VIRTUAL COACHING, SELF-DIRECTED LEARNING, AND THE IMPLEMENTATION OF

EVIDENCE-BASED PRACTICES: A SINGLE QUALITATIVE CASE STUDY

by

Elisabeth A. Myers

Liberty University

A Dissertation Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

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APPROVED BY:

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Abstract

The purpose of this single instrumental case study was to understand how a virtual coaching program provides opportunities for self-directed learning during the implementation of evidence-based practices for adults at Navigator Coaching. The theory guiding this study was Deci and Ryan's self-determination theory as conceptualizations of self-directed learning described in the literature mirror descriptions of self-determination. The central research question was: How does a virtual coaching program provide opportunities for self-directed learning during the implementation of evidence-based practices? As a single instrumental case, the setting for this study was one virtual life-coaching program in North America. The sample of participants included 12 adults who were currently enrolled in the program for a minimum of 6 months and participated in weekly program activities. Multiple data collection methods were employed to describe and understand the case: observations, audiovisual materials, and individual interviews. Interpretational analysis and a multistep data analysis process including direct interpretation, categorical aggregation, correspondence tables, and interpretive commentaries were utilized to develop the themes and overall synthesis of the case. Opportunities for self-directed learning were provided in weekly live sessions, modules in the program library, and in the Facebook group. Program members utilized instructional opportunities to satisfy their need for autonomy, thus becoming students of self. Participation in a purposeful community that was focused on solutions provided opportunities for program members to satisfy competence and relatedness needs. Program members implemented evidence-based practices and developed skills to create weekly learning plans, which assisted them in becoming agents of their highest selves.

Keywords: virtual coaching, self-directed learning, evidence-based practices, self-determination theory, sustained implementation

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Dedication

This case study is dedicated to the program members and coaches of Navigator Coaching. Your emphasis on understanding lasting change as an internal process that transforms belief systems highlights the truth and wisdom in Scripture:

> Finally, brethren, whatever things are true, whatever things are noble, whatever things are just, whatever things are pure, whatever things are lovely, whatever things are of good report, if there is any virtue and if there is anything praiseworthy—meditate on these things. The things which you learned and received and heard and saw in me, these do, and the God of peace will be with you (New King James Version Study Bible, 1997/2018, Philippians 4:8–9).

Thank you for modeling that with practice, we can think new and better thoughts that result in actions that improve our own life experience and allow us to joyfully serve our families and communities. Your pursuit of the good, true, and lovely is inspiring.

Acknowledgments

Thank you to God, my heavenly Father, for your love, grace, and mercy. "For of Him and through Him and to Him are all things" (New King James Version Study Bible, 1997/2018, Romans 11:36). Dear Father, thank you that your ways and thoughts are higher than our ways and thoughts and that your Word will not return void but will accomplish your purposes (New King James Version Study Bible, 1997/2018, Isaiah 55:9–11). Thank you to my Savior, Jesus Christ: You are the Logos, the Word incarnate (New King James Version Study Bible, 1997/2018, John 1:1–3). Jesus, thank you that you are our good Shepherd; you willingly gave your life for us, sheep who have gone astray (New King James Version Study Bible, 1997/2018, John 10:11–18; Isaiah 53:6) so that we have the hope of eternal life (New King James Version Study Bible, 1997/2018, John 3:16–17). "But He was wounded for our transgressions, He was bruised for our iniquities; The chastisement for our peace was upon Him, And by His stripes we are healed" (New King James Version Study Bible, 1997/2018, Isaiah 53:5). Thank you, Holy Spirit, that you are transforming believers into the image of Jesus, from glory to glory (New King James Version Study Bible, 1997/2018, 2 Corinthians 3:18). Holy Spirit, thank you that you help us in our weakness, search our hearts, and intercede for us according to the will of God (New King James Version Study Bible, 1997/2018, Romans 8:26–27).

Thank you, Father, for your holy Word, the sacred Scriptures. "All Scripture is given by inspiration of God, and is profitable for doctrine, for reproof, for correction, for instruction, for righteousness" (New King James Version Study Bible, 1997/2018, 2 Timothy 3:16). In your Word is wisdom for remaining humble and seeking knowledge while conducting research: 1. "He who answers a matter before he hears it, It is folly and shame to him" (New King James Version Study Bible, 1997/2018, Proverbs 18:13).

2. "The heart of the prudent acquires knowledge, and the ear of the wise seeks knowledge" (New King James Version Study Bible, 1997/2018, Proverbs 18:15).

3. "The first one to plead his cause seems right, until his neighbor comes and examines him" (New King James Version Study Bible, 1997/2018, Proverbs 18:17).

4. "A fool has no delight in understanding, But in expressing his own heart" (New King James Version Study Bible, 1997/2018, Proverbs 18:2).

Thank you to Dr. Christine Saba, my dissertation chair, for your prayers, guidance, and kindness. God has given you gifts of encouragement and wisdom to gently and courageously lead doctoral candidates to the truth: the truth of God's Word, the truth of our strengths, and the truth of our weaknesses. Thank you for not being ashamed of the gospel of Christ (New King James Version Study Bible, 1997/2018, Romans 1:16) and continually pointing me to the Lord, who is the source of my strength, my refuge, and my defense (New King James Version Study Bible, 1997/2018, Psalm 59:16–17). Thank you to Dr. Susan Quindag, my committee member, for your God-given wisdom and insight. Your detailed feedback and questions were instrumental in helping me recognize where the manuscript lacked clarity, consistency, and cohesion. You showed me why it is important for the dissertation to be a cohesive whole. Thank you for your joy and enthusiasm for research and learning. Thank you to both Dr. Saba and Dr. Quindag for demonstrating the value and importance of seeking wise counsel, listening, and increasing learning (New King James Version Study Bible, 1997/2018, Proverbs 1:5) because without counsel plans fail (New King James Version Study Bible, 1997/2018, Proverbs 15:22).

Thank you to the study participants for your time and sharing your experiences of learning in a virtual coaching program. Thank you for modeling committed action and perseverance during difficult circumstances. You inspire me to "press toward the goal for the

prize of the upward call of God in Christ Jesus" (New King James Version Study Bible,

1997/2018, Philippians 3:14).

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List of Abbreviations

Evidence-Based Practices (EBPs)

Fidelity of Implementation (FOI)

Institutional Review Board (IRB)

Multitiered Systems of Support (MTSS)

Professional Development (PD)

Random Controlled Trial (RCT)

Response to Intervention (RTI)

Self-Determination Theory (SDT)

CHAPTER ONE: INTRODUCTION

Overview

Evidence-based practices are implemented to improve organizational systems and accomplish positive outcomes, but initiating and sustaining practices is difficult. Readers are invited to join the research investigation to discover the root of implementation challenges and the role coaching and self-directed learning play in improving the implementation of evidence-based practices. This introduction first provides a brief background of the historical, social, and theoretical context regarding coaching, learning, and the implementation of evidence-based practices. Then, the research issues are defined and detailed through a problem statement, which is followed by the purpose statement and significance of the study. Lastly, the research questions, definitions of key terms, and a closing summary are provided.

Background

Organizations implement evidence-based practices (EBPs) to achieve goals and overall reform (Morrison et al., 2021). Implementation is a process encompassing what to implement and how to effectively deliver and sustain practices (Neal & Fixsen, 2020; Webb & Michalopoulou, 2021). Achieving adequate fidelity of implementation (FOI), where the core elements of EBPs are implemented as intended, is challenging (Caves et al., 2021; Combs et al., 2022). Stakeholders need to become self-directed learners to achieve high FOI and sustain EBPs (Austin, 2022; Birken & Currie, 2021). Self-directed learning occurs when stakeholders have transferred learning into practice and are motivated and committed to implement EBPs with high fidelity (Carlgren & BenMahmoud-Jouini, 2022; Culph et al., 2021). Coaching is recommended to support FOI, self-directed learning, and overall implementation (Gavigan et al., 2021;

Giordano et al., 2021). There is a focus in the literature on outcomes associated with coaching, but coaching practices are not clearly defined, described, or understood (Elek & Page, 2019; Greif et al., 2022; Hunter & Redding, 2023; Lee et al., 2023; Odom et al., 2022). The following sections include discussions of the historical, social, and theoretical contexts of research issues to understand how phenomena have evolved, thus framing the need for this study.

Historical Context

There is an emphasis in education and health care settings to engage in practices that are evidence-based to positively change outcomes (Halberg et al., 2021; Stoiber et al., 2022). The origin of the term *evidence-based practices* is found in evidence-based medicine (Halberg et al., 2021). Evidence-based medicine is a medical philosophy emphasizing the thoughtful and explicit use of the current and best empirical evidence for making evidence-based decisions regarding individualized patient care (Mackey & Bassendowski, 2017). This philosophy expanded to nursing care and became known as evidence-based practice, whereby health care professionals purposed to achieve high-quality patient outcomes across settings (Halberg et al., 2021). The adoption of the evidence-based philosophy in education moved into the national spotlight in the late 1990s once comprehensive school reform initiatives were championed by members of the United States' congress (Slavin, 2002). The emphasis on EBPs has recently expanded to other organizational settings, with a focus on best practices in leadership, management, and teaming (Aljbour et al., 2022; Cho et al., 2017; Cleary-Holdforth et al., 2022; Leroy et al., 2022; Northouse, 2019; Wheelan, 2016).

EBPs may refer to single interventions or an entire program, framework, or reform effort consisting of a multitude of interventions with demonstrated empirical evidence (Fuchs & Fuchs, 2017; Hall, 2018; Neal & Fixsen, 2020). Research investigating EBPs has exploded since the

1990s, and a plethora of EBPs are widely available (Hall, 2018; Hattie & Zierer, 2019). The issue of implementing practices with demonstrated effectiveness quickly moved from a concern of what to implement to achieve reform to how evidence-based frameworks should be implemented in practice (Darling-Hammond, 2007; Stoiber & Gettinger, 2016). It became apparent that there were widespread variations in how implementation was occurring across settings, and since these variations were affecting outcomes, a new type of research was needed: implementation research (Nordstrum et al., 2017).

Implementation science developed as a formal research discipline because of widespread failure to implement and sustain EBPs in health care settings (Kelly, 2013), and implementation science research soon extended to other settings (Lengnick-Hall et al., 2022). In 2006, the *Implementation Science* journal made its debut, and in 2012, the *Handbook of Implementation Science for Psychology in Education* was published (Nordstrum et al., 2017). Researchers have concluded that the type and quality of training professionals receive in real-life settings impacts the degree of FOI achieved and implementation success (Balu et al., 2015; Fuchs & Fuchs, 2017; Stahl, 2016). Implementation science researchers have developed implementation frameworks that are built on the proposition that professional learning is important at each stage of the implementation process and that training needs to support implementation at the individual level to increase the collective capacity that generates enough momentum to actualize change (Damschroder et al., 2021; Neal & Fixsen, 2020; Nordstrum et al., 2017; Sanetti & Collier-Meek, 2019).

Social Context

Stakeholders across organizational settings are expected to effectively implement and sustain EBPs (Horn et al., 2021; Kreutzer et al., 2021; Leroy et al., 2022). However, the typical

implementation training professionals receive consists of traditional professional development (PD), and workshops are usually conducted without follow-up sessions or ongoing support (Nordstrum et al., 2017). Inadequate training practices are contributing to the research-to-practice gap associated with implementation; follow-up support is key in measuring the transfer of learning and sustaining new practices (Horn et al., 2021). Stakeholders receiving traditional training tend to have a partial understanding of what EBPs are meant to accomplish and are unsure how to implement them in real-life settings (Webb & Michalopoulou, 2021). This partial understanding leads to uncertainty, confusion, and resistance to implementation (Webb & Michalopoulou, 2021). Professionals implementing EBPs often feel unprepared to deliver EBPs (Frey & Fisher, 2017), and this perceived lack of preparation is associated with diminished confidence, commitment, and FOI (Birken et al., 2017).

In education settings, inadequate training practices affect students receiving evidence-based instruction (Fuchs & Fuchs, 2017). Negative student outcomes identified in evaluations of evidence-based frameworks were likely the result of ineffective implementation training (Fuchs & Fuchs, 2017). Conversely, when practitioners receive ongoing training, where knowledge is transferred into practice, adequate FOI and positive student outcomes are achieved (Webb & Michalopoulou, 2021). In health care settings, low FOI to coordinated care interventions negatively impacts patient care and the overall efficiency of health care teams (Nunnery et al., 2022). Conversely, when coordinated care efforts are implemented with fidelity, positive outcomes are actualized for individuals, families, and communities (Birken et al., 2017; Neal & Fixsen, 2020). In other organizational settings, low FOI to teaming innovations negatively affects production and outputs (Kittelman et al., 2021; Wheelan, 2016). When teams work cohesively and achieve synergy, production improves and goals are accomplished, which

contributes to the stability of the organization and the community in which it is situated (T. Choi & Chandler, 2020; Kittelman et al., 2021; Neal & Fixsen, 2020; Scott & Davis, 2007; Wheelan, 2016).

Ongoing coaching has been identified as a competency driver to improve and sustain the implementation of EBPs (Arden & Benz, 2018; Horner et al., 2017). The first coaching model to increase use of best practices was a peer coaching model developed by Joyce and Showers (1981). The peer coaching model was created to address the problem of educators either partially implementing best practices or abandoning them altogether (Joyce & Showers, 1981). Joyce and Showers (1981) posited the issue of poor implementation resulted from a lack of transfer of learning; teachers were not engaged and committed to implementation because they had not applied knowledge and training to their pedagogy.

Implementation science researchers echo Joyce and Showers (2002) and contend coaching will support the transfer of learning, where practitioners become knowledgeable, skillful, engaged, and committed (Arden & Benz, 2018; Curran et al., 2022; Locke et al., 2022). However, the relationship between the factors supporting long-term learning and transfer of learning during implementation are not well understood and require further study to develop professional learning models that support implementation sustainability (Meyer et al., 2022; Ramaswamy et al., 2022). There is a lack of understanding as to the coaching structures, processes, and practices that facilitate stakeholders' self-directed learning, where learning has been transferred into practice (Elek & Page, 2019; Locke et al., 2022; Odom et al., 2022; Rosenberg et al., 2022). Coaching is also time-consuming and expensive; few organizations can afford coaching that supports implementation processes (Giordano et al., 2021; Kraft & Blazar,

2017). As such, there is a need to develop coaching models that provide high quality support amidst budget constraints (Curran et al., 2022; Dorsey et al., 2020; Fleddermann et al., 2023).

Theoretical Context

Three theories have guided implementation research and are relevant for improving fidelity of implementation and sustaining positive outcomes: general systems theory, the theory of implementation effectiveness, and Joyce and Showers' (1981) model of peer coaching. According to general systems theory, for any system—biological, ecological, or organizational— the conditions in the surrounding environment impact production processes within the system (Von Bertalanffy, 1968). All systems engage in production, which is the organization of inputs to produce outputs, and it is important to understand how external environmental factors and internal subsystem activities impact production processes to sustain positive outputs (Von Bertalanffy, 1968). Systems theory terms—capacity, inputs, outcomes, environmental conditions—are prevalent in the implementation literature and frequently used as a lens to examine implementation issues (Barwasser et al., 2022; Horner et al., 2017; Rapport et al., 2022; Rowe et al., 2021; Seward et al., 2021).

In their theory of implementation effectiveness, Klein and Sorra (1996) posited there is a direct correlation between the implementation climate and professionals' use of innovations. Implementation effectiveness is the degree professionals in an organization will engage in the consistent, committed, and quality use of innovations; factors such as learning and training, user friendliness, stakeholder values, and rewards influence the institutional climate and the implementation process (Klein & Sorra, 1996). This theory has been extended to include the concept of organizational readiness, which emphasizes planning and preparation for achieving goals and sustaining practices (Rapport et al., 2022; Wakida et al., 2021).

According to the model of peer coaching by Joyce and Showers (1981), a peer coaching program will provide the practice, companionship, and feedback educators need to transfer learning into daily practice and sustain best practices. Coaching models are a key component of implementation science frameworks and continue to be employed to meet stakeholder training needs and support implementation (Arden & Benz, 2018; Cornett & Knight, 2009; Curran et al., 2022; Hsieh et al., 2021; Odom et al., 2020). There is overlap between Joyce and Showers' (1981) model of peer coaching and self-directed learning described in the implementation literature (Locke et al., 2022; Odom et al., 2022; Rosenberg et al., 2022).

There are parallels between Joyce and Showers' (1981) model of coaching and self-determination theory (SDT), which is the theory grounding this study. According to SDT, social contexts that facilitate self-determination provide opportunities for stakeholders to satisfy their psychological needs for autonomy, competence, and relatedness (Deci & Ryan, 1985). Transfer of learning in the peer coaching model corresponds to the psychological need of autonomy in SDT, and descriptions of instruction and companionship in the coaching model correspond to the psychological needs of competence and relatedness in SDT (Joyce & Showers, 1981; Ryan & Deci, 2000, 2020; Ryan & Niemiec, 2009).

There is also overlap between general systems theory, the theory of implementation effectiveness, and self-determination theory. Systems theory terms such as capacity, inner resources, and self-organization are incorporated in SDT (Ryan & Niemiec, 2009), and like general systems theory, SDT also posits social contexts can impact a system (Deci & Ryan, 1985; Von Bertalanffy, 1972). There is agreement between tenets in the theory of implementation effectiveness and SDT that conditions within a social context influence

stakeholders' engagement, values, commitment, and motivation (Klein & Sorra, 1996; Ryan & Deci, 2000, 2020).

The concept of improving the capacity of individuals and organizations is relevant in studies employing the theory of implementation effectiveness and coaching models (Curran et al., 2022; Wakida et al., 2021). Coaching is understood as a method for building stakeholder competencies and supporting their commitment to implementation (Curran et al., 2022; Hsieh et al., 2021; Odom et al., 2020). Several recent studies have examined coaching and stakeholder learning, and findings indicate self-directed learning is important in improving practices and achieving positive outcomes (Curran et al., 2022; Hsieh et al., 2021; Lomis et al., 2021). Wang and Lu (2020) employed SDT in their study of coaching in an undergraduate context; they found there was a relationship between students' self-regulation habits and self-determination. Fleddermann et al. (2023) are currently developing a model of coaching for implementation in a health care setting to improve implementation effectiveness and sustain practices. This study focuses on opportunities for self-directed learning during the implementation of EBPs in a virtual coaching setting.

Problem Statement

The problem is coaching processes in virtual professional development settings that improve the implementation of evidence-based practices are not clearly defined, developed, or understood (Ayvazo et al., 2021; Caron et al., 2022; Locke et al., 2022; Rosenberg et al., 2022). Coaching is described as a competency driver in implementation science frameworks and is recommended as a tool to improve FOI and sustain practices (Page & Eadie, 2019; Pianta et al., 2021). Coaching is understood to support self-directed learning so that stakeholders implementing EBPs commit to the process (Johnson et al., 2018; Wang & Lu, 2020). Self-

directed learning is necessary for achieving adequate FOI and sustaining the implementation of EBPs (Romano & Schnurr, 2022; Song et al., 2022).

However, there is an emphasis on coaching outcomes without a clear and consistent understanding of what coaching is and how to engage in it (Hunter & Redding, 2023; Lee et al., 2023; Sinaise et al., 2023). Even between coaches, there is little consensus regarding coaching concepts and how coaching is understood (Greif et al., 2022; Hagen et al., 2017; Hussey & Campbell-Meier, 2021; Lee et al., 2023; Sinaise et al., 2023). Future studies that detail the features of effective coaching and how coaching supports self-directed learning are important for developing professional learning programs that improve FOI and the sustainability of EBPs (Ayvazo et al., 2021; Dorsey et al., 2020; Fleddermann et al., 2023; Locke et al., 2022; Rosenberg et al., 2022).

Purpose Statement

The purpose of this single instrumental case study was to understand how a virtual coaching program provides opportunities for self-directed learning during the implementation of evidence-based practices for adults at Navigator Coaching. Navigator Coaching is a virtual life-coaching program that offers coaching services for adults wanting to achieve professional and personal goals. In this study, self-directed learning was generally defined as the transfer of learning that occurs when adults are autonomously motivated and self-determined. The theory guiding this study was self-determination theory by Deci and Ryan (1985). Self-determination is facilitated through the satisfaction of universal psychological needs for autonomy, competence, and relatedness (Deci & Ryan, 1985). As such, this study examined how Navigator Coaching provided opportunities for the satisfaction of psychological needs to understand how coaching fosters self-directed learning during the implementation of EBPs.

Significance of the Study

There is a need for future studies to examine the resources and factors associated with successful coaching (Ayvazo et al., 2021; Ippolito et al., 2021; Khumra et al., 2022). Joyce and Showers (1981) called for research to investigate the relationship between coaching and the transfer of learning. That call continues to be relevant (Opre et al., 2022). Johnston (2021) explains little research has been done regarding coaching and stakeholders' self-reflection, and without empirical research and stronger theoretical foundations, the potential of self-reflection to improve practices and increase learners' capacity may be a passing trend. The following sections include discussions of the theoretical, empirical, and practical significance of this study.

Theoretical Significance

The theoretical significance of this study includes adding to the body of SDT research by carrying on the vision of Edward Deci and Richard Ryan to continue investigations of social contexts that increase autonomous motivation and facilitate self-determination (Ryan & Deci, 2020). Through the lens of SDT, this case study responded to researchers' recommendations to improve the understanding of coaching by providing greater contextual detail of coaching programs (Barrett, 2021; Rosenberg et al., 2022). Since the focus of this study was to understand how psychological needs are satisfied in a coaching context, this research also contributed to researchers' propositions to better understand factors influencing self-directed learning (Ayvazo et al., 2021; Stoiber et al., 2022).

Empirical Significance

The empirical significance of this study includes responding to the need for future studies to deepen the current understanding of professionals' learning needs during implementation (Faggella-Luby & Bonfiglio, 2020; D. K. Shannon et al., 2021). This is important in learning

how to build implementation capacity that accomplishes positive outcomes (Goodman, 2017; Horner et al., 2017). Coaching is understood to support learning by targeting professionals' knowledge and skill development (Giordano et al., 2021). However, future implementation studies are needed to improve this understanding because coaching is a complex process (Steinbrenner et al., 2020). Specifically, descriptive studies are needed because there is little discussion in the literature detailing coaching processes and variations in coaching practices (Hunter & Redding, 2023; Odom et al., 2022). This information is important because research findings indicate there may be a relationship between an adequate level of coaching and successful implementation (Furman et al., 2021; Odom et al., 2022). There is agreement in the literature for future research to examine how coaching processes in general and the mechanisms in particular support the transfer of knowledge at the individual level (Curran et al., 2022; Odom et al., 2022; Rosenberg et al., 2022; D. K. Shannon et al., 2021; Stoiber et al., 2022).

Practical Significance

Since the focus of this case study was to understand the opportunities for self-directed learning available in a coaching program, there are practical implications for coaching programs, professional development practices, implementation processes, and improving FOI at the general organizational level (Cornelius et al., 2020; Khumra et al., 2022; Stoiber et al., 2022; Walunas et al., 2021). There is consensus in the literature that coaching needs to be ongoing and included in professional development to support implementation, but researchers note few studies provide adequate detail regarding the coaching and PD that professionals receive (McMaster et al., 2021; D. K. Shannon et al., 2021). As such, there is a need to develop craft knowledge by studying coaching models in diverse contexts to improve practices and outcomes across disciplines (Arden et al., 2017; Dorsey et al., 2020; Ippolito et al., 2021; Kraft & Blazar, 2017; Rosenberg et

al., 2022). The unique virtual coaching context in this study offered additional craft knowledge for organizations looking to develop and improve implementation plans and professional learning programs (Fleddermann et al., 2023; Odom et al., 2022; Stoiber et al., 2022). Data from this case study also contributed to discussions regarding the facilitation of self-directed learning and improving implementation capacity at the individual level (Lomis et al., 2021; Romano & Schnurr, 2022; Ting et al., 2021). However, it is the prerogative of the readers of this case study to determine how the data may apply to their contexts (Stake, 1995).

Research Questions

The research questions for this case study were rooted in the theoretical framework of Deci and Ryan's (1985) self-determination theory. SDT theorists posit social contexts that facilitate increased self-determination provide opportunities for the satisfaction of three universal psychological needs: autonomy, competence, and relatedness (Ryan & Deci, 2020). Since self-directed learning was conceptualized as self-determined learning in this study, the research questions focused on how a virtual coaching program, as a social context, provided opportunities for psychological need satisfaction and self-directed learning.

Central Research Question

How does a virtual coaching program provide opportunities for self-directed learning during the implementation of evidence-based practices?

Self-directed learning is described as the transfer of learning, active learning, and self-regulated learning, which are associated with improved implementation and the accomplishment of goals (Romano & Schnurr, 2022; Torre et al., 2020; Tsuda et al., 2019). In three studies, one in an educational context and two in a health care context, virtual coaching helped stakeholders transfer learning into practice, resulting in skill development and improved outcomes (Esposito

et al., 2022; Horn et al., 2021; Kreutzer et al., 2021). Self-directed learning is also associated with increased self-reflection; coaching has positively impacted stakeholders' self-reflection, leading to improved practices (Johnston, 2021; Stoiber et al., 2022; Wang & Lu, 2020).

Sub-Question 1

How does the coaching program provide opportunities for adults to satisfy their need for autonomy?

There is a relationship between perceptions of agency and stakeholders' engagement in implementation and goal attainment (Ryan & Deci, 2020). When stakeholders are included in planning for and evaluating the implementation process, they experience agency over implementation, which is important in stakeholders accepting and committing to the process (Alonge et al., 2020; Caves et al., 2021; Kittelman et al., 2021). Coaching supports autonomy during implementation by facilitating ownership of learning, where stakeholders invest in professional development that positively contributes to individual and organizational outcomes (Lomis et al., 2021; Tsuda et al., 2019; Wakida et al., 2021).

Sub-Question 2

How does the coaching program provide opportunities for adults to satisfy their need for competence?

Implementation training needs to target stakeholders' competencies to improve organizational outcomes (Arden & Benz, 2018; Wakida et al., 2021). Targeting professionals' knowledge, skills, and attitudes at the individual level strengthens the capacity of health care teams and junior researchers (Lomis et al., 2021; Wakida et al., 2021). When coaching focuses on professionals' competency development, stakeholders become more engaged and committed to implementation (Jakopovic, 2021; Reinholz & Andrews, 2020).

Sub-Question 3

How does the coaching program provide opportunities for adults to satisfy their need for relatedness?

Collaboration and teaming are important in improving FOI and achieving goals (Kittelman et al., 2021; Nordstrum et al., 2017; Wheelan, 2016). When stakeholders perceive they are part of a team and their feedback matters, they become motivated to accomplish positive outcomes (Lomis et al., 2021; Page & Eadie, 2019). Coaching fosters collaborative feedback cycles which improves teaming between organizational members (Fountas & Pinnell, 2021; Káplár-Kodácsy & Dorner, 2022).

Definitions

1. *Autonomous Motivation* – Behavior that originates from within the self, whereby people are self-determined to act because there is purpose and value in the actions (Gagné & Deci, 2005).

2. *Autonomy* – Experiencing a sense of ownership and having freedom and choice over actions; it is making decisions and taking self-initiated action (Ryan & Deci, 2020).

3. *Competence* – The perception that learning and growth are attainable and will lead to success; it is believing skills can be mastered and one is capable of being effective (Ryan & Deci, 2020).

4. *Identified Regulation* – The pursuit of activities that have been identified as being worthwhile and having some importance, or they may be stepping stones to accomplishing another activity that aligns with a person's value system (Ryan & Deci, 2000).

5. *Integrated Regulation* – The pursuit of activities that have been fully integrated within a person's value system: Activities are pursued because they have personal value (Ryan & Deci, 2000).

6. *Intrinsic Motivation* – Action that is pursued for no other purpose than interest in the action itself (Ryan & Deci, 2000).

7. *Relatedness* – The need for connection and belonging: People in all cultures have a need to experience connection with others (Ryan & Deci, 2020).

Summary

The purpose of this single instrumental case study was to understand how a virtual coaching program provided opportunities for self-directed learning during the implementation of evidence-based practices for adults at Navigator Coaching. The problem is coaching processes in virtual professional development settings that improve the implementation of evidence-based practices are not clearly defined, developed, or understood (Ayvazo et al., 2021; Caron et al., 2022; Locke et al., 2022; Rosenberg et al., 2022). This chapter has provided readers the historical, social, and theoretical contexts relevant for framing the problem, purpose, and significance of the study. It has also informed readers of the research questions guiding this case study, with the central question investigating: How does a virtual coaching program provide opportunities for self-directed learning during the implementation of evidence-based practices? By exploring opportunities for psychological need satisfaction, answers to the central research question and sub-questions contributed to the body of knowledge regarding professional learning contexts that strengthen the capacity of professionals implementing evidence-based practices.

CHAPTER TWO: LITERATURE REVIEW

Overview

This literature review explores research related to the implementation of evidence-based practices. There is a specific focus on examining factors that hinder and facilitate effective implementation processes. Self-determination theory by Deci and Ryan (1985) provides the theoretical framework for this case study. In this chapter, the theoretical framework is discussed first and is followed by a synthesis of related literature. The related literature opens with studies that investigated the implementation of evidence-based practices and includes discussions of fidelity of implementation, the implementation process, and implementation drivers. The next related literature section is an exploration of learning and the implementation of evidence-based practices and provides discussions of ongoing learning, process evaluations, and self-directed learning. The final related literature section is an examination of coaching and the implementation of evidence-based practices and includes discussions of coaching and engagement, limits to coaching effectiveness, and virtual coaching. The chapter concludes with a summary that addresses the gap in the literature.

Theoretical Framework

Self-determination theory (SDT) is a macro-theory of human motivation developed by Edward Deci and Richard Ryan (Deci & Ryan, 1985). According to SDT, humans need to satisfy three universal psychological needs to become self-determined: autonomy, competence, and relatedness (Deci & Ryan, 1985). SDT researchers assert that people have a common human nature, and, like physical needs, psychological needs are objective (Ryan & Niemiec, 2009).

Through decades of research, these three psychological needs have been confirmed across countries, cultures, ages, and settings (Deci & Ryan, 2008).

When psychological needs are satisfied, people become autonomously motivated and self-determined in their actions (Deci & Ryan, 2008). However, when psychological needs are thwarted, self-determination, wellness, and motivation are diminished (Ryan & Deci, 2000). SDT researchers do not argue that environments directly control behavior but contend social conditions influence people's perceptions, experiences, and need satisfaction (Ryan & Niemiec, 2009). Therefore, SDT researchers are concerned with social conditions that support optimal psychological health and well-being (Ryan & Niemiec, 2009).

Developments of SDT indicate self-determination exists along a continuum of motivation that includes autonomous motivation, controlled motivation, and amotivation (Gagné & Deci, 2005). There is a positive correlation between autonomous motivation and self-determination: When autonomous motivation increases self-determination also increases (Ryan & Deci, 2020). The three categories of autonomous motivation are intrinsic motivation, integrated regulation, and identified regulation (Gagné & Deci, 2005).

Autonomous motivation is associated with increased effort, enjoyment, and responsibility (Ryan & Deci, 2020). Autonomous motivation also fosters persistence, higher quality of learning, wellness, self-regulation, and transferable learning (Ryan & Niemiec, 2009). Conversely, controlled motivation has predicted lower quality of learning and is associated with superficial learning and diminished transfer of learning (Ryan & Niemiec, 2009). When organizational environments support autonomous motivation by facilitating opportunities for psychological need satisfaction, stakeholders are more likely to develop their capacity and flourish (Ryan & Niemiec, 2009).

This case study will use SDT as a lens to understand how a virtual coaching program is a facilitative context for self-directed learning during the implementation of evidence-based practices (EBPs). In the literature, self-directed learning is important for sustaining engagement in the implementation process (Lomis et al., 2021; Wang & Lu, 2020). Self-directed learning is associated with increased ownership, commitment, and autonomy during implementation (Torre et al., 2020). Additional descriptors of self-directed learning include self-regulated learning, self-initiated learning, and active learning (Chaipidech et al., 2021; Lomis et al., 2021).

Self-directed learning results from the transfer of learning (Romano & Schnurr, 2022). According to SDT, there is a relationship between the transfer of learning and autonomous motivation (Niemiec & Ryan, 2009). When psychological needs are satisfied, stakeholders are more self-determined to pursue meaningful learning, where they organize and apply knowledge (Niemiec & Ryan, 2009). Since descriptions of self-directed learning mirror descriptions of self-determination as described in SDT, self-directed learning will be conceptualized as the transfer of learning that occurs when learners are autonomously motivated and self-determined.

Related Literature

The purpose of the related literature section is to highlight the literature most relevant to understanding the case issues. This synthesis of literature includes discussions of three overarching issues: the implementation of evidence-based practices, learning and the implementation of evidence-based practices, and coaching and the implementation of evidence-based practices. Each sub-section flows from these main issues and can be conceptualized as bricks of information that build an understanding of the need for this study.

Implementation of Evidence-Based Practices

The implementation of EBPs is seen as a viable solution for solving organizational problems by altering production, improving organization, and actualizing positive outcomes (Kearney & Childs, 2021; Leeman et al., 2019; Neal & Fixsen, 2020). However, the implementation of EBPs is difficult because it brings change, and change is hard (T. Choi & Chandler, 2020; Lyon et al., 2021). Evidence-based implementation efforts in health care and education settings are prone to failure and at risk of abandonment (Combs et al., 2022; Damschroder et al., 2021; Fuchs & Fuchs, 2017; McIntosh et al., 2016; Nunnery et al., 2022). Improvement starts with understanding problems of implementation and studying examples of successful implementation (Ippolito et al., 2021; Neal & Fixsen, 2020; Schneider et al., 2017; Webb & Michalopoulou, 2021). The following sections contribute to this understanding through discussions of fidelity of implementation, the implementation process, and implementation drivers.

Fidelity of Implementation

In research settings, it is more common to achieve a high level of fidelity of implementation (FOI) because research environments are more controlled (Kien et al., 2018; Shernoff et al., 2020). Members of research teams tend to adhere to the core elements of EBPs and teach stakeholders in various settings to do the same; there are also enough resources to deliver and sustain EBPs (Kien et al., 2018; Shernoff et al., 2020). Debriefing meetings, where research team members check in with stakeholders, evaluate fidelity, and resolve concerns, are also typically included in the procedures in controlled settings (Kien et al., 2018).

When practices have been designated as evidence based, a process of adaptation has occurred until positive outcomes have been achieved (Hattie & Zierer, 2019). The core elements

of EBPs are the step-by-step methods that make up the essence of each innovation and distinguish one practice from another (Fuchs & Fuchs, 2017). The core components are neither arbitrary nor optional, and they are included in the methods of EBPs because researchers have concluded that a set of elements are necessary to accomplishing goals (Fuchs & Fuchs, 2017). Evidence-based practices with high efficacy rates have documented high FOI to the core elements (Barwasser et al., 2022). Ongoing assessment, with consistent documentation of implementation processes, are essential to sustaining practices (Shogren et al., 2021).

Though efficacy rates for EBPs are high in research settings, these rates are likely to decrease significantly in natural settings (Combs et al., 2022; Cook & Odom, 2013). This is because of low FOI, which occurs because stakeholders do not understand the core elements of EBPs, why FOI is important, and how to make proper adaptations (Combs et al., 2022; Locke et al., 2022). A national evaluation of Response to Intervention (RTI), an evidence-based framework to improve academic outcomes, comparing impact schools and reference schools across 13 states revealed widespread variation in implementation (Balu et al., 2015). FOI was low, and negative outcomes were reported across grades 1–3 (Balu et al., 2015). Achieving FOI was also challenging in RTI evaluations in two midwestern states (Fuchs & Fuchs, 2017). Data from an implementation study of Multi-tiered Systems of Support (MTSS), an evidence-based framework to improve academic and behavior outcomes, revealed 68% of the schools in the study were missing a universal Tier 1 behavior component, and 90% were missing behavior screening and measurement data (J. H. Choi et al., 2019). This is noteworthy because these are core components of the evidence-based framework (Faggella-Luby & Bonfiglio, 2020; Fuchs & Fuchs, 2017).

In another example, researchers were limited in their data collection and analyses of an evidence-based Tier 2 reading program because the overall RTI framework was not implemented with fidelity (Varghese et al., 2021). Findings from a study of over 1,600 teachers in 371 middle schools in 14 states revealed the core components of an evidence-based life skills program were not implemented with fidelity (Combs et al., 2022). Educators made adaptations to the core elements because they were unaware of the importance of FOI (Combs et al., 2022).

Low FOI is positively associated with inadequate implementation training (Sanetti & Collier-Meek, 2019). One issue is that implementation training needs to be understood through the lens of systems change (Barwasser et al., 2022). *Systems change* occurs when the production of an organization is altered. In every organization, *production* is the sum of all activity that results in outputs (Kucharczyk et al., 2022). When organizations implement EBPs, new inputs are added to the system to change production and accomplish positive outputs (T. Choi & Chandler, 2020; May et al., 2016; Schneider et al., 2017). New inputs impact individuals, units, and departments because production is an interdependent process (T. Choi & Chandler, 2020; Schneider et al., 2017).

Systems require an increase in capacity to respond effectively to the changes in production (Schneider et al., 2017). Otherwise, the system will become overwhelmed, resulting in negative outcomes and the abandonment of EBPs to relieve the pressure placed on the system (T. Choi & Chandler, 2020). System capacity is directly associated with *organizational learning*, which is the degree that stakeholders are aware of system inputs, prepared for achieving high fidelity, and regularly evaluating processes and outcomes (Rowe et al., 2021). Examining EBPs through a systems lens means understanding how implementation will affect people and production (T. Choi & Chandler, 2020). To plan for effective production, where the system has

the capacity to respond to change, implementation must also be understood as a process (Horner et al., 2017).

Implementation Process

Implementation has often been conceptualized as the delivery of EBPs (Horner et al., 2017; Morrison et al., 2021). *Delivery* refers to the actions associated with providing and receiving an innovation to accomplish specific outcomes (Eagle et al., 2015; Reinholz & Andrews, 2020). There is a tendency to rush into the action of delivering an intervention without planning for effective delivery or how to sustain EBPs (Kucharczyk et al., 2022). This lack of planning decreases the capacity of a system to adapt to the new inputs and manage production (Horner et al., 2017). Delivery is important, but it is only one stage of the implementation process (Reinholz & Andrews, 2020).

Cook and Odom (2013) highlight adoption, implementation, and maintenance as implementation stages. Nordstrum et al. (2017) note the implementation process includes an organization phase, operations phase, early sustainability phase, and an ongoing operations and sustainability phase. Odom et al. (2022) used an implementation framework with four stages: exploration, preparation, implementation, and sustainment. The implementation framework commonly referenced in the literature was developed by Fixsen et al. (2005) and includes adoption, installation, initial implementation, full implementation, and sustainability (Blanchard et al., 2017; Eagle et al., 2015). However, within implementation research, it is understood that there are three overarching stages and therefore, the Consolidated Framework for Implementation Research is frequently employed in research (Bangham et al., 2023; Cassar et al., 2019; Gelman et al., 2023). Since the term *implementation* refers to an entire process and also the middle stage in the process, there is a need to distinguish between their uses. As such,

implementation in this study will refer to a process consisting of three stages: adoption, delivery, and sustainability.

      Adoption. *Adoption* is the first stage of implementation and describes how stakeholders agree on what evidence-based practices will accomplish goals, who will deliver EBPs, how they will be delivered, and how practices will be sustained (D. C. Meyers et al., 2012; Rogers, 2003). Having an implementation team representing leaders and stakeholders of all departments within an organization who are impacted by the process is a critical element of successful adoption (Kittelman et al., 2021; Wheelan, 2016). This is because stakeholders at various levels offer insight into how implementation affects production at the organizational level and their jobs on an individual level (Jankvist et al., 2021; Reinholz & Andrews, 2020). Leaders are important members of the implementation team and need to synthesize feedback from stakeholders and incorporate it during decision-making in the adoption stage (Clavijo-Chamorro et al., 2022; Wright & Steed, 2021). This demonstrates to stakeholders that their feedback is valued, which facilitates trust and honesty (Alonge et al., 2020; Caves et al., 2021). When members of the implementation team trust each other and feel supported by their leaders they are more likely to accept and deliver EBPs (Clavijo-Chamorro et al., 2022). Before agreeing on what practices to implement, stakeholders need to discuss and agree on a set of goals (Jankvist et al., 2021). Goals are identified from understanding a problem or need (Reinholz & Andrews, 2020). Stakeholder input is important in understanding the context of a problem and creating appropriate goals (Alonge et al., 2020).

      Once an implementation team has understood the problems and outlined goals, the next step is to research evidence-based practices that are likely to result in goal attainment (Reinholz & Andrews, 2020). This takes a significant amount of time, but it is crucial for successful

implementation (Alonge et al., 2020). It is up to the implementation team to delegate research tasks (Jankvist et al., 2021; Reinholz & Andrews, 2020; Wheelan, 2016). Leaders need to research their organization's structures, production processes, and workplace climate to understand how implementation will impact the inputs and outputs of the current organizational system (Clavijo-Chamorro et al., 2022; Goodman, 2017). Put another way, leaders need to be system experts who foresee what organizational changes are necessary for successful implementation (Clavijo-Chamorro et al., 2022; Goodman, 2017; Northouse, 2019). Once the research has been completed, the team needs to create an implementation plan, which will be a blueprint for delivery and sustainability (Alonge et al., 2020; Rowe et al., 2021). Reinholz and Andrews (2020) conceptualize this blueprint as an organization's theory of change, where goals and expected outcomes are clearly defined, along with detailed steps of how goals will be accomplished.

Delivery. The middle stage of implementation is the activity associated with delivering EBPs (Eagle et al., 2015; Neal & Fixsen, 2020). Successful delivery is dependent on the preparation of stakeholders (Combs et al., 2022). Individuals delivering EBPs need extensive implementation training, and leaders need training on how to support staff delivering EBPs (Combs et al., 2022; Page & Eadie, 2019). Stakeholders delivering EBPs need training that incorporates the theories guiding the EBPs, explains what the practices are meant to accomplish, and describes the step-by-step methods of delivery (Barwasser et al., 2022).

Implementation is a value-oriented change because stakeholders need to accept EBPs and how they are delivered (Birken & Currie, 2021; Carlgren & BenMahmoud-Jouini, 2022; Nordstrum et al., 2017). Without commitment to the process, fidelity of implementation will wane over time, and the likelihood of abandoning EBPs increases (de Waal & Heijtel, 2016;

Nordstrum et al., 2017). Therefore, training is crucial to stakeholders accepting and sustaining

implementation (Sanetti & Collier-Meek, 2019). Acceptance is associated with stakeholders

feeling competent and supported during delivery (Kittelman et al., 2021; Ting et al., 2021).

Stakeholders also perceive their leaders as a gauge for committing to implementation (Faggella-

Luby & Bonfiglio, 2020). If organizational leaders are engaged in implementation and

demonstrate their commitment, stakeholders will likely follow their example and become

engaged in the process (Clavijo-Chamorro et al., 2022; Rowe et al., 2021).

It is typical for stakeholders to question implementation and forget steps during the

delivery of EBPs, which is why thorough training and ongoing practice are essential (Combs et

al., 2022; Goodman, 2017; Hall, 2018; Romano & Schnurr, 2022). Stakeholders need

opportunities to voice questions and concerns; they also need time to reflect on delivery (T. Choi

& Chandler, 2020). Regular feedback cycles during delivery are important in providing the

support stakeholders need to sustain implementation (Hagiwara et al., 2022; Lomis et al., 2021).

Feedback cycles are meetings where members of the implementation team discuss how delivery

is occurring throughout the organization (T. Choi & Chandler, 2020; Lomis et al., 2021). The

synthesis of multiple perspectives helps the team dissect where problems are occurring and how

the problems impact individuals, teams, and departments (Hagiwara et al., 2022). This

encourages shared responsibility, where implementation team members perceive they are being

supported (T. Choi & Chandler, 2020; Kittelman et al., 2021; Wheelan, 2016). Additionally,

when stakeholders work together to problem-solve, the team benefits from the strengths of its

members, resulting in more effective, creative, and innovative solutions (Kittelman et al., 2021;

Wheelan, 2016). When stakeholders perceive their feedback is valuable, they are more likely to

continue and even increase their feedback, which facilitates more honest and effective

communication (Fountas & Pinnell, 2021). The greater the clarity regarding how delivery is occurring in practice, the more likely the implementation team can provide targeted support to improve outcomes (Chaipidech et al., 2021).

      Sustainability. *Sustainability* is the final stage of implementation and refers to the maintained delivery of EBPs, where FOI is high and intended benefits continue to be accomplished over time (Faggella-Luby & Bonfiglio, 2020; Kwan et al., 2022). To reach a level of sustainability there must first be viable processes to sustain (Nordstrum et al., 2017). This means stakeