Wond'ry Center is located centrally on the Vanderbilt Campus



taking, cutting-edge technology such as 3-D printers and robots, and a warm and encouraging team of program leaders who meet with participants to understand where they are in their entrepreneurial journey and offer support.

The Wond'ry Center has an open architectural design that's intended to foster collaboration.



Mentor Coaching

Importantly, the organization offers resources at no cost to the Vanderbilt community, and these resources include classes on how to start a business, how to create a social venture, how to grow a venture post-launch, and additional courses on innovation, technology, and related topics. In addition, the organization provides mentorship coaching to entrepreneurs at no charge. The Wond'ry has a 'think tank' of experienced and diverse business leaders in the Nashville area who volunteer to support entrepreneurs by offering coaching in their area of expertise. There are experts in a wide range of subject matters to assist current and future business owners and innovators with a diverse array of needs - from accounting to legal services to strategy.

Entrepreneurs are matched with a mentor coach when they express a need for assistance to a Wond'ry program staff member. The staff member then works with the entrepreneurs to fully understand their specific needs and then match them with the optimal mentor(s). Additionally, the Wond'ry management team is intentional about developing relationships with students, alumni, faculty, and staff members and understanding their goals and needs. It's also possible for a Wond'ry team member to initiate the mentor matching process by suggesting this to an individual in one of the other Wond'ry programs whom they think could benefit from coaching guidance. Upon being matched with a mentor, the entrepreneur and mentor then follow up to schedule an initial meeting and begin their coaching sessions.

Mentor coaching relationships can last for multiple months or merely a few sessions, customized to fit the needs of the entrepreneur. In some cases, mentor coaches evolve their relationship to more formalized and longer lasting partnerships, such as having the mentor join the board of directors or becoming an invested partner in the business. However, most mentor coaching relationships are less formal in nature and focus specifically on helping the mentee achieve his/her entrepreneurial and innovation goals. There is no expectation that the mentee will financially compensate the mentor, and mentors agree to participate in the program as volunteers who desire to support innovation in the Vanderbilt and Nashville communities.

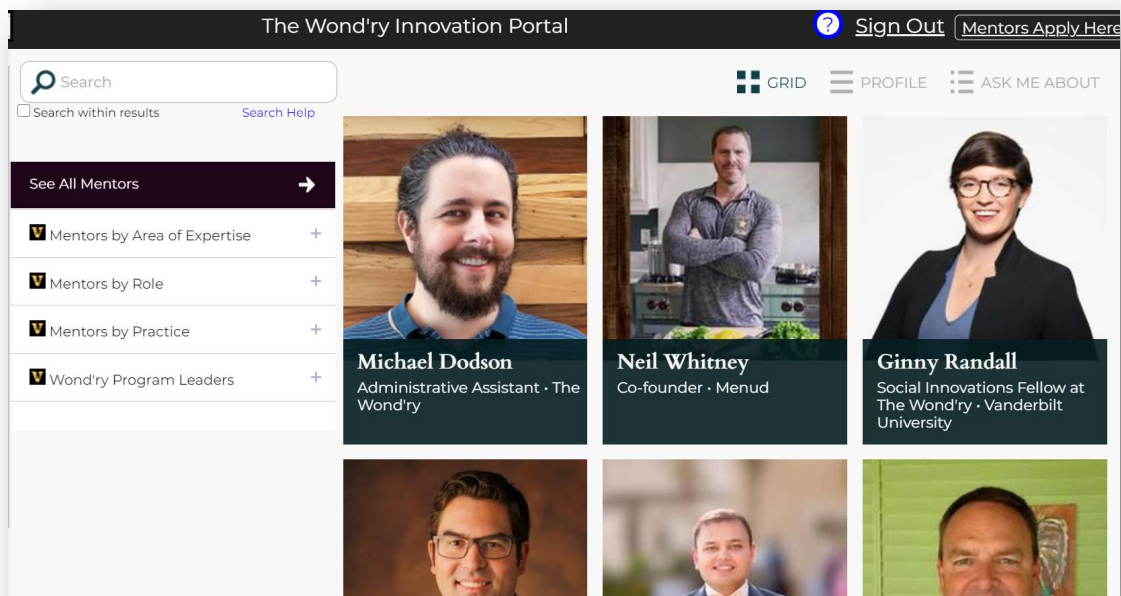
Growth Objectives for 2020

In 2020, the Wond'ry is seeking to further grow and mature the services that it offers to entrepreneurs. However, it does not have clarity on which aspects of the mentor coaching process deliver the most benefit to their students, faculty, and alumni.

To this end, the Wond'ry has received a grant to fund a new Innovation Portal that was launched shortly before the Fall 2020 semester. The Innovation Portal has the potential to become a central resource platform that facilitates engagement between mentors and entrepreneurs. In order to help the Wond'ry maximize its ability to support innovators through the mentor program and the new Innovation Portal, 2020 is an optimal time to evaluate the program and understand how it can continue to grow and develop to meet the needs of entrepreneurs. This can also better enable the Wond'ry to serve the Vanderbilt community to the greatest extent possible and gain awareness of additional leadership services that could help mentees be more effective. The specific capabilities of the Innovation Portal enable Wond'ry stakeholders to:

- Schedule meetings (called “Sessions” in the Portal) with Wond'ry Mentors
- Reserve Maker Stations in the Wond'ry Makerspaces
- Browse through previous projects and clients the Wond'ry has helped
- Find a Library of digital resources related to innovation

Figure 1: The Innovation Portal



Mentor Profiles

The current mentors are profiled both on the Vanderbilt Wond'ry website as well as in the Innovation Portal. There are 60 mentors participating in the program during the Fall 2020 semester. Of the 60 total mentors, 15 are female (25% of the mentors) and 9 of the program mentors are non-Caucasian (15% of the mentors). Mentors span a diverse array of industries, including:

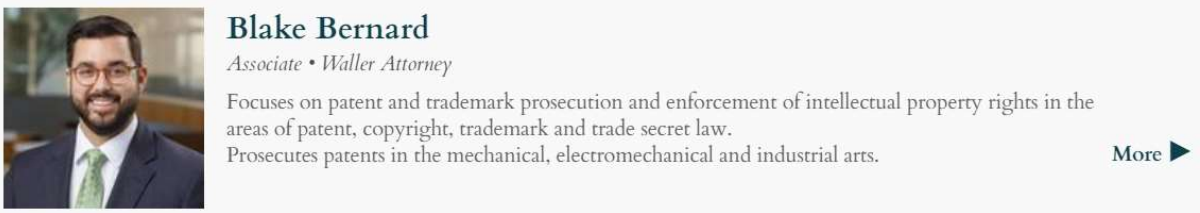
- Consumer Discretionary
- Consumer Staples
- Energy
- Financials
- Healthcare
- Industrials
- Information Technology
- Nonprofits and Foundations
- Telecom Services
- Utilities


In addition, mentors can be identified through their practice areas:

- Design and Innovation
- Entrepreneurship
- Making & Prototyping
- Social Innovation

Each mentor has completed a profile that can be used to help facilitate the matching process between innovators and the prospective mentors. The profiles focus on the professional backgrounds of the mentors and the potential areas in which they can offer coaching guidance to mentees.

Figure 2: Mentor Profile Example



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Focuses on patent and trademark prosecution and enforcement of intellectual property rights in the areas of patent, copyright, trademark and trade secret law.
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CONTEXT

Mentor Coaching Research Context

The mentor coaching offered by the volunteer mentors at the Wond'ry is a form of business coaching, in which business-related advice and guidance are provided by a coach (also called a mentor) to a coachee (also called a mentee). The field of business coaching has been a rapidly growing area over the last decade (Athanasopoulou & Dopson, 2018). It is now a multi-billion dollar industry consisting of over 53,300 professional coaches across the globe (ICF, 2016), representing meaningful growth from 2012, in which there were 47,500 professional coaches (ICF, 2012). Also known as executive coaching and leadership coaching, business coaching as a discipline is relatively young, with recognition distinctive from other types of consulting and counseling only occurring within the last three decades (Armstrong, 2011).

The field of business and executive coaching has evolved rapidly in a short period of time. For instance, a survey of 140 coaches found that shortly over a decade ago coaches were retained primarily to address ineffective and destructive leadership behaviors. Now, coaches are primarily used to develop and grow individuals who are identified as being high performers in organizations (Coutu et al., 2009). Additionally, the proliferation of business coaching has influenced management training and education, with courses in MBA and executive education programs incorporating personal development and reflection components - key elements of effective coaching processes (Petriglieri, Wood, & Petriglieri, 2011; Datar, Garvin & Cullen, 2010).

Given that the field is still considered to be nascent, definitions of business coaching vary in academic literature while referring to the same or similar practices (Blackman, Morsardo, & Gray, 2011). The term can also be used interchangeably with business 'mentoring'. For the purposes of this study, business coaching and mentoring will be defined as a targeted, purpose-driven intervention that helps entrepreneurial and business leaders create and sustain meaningful and positive changes in their entrepreneurship-related behavior and personal growth (Grant, 2012).

Importantly, although business coaching as a practice is administered similarly to individual counseling - through private meetings between the coach/counselor and person receiving support and guidance, business coaching is differentiated from counseling in that it does not address mental health challenges (Passmore, 2009; De Haan, Duckworth, Birch, & Jones, 2013). This type of business coaching can be applied in multiple different settings.

In some cases, individuals choose to hire a business coach independently and pay for the costs on their own. In other situations, organizations choose to pair employees with coaches they believe can help them grow and develop professionally. In this context, the coaches they choose can be either external to the organization (and therefore independent, offering a greater degree of confidentiality) or they can be other

employees of the organization. These internal business coaches can be human resource team members or an individual's internal line manager (Brandl, Madsen, & Madsen, 2009; Teague & Roche, 2011).

Research has shown that both models and approaches can confer benefits to the individual who is being coached (Ennis, Goodman, Otto, & Stern, 2008; Garman, Whiston & Zlatoper, 2000; Kampa-Kokesch & Anderson, 2001). Businesses are known for making significant investments in human resource professional development programs with the goal of improving productivity and developing a competitive advantage in the marketplace. Business coaching is one type of these human resource professional development programs, and it can confer benefits on the organizations that choose to facilitate and pay for the services in addition to the individual receiving the coaching (Fulmer, Gibbs, & Goldsmith, 2000).

The construct of business coaching and how it is conducted can vary given the specific needs of an organization, business/entrepreneur leader, and the mentor/coach. However, the construct that will be used in this study (and that which is used most commonly) is the intentional relationship between a business coach mentor and a coachee that is designed to support the coachee in achieving business and entrepreneurial related goals (Blackman et al., 2011). Although business mentoring can be conducted in group settings, the focus of this study is the one-on-one relationship between a business coach and his/her coachee. Further, the duration of the one-on-one relationships can vary significantly based on the needs of the coachees and the effectiveness of the mentoring relationship (Athanasopoulou & Dopson, 2018).

As described above, in some cases the business coach is external to the coachee's employing organization, which can provide greater objectivity to mentoring that is conducted by a coach within the coachee's employing organization. In these types of coaching relationships, the business coach is generally compensated by the coachee's employer, which is consistent with what is seen throughout the business environment (Blackman et al., 2011). Yet in some situations the coachees can choose to pay for the business coach personally in order to improve their professional performance and future career prospects or the mentoring can be done on a voluntary basis in which the coach is not financially compensated (Athanasopoulou & Dopson, 2018). In contrast to this model, the Vanderbilt Wond'ry mentors volunteer their time to provide coaching guidance to program participants and are not financially compensated.

Mentor Coaching Effectiveness

Because the field of business coaching is at an early stage of development, academic research on its effectiveness is only now beginning to become more prevalent (Blackman, Morsardo, & Gray, 2016). However, it's clear that numerous studies are finding that coaching can have a positive impact both on individuals who are the recipients of coaching and their organizations (Bartlett et al., 2014). The particular benefits and the extent of their impact can vary by coaching recipient, but the literature consistently demonstrates that business coaching leads to benefits for recipients and organizations (Grant, 2012). A thorough review of business coaching effectiveness is

provided below in the Research Questions and Conceptual Framework section, centering on the review conducted by Blackman et al. in 2016.

It is important to note that due to the highly individualized nature of coaching, comparing effectiveness across the varied coaching methods and approaches has been challenging for researchers (Blackman et al., 2011). Business coaches can use multiple different approaches to assist coachees, ranging from cognitive-behavioral to solution-focused to positive psychology/strengths-centered (Athanasopoulou & Dopson, 2018), further complicating studies on comparative effectiveness.

Further, measurement of success for business coaching is based upon the coachee's improved professional capabilities and the impact that these skills have on his/her organization's performance (Ennis, Goodman, Otto, & Stern, 2008). Indicators of effectiveness relate both to the goals of the individual as well as to their organization(s). For entrepreneurs and innovators, the organizational goals can be aligned with the goals of their business venture, desired innovation outcomes (e.g. receiving a patent), or skill development that will enable them to become more innovative (Ennis, Goodman, Otto, & Stern, 2008).

Frequently, metrics of success are based on the coachee's organizational objectives and professional growth needs, which allow for limited comparison across coaching relationships. In addition, coaching effectiveness is often measured through self-assessments provided by the coachee. Although coachee satisfaction and perceived effectiveness are important, they lack the objectivity necessary to provide a robust understanding of the impact of coaching on other individuals in the coachee's organization and financial and performance improvement of the organization itself (Ely et al., 2010; Theeboom, Beersma & van Vianen, 2014; Jones, Woods & Guillaume, 2016; Grover & Furnham, 2016). Past research has demonstrated that individuals are frequently unable to provide accurate self-assessments and that they tend to inflate their capabilities relative to the results of an objective assessment (Kruger & Dunning, 1999).

Singling out business coaching as the cause of positive changes in an organization is a significant challenge given the multiplicative number of other factors impacting business success and failure (e.g. competitive environment, economic climate, regulatory changes). Yet the field of entrepreneurship provides an ideal opportunity to test the impact of business coaching and mentoring on organizational results due to the heightened ability of founders and leaders in these businesses to make decisions that have meaningful implications for the strategic direction of the company, innovation efforts, and resulting outcomes (Audet & Couteret, 2012).

This is particularly the case when the entrepreneur/founder is filling the CEO, COO, or another c-suite role. Compared to c-suite executives in Fortune 500 publicly traded companies that are beholden to the needs of shareholders, the founders of small, new, privately held businesses are generally able to make key organizational decisions more quickly and without the approval of others. Although a causal relationship between business outcomes and business mentoring is still not determinative when entrepreneurs are the individuals receiving the mentoring, their ability to make decisions

that directly shape the business as a result of insights received through the coaching process can shed new light on the impact that business coaching does or does not have on entrepreneur and organization results (Audet & Couteret, 2012).

Stakeholder Analysis

Situated within this context, the Vanderbilt Wond'ry has multiple stakeholders who are invested in the success of the mentor program and/or impacted by the program outcomes. Please see Table 1 below for a summary of key stakeholders.

Table 1: Vanderbilt Wond'ry Mentor Program Stakeholder Analysis

Role(s)	Description
Wond'ry Leader	Executive Director of the Wond'ry
Mentor Program Leader	Director overseeing operations of the Mentor Program
Program Participants	Mentees Mentors
Funders / Sponsors	Sources of funding for the Wond'ry, including Vanderbilt University, grant providers, and individual donors
Faculty Advisors	Faculty who support the Wond'ry's programs and serve as an Internal Advisory Board
Wond'ry Consultants	Provide specific guidance and support for Wond'ry programs
Past Participants	Previous Mentees and Mentors who have participated

Primary stakeholders include the Wond'ry Executive Director and team members as well as the mentors and mentees. The Executive Director of the Wond'ry is responsible for ensuring the mission of the organization is achieved through its programs and initiatives. Similarly, the director of the mentor program has a vested interest in its success, as she is responsible for overseeing the administration of the program and matching mentors with prospective mentees. Both of these individuals develop meaningful relationships with the students, faculty, alumni, and staff who request mentor coaching support. They have also built strong relationships with the mentors who volunteer their time to support the program.

Both the mentors and mentee program participants invest significant time into the program. Mentees are entrusting at least a portion of their entrepreneurial journey to the mentors who are coaching them. Their decisions and the resulting outcomes on their companies, products, and services have the potential to be significantly influenced

and shaped by the advice they receive from mentors and choose to act upon. When receiving mentor coaching guidance in areas of specific expertise, such as legal guidance on how to form a business, the advice they follow can be pivotal in shaping the future success and viability of the business. Because of this, a trusting relationship between the mentees, Wond'ry program leaders, and mentors is critical (Garvey, Stokes, & Megginson, 2009).

The mentors who volunteer their time are also important stakeholders who have a vested interest in making the program successful. They choose to be part of the program because they desire to help entrepreneurs and innovators succeed. Some of the mentors are former or current entrepreneurs themselves who can personally relate to both the challenges and highpoints of innovating. Other mentors specialize in specific fields (e.g. engineering, law, accounting). Further, there are several Master Mentors who are particularly committed to the program and mentor more individuals than most of the other mentors. They play a key role in training new mentors who volunteer to be part of the program. Prior to a new mentor's first connection with a mentee, the Master Mentors meet with the new mentors to provide advice on how to effectively coach and guide mentees.

The new mentors are paired with the two Master Mentors at the discretion of the mentor program director. There is not a defined curriculum or training program that the Master Mentors use to train the new mentors. They discuss their personal experiences regarding mentoring tactics that have been effective and ineffective. They also share anecdotes of successful mentee relationships, illustrating the potential for the mentor to make a positive impact on the entrepreneurial journey of mentees. The resulting training of the new mentors is personalized and allows the new mentors to ask specific, relevant questions to the Master Mentors. However, due to the structure of this approach, the training information that is provided is inconsistent across the new mentors who join the program.

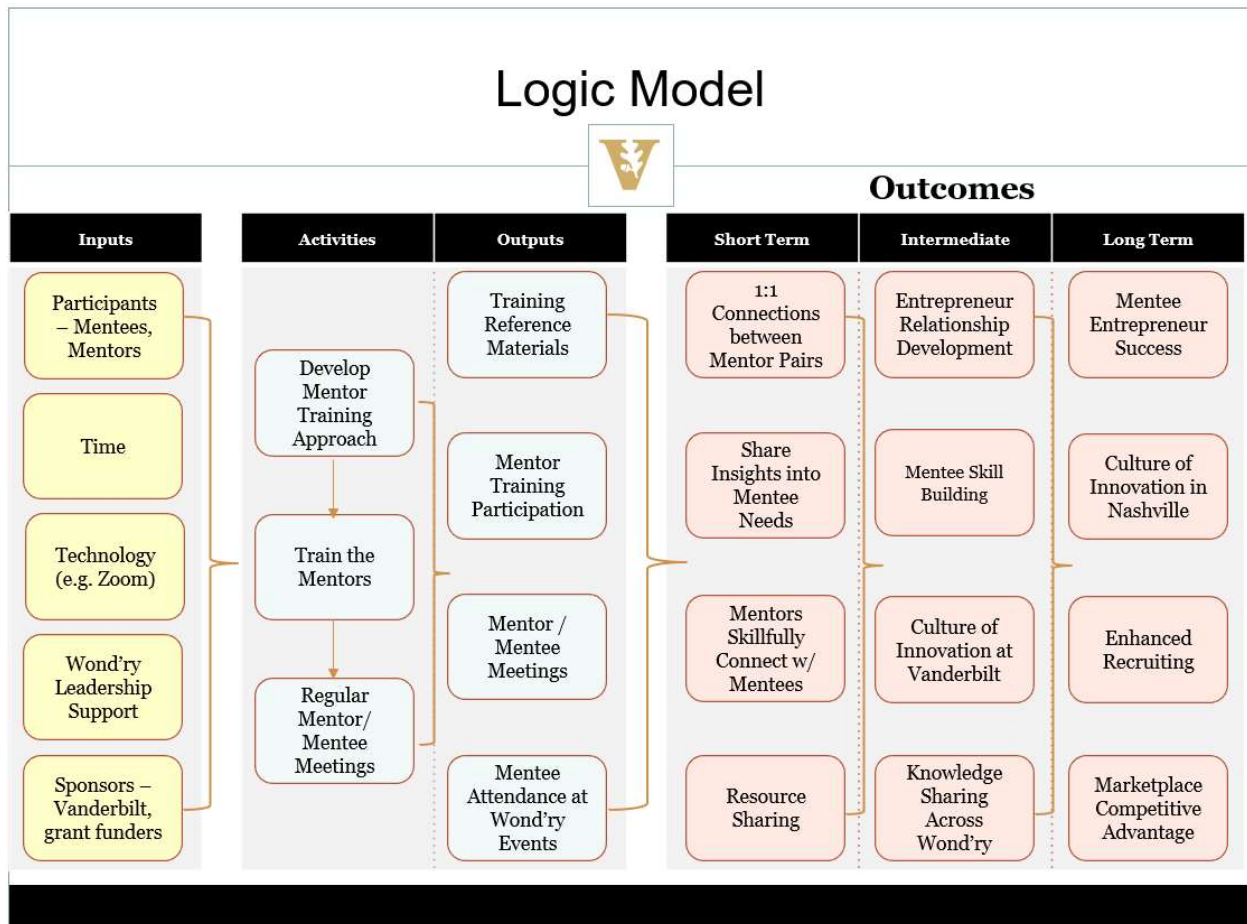
Secondary stakeholders of the program are also committed to the success of the Wond'ry and the entrepreneurs and innovators it is serving. These secondary stakeholders include other organizations that provide funding for the Wond'ry, including Vanderbilt University and organizations that have awarded grants to the center. These stakeholders have a vested interest in seeing the Wond'ry accomplish its mission and value the results it achieves. Currently, the Wond'ry can measure impact based on the number of participants in its programs. However, success metrics that measure participant outcomes are more limited in nature.

Additionally, a group of faculty advisors and consultants form an Internal Advisory Board for the Wond'ry. They help the organization's leadership team shape and grow the organization as effectively as possible. Although their efforts are voluntary, they are highly committed to the support of the Wond'ry leadership team and the individuals impacted by the organization. Finally, past participants in the program who have benefited from having mentors and have served in the past as mentors are likely to appreciate the opportunity to be part of this unique and nurturing community of entrepreneurs.

Logic Model Overview

The operational construct that the Wond'ry uses to manage and execute the mentor program is comparatively straightforward. In spite of the simplicity of the operating model it has the potential to generate meaningful outcomes, particularly in the longer-term time horizon. The logic model shown below in Figure 3 provides a concise, landscape view of the inputs that are invested into the program and how they generate short, intermediate, and long-term outcomes. Importantly, these outcomes enable the Wond'ry to help accomplish its mission, which reaches beyond the realm of the program participants.

Figure 3: Vanderbilt Wond'ry Mentor Program Logic Model



Mentor Program Inputs

The primary resources that are invested in operating the mentor program include direct participants (mentees and mentors) and the time that these individuals spend engaging in mentor conversations, taking follow-up actions based on the mentor

guidance provided, and preparing for future mentor/mentee coaching meetings. In addition, technical resources such as Zoom are used to connect the mentors and mentees.

Prior to the 2020 outbreak of Covid-19, mentors and mentees would more typically meet in person, and these meetings would generally occur at the Wond'ry. However, mentor meetings have since been facilitated using virtual capabilities and will likely continue in this capacity for the remainder of 2020. More recently, the Wond'ry's new Innovation Portal offers mentees the ability to schedule meetings with their mentors through the Portal as opposed to using email, calls, or texts for scheduling. This can streamline the process of connecting mentors and mentees, particularly as utilization of the Portal grows.

Additionally, funding for the Wond'ry is used to compensate the program directors who administer the program. The Wond'ry leadership team facilitates the introduction of mentors to the mentees they will coach, which is instrumental in creating a constructive relationship between the mentor and mentee (Garvey, Stokes, & Megginson, 2009). Further, the Wond'ry program leaders build, refine, and cultivate the slate of mentors who participate in the program in an effort to create a diverse and effective group that can meet the needs of mentees.

Activities and Outputs

The primary activities associated with the program include providing informal training and support to mentors and the actual coaching meetings with the mentors and mentees. The training provided to mentors upon entering the program is generally informal in nature through the Master Mentors. However, this less-structured approach provides the new mentors with the ability to ask specific questions and receive guidance from an experienced mentor. The majority of the activities center around the actual provision of coaching guidance through one on one meetings between mentors and mentees. These meetings vary in both frequency and duration, which provides flexibility to meet the individual needs of the mentees. This flexibility also helps promote the continued engagement of the mentors, most of whom have full-time jobs outside of their mentor volunteer commitment.

Program outputs are closely related to the activities and include any training and support materials that are provided to the mentors, participation in the training, and attendance and engagement at Wond'ry programs and events outside of the mentor program. Mentees can be encouraged by mentors to participate in Wond'ry events and programs that can help them grow their skills and capabilities in addition to what they're learning in the coaching sessions.

These programs include the Ideator, Builder, and Founder programs as well as Speaker Series events hosted by the Wond'ry. The Ideator program is designed to teach participants effective ways to take their ideas and turn them into entrepreneurial ventures, products, or services. It lasts two to five weeks, with the opportunity for participants to pitch their idea to a group of investors, entrepreneurs, faculty members,

and Wond'ry staff for potential microgrant funding. The Builder program is designed for participants who have already formed a venture based on their ideas, and it helps them mature and grow their ventures. The program offers a step-by-step guide for aspiring entrepreneurs (including faculty, staff, and students) with a viable early stage idea to actually launch a new venture. It is designed for graduates of the Wond'ry Ideator program. The Founder is intended for graduates of both the Builder and Ideator programs, and it provides ongoing resources, connections, mentorship, and funding opportunities for entrepreneurs who have completed in-depth customer discovery, found both product-solution fit and product-market fit, and launched a venture (which can be for profit or not for profit). The Speaker Series offers Wond'ry program participants the opportunity to learn from experienced entrepreneurs who offer to speak at Vanderbilt on topics related to innovation that might be of interest and helpful to members of the Vanderbilt community. Mentors can also expose their mentees to community-based events and opportunities hosted by related organizations in Nashville (such as the Nashville Entrepreneur Center) that facilitate their innovation endeavors.

Program Outcomes

The short-term outcomes of the program are primarily the quickly generated results of the mentor coaching sessions. These include the initial connection and rapport building that begins during the coaching sessions, further developing and uncovering the actual needs of the mentees, and the initial sharing of resources to help assist the mentee. These outcomes typically result during the coaching sessions themselves and without the benefit of having the mentee apply the insights gained and practicing new skills over time.

As time progresses and the mentor relationship matures, meaningful outcomes begin to accrue including the development of mentee skills as they continue to pursue their innovation journey. This type of outcome was the primary focus of the current analysis. Knowledge sharing across the Wond'ry is facilitated as mentees share what they are learning and what is working and not working with other participants in the Wond'ry's programs. This knowledge transfer can occur formally through participation in the Builder, Ideator, and Founder programs that were described above as well as informally when mentees connect with each other at the Wond'ry or elsewhere on the Vanderbilt campus.

Summed across the mentor program, the collective outcome of an enhanced culture of innovation at Vanderbilt begins to develop. Importantly, the Wond'ry mentor program is designed to support stakeholders across the Vanderbilt community, and the maturation of entrepreneurial skills and interests that results through the mentor program will have a multiplied effect across Vanderbilt as students, staff, and faculty members hear about the results of their entrepreneurial efforts.

On a longer-term basis, outcomes include the actual achievements of the innovators who receive mentor coaching. These accomplishments currently and will continue to vary in nature depending on the type of innovation the mentee is pursuing but can range from the formation of a new business to the receipt of venture capital

funding to getting a patent for an invention. Moreover, Vanderbilt is an integral part of the Nashville business, arts, and non-profit community and the culture of the Vanderbilt community is largely interwoven with the broader Nashville community. As knowledge of the successful outcomes of Wond'ry mentees spreads, this can facilitate a broader awareness and culture of innovation in Nashville.

This entrepreneurial cross-cultural enhancement can also occur through the mentors, who are based in Nashville. The Master Mentors along with many of the mentors also support the Nashville Entrepreneur Center, which is another epicenter of innovation within the city. The transfer of knowledge and resources between the Wond'ry mentor program participants and the Entrepreneur Center can lead to a flourishing culture of innovation in the city and surrounding middle Tennessee area.

Additionally, as the Wond'ry program participants experience success with their innovation initiatives, this knowledge is spread to others through publications developed by Vanderbilt communications and through related industry resources. As Vanderbilt continues to recruit high-caliber students across the globe, the achievements of the successful program participants and the Wond'ry resources can be touted as competitive differentiators from other top-quality institutions of higher education. This can lead to enhanced recruiting outcomes for Vanderbilt. It can also attract students who are excited about innovation and reinforce the development of an innovative campus and community culture.

RESEARCH QUESTIONS AND CONCEPTUAL FRAMEWORK

Conceptual Framework

Central to the success of the Wond'ry Mentor Program is the effectiveness of the mentor and mentee coaching relationships. The Wond'ry has not yet done a formal analysis of the perceived value of the mentoring and does not know which specific aspects of the coaching provide the greatest or least value to the entrepreneurs in the mentor relationships. Gaining insight into the effectiveness of the mentor relationships can enable the Wond'ry to refine and improve the success of the mentor program and optimize the fulfillment of its mission.

Blackman et al. (2016) provide a useful framework for analyzing the factors that contribute to perceived effective coaching practices, and this framework was foundational for assessing the Wond'ry's coaching program. The framework is based on their meta-analysis of 111 published empirical papers evaluating business coaching theory, processes, and outcomes. The Blackman study focused exclusively on business coaching, which they defined using a definition originally developed by Ting and Hart as "a formal relationship with a designated coach, in which the coachee and coach collaborate to assess and understand the coachee and his or her leadership developmental tasks, to challenge current constraints while exploring new possibilities, and to ensure accountability and support for reaching goals and sustaining development" (Blackman et al., 2016, Ting & Hart, 2004, p. 116). This definition is consistent with the mentor coaching approach used by the Wond'ry.

Blackman et al. conducted a systematic review of the published empirical research on business coaching, focusing on assessing the processes and outcomes of coaching in the studies that they reviewed. Although meta-analyses of coaching effectiveness had been conducted in the past, the Blackman et al. study was the seminal research effort to use a systematic review approach to analyze business coaching effectiveness (Blackman et al., 2016).

Blackman et al. grouped the 111 empirical studies on coaching they analyzed by the experiment design (i.e. case studies, quasi-experimental studies, hybrid studies that combined the use of business coaching with other HR-related performance development interventions). When comparing the coaching methodologies, they found that there was a diverse array of theoretical approaches used to guide the coaching (e.g. cognitive behavioral). This is important because the studies were using different coaching methodologies to conduct business coaching interventions. Blackman et al. grouped these methodologies into seven types of coaching approaches.

Importantly, each of the studies reviewed reported that the assessed coaching program was viewed by participants to be effective in at least one way. Specific outcomes of business coaching that were identified by the studies included:

- Improved ability to delegate appropriately (McGovern et al., 2001)
- Better stress management (Ladergard, 2011; Wales, 2003);
- Enhanced ability to address workplace conflict and work autonomously (Blackman, 2008; Gray, Ekinci, & Goregaokar, 2011; Smith Glasgow, Weinstock, Lachman, Dunphy Suplee, & Dreher, 2009);
- Increased personal accountability (Kralj, 2001);
- More innovation and creativity (Norlander, Bergman, & Archer, 2002; Styhre, 2008);
- Higher levels of initiative (Blackman, 2010; Sonesh et al., 2015); and
- More flexibility and adaptability (Hall, Otazo, & Hollenback, 1999).

Blackman et al. did not find direct evidence that business coaching was more effective than other development and training techniques. However, this was primarily due to the nature of the studies that were included in the analysis. The vast majority of the studies exclusively assessed the impact of coaching and did not compare coaching effectiveness to other types of training and development programs (Blackman et al., 2016).

Blackman et al., identified five different aspects or factors of the coaching relationship that are necessary for successful outcomes - Coach, Coachee, Relationship, Organizational Context, and Coaching Process. These factors are shown below in Table 2. The framework developed by Blackman et. al. is based on Kilburg's (2001) analysis of coaching practices and is consistent with the conceptualizations and frameworks discussed in multiple other studies (Bennet, 2006; Passmore & Fillery-Travis, 2011). These five factors were studied both quantitatively and qualitatively in relation to the Wond'ry coaching relationships to gain further insight into which attributes of the coaching relationships and overall coaching program components were perceived to be most impactful on the mentee.

Table 2: Conceptual Framework of Factors Contributing to Effective Coaching Practice (Blackman et al., 2016)

Coach	Coachee	Relationship	Organizational Context	Coaching Process
<ul style="list-style-type: none"> • Experience with coaching • Experience with relevant sector • Likeable • Self-confident • Empathetic • Warm • Organized • Creative • Calm • Communicates clearly • Honest • Maintains confidentiality 	<ul style="list-style-type: none"> • Self-efficacy • Motivated • Locus of control • Confident • Committed • Involved • Effort • Ability/competence 	<ul style="list-style-type: none"> • Matching between coach and coachee • One-on-one interaction • Trust • Authenticity • Challenge • Commitment by both 	<ul style="list-style-type: none"> • Support • Goal alignment 	<ul style="list-style-type: none"> • Encourage appropriate action • Uses priorities and timelines • Relates personal to organizational goals • Identifies blind spots • Constructively views difficult issues

This framework is a visual depiction of the links that can be made between coaching concepts and theories (Webster & Watson, 2002). The field is in alignment that effective communication skills, genuine care and support for the mentee, and integrity are among key character traits of effective coaches, and these capabilities are included in the framework (Passmore & Fillery-Travis, 2011). Importantly, the framework accounts for the various personality traits and behaviors that can characterize coaches and mentors along with their levels and depth of experience (Blackman et al., 2016). These include traits such as being empathetic, creative, honest, calm, warm, organized, self-confident, and likeable. Behaviors include communicating clearly and maintaining confidentiality. Experience levels are also included for both coaching experience and experience in a relevant industry sector.

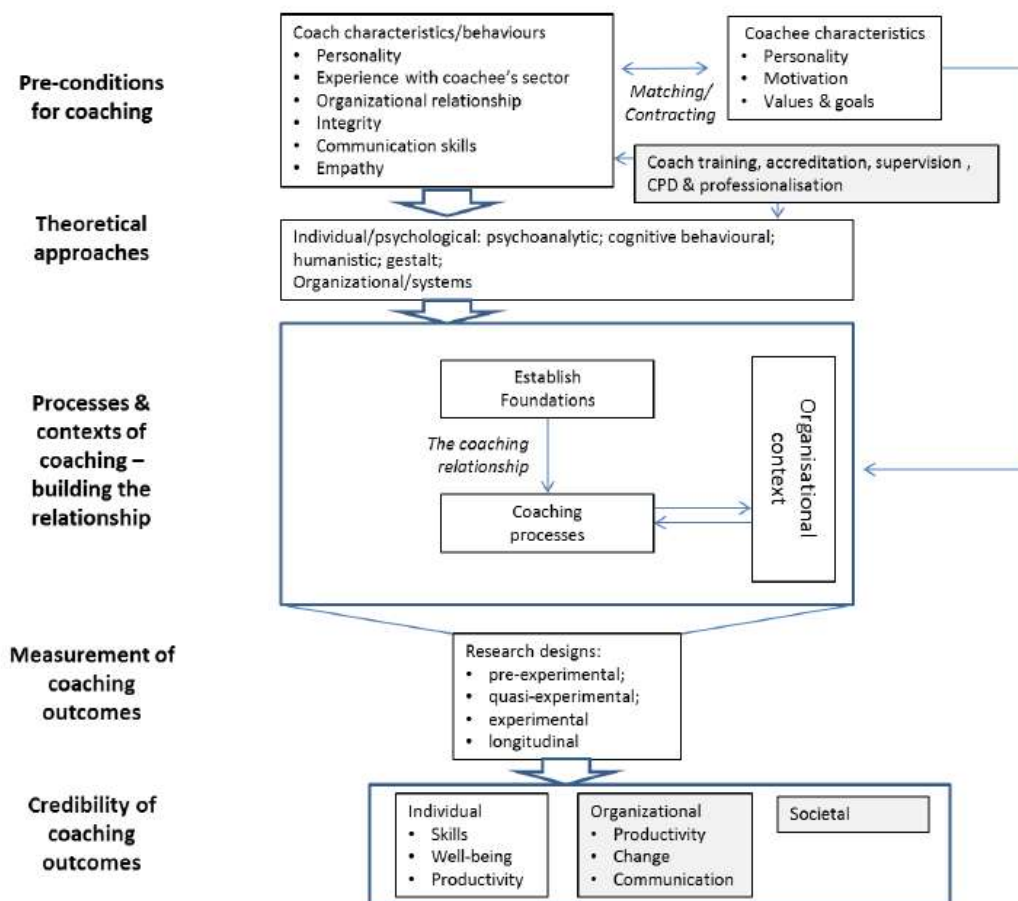
However, it's critical to note that the details behind what makes each of these traits important, and in which particular settings they are most influential, is still missing from the research (Blackman et al., 2016). As an example, the framework notes the importance of clear communication, which has been found to be an important trait of coaches in multiple studies. However, the research has not illuminated specifically which communication behaviors lead to a coach being perceived to be a clear communicator. Further insights into the behaviors that undergird each trait will be important as the field of coaching and mentoring progresses (DeMeuse et al., 2009).

Also significant to note in this conceptualization is the inclusion of the coaching process as a factor in fostering a constructive mentor coaching relationship and outcome. The actual behaviors of the coach and coachee are the focus of much of the

research completed to date, but these behaviors are conducted within a broader coaching process that includes other important components that can influence the success and impact of coaching (e.g. the matching process between the coach and coachee). Gaining insight into the way the behaviors are delivered from a process standpoint is important to understanding the effectiveness of the coaching relationship as a whole (Blackman et al., 2016).

In addition to the behavioral factors that contribute to effective coaching shown in Table 2, the theoretical approaches used to conduct the coaching (e.g. cognitive behavioral) and processes and contexts in which the relationship is built (e.g. the coachee's organization) lead to measurable outcomes of the coaching. Viewing the holistic process and environment in which the coaching takes place is important for analyzing effectiveness and understanding opportunities for growing and improving a coaching program, as shown below in Figure 4. Incorporating all of these elements into studies designed to measure coaching outcomes leads to greater credibility and more nuanced understanding (Blackman et al., 2016).

Figure 4: Conceptual Framework of the Coaching Process (Blackman et al., 2016)



The current study of the Wond'ry's mentor program takes an approach that incorporates a comprehensive analysis of the factors that contribute to effective coaching outcomes as well as the process that enables these factors to contribute to effective coaching. While personality characteristics are important, if one of the goals of research is to recommend improvements in coaching, we need to focus on concrete behaviors that can be changed. For the purposes of this study, several research questions guided the course of the assessment and the analysis of the findings. Factors 1, 2, 3, and 5 from Blackman et al.'s model regarding the coach, coachee, relationship, and coaching process are directly referenced in the research questions detailed below.

Factor 4 pertains to the organizational relationship and is not uniformly relevant to all participants in the Wond'ry's mentor program. Many of these individuals are entrepreneurs who have not yet formed their organizations or are in the early stages of doing so, which is one of the reasons why they might seek coaching support. Because an organizational relationship likely does not yet exist or does so in an infantile stage, this factor was not incorporated into the research questions.

Research Questions

Based on the current status of the Mentor Program and the objectives of the program leadership team to grow and improve the program, the following research questions were the focal areas of inquiry for the research:

1. Which mentor coaching behaviors, aspects of the mentor coaching relationship, and components of the coaching process do mentees believe have the most impact on their ability to be successful?
2. What are the characteristics and traits of the mentee entrepreneurs who are being coached through the Wond'ry's mentor program?
3. What are some business outcomes entrepreneurs and innovators attribute to the guidance of their mentor(s)?

These questions were intended to gain insight into both the behaviors of the mentor coaches that deliver favorable coaching outcomes but also account for the reciprocal nature of the mentor relationship. Many studies focus exclusively or nearly exclusively on the coach but do not factor in the importance of having a mentee who is engaged in the mentor relationship and committed to making it successful (Gan & Chong, 2015). Getting insight into the characteristics and behaviors of the individual receiving the mentoring creates a more holistic and accurate picture of the coaching process and why it is or is not considered to be effective.

Additionally, understanding the perceived outcomes and benefits of mentoring from the entrepreneurs who participate in the program provides insight into the short and long term value that the program is delivering, as demonstrated collectively across the program in the Logic Model depicted above in Figure 3.

Although individual assessments of outcomes are likely going to be primarily subjective in nature, as they are for most related studies, some innovators might be able to make direct links between the advice they received from a mentor and the impact that this had on their entrepreneurial outcomes (DeHaan, 2009). An example of this would be the completion of a patent filing or submitting the forms to incorporate a business. Gaining insight into outcomes can help the Wond'ry leadership team obtain a more comprehensive understanding of the value that the mentor program provides to participants and also to the broader Vanderbilt community.

METHODS

Research Approach

To answer the key research questions described above, a sequential mixed methods approach was used to uncover both quantitative and qualitative findings that could enable the Wond'ry to effectively grow and improve the mentor program. This type of research methodology is particularly effective when the first phase of data gathering and analysis is necessary to both create and refine the instrumentation used to complete inquiries that will gain further insights using other methods (Cresswell & Plan Clark, 2018). The focus of the quantitative research was a survey of individuals who received mentor support and coaching through the Vanderbilt Wond'ry's mentor program. These individuals completed the survey following the conclusion of their mentor relationship, giving them time to assess the perceived value of the outcomes of the coaching.

Table 3: Sequential Mixed Methods Research Design

Mixed Methods Design	Participants	Description
1. Quantitative and Qualitative Survey	❖ Mentees	❖ Conduct survey (mentee graduates < 5 years)
2. Qualitative Interviews	❖ Master Mentors, Program Administrators	❖ Conduct interviews with Master Mentors to assess findings and add new insights ❖ Conduct interviews with Program Administrators to understand program structure, organizational context

Conducting the assessment following the completion of the business coaching relationship had multiple benefits. Primarily, it provided some time for coachees to actively use their refined capabilities to impact their entrepreneurial efforts, measure the results, and gauge if the results were positive or negative. Further, this approach helped mitigate the 'Hawthorne effect' of participants changing their behavior because they know they are being studied as opposed to the intervention itself (Adair, 1984).

The survey was based upon the instrument used by DeHaan et al. (2009) and Heron (1975; see Appendix A) and was designed to elicit both quantitative and qualitative responses so that the study could deliver numeric, quantitative insights while also providing the rich context that qualitative analysis provides. To that end, most questions used a six point Likert scale for coachees to assess their business coaching experience.

These questions were used to answer the first and second overarching research questions for this study. Other survey questions regarding entrepreneurial impact were qualitative in nature to allow for more varied responses based on the individual's innovation goals and outcomes. The qualitative questions were designed to deliver insights to the third overarching research question for this study.

Significantly, the questions that were posed to mentor program participants were designed to elicit which behaviors the mentor and mentee bring to the coaching relationship as opposed to their personalities or life circumstances. This was intentional because behaviors are fluid and can be changed, whereas personalities and external environmental circumstances are more fixed in nature (DeHaan et al., 2009). This feature of the question design and survey construct is important because it enables the findings to be actionable in nature. It is also consistent with the approach that Blackman et al. (2016) used in their analysis of the literature. As the goal of the research is to help the Wond'ry grow and improve its program, this will inevitably require making changes. Insights regarding the personality types of mentors and mentees are less helpful for this purpose and were therefore not used in the assessment.

The survey questions regarding the mentor coaching behaviors were grouped into six independent, reliable and validated categories or constructs of coaching intervention as outlined by Heron (1975). These behaviors include Directing, Informing, Challenging, Discovering, Supporting, and Releasing categories of behaviors. Study participants were asked to assess both the frequency of each behavior and the impact of the behavior. The Likert scores assessing these behaviors' impact ranged from 0 meaning "Not at All" to 5, which indicated a response of "Very High".

The Cronbach Alpha scores for Heron's six categories of coaching behaviors were computed based on an assessment of 292 managers in the original study and are shown below. The relatively high Cronbach Alpha scores indicate that the constructs used for this survey instrument are reliable (Curd, 2006).

- Directing (0.86)
- Informing (0.83)
- Challenging (0.88)
- Releasing (0.93)
- Discovering (0.89)
- Supporting (0.86)

Importantly, DeHaan et al. (2009) added ten additional questions to reflect behavioral categories that research on coaching subsequent to Heron (1975) deemed to be important. These include questions that assessed behaviors related to humor, provocation, goal-setting, skill practice, use of metaphors, and homework assignments. The addition of these behavioral categories makes the assessment consistent with more

recent research findings and more comprehensive than prior studies (Blackman et al., 2016).

However, an important limitation of this approach is that the ten additional categories of behaviors that DeHaan et al. added were not assessed as independent and validated constructs that form as a result of several behaviors. The ten additional behaviors were assessed as individual questions on the survey that DeHaan et al. used and reliability scores were not included. In contrast, the six constructs based on Heron (1975) were assessed as the average of multiple related behaviors and found to have high reliability. As a result, the value of the findings for the six constructs is greater than the findings for the ten additional behaviors added by DeHaan et al. (2009). The ten behaviors that were added by DeHaan et al. include:

- Respond to some of the things I say with lightness and humor
- Manage my expectations explicitly
- Rephrase or paraphrase what I have just said
- Draw attention to specific words/metaphors that I use
- Play the devil's advocate bringing out the inconsistency of what I've just said
- Convert my objections into opportunities
- Suggest and review "homework" for between the sessions
- Engage in "live" exercises such as role-play, mind-mapping, etc.
- Approach concerns that I raise from a very different and new perspective
- Make explicit the patterns of behaviors that I seem to engage in

The questionnaire used for the Wond'ry assessment was web-based and developed using the Qualtrics platform (see Appendix A). Participants could take the assessment both through mobile and non-mobile devices using a web browser. It was designed to take less than 30 minutes for individuals to complete. Consisting of 176 total questions, 173 were closed-ended questions requiring participants to select an answer from pre-filled answer options. The remaining three questions were open-ended and qualitative in nature. The questions were grouped and organized by type as follows:

- Basic demographic information
- Information about the mentor coaching relationship (length, how the relationship was formed, goals)
- Personal behaviors and preferences
- Coaching behaviors, grouped by both the frequency of the behavior as well as its perceived impact. For example,

“When working with me, my mentor tends to...”

- Make me aware of my mistakes (Frequency - how often?)
- Make me aware of my mistakes (Impact - how helpful?)
- Open-ended questions
 - Would you like to mention any contributions from your mentor that made the mentoring particularly helpful to you, which were not covered by the questions above?
 - Could you name three specific outcomes that you ascribe to the mentoring?
 - Is there anything you would like to add regarding your experience with mentoring?

An email request was sent by the Wond’ry Mentor Program Director to potential survey participants who had received mentor coaching support and had concluded their mentor relationship (see Appendix B). The individuals knew the Program Director and the hypothesis was that they would be more likely to respond to the email and participate in the survey if the request came from someone they knew as opposed to a researcher that they had never met and were unfamiliar with.

The email was sent to 52 individuals, and 21 individuals completed the survey. The relationship between mentor coaches and their coachees is confidential and can be personal in nature. Because of this and the desire to obtain results that were as accurate as possible, prospective participants were informed that their responses would be kept anonymous. Assessment results were obtained in Qualtrics and were not associated with an individual’s name or email address to preserve anonymity. In addition, confidentiality was protected by summarizing all results of the survey. Individual survey results were not provided to the leadership team of the Wond’ry.

Consistent with the sequential mixed methods approach, the initial results of the quantitative surveys were used to help shape the qualitative interviews (see Appendix D). In-depth discussions with the two program Master Mentors and program leaders were conducted to gain insight into the structure of the program and opportunities for growth. The program leaders made an introduction to the Master Mentors asking them to participate in the research, assuring them that their responses would be kept anonymous. Both Master Mentors were willing to participate and individual interviews were scheduled.

Using the interview guide located in Appendix D I interviewed the Master Mentors to understand their backgrounds, experiences as Master Mentors, level of training, and gain their perspectives on opportunities for the Wond’ry to improve. The interviews were conducted anonymously in an effort to assure the participants that they would be able to provide candid insights without risk of anyone from the Wond’ry being able to

attribute certain feedback and recommendations that might not be favorable about the mentor program to any particular individual. The interview duration ranged from 60 to 90 minutes, and there was flexibility on the time allocated for the discussions to ensure that the Master Mentors had sufficient time to state and explain their answers. Interviews were recorded, transcribed, and reviewed subsequently to distill themes and insights.

Including these interviews in the research design helped provide insight into why the program was structured in certain ways. In alignment with Blackman et al.'s (2016) conceptual framework, this approach also allowed the research to encompass the coaching process and organizational context, broadening the focus from mentoring behaviors and outcomes to the greater culture and structure in which the mentor relationships are fostered.

Upon the completion of the survey and qualitative interviews, all information gathered was analyzed to deliver insights that could help the Wond'ry increase the efficacy of the mentor program. Findings were packaged both at the micro level (mentor coaching behaviors) as well as at the macro level (program-based organizational structure). The collective results were presented to program leadership and discussed in depth to ensure understanding and alignment with potential recommendations.

FINDINGS

The findings from the quantitative surveys and qualitative interviews provide valuable insights into what mentees find most useful about the mentor guidance they received and their overall satisfaction levels with the program.

The findings of the quantitative components of the survey taken by mentor program participants were highly statistically significant and offered a compelling view into the types of coaching behaviors that they find to be most and least impactful. A repeated measures ANOVA test was conducted to discern if there was statistically significant difference between the means of the behavioral constructs that were assessed in the quantitative portion of the survey. The analysis was conducted for both the average frequencies of the behaviors and the average impacts of the behaviors. The comparative results of the averages of each of the six primary behavior constructs are shown below in Figure 5. This is followed by the averages for all 16 behavior categories in Figure 6.

Figure 5: Mentee Perception of Coaching Behavior Frequency and Impact - Primary 6 Constructs (Validated by Heron, 1975)

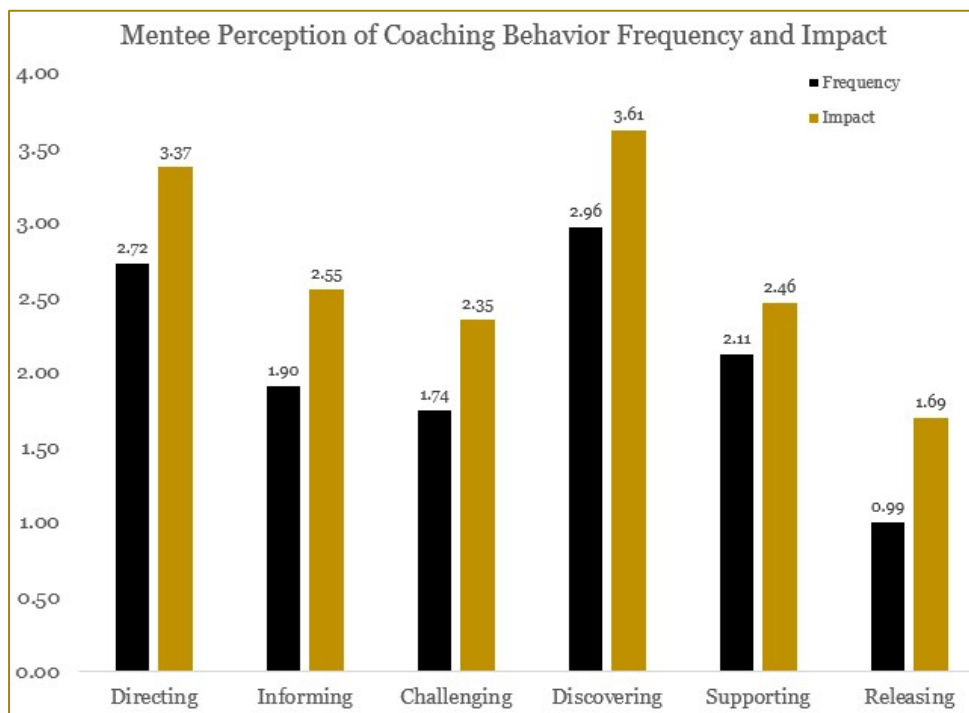
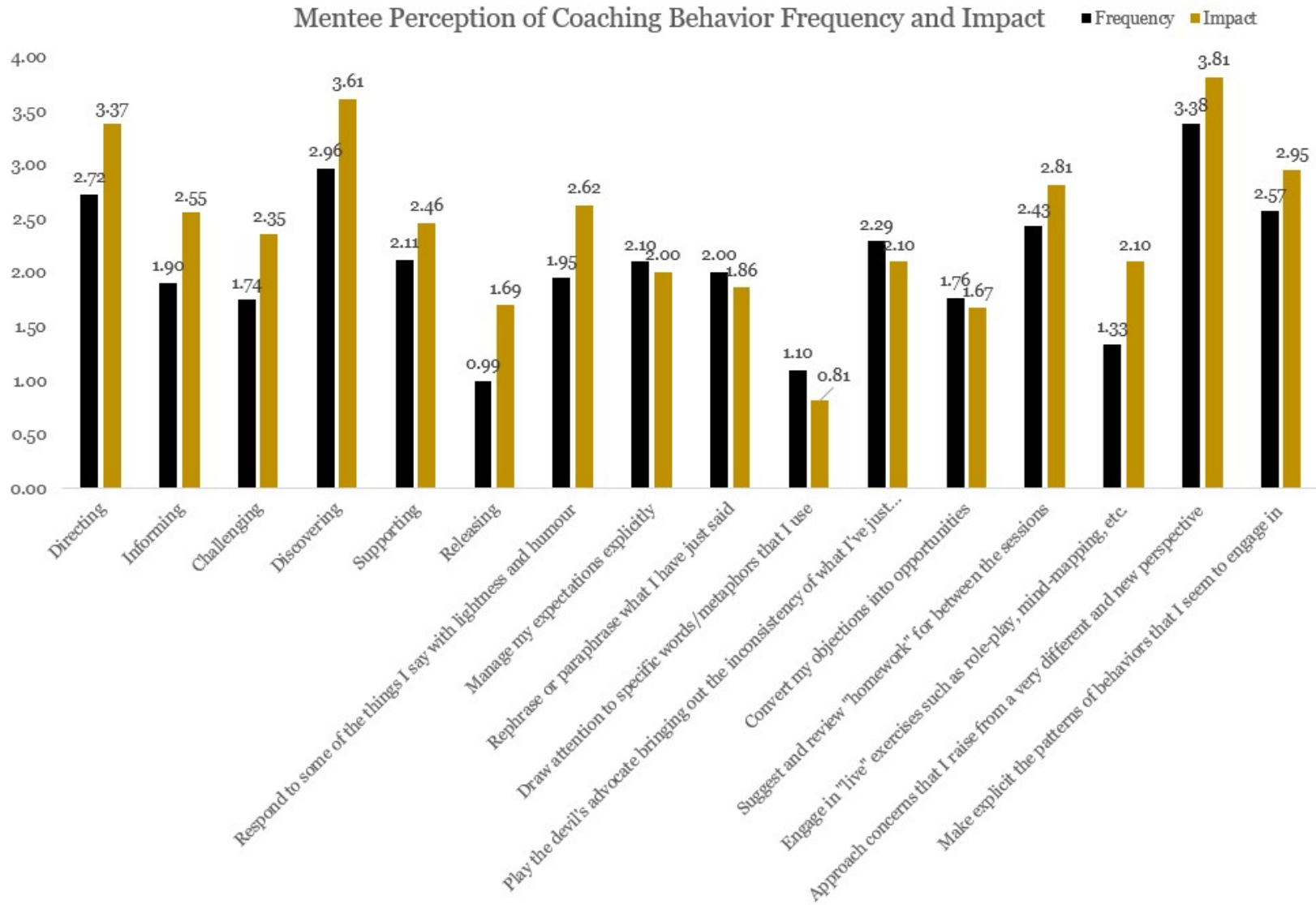


Figure 6: Mentee Perception of Coaching Behavior Frequency and Impact - All 16 Categories of Behaviors Included by DeHaan et. al, 2009



The repeated measures ANOVA test found that there were statistically significant differences between each of the constructs that measured average frequency of coaching behaviors, $F(15,300) = 9.94, p < .001$. Similarly, the test found that there were statistically significant differences between each of the constructs that measured the average impact of coaching behaviors, $F(15,300) = 12.47, p < .001$.

The findings that are detailed and discussed below will focus on the insights uncovered from the primary six coaching constructs developed by Heron (1975) shown in Figure 5 but will also include analysis of the ten additional coaching behavior questions that were added by DeHaan et al. (2009). As discussed above, this is due to the greater validity and reliability of the six coaching constructs that were developed by Heron (1975). However, the responses to the ten additional questions DeHaan et al. added can provide further insight that is still worth considering in the context of the other results. The findings from the research have been distilled and synthesized into seven key findings that answer the original research questions and provide additional insights, as shown below in Table 4. Each of the key findings will be discussed below in detail.

Table 4: Key Findings Summary

Key Findings	
Research Question 1	
Which mentor coaching behaviors, aspects of the mentor coaching relationship, and components of the coaching process do mentees believe have the most impact on their ability to be successful?	
1	Mentees are solution-oriented and highly value the specific advice provided by mentors that can lead to discovering new opportunities. This is perceived as being more impactful than processing the emotions associated with entrepreneurship and innovation.
2	Providing direct information on how to solve problems and potential solutions is highly valuable to entrepreneurs.
3	Mentors currently engage in high-impact coaching behaviors.
Research Question 2	
What are the characteristics and traits of the mentee entrepreneurs who are being coached through the Wond'ry's mentor program?	
4	The mentees are generally driven, highly motivated, and also willing to ask for assistance when needed.
Research Question 3	
What are some business outcomes entrepreneurs and innovators attribute to the guidance of their mentor(s)?	
5	Specific outcomes derived directly from mentor coaching are difficult to pinpoint, although program participants attribute their success in part to their mentors.
Additional Findings	
6	Overall, mentor program participants are highly satisfied with the mentor support they received.
7	Additional structure and training can be helpful for mentors so that they can be as effective as possible when guiding program participants.

Research Question 1

Which mentor coaching behaviors, aspects of the mentor coaching relationship, and components of the coaching process do mentees believe have the most impact on their ability to be successful?

Finding 1 – Mentees are solution-oriented and highly value the specific advice provided by mentors that can lead to discovering new opportunities. This is perceived as being more impactful than processing the emotions associated with entrepreneurship and innovation.

When examining the core coaching constructs and the perceived impact that they had on mentees, it became clear that Discovering and Directing coaching behaviors were perceived by survey respondents to have the largest impact. Discovering coaching behaviors received an average impact rating of 3.61 out of 5.00, and Directing coaching behaviors received an average impact rating of 3.37. These impact scores were significantly higher than the scores for the other four constructs, as shown in Figure 5 above. Additionally, DeHaan et al. added a question to assess the impact to mentees when mentors “Approach concerns that I raise from a very different and new perspective”, shown in Figure 6. This behavior is similar in nature to some of the Discovering construct behaviors and received a high average score of 3.81.

The Discovering questions include assessments of behaviors that are intended to help mentees discover new opportunities and gain insights into resources that they might not have otherwise known about on their own. Examples of Discovering behaviors include:

- “Make me aware of the choices open to me.”
- “Ask open questions to promote discovery.”

The Discovering behaviors were also perceived by survey participants to be the most frequently used behaviors by mentors. The frequency score of 2.96 was the highest for all of the six primary constructs as well as for the ten additional DeHaan et al. questions that were included in the assessment.

These insights indicate that mentees value when mentors provide information that can lead them to new conclusions or entrepreneurial solutions and approaches that they had not previously considered. The mentees are solution-oriented, and discovering new ways to address issues or make progress on innovation is perceived to be highly impactful. However, it is difficult to know for certain if mentees experience high impact from these behaviors because the mentors use these behaviors frequently or if the behaviors themselves are of high impact. It’s possible that the impact is perceived to be

high because mentors use the behaviors frequently. Yet the high average ratings for impact and frequency do indicate that this construct of mentor behaviors is both utilized frequently and viewed as being helpful to mentees.

The finding regarding the Discovering construct behaviors is consistent with the findings of DeHaan et al. (2009). In both studies De Haan et al. conducted using this survey instrument, the Discovering construct behaviors were rated highest both in frequency and in impact. As shown in Appendix E, the Discovering construct was rated 3.59 and 3.65 out of 5 respectively in the studies on impact. Further, the Discovering construct was rated 3.63 and 3.6 on frequency during the two studies. The similarities between the DeHaan et al. research and the findings of this study on the Wond'ry's mentor program provide greater confidence in the validity and reliability of the results that Discovering construct behaviors are both high-impact and high-frequency behaviors for coaching program participants.

The high average impact and frequency ratings for Discovering based behaviors contrast sharply with responses regarding the impact and frequency of Releasing behaviors. The average impact score for the Releasing construct was 1.69, and the average frequency score was 0.99. These scores are both significantly lower than the scores for the Discovering construct - both on impact and frequency. Again, this is similar with DeHaan et al. (2009), with the Releasing construct being rated 2.87 and 3.12 in each of their studies, which is significantly lower than the Discovering construct.

When examining the types of behaviors that comprise the Discovering construct, it is apparent that these behaviors are more solution-oriented and tactical than the behaviors in the Releasing construct. The Releasing behaviors focus on enabling entrepreneurs to identify and assess their feelings regarding their situation. An example of this behavior includes when a mentor "Ask[s] me how I feel about a success which I achieved".

This has important implications for Wond'ry mentors regarding the types of behaviors they should engage in to have the highest possible impact on their mentees. Revealing the choices that are open to mentees is perceived to be very impactful. As such, mentors should be intentional about presenting choices and opportunities to mentees as appropriate. Further, doing so is higher impact than releasing behaviors such as asking mentees how they feel about their successes. Focusing the mentor/mentee sessions on Discovering behaviors instead of Releasing behaviors can lead to higher impact for mentees over time.

Finding 2 – Providing directive information on how to solve problems and potential solutions is highly valuable to entrepreneurs.

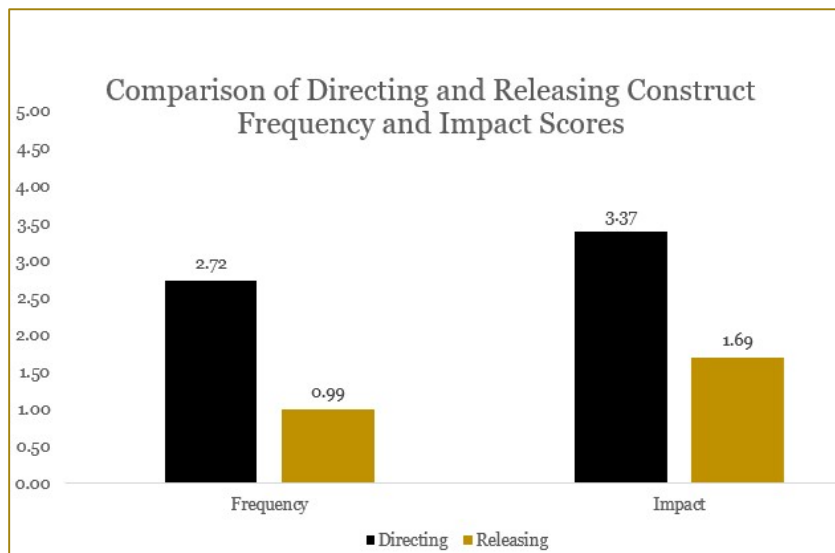
Similar to the high impact of Discovering behaviors on entrepreneurs, Directing behaviors that provide mentees with information regarding how to solve problems were also viewed as being highly impactful. The impact score average across all Directing

behaviors was 3.37 out of 5.00, indicating that this construct had the second highest impact value to mentees. Examples of Directing behaviors include:

- “Suggest that I choose a particular solution”
- “Advise me of the appropriate action to take”
- “Persuade me to take a particular approach”

The highest impact behavior out of all 60 behaviors that were assessed was a Directing behavior. Specifically, the behavior is when mentors “Advise me of the appropriate action to take”. This behavior received an average impact rating of 4.76, with a correspondingly high frequency of 4.33. Additionally, the high average rating for this behavior and the other Directing types of behaviors contrast meaningfully with responses regarding the impact and frequency of Releasing behaviors. When assessing the behaviors that form the Directing construct, it is apparent that these actions are more specific and strategic than the behaviors in the Releasing construct that are more reflective in nature. This relationship dynamic is similar to the comparison drawn between the Discovering behaviors and Releasing behaviors. The average impact and frequency for the Discovering and Releasing constructs is illustrated below in Figure 7.

Figure 7: Comparing Impact and Frequency of Directing and Releasing Constructs



Similar to the implications for Discovering construct behaviors, Wond’ry mentors can have higher impacts on mentees by choosing to engage in Directing construct behaviors and spending less time in mentee sessions engaging in Releasing types of behaviors. Examples of Releasing behaviors that had lower than average impact scores and significantly decreased the overall construct average score include:

- Ask me why I am upset or angry (Impact - how helpful?) - 0.14 average impact

- Help me to express my insights after an emotional experience (Impact - how helpful?) - 0.62 average impact

These behaviors were identified as being very low impact by survey participants and should likely be avoided by mentors unless there is a specific mentee situation that merits using them.

Finding 3 – Mentors are engaging in highest-impact coaching behaviors with the highest frequencies.

Interestingly, the data show that the Wond'ry program mentors are utilizing coaching behaviors that were perceived to have the highest impact more frequently than they are utilizing behaviors that were perceived to have lower impact. Correlations for each of the six coaching behavior constructs indicate strong relationships between the frequency of coaching behaviors and the impact of coaching behaviors. Across all of the constructs, the average correlation between frequency and impact of behaviors was 0.79. The highest correlation was for the Supporting construct, with a correlation of 0.91. The lowest correlation was captured for the Discovering construct, with a correlation of 0.62.

This is a favorable finding because it indicates that the higher impact behaviors are being engaged in with the greatest frequency. However, some of the implications for this are unclear. Fortunately, the data did not imply that the mentors are engaging in low-impact activities on a frequent basis. This would have indicated that many of their efforts were perceived to be ineffective to mentees.

However, it is not clear if there is a causal relationship between the frequency of certain behaviors and their perception as being high impact. It could be the case, for example, that because mentors use certain behaviors frequently the mentees remember the behaviors and associate those specific behaviors with the overall favorable view they have of their mentor coaching experience. This could also be the case if mentees hold their mentors in high esteem and have the perception that the behaviors the mentors engage in are uniquely impactful and valuable. Keeping in mind that this finding is based on a correlation as opposed to causation is important in order to prevent erroneously drawing a cause and effect conclusion that is not accurate based on the data.

Research Question 2

What are the characteristics and traits of the mentee entrepreneurs who are being coached through the Wond'ry's mentor program?

Finding 4 – The mentees are generally driven, highly motivated, and also willing to ask for assistance when needed.

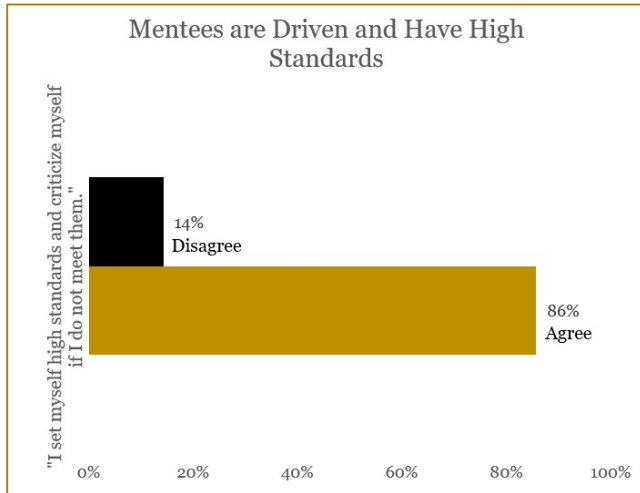
The second research question centered around the characteristics of the mentees who participate in the Wond'ry's program, in alignment with Blackman et al.'s (2016) conceptual framework. Specifically, the question being studied is, "What are the characteristics and traits of the mentee entrepreneurs who are being coached through the Wond'ry's mentor program?" Accordingly, in addition to assessing the impact of mentor behaviors, the study analyzed the traits of the mentee program participants to gain insight into their values and goals, motivation, and personality.

These aspects of the mentor program participants are fundamental to the success of the program overall and are in alignment with the Blackman et al. (2016) conceptual framework of effective coaching programs. This information can help program leaders tailor the mentor program and mentor guidance to the specific needs of the individuals they are serving. It also gives insight into new information the Wond'ry can provide to mentors about the mentees they are coaching.

In order to answer this particular research question, there was not a single construct that could be used. Therefore, I examined several questions within the survey that most directly related to this aspect. These questions and their findings are shown below (see Figure 8). The findings overwhelmingly indicate that the mentee program participants who completed the survey are highly driven, motivated, and hard-working. They have high standards and are willing to work harder than others to achieve them.

Survey participants were asked to state if they agreed or disagree with the statement "I set myself high standards and criticize myself if I do not meet them." Of the survey respondents, 86% attested that they agree with this statement. Interestingly, the statement includes the potential for self-criticism, which could be harmful to innovators as they complete the creative design process in bringing an idea to fruition. Failure is a known component of many entrepreneurial and innovation journeys, and self-criticism could lead some entrepreneurs to abandon their efforts and/or develop low self-esteem (Audet & Couteret, 2012). Mentor coaches can be aware of these tendencies to help mentees manage them and channel their drive and high standards in effective ways.

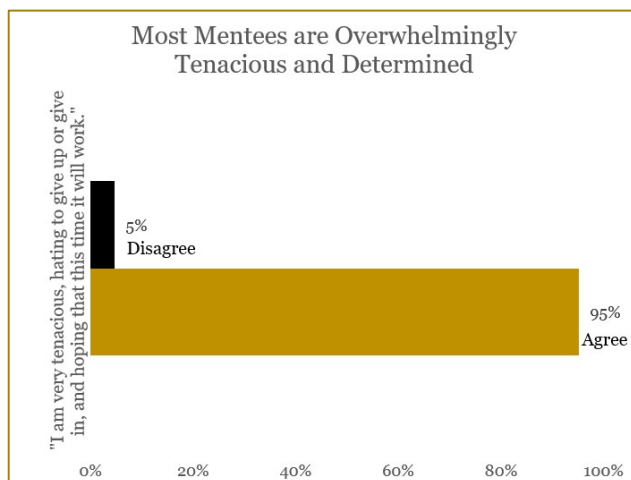
Figure 8: Mentee High Standards



Similarly, survey participants were asked if they agreed or disagreed with the statement, “I am very tenacious, hating to give up or give in, and hoping that this time in will work”. An overwhelming 95% of participants agreed with this statement, as shown below in Figure 9. This indicates that program participants are highly motivated and persistent in pursuing their entrepreneurial goals. Mentors do not have a significant need in most cases to motivate their mentees, as they already have very high levels of tenacity and drive.

However, they might be well-advised to ensure that the mentees are wise in their tenacity and have a longer-term view of the future and desired goal outcomes. The media image and culture of entrepreneurship frequently celebrates extreme and excessive hours that can lead to burnout and other problems for the entrepreneur and the individuals in his/her community (Audet & Couteret, 2012). Mentors can be aware of this tendency and look for concerning signs of burnout that could prevent the mentee from being successful in the longer term.

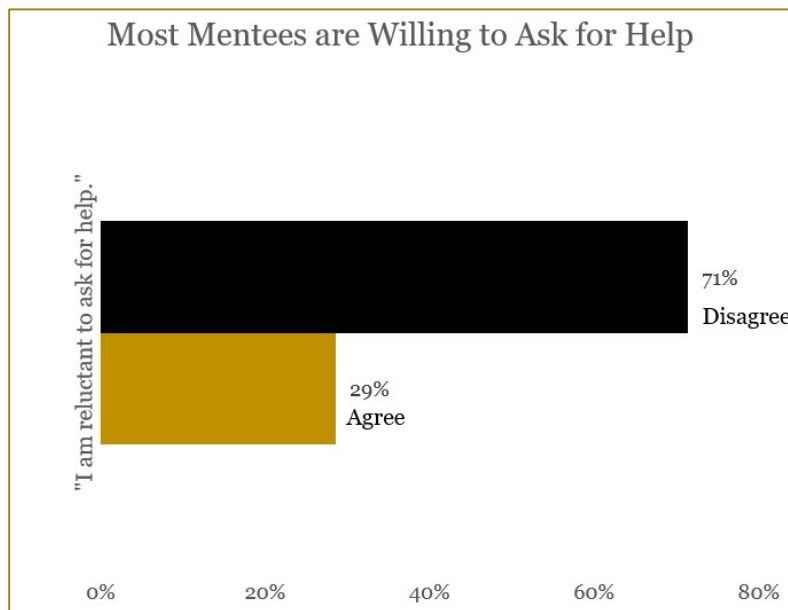
Figure 9: Mentee Tenacity and Persistence



Although mentees are highly driven to the point of self-criticism when efforts do not materialize into outcomes as desired and have high standards, they are generally still willing and able to ask for help when needed. When asked if they agreed or disagreed with the statement “I am reluctant to ask for help”, 71% of respondents disagreed. As shown in Figure 10, below, this indicates that most program participants do not struggle with admitting that they are incapable of doing everything needed to be successful as an entrepreneur independently. However, it is notable that nearly one third of respondents said that they are reluctant to seek assistance when needed, and this is a sizable minority.

Mentor coaches would be wise to work with their mentees to ensure that they feel comfortable expressing needs and seeking resources for support as appropriate. It could be the case that these individuals feel embarrassed about their inability to complete a task independently, particularly given their driven personality. Mentors can be aware of this potential tendency and intentionally ask mentees during each session if they need help in a particular way to move forward in achieving their goals. This would likely be well-received by mentees, as the research findings indicate that they are solution-oriented and receive high-impact value from mentors when they provide awareness of choices that are available and advice on which actions to take.

Figure 10: Mentee Willingness to Ask for Help



Research Question 3

What are some business outcomes entrepreneurs and innovators attribute to the guidance of their mentor(s)?

Finding 5 – Specific outcomes derived directly from mentor coaching are difficult to pinpoint, although program participants attribute their success in part to their mentors.

The third research question focused on uncovering the outcomes that could be attributed to the mentor coaching. As discussed previously when reviewing the literature on coaching, specific outcomes of mentor coaching relationships that are directly attributable to the coaching intervention have been difficult for researchers to define. There are multiple reasons for this challenge, including the Hawthorne effect, inability of coaching participants to be objective, and the lack of ability to isolate coaching from other interventions and environmental settings that could influence outcomes (Blackman et al., 2016). Unfortunately, the research from this initiative underscored the complexity of directly tracing outcomes to the mentor coaching relationship.

Survey participants were asked to “name three specific outcomes” they ascribe to the mentoring they received. The question was open-ended and optional, as not all participants might perceive that they experienced outcomes directly connected to the coaching. Slightly over half of the participants provided at least one comment to answer this question. The question was not mandatory for completion of the survey, but it was disappointing that the completion rate for this was not higher. It is difficult to understand why this was the case without doing follow-up research of survey participants. However, it could potentially indicate that individuals who did not respond were unclear on direct outcomes that they experienced or that they did not think they experienced positive outcomes from the coaching. In contrast, it could also indicate that they were simply fatigued from taking the survey and did not care to answer additional, optional questions at the end of the survey.

Responses varied significantly in regard to specificity and ability to directly tie the outcome to coaching. The responses were categorized and analyzed to determine if they included a specific outcome or a more general statement regarding the benefit of the coaching. Only 36% of the responses included a specific outcome, whereas the remainder of the responses were more general in nature.

Examples of specific outcomes that were shared in the survey include:

“My mentor was exceedingly helpful in thinking through next steps for incorporating a business. I could not have done this without him, I don’t think. It’s difficult to know exactly which type of corporation to form (e.g. LLC, S-Corp) and then you need help actually filling out and filing the papers. He was with me side by side each step of the way.”

“I think the clarity that I received following the mentor sessions was highly valuable. Knowing what to do next can be difficult. The mentor I worked with primarily helped assess and clarify my thinking.”

“Networking connections. The mentor I had was well-connected in the community and introduced me to other people who could be helpful as well.”

The responses that were more general in nature included statements that expressed gratitude for the program but did not pinpoint direct results of the mentoring. An example of this type of response was, “It was helpful to have someone work with me on the venture I was considering forming. I was really appreciative of his time and assistance.” In this case, the respondent expressed that s/he saw benefit from the mentor coaching but did not clarify a particular outcome that materialized due to the mentor relationship.

Similarly, when asked about specific outcomes that could be directly and exclusively traced to mentoring, the Master Mentors had some difficulty doing so. They had numerous stories of individuals they had mentored who were successful in their entrepreneurial endeavors. They could pinpoint these individuals easily and their stories were highly compelling and inspirational. Gaining insight into which factors of the mentor relationship attributed to their success would be useful in the future for shaping and growing the Wond’ry’s mentor relationships.

Additional Findings

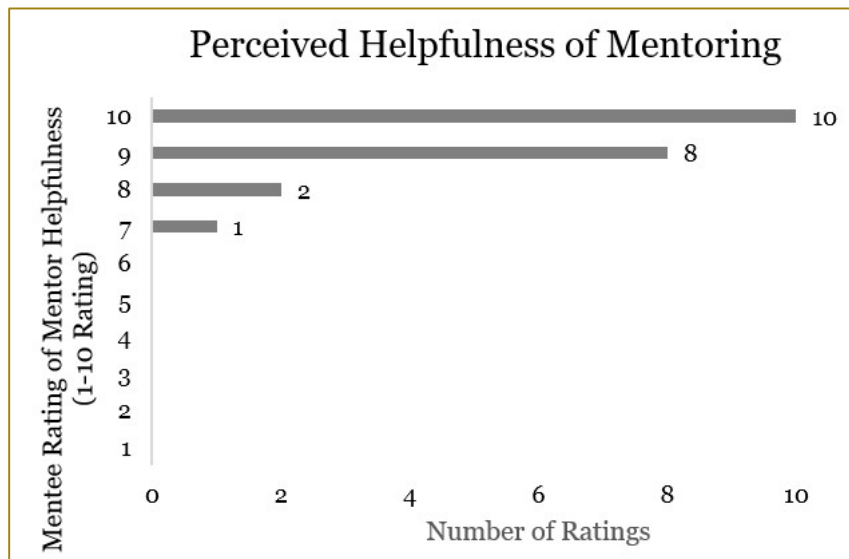
Finding 6 – Overall, mentor program participants are highly satisfied with the mentor support they received.

Although this finding was not directly related to the core research questions, it provides helpful insight into the perceived effectiveness of the Wond’ry mentor program as a whole.

Past participants in the mentoring program were asked to rate how helpful their experience was with their mentors. Specifically, the question was worded, “Please rate the helpfulness of your mentoring experience thus far, on a scale from 1 - 10, with 10 indicating that it was extremely helpful and 1 indicating that it was not at all helpful.” The findings indicate that overall participants were highly satisfied with the mentor coaching they received. This was reflected in the qualitative comments as well. For instance, one participant stated, “Thank you, thank you for an excellent mentor. To be able to work with such an experienced individual who could help me with the right things at the right time was invaluable.” Another participant stated, “I could not have accomplished what I did without the support of my mentor”.

Across all respondents, the average rating of mentor helpfulness was 9.29, indicating very high levels of satisfaction. The lowest score received was a rating of 7, and nearly 50% of past participants provided a rating of 10. The full distribution of scores is shown below in Figure 11.

Figure 11. Perceived Helpfulness of Wond’ry Mentoring



It's important to note that although there are opportunities for program improvement, with associated details listed in the Recommendations section, participants are pleased overall with their mentor experience. This finding indicates that they are already obtaining value from the program and that changes can only enhance their current experience.

Finding 7 – Additional structure and training can be helpful for mentors so that they can be as effective as possible when guiding program participants.

Discussions with the Wond'ry's Master Mentors were enlightening. All Master Mentors reported that they have had substantial experience as entrepreneurs, and all of them are currently engaging in innovation activities. One Master Mentor stated, "Entrepreneurship is in my DNA. It's who I am and have always been. I've been an entrepreneur in the for-profit world but also in the policy space. I think you have to have some experience as an innovator or an entrepreneur to be effective as a mentor here". In addition, they have significant experience mentoring entrepreneurial mentees at various stages of their innovation pathway. Also, the Master Mentors provided examples of success stories of mentees whom they had mentored. Some of the mentored individuals have built ventures that were then sold for significant sums, and the Master Mentors spoke about them with pride.

In response to the question "If you had the ability to modify the Wond'ry mentor program, which changes would you make?" the Master Mentors stated that additional structure to support the program participants - both mentors and mentees could be useful. Specifically, they described having a defined process in place to connect each individual associated with the Wond'ry to a mentor quickly when they become involved with Wond'ry programs and resources. Their perspective was that this could be beneficial in ensuring that all who could benefit from mentoring have the opportunity to work with a mentor. One Master Mentor mentioned, "We have the foundation of the program. I'm not worried about that. What we're missing is the finesse. We need a process and structure that holds everything together and keeps everything running smoothly. We need to be able to document what we're doing and share that with others. That's a big missing piece".

In addition to having a defined process for connecting prospective mentees with mentors, the Master Mentors specifically emphasized that it's important for there to be a process for documenting the entrepreneur's goals and how they are being supported by the mentors. As new needs arise, they could be documented in a central repository that is accessible to Wond'ry leadership team members and the mentors. A Master Mentor stated, "Genius things can happen in these sessions. Not always, but sometimes. We need to be able to document this and where someone is on the entrepreneur path. If we don't have this, we lose them. We need to know where everyone is, what they need so we can work to meet those specific needs". In addition, the perception was that this could be highly useful for ensuring the mentor relationships are constructive and efficient for both the entrepreneur and mentor.

Further, the Master Mentors mentioned a need for documented notes from sessions to be shared with other mentors as appropriate when an entrepreneur has a specific need. One example provided by one of the interview participants was a mentee who might be working with a mentor to incorporate a new business as an LLC. Upon completion of this step s/he might need specific guidance on developing financial operations and monitoring systems (which aligns with the solution-specific behaviors that mentees value). The current mentor could then find another mentor who has knowledge of financial operations and share notes from the previous sessions with the new mentor. This can help ensure a smooth transition for the mentee when s/he needs specific advice from a different mentor. The mentor introduction process can also be streamlined. In addition, capturing notes on the mentor/mentee coaching sessions can facilitate the documentation and monitoring of outcomes across all mentees.

Furthermore, the mentors stated that it would be helpful to provide more formal training to new and existing mentors. The process to become a mentor is relatively simple and fast, which is helpful because it isn't cumbersome and discouraging for prospective mentors. Essentially, interested prospective mentors send an email to the mentor program leader expressing their interest. The program leader then meets with the mentor and explains the expected commitment and voluntary nature of the program. Additional information about the Wond'ry and its resources is also provided to mentors so that they can be shared with mentees as appropriate. In some cases, new mentors have met with Master Mentors to gain insight into how to coach entrepreneurs. However, these meetings are currently inconsistent and could be improved according to the Master Mentors.

DISCUSSION AND LIMITATIONS

Like all research, the data collection and assessment for this project has limitations, including generalizability beyond the Wond'ry's mentor program. Although all former mentor program participants were given the opportunity to participate in the survey, neither 100% of participants took the questionnaire nor a representative sample of all demographic or participant categories was sought nor can be verified. Because of this, it's difficult to ensure that the findings accurately reflect the aggregate population of the Wond'ry's mentor program participants.

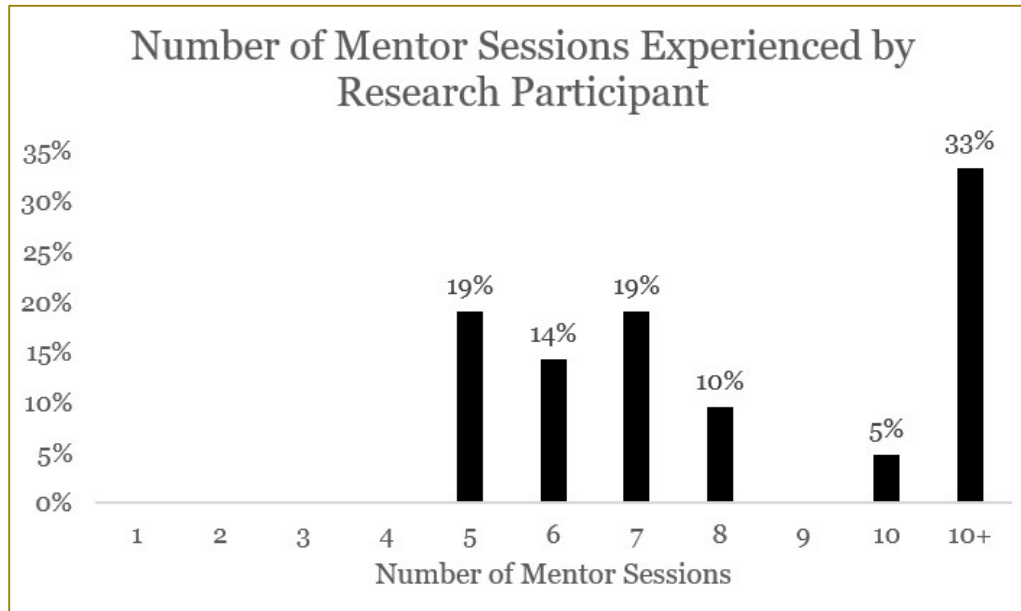
In addition, the sample size for this study was small, at 21 mentees who were participants in the program. This was due in part to the relatively small number of total previous mentor program participants. The small number of participants makes it challenging to know if the sample is representative of the full program. Results would likely be both more precise and accurate if it had been possible to obtain a larger sample size for the quantitative assessment.

In addition, only 38% of the survey participants stated that they were current students, meaning that the data is skewed toward alumni of the program. Current students might have different experiences than alumni of the program, making it difficult to ascertain if the findings are reflective of the most recent participants in the program. It's possible that the program quality has changed over time (both positively and negatively) and that the findings from alumni reflect aspects of the program that are no longer in existence at the present time.

When asked "What do you want to achieve through mentoring?", 100% of participants in the survey selected the option that "In my mentoring, I would like to learn something new." This result indicates a higher than expected uniformity of responses, and it's possible that intellectually curious participants in the program were more likely to take the survey than participants who were not as driven to learn a new skill or capability. If this is the case, the survey data would not be reflective of the participant population as a whole and could yield skewed results regarding the highest impact mentor coaching behaviors.

Further, the wide range of duration of the mentor relationship could impact the results of the study. The number of sessions a mentee had with a mentor ranged from only five meetings to over ten meetings. It's possible that individuals who had longer mentor relationships obtained better exposure to the benefits and deficiencies of the program. However, their responses were weighted equally to participants who only had five meetings with a mentor. Unfortunately, program data does not exist to indicate the average duration of mentor relationships, so it's difficult to assess if this is reflective of the program or not.

Figure 12: Mentor Sessions Experienced by Survey Participants



It's also important to note the potential for bias in rating the mentor program effectiveness and impact of mentor behaviors because individuals still have an affiliation with the program and/or with Vanderbilt. All study participants were either alumni or current students. To maintain positive relationships and also support the mission of the Wond'ry, participants could have provided responses that were more favorable in nature than would have been provided if they had no connection or affiliation with the mentor program, the Wond'ry, or Vanderbilt.

Additionally, the qualitative interviews were conducted via Zoom, an online meeting platform, as data collection in person was not possible due to safety procedures necessary for COVID-19 prevention. In one case, due to technical challenges, the interview had to be completed by phone. As a result, observations of body language were limited. Recordings were made of the conversations to ensure that all insights were captured accurately. In some cases, knowing that a conversation was being recorded might make an individual less willing to share sensitive information.

RECOMMENDATIONS

This study was initiated with broadly-based questions regarding mentor coaching effectiveness and outcomes that led to more specific questions regarding the impact of specific mentor behaviors and the practical refinement of the Wond’ry’s mentor program. As such, findings provided both macro and micro level views of how the mentor relationships deliver customized support and guidance to innovators and entrepreneurs associated with Vanderbilt.

Program improvement recommendations are most effective when based upon a problem or set of goals that are fully understood. Bryk et al. (2017) illuminate the need for improvement to derive from a well-defined and vocalized problem of practice. In the case of the Wond’ry’s mentor program, the central focus of these recommendations is to improve the quality of the mentor relationships developed and fostered by the program to promote successful entrepreneurial outcomes.

Taking all of the findings into consideration along with the context of the Wond’ry in the Vanderbilt and Nashville community, the following four recommendations were developed and are detailed below. It’s important to note that the recommendations were crafted in a way that would be feasible for the Wond’ry to implement them in the near-term time horizon with low or no new financial resources. The intent was to make them realistic and practical in nature so that they could be implemented and show meaningful benefit to the program leaders and participants. Taken as a whole, these recommendations will enable the Wond’ry to continue growing and improving the mentor program so that it thrives and offers differentiated value in the future.

Table 5: Core Recommendations for the Wond’ry Mentor Program

Core Recommendations	
1	Training Offer more formal training and support to mentors to increase effectiveness for entrepreneurs.
2	Documentation Take a more structured approach to supporting mentees and documenting outcomes from mentor meetings to ensure needs are being met optimally.
3	Coaching Model Consider implementing a solution-oriented coaching model such as the GROW Model to help frame mentor meetings and support mentees with meeting their specific goals.
4	Continuous Improvement Conduct mentee and mentor satisfaction assessments to understand what is and is not effective on a regular basis, at least annually.

Recommendation One

Training

Offer more formal training and support to mentors to increase effectiveness for entrepreneurs.

The findings illuminated in the above research indicate which mentor behaviors are viewed by mentees as being most impactful and least impactful. These are valuable insights for new mentors to learn upon entering the program so that they can be as helpful as possible to their mentees. Instead of guessing how to serve the mentee they can have a clear sense of which behaviors and activities will likely add the most impact (as perceived by the program mentees) and allocate their time based on the highest impact potential. Research indicates that individuals require three to six months to learn and develop coaching skills before they feel comfortable using these skills in practice with coachees (Grant, 2010). As such, more formal and intentional training and support for mentors who are new to the Wond'ry can be beneficial.

Currently, new mentors do not receive consistent, formal training from the Wond'ry aside from their initial meeting with a Master Mentor. Some, but not all, mentors have received training on how to be an effective coach in their prior professional development training. Others have significant experience with mentoring but have not received formal training. To ensure that mentors are guiding mentees effectively and to help deliver high-quality mentoring experiences for all program participants, it would be helpful for the Wond'ry program leaders to offer training to new mentors and also potentially for existing mentors who have not had training in this area.

One way the Wond'ry could assess the coaching skills of new mentors to determine if training would be beneficial and in which areas training could have the most impact is to have prospective mentors take the Goal-focused Coaching Skills Questionnaire (GCSQ), shown in Appendix F. This is a self-reported assessment that consists of 12 items and is a measure of goal-focused coaching skills that align with five factors of goal-focused coaching:

- Outcomes of coaching
- Working alliance
- Solution focus
- Goal setting
- Managing process and accountability

Individuals who take the assessment use a Likert scale rating to assess their capabilities in these five areas. Grant and Cavanagh (2007) found that the GCSQ was a valid and reliable measure of coaching capabilities. As such, the assessment was able to effectively distinguish between professional and novice coaches. Further, new

coaches improved their scores as their coaching skills grew and developed (Grant, 2007).

Training on coaching skills can be beneficial in improving coaching capabilities, particularly for individuals who have management experience but little or no coaching experience (Grant, 2007). The mentors who are accepted into the Wond'ry's program are highly talented and capable individuals. However, they have a variety of backgrounds and different levels of familiarity with coaching and mentoring. The Master Mentors indicated that many of the mentors have had some prior mentoring or coaching experience but that this can range significantly.

The goal of offering mentor training on coaching skills and techniques is not for the volunteer mentors to become professional coaches who are charging significant sums per hour. Instead, the objective is to provide them with baseline coaching principles and tactics that can enable them to be effective in a coaching capacity, translating their subject matter expertise into solution-oriented advice to mentees. For instance, a mentor might be a highly skilled accountant with very little experience providing mentor coaching advice, much of which is limited to guiding the careers of direct reports at his/her firm. This individual has the skills and knowledge to offer specific guidance related to accounting issues, but how to deliver that information and develop a partnership with the entrepreneur as s/he applies the knowledge in a coaching setting might not be skills the mentor has developed prior to joining the Wond'ry as a mentor.

As assessment of two different approaches to training coaches found that experienced managers similar to the Wond'ry mentors who participated in a 13-week training program on coaching skills experienced an increase in both their goal-focused coaching skills and emotional intelligence. The program consisted of 2.5 hour weekly workshops and action-centered learning between the weekly sessions. In contrast, a two-day, intensive "Manager as a Coach" training program resulted in an increase in a coach's goal-focused coaching skills but not emotional intelligence (Grant, 2007). For the purpose of enhancing the skills of Wond'ry mentors, both longer-term training programs and shorter-term intensive trainings will likely be effective. However, a longer-term training program might yield additional mentor capabilities such as emotional intelligence that enhance the mentor coaching experience.

To that end, offering training in basic goal-setting coaching principles similar to the program used by Grant (2007) that are tailored specifically to the behaviors this research has found to be most impactful to mentees will likely be useful for improving the quality of mentor relationships over time. If the Wond'ry leadership team decides to take the shorter-term intensive approach to training (which will not likely yield improvements to mentor emotional intelligence capabilities), the training program could be offered in a manageable and cost effective seminar-style course to all mentors over a weekend, and this could be conducted both virtually and in person. The class could likely be co-led by the Wond'ry program leadership team and the Master Mentors.

Topics to consider including in the training sessions that were recommended by the Master Mentors could include:

- Building trusted advisor relationships
- Aligning on goals for the mentor sessions
- Asking insightful questions
- Providing useful advice without being overbearing
- Showing empathy while also pushing the mentee to grow
- Sharing mentor experiences and past mistakes to facilitate mentee growth
- Knowing when to end the mentor relationships

Additionally, the Master Mentors thought it could be helpful to encourage mentors to join local professional organizations that provide professional development support that is useful for developing coaching skills. These organizations include but are not limited to the International Coaching Federation, Tennessee Chapter and the Society for Human Resource Management (SHRM), Middle Tennessee Chapter. These organizations offer tactical resources for mentors and coaches and also foster networking opportunities with other professionals who might be more experienced with coaching. However, it should be noted that not all of their training programs and materials are proven by academic research to be effective.

Recommendation Two

Documentation

Take a more structured approach to supporting mentees and documenting outcomes from mentor meetings to ensure needs are being met optimally.

As delineated in the prior section regarding findings from the Master Mentor discussions, taking a more structured approach to documenting mentor relationships and outcomes can help improve the quality of the overall program experience for both mentors and mentees. To do this, it will be helpful to develop a process and documentation form for the program leaders and mentors to use to document when mentor relationships begin, how they progress, the goals of the mentees, and outcomes that are experienced. Fortunately, the new Innovation Portal could be an ideal tool to facilitate the documentation and exchange of information between program leaders and mentors. This process is analogous to case management documentation of patients as they navigate the healthcare system (Kathol, Andrew, Squire, & Dehnel, 2018).

At the onset of a mentor relationship, it would be valuable to have an intake form that documents why an innovator is seeking mentoring, his/her goals, background information, training in entrepreneurship (e.g. if they have taken Ideator, Builder and/or Founder or a similar program). This documentation will help program leadership and the mentors ensure that the innovators are properly matched with the mentors that can provide them with the highest possible solution-oriented value. When used by both program leadership and the mentors, it can ensure alignment between all parties regarding the optimal structure and focus during the mentor sessions.

Subsequent to the initial mentor/mentee pairing, it would be useful for mentors to have a form to document the sessions that they have with the mentee. This is useful for multiple purposes. First, the mentors are busy working professionals with multiple competing priorities. Having documentation of the prior session will help ensure a seamless narrative between sessions.

Second, there will be occasions when mentees need to transition from one mentor to another. For example, a mentee might need detailed guidance on developing a strategic plan, which is out of the realm of expertise of the current mentor. The mentor could collaborate with the mentor program leadership team to identify another mentor who could provide the specific advice needed. Rather than starting from scratch, the mentor with strategic planning skills could review the notes and begin the mentor relationship with a solid foundation and understanding of the mentee's goals without having to discuss all of the background context and history in detail.

Third, it's important for the Wond'ry to be able to document the outcomes of its programs to stakeholders, including potential funders. A formal documentation and outcome tracking process will prompt mentors to regularly record progress mentees have made on achieving their goals. The collective outcomes and achievements across the mentors and mentees could paint a compelling picture of the value of the mentor program to prospective donors, grant organizations, and to Vanderbilt.

The documentation requests should not be burdensome in nature so that mentors follow through with this part of the program and provide useful information. A simple, 3-5 question form that could be submitted and stored electronically on the Innovation Portal would be ideal. Additionally, mentors and program leaders should be able to readily and confidentially access the notes from other mentors to facilitate mentee transitions when needed (Kathol, Andrew, Squire, & Dehnel, 2018).

Recommendation Three

Coaching Model

Consider implementing a solution-oriented coaching model such as the GROW Model to help frame mentor meetings and support mentees with meeting their specific goals.

As discussed with the Master Mentors, the mentoring that is being provided is generally not offered following a particular coaching model. Rather, the mentors are

given complete discretion regarding how they structure and lead the sessions. This could work well if mentors are naturally talented with coaching. However, mentoring is a discipline with best practices that are known to allow for the development of more impactful relationships with mentees and ideally lead to optimal performance outcomes (DeHaan et. al, 2009). To this end, and taking into consideration the consistent value mentees placed on solution-oriented Discovering and Directing mentor guidance, it could be very useful to both mentors and mentees to use a proven coaching framework that helps lead to the achievement of specific outcomes in mentor settings.

One such framework that is well-regarded and used frequently in coaching relationships is the GROW model of coaching (David & Clutterbuck, 2013). The GROW model is a four-step process to structure the mentor coaching relationship. One of the model's strengths is its inherent simplicity. It is straightforward for individuals who are new to coaching to learn quickly and begin implementing effectively without extensive training. Further, this model is goal-oriented and focused on delivering specific outcomes, which aligns well with the findings that entrepreneurs find guidance on opportunities and decisions to be highly impactful (Whitmore, 2020).

The GROW model begins by identifying the mentees goals and follows through to the actions necessary to make it come to fruition. The four steps include:

Table 6: GROW Model Overview (Whitmore, 2020)

GROW Model Overview	
1	<p><i>Goals – What are your goals?</i></p> <ul style="list-style-type: none"> • Identifies and clarifies the type of goal through an understanding of ultimate goals, performance goals and progress goals along the way. • Provides understanding of principal aims and aspirations. • Clarifies the desired result from the session.
2	<p><i>Reality – What is the reality?</i></p> <ul style="list-style-type: none"> • Assesses the current situation in terms of the action taken so far. • Clarifies the results and effects of previously taken actions. • Provides understanding of internal obstacles and blocks currently preventing or limiting progression.
3	<p><i>Options – What are your options?</i></p> <ul style="list-style-type: none"> • Identifies the possibilities and alternatives. • Outlines and questions a variety of strategies for progression.
4	<p><i>Will – What will you do?</i></p> <ul style="list-style-type: none"> • Provides understanding of what has been learned and what can be changed to achieve the initial goals. • Creates a summary and plan of action for implementation of the identified steps. • Outlines possible future obstacles. • Considers the continued achievement of the goals, and the support and development that may be required. • Estimates the certainty of commitment to the agreed actions. • Highlights how accountability and achievement of the goals will be ensured.

As shown above, the four steps are tactical in nature and align well with the findings of the research survey. For instance, Step Three in the GROW Model, Options, is based on Discovering types of behaviors that were identified by mentees who

participated in the research to be the highest impact types of behaviors. The behaviors outlined in Step Four of the GROW Model are in alignment with the Directing behaviors assessed in the survey. The Directing category of behaviors was perceived to have the second highest impact by mentees on their entrepreneurial journey. Further, new mentors can readily access resources on this model, including prompts to use to facilitate a discussion on each area of the model. Basic training on the GROW model or a similar model can help mentors and mentees stay focused on reaching desired goals and documenting outcomes, reinforcing the success of the mentor program as a whole (David & Clutterbuck, 2013).

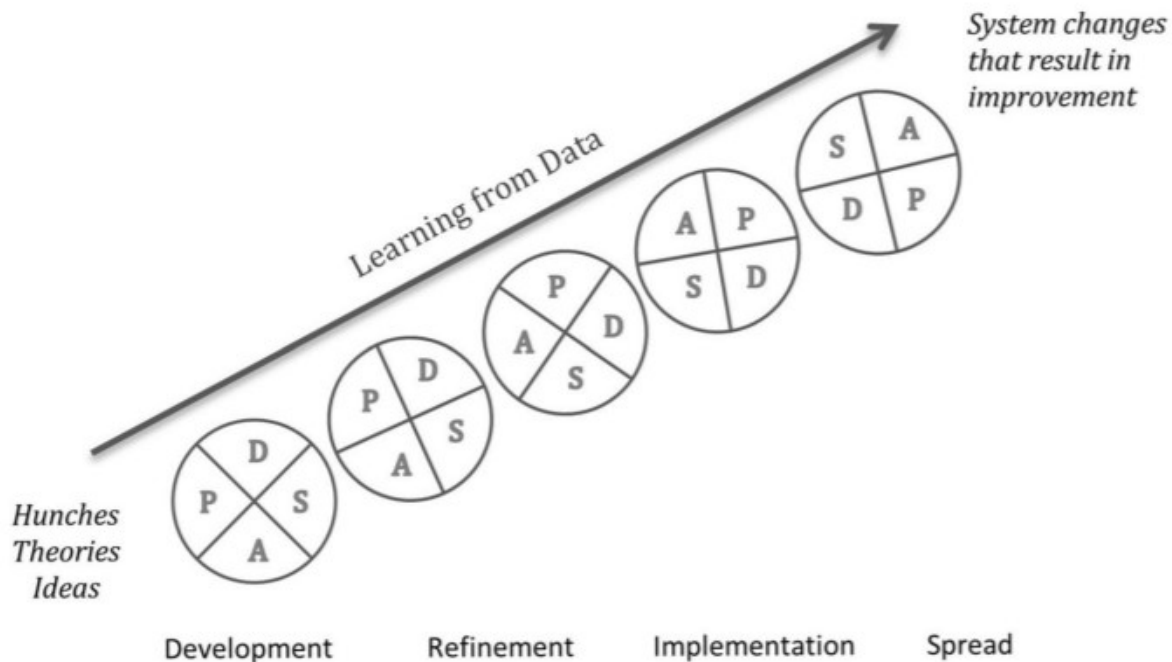
Recommendation Four ***Continuous Improvement***

Conduct mentee and mentor satisfaction assessments to understand what is and is not effective on a regular basis, at least annually.

Finally, the mentor program has delivered positive results to date to its key stakeholders, as documented in both the research survey satisfaction scores as well as the qualitative responses and interviews. To keep the current momentum going in a positive direction and to continue growing and improving the program, it will be helpful to engage in a continuous improvement process. The completion of periodic and regular assessments of mentor relationships and the mentor program as a whole will provide valuable insights into what is working well and should be continued and what is not working effectively that could be improved. The well-known and straightforward Plan - Do - Study - Act model for continuous improvement, illustrated below in Figure 13, can be a useful approach to ensure success is built upon and weaknesses are improved over time (Bryk et al., 2017).

This approach to continuous improvement enables organizations to move from mere theories or hunches about how they should change to improve their results to the actualization of systemic changes that result in meaningful improvement. To do this, program leaders take a data-driven approach to planning which changes to make and then executing those changes, oftentimes in a small experiment or pilot project. They then study and measure the effects of the changes and act on findings that demonstrate improvements have been made. Over time, they continue to develop and refine their efforts to make meaningful changes, implementing the ideas that have the most merit. Once successful, the changes are spread to the rest of the organization in an effort to create more widespread, positive changes and improvements (Bryk et al., 2017).

Figure 13: Continuous Improvement Over Time (Langley, 2009)



The current study is the first formal analysis that the Wond'ry has engaged in to assess the effectiveness of the mentor program. Hopefully, the findings and recommendations detailed above can be successfully implemented to enable the program to optimize the fulfillment of its mission. However, program change is generally incremental in nature and does not create linear results. Rather, progress comes intermittently as program refinements are implemented and take time to show full benefits (Langley, 2009). A periodic analysis of program outcomes both at the micro level of mentor relationships and at a macro level showing program effectiveness and efficiency will help enable the leadership team to make changes that lead to meaningful, positive improvements.

Assessments of mentee satisfaction can be conducted at the conclusion of mentor relationships. The results can help mentors refine their approaches and can also help the program leadership match new mentees with mentors effectively in the future. In addition, these assessments can be aggregated annually to show mentee satisfaction rates and trends over time.

Additionally, as discussed previously, mentors are key stakeholders of the program and are essential for its success. Collaborating with mentors to assess their satisfaction with the program and uncover new opportunities for improvement will likely help them continue to feel as though they have an imprint on the success for the program. This can lead to additional buy-in and engagement as volunteers who are committed not only to their individual mentees but also to the program as a whole (Bryk, 2017).

These assessments do not need to be arduous in nature. The survey instrument used to conduct this research study could be used as a benchmark and starting point for future annual assessments sent to program stakeholders. Further, the Innovation Portal has the potential to be a central source for all artifacts associated with the mentor program, including making connections with mentors, gathering and transferring notes on mentor meetings, delivering assessments, and offering coaching training materials to mentors. The aggregation and analysis of the results could be conducted by a student or alumnus/a who is interested in helping support the program so that it can continue to be successful. This removes significant administrative burden from the program leadership team, which is already experiencing limited capacity for assuming additional tasks.

Upon completion of the assessments it will be important to share the results with participants and develop a straightforward plan to implement changes that address any key issues that arise on the surveys. Over time, the mentor program can continually grow and improve to optimize the outcomes of its entrepreneurs, meet the needs of mentors and other stakeholders, and continue fostering a flourishing culture of innovation at Vanderbilt, in the Nashville community, and beyond.

CONCLUSION

The Vanderbilt Wond'ry is a unique and important organization that promotes a “maker” culture and supports trans-institutional collaboration across all Vanderbilt schools, disciplines, and levels. The mentor coaching program is an important program offered by the Wond'ry and offers individualized support to entrepreneurs.

The above research initiative details a comprehensive program evaluation that was conducted to gain insight into the effectiveness of the mentor program. It also determined which attributes of the program were viewed as most valuable by the participants. A sequential mixed methods approach using a survey with quantitative and qualitative questions along with selected mentor interviews was used to conduct the assessment.

Key findings were distilled from the data that was collected and include the following takeaways that answer the three primary research questions and provide additional relevant insights:

Key Findings	
Research Question 1	
Which mentor coaching behaviors, aspects of the mentor coaching relationship, and components of the coaching process do mentees believe have the most impact on their ability to be successful?	
1	Mentees are solution-oriented and highly value the specific advice provided by mentors that can lead to discovering new opportunities. This is perceived as being more impactful than processing the emotions associated with entrepreneurship and innovation.
2	Providing direct information on how to solve problems and potential solutions is highly valuable to entrepreneurs.
3	Mentors currently engage in high-impact coaching behaviors.
Research Question 2	
What are the characteristics and traits of the mentee entrepreneurs who are being coached through the Wond'ry's mentor program?	
4	The mentees are generally driven, highly motivated, and also willing to ask for assistance when needed.
Research Question 3	
What are some business outcomes entrepreneurs and innovators attribute to the guidance of their mentor(s)?	
5	Specific outcomes derived directly from mentor coaching are difficult to pinpoint, although program participants attribute their success in part to their mentors.
Additional Findings	
6	Overall, mentor program participants are highly satisfied with the mentor support they received.
7	Additional structure and training can be helpful for mentors so that they can be as effective as possible when guiding program participants.

Based on these findings, the Wond'ry has several opportunities to build upon the strong foundation it has laid for the mentor program. Recommendations for continued growth included:

1. **Training** - Offer more formal training and support to mentors to increase effectiveness for entrepreneurs.
2. **Documentation** - Take a more structured approach to supporting mentees and documenting outcomes from mentor meetings to ensure needs are being met optimally.
3. **Coaching Model** - Consider implementing a solution-oriented coaching model such as the GROW Model to help frame mentor meetings and support mentees with meeting their specific goals.
4. **Continuous Improvement** - Conduct mentee and mentor satisfaction assessments to understand what is and is not effective on a regular basis, at least annually.

The future of the Wond'ry mentor program is exciting, particularly given the commitment and capabilities of the current leadership team. The enactment of the findings and recommendations presented above will enable the program to continue growing and improving - maximizing the impact that it can have on supporting the journeys of entrepreneurs and innovators who are shaping our future.

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APPENDIX A. Vanderbilt Wond'ry Mentor Program Coaching Evaluation

Introduction

Hello! Thank you for participating in our research on the effectiveness of the Mentor Program at the Wond'ry. Your answers to the questions below will enable us to continue to grow and improve the Wond'ry. Please complete this questionnaire, which will take less than 30 minutes to finish.

Thank you again for your assistance in making the Wond'ry as successful as possible in promoting innovation.

Questionnaire

1. Background Information

First we would like to ask you some information about yourself.

- a. Gender: F / M (please circle appropriate letter)
- b. Age:
- c. Your Organization:
- d. Professional role (e.g. student, alumni, faculty member, community member, other):
.....

2. Information about your mentoring journey

- a. How many mentoring sessions have you received to date from your mentor?
.....
- b. What is the expected length of your mentoring (total number of sessions) if you have not yet concluded your mentor relationship?
.....
- c. Who took the initiative to request a mentor?

Yourself – A Wond'ry Team Member – Other (please specify:)

d. What did you hope to achieve through mentoring? Please select one or two of the following options – circle as appropriate:

- 1 In my mentoring, I would like to learn something new
- 2 In my mentoring, I would like to change my behavior or approach
- 3 In my mentoring, I would like to strengthen myself, become more resilient
- 4 In my mentoring, I would like to stop doing certain things
- 5 In my mentoring, I would like to reflect on my skills
- 6 In my mentoring, I would like to
.....(own description, max. five words)

e. Could you rate the helpfulness of your mentoring experience thus far, on a scale from 1 – 10?

.....

f. Could you select from the list of qualities below:

- 1 Circle three qualities that you really appreciate in your mentor:

Availability	Tolerance	Respect	Openness	Knowledge
Warmth	Encouragement	Humour	Involvement	Genuineness
Composure	Authenticity	Calmness	Creativity	Service
Understanding	Detachment	Listening	Empathy	Experience

- 2 Circle three other qualities of your mentor that you have perceived but which are less relevant for your mentoring:

Availability	Tolerance	Respect	Openness	Knowledge
Warmth	Encouragement	Humour	Involvement	Genuineness
Composure	Authenticity	Calmness	Creativity	Service

Understanding	Detachment	Listening	Empathy	Experience
---------------	------------	-----------	---------	------------

3. Behaviors of your mentor

Listed below are many different ways in which your mentor might act towards you. For each item, please indicate in the right-hand boxes your perception of

- (1) how often you see him/her acting in that way, and
- (2) how helpful it is for you in this mentoring experience if the mentor acts in that way.

None of these behaviours are good or bad in themselves. So there are no "right" or "wrong" answers. Don't spend too long considering your replies: your immediate spontaneous answer is likely to be the most valuable.

Numbers are assigned as follows:

- 0 - Not at all (or 'not applicable')
- 1 - Rarely
- 2 - Sometimes
- 3 - Moderately high
- 4 - High
- 5 - Very high

We would imagine that if you score a '0' for Frequency, you will probably also score a '0' for Impact, as that behaviour just never happens. For other scores, Frequency and Impact should be independent dimensions which you can score separately from each other.

When working with me, my mentor tends to

		Frequency	Impact
		"How often?"	"How helpful?"
		0- 5	0 - 5
0	<i>Example answer - please fill in your replies in this box -----></i>		
1	advise me of the appropriate action to take		
2	explain the purpose of a task		
3	raise my awareness of my own learning needs		
4	ask me to tell him/her about a negative incident which I have experienced		
5	encourage me to set my own learning goals		

6	show his/her respect for me as an individual		
7	give me feedback about the impact of my behaviour		
8	invite me to talk about a difficult personal experience of mine		
9	help me to reflect on my experiences		
10	express his/her concern to help me		
11	suggest that I choose a particular solution		
12	inform me about a learning opportunity		
13	ask me what I have learnt from a particular incident		
14	acknowledge the value of my ideas, beliefs, opinions		
15	persuade me to take a particular approach		
16	interpret my experiences or behaviour		
17	ask questions to uncover what I am hiding or avoiding		
18	encourage me to express my emotions		
19	apologise for anything he/she does which is unfair, forgetful, hurtful		
20	ask me how I can apply what I have learnt		
21	help me to recognise my own emotions		
22	challenge my denials or defensiveness		
23	make me aware of the choices open to me		
24	ask that I change my behaviour		
25	ask me how I feel about a success which I achieved		
26	make me aware of my mistakes		
27	offer me an explanation of what has happened		
28	inform me about the success criteria for a task		
29	ask open questions to promote discovery		
30	praise me for a job well done		
31	encourage me to find my own solutions and answers		
32	ask me why I am upset or angry		
33	offer me emotional support in difficult times		
34	present facts which contradict my opinions		
35	demonstrate skills or actions which he/she wants me to copy		
36	give me information which I need to achieve a task		
37	draw my attention to facts which I have missed		
38	reflect my feelings by describing what he/she sees in my behaviour		
39	make me feel welcome when I visit him/her		
40	recommend the best way to do something		
41	challenge my assumptions		

42	ask me to evaluate my own performance		
43	he/she gives me feedback about my results		
44	propose the best course of action for me to take		
45	ask me to express feelings which are blocking my progress		
46	show me the consequences of my actions		
47	ask me to set my own work objectives and targets		
48	make himself/herself accessible to me when needed		
49	help me "with their hands in their pockets": i.e. without interfering		
50	ask me how I feel about a current difficulty		
51	encourage me to feel good about myself		
52	tell me where to go to find information and help		
53	show me how to correct my mistakes		
54	confront issues of poor performance		
55	tell me how to get started on a new task		
56	reveal information about his/her own experiences		
57	affirm positive qualities or actions of mine which I am denying		
58	help me to express my insights after an emotional experience		
59	help me to map out my present understanding		
60	share information about his/her own failures and weaknesses		
61	respond to some of the things I say with lightness and humour		
62	manage my expectations explicitly		
63	rephrase or paraphrase what I have just said		
64	draw attention to specific words or metaphors that I use		
65	play the devil's advocate bringing out the absurdity of what I've just said		
66	convert my objections into opportunities		
67	suggest and review 'homework' for between the sessions		
68	engage in 'live' exercises such as role-play, mind-mapping etc.		
69	approach concerns that I raise from a very different and new perspective		
70	make explicit the patterns of behaviours that I seem to engage in		

4. Your own personal drivers

Below are 25 statements about yourself as a professional. Please indicate if you agree or disagree with them.

	Agree	Disagree
1. I set myself high standards and criticise myself if I do not myself if I do not meet them.		
2. It is important for me to be right.		
3. When I have a project at work, I tend to stay later than my colleagues in order to get everything right.		
4. I like to explain things precisely and in detail.		
5. I feel discomforted when even little things are out of place, such as a disorderly presentation, or a mess on someone's table.		
6. I would rather do what the other person wants, if doing what I want would make them less happy.		
7. It is important for me to be liked.		
8. I feel responsible for keeping the others around me feeling good.		
9. I am usually quite easily persuaded.		
10. I do not like conflict.		
11. I enjoy doing a lot of things simultaneously.		
12. I am very quick at doing things, and can get impatient with others.		
13. I often talk before the other person finishes what they have to say.		
14. I like to get on with the work rather than planning and talking about it.		
15. I often set myself too short time limits.		
16. I tend to control and hide my feelings.		

17. I prefer to get on with things on my own.		
18. I am reluctant to ask for help.		
19. I often do not recognise if I am hungry, thirsty or tired while doing my work.		
20. I get tired if I am with other people for too long.		
21. In conflicts I feel 'damned if I do, damned if I don't'.		
22. I have a tendency to start things but never quite finish them.		
23. I often find myself going round and round in circles with a problem, feeling stuck and not able to get out of it.		
24. I am often the 'rebel' or the 'odd one out' in a group.		
25. I am very tenacious, hating to give up or give in, and hoping that this time it will work.		

5. Some open-ended questions

Finally, we would be grateful if you could answer a few open questions about your coaching experience:

- a. Would you like to mention any contributions from your mentor that made the mentoring particularly helpful to you, which were not covered by the questions above:

1

.....

2

.....

3

.....

- b. Could you name three specific outcomes that you ascribe to the mentoring:

1

2

3

c. Is there anything you would like to add, regarding your experience with mentoring:

.....

.....

.....

Thank you for your valuable contribution!

APPENDIX B. Research Participation Request Email – Mentor Program Participants

Below is the email template that was used to request participation in the research through the completion of the questionnaire.

[First Name],

Hello! I hope all has been going well with you and your innovation endeavors. As the Vanderbilt Wond'ry continues to grow and improve, we're partnering with a doctoral candidate to assess and gain insights into the effectiveness of our Mentor program. As a current or former recipient of Mentor support, we would value your assistance.

Will you please complete the anonymous assessment linked here **by Weekday, Month, Date**? This should take less than 30 minutes to complete and would be highly valuable to us.

Please let me know if you have any questions, and thank you for your assistance with this important initiative.

Associate Director
The Wond'ry - Vanderbilt University

APPENDIX C. Current Wond'ry Program Mentors



Blake Bernard

Associate, Waller Attorney



John Bers

Adjoint Professor of Engineering Management, Vanderbilt University



Woody Bibb

Founder, Bibb Ventures



Laura Campbell

Founder, Laura Campbell & Assoc.



Ray Capp

Advisor at JRI Ventures



Sean Casey

Head of Product for divvyDOSE



James DiGiorgio

President, Applied Knowledge LLC



Amr El-Husseini

Wond'ry Master Mentor - CEO, Lodestone Advisory Group



Larry Felts

Partner, The KF Group



Anant Gandhi

Innovation Principal, Bridgestone Americas



Chris Gardner

Senior Sales Executive, Oscar Insurance



Shawn Gliner

Wond'ry Master Mentor - CEO, Nanoferix



Andrew Goldner

Partner at GrowthX



Jeff Gould

Chief Strategy Officer for both Amplion Clinical Communications and Orchid International



Kane Harrison

VP & CMO of TalkApolis



Jessica Harthcock

Founder and CEO of Utilize Healthcare



Willis Hulings

Associate Professor of Practice of Managerial Studies, VU College of Arts & Science



Diane Keeney

Senior Program Specialist, Cumberland Emerging Technologies, Inc



Paul King

Professor Emeritus of Bio- and Mechanical Engineering, VU School of Engineering



Yiorgos Kostoulas

Associate Professor, Engineering Management Program



Greg Lewis

CEO, Tennessee Center for Family Business



Dawei Li

Co-Founder, Aloa



Robinson Littrell

Consultant, Deloitte Consulting



Marcia Masulla

CEO of Roar Nashville, Founder & Managing Partner of Nashville Fashion Week, Founder & Executive Director of Tiny But Mighty Fund



Libby Monette

Marketing Manager, AccuReg



Jeremy Park

Manager of Adult & Accounting Services, Pershing Yoakley & Associates



Jorge Perez

VP of Engineering, Cylera



Danny Pippin

Exec. Dir., John Maxwell Team



Joe Rando

Associate Professor, Practice of Managerial Studies



Martin Renkis

GM, Johnson Controls



Peter Rousos

Director of New Ventures, VU CTTC



Dan Ryan

Principal for Ryan Search and Consulting



Bayard Saunders

CMO of MiiA Digital



Fred Scholl

Global Senior Information Security
Risk Manager



Yolanda Shields

Author, Speaker, and Coach



Phil Shmerling

SVP Relationship Manager, Studio
Bank



Peter Smith

President/COO Golden Spiral



Thea Swenson

Resident, VUMC



Joe Thomas

Owner and Consultant Music City
Cyber



Philip Tulumieri

Business Executive and Consultant



Stryker Warren

Wondry Master Mentor - Vanderbilt
University CTTC, EAC & Healthcare
Consultant



Diane Warren

VP of Merchandising, VF Workwear



Neil Whitney

Co-founder, Menud



Anderson Williams

VP of Operations, BOS Framework



Michael Woolf

Operations Exec | Legal Advisor |
Entrepreneur

B

C

P

p

S

W

U

C

APPENDIX D. Master Mentor Interview Guide

1. Can you please provide me with some information about your professional background?
2. Have you been an entrepreneur and/or innovator at some point? If so, can you please tell me about this?
3. Why did you choose to become a mentor?
 - a. How long have you been a mentor?
 - b. Have you been a mentor anywhere else in addition to the Wond'ry?
4. Have you had any training on how to effectively coach others?
 - a. If so, what type of training was this?
 - b. Did you read books or talk to other mentors to get guidance on how to coach?
5. Can you tell me about your approach to coaching mentees?
6. How do you interact (if at all) with the other Wond'ry mentors?
7. How do you interact (if at all) with the Wond'ry leadership team?
8. If you had the ability to modify the Wond'ry mentor program, which changes would you make?
9. What other information would be helpful for us to discuss?

APPENDIX E. Comparative Results from DeHaan et al.

Below are the results that DeHaan et al. (2009) found when assessing the qualities that are most and least valued in coaching relationships.

	Select three qualities from the list that you really appreciate in your coach				Select three other qualities that you have perceived but which are less relevant for your coaching			
	Questionnaire 1		Questionnaire 2		Questionnaire 1		Questionnaire 2	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Availability	5	2.43	6	5.77	13	6.34	2	2.15
Warmth	8	3.88	6	5.77	17	8.29	9	9.68
Composure	2	0.97	–	–	8	3.90	5	5.38
Understanding	30	14.56	11	10.58	10	4.88	5	5.38
Tolerance	4	1.94	–	–	11	5.37	3	3.23
Encouragement	25	12.14	11	10.58	10	4.88	8	8.60
Authenticity	11	5.34	3	2.88	6	2.93	3	3.23
Detachment	5	2.43	2	1.92	10	4.88	4	4.30
Respect	2	0.97	–	–	11	5.37	7	7.53
Humour	1	0.49	2	1.92	18	8.78	5	5.38
Calmness	6	2.91	4	3.85	20	9.76	5	5.38
Listening	34	16.50	19	18.27	7	3.41	3	3.23
Openness	9	4.37	5	4.81	8	3.90	5	5.38
Involvement	11	5.34	–	–	5	2.44	3	3.23
Creativity	6	2.91	–	–	14	6.83	2	2.15
Empathy	11	5.34	7	6.73	11	5.37	9	9.68
Knowledge	19	9.22	12	11.54	5	2.44	1	1.08
Genuineness	7	3.40	3	2.88	7	3.41	6	6.45
Service	1	0.49	–	–	6	2.93	1	1.08
Experience	9	4.37	13	12.50	8	3.90	7	7.53

Below are the results that DeHaan et al. (2009) found when assessing the reasons for engaging in mentor coaching.

Independent variable	Range	Questionnaire 1		Questionnaire 2	
		Frequency	%	Frequency	%
What do you hope to achieve through coaching?	I would like to learn something new	24	17.14	8	25.81
	I would like to strengthen myself, become more resilient	28	20.00	11	35.48
	I would like to change my behaviour or approach	39	27.86	6	19.35
	I would like to stop doing certain things	10	7.14	1	3.23
	I would like to reflect on my practice	36	25.71	5	16.13
	Other	3	2.14	0	0.00

Note: Frequencies and percentages for all other independent variables can be obtained from the authors

Below are the results that DeHaan et al. (2009) found when assessing the frequency and impact of specific behaviors in coaching settings.

Measurement	Descriptive statistics				Correlations between the six main Coaching Behaviours and Helpfulness/Learning Styles, at Time 1 and Time 2							
	Time 1		Time 2		Helpfulness		Time 1 AC-CE		AE-RO		Time 2 Helpfulness	
	Impact	Frequency	Impact	Frequency	Impact	Frequency	Impact	Frequency	Impact	Frequency	Impact	Frequency
<i>Heron's coaching behaviours</i>												
Directing	2.67	2.40	2.78	2.58	0.31**	0.21	-0.00	0.05	0.29*	0.24*	0.09	0.09
Informing	3.01	2.93	3.09	3.03	0.46**	0.43**	0.05	0.02	0.15	0.15	0.12	0.20
Challenging	2.95	2.79	3.20	3.00	0.40**	0.42**	0.13	0.15	0.13	0.10	0.16	0.21
Releasing	2.87	2.80	3.12	3.01	0.46**	0.40**	0.23	0.28*	0.15	0.16	0.15	0.08
Discovering	3.59	3.63	3.65	3.60	0.40**	0.37**	-0.00	-0.07	-0.01	-0.06	0.08	0.14
Supporting	3.06	3.12	3.10	3.13	0.48**	0.29*	0.24*	0.15	0.24*	0.08	0.25	0.17
<i>Additional coaching behaviours</i>												
Respond to some of the things I say with lightness and humour	3.56	3.51	3.48	3.48								
Manage my expectations explicitly	3.18	3.20	2.81	2.87								
Rephrase or paraphrase what I have just said	3.30	3.30	2.74	2.90								
Draw attention to specific words/metaphors that I use	3.23	3.32	3.35	3.42								
Play the devil's advocate bringing out the inconsistency of what I've just said	2.89	2.61	3.48	3.20								
Convert my objections into opportunities	2.86	2.74	3.10	3.10								

(continued)

[Continued from above] Below are the results that DeHaan et al. (2009) found when assessing the frequency and impact of specific behaviors in coaching settings

Measurement	Descriptive statistics				Correlations between the six main Coaching Behaviours and Helpfulness/Learning Styles, at Time 1 and Time 2							
	Time 1		Time 2		Helpfulness		Time 1		AE-RO		Time 2	
	Impact	Frequency	Impact	Frequency	Impact	Frequency	Impact	Frequency	Impact	Frequency	Impact	Frequency
Suggest and review "homework" for between the sessions	2.78	2.73	2.87	2.72								
Engage in "live" exercises such as role-play, mind-mapping etc.	2.07	1.83	2.23	2.03								
Approach concerns that I raise from a very different and new perspective	3.27	3.06	3.45	3.29								
Make explicit the patterns of behaviours that I seem to engage in	3.29	3.07	3.58	3.32								
Helpfulness of the coaching experience	7.21		7.87									
Learning style AC-CE	-3.23											
Learning style AE-BO	-5.51											

Notes: *Correlation is significant at the 0.05 level (2-tailed); **Correlation is significant at the 0.01 level (2-tailed); Correlations between the six main Coaching Behaviours and Helpfulness/Learning Styles, at Time 1 and Time 2
Information about Correlations of the ten Additional Coaching Behaviours with Helpfulness/Learning Styles can be obtained from the authors

APPENDIX F. The Goal-focused Coaching Skills Questionnaire (Grant, 2007)

Table 1 The Goal-focused Coaching Skills Questionnaire

<i>Facet</i>	<i>Item</i>
O	My coaching is always effective in helping my coachees reach their goals
O	My coachees do not seem to value the time we spend having coaching conversations (R)
WA	I know how to create an environment in which coachees feel free to present their own ideas
WA	I purposefully use language that shows that I understand my coachee's feelings
SF	By the end of a coaching session my coachees always have greater clarity about the issues they face
G	The goals we set when coaching are always stretching but attainable
G	The goals we set during coaching are very important to my coachees
G	The goals we set during coaching are often somewhat vague (R)
G	I am very good at helping my coachees develop clear, simple and achievable action plans
SF	When coaching, I spend more time analysing the problem than developing solutions (R)
MPA	I always ask my coachees to report to me on progress towards their goals
MPA	When coaching I find it difficult to address any performance shortfalls directly and promptly (R)

Notes: O = Outcomes of coaching; WA = Working alliance; SF = Solution-focus; G = Goal setting; MPA = Managing process and accountability; (R) = Reverse scored; Free use of this scale for training and research purposes is permitted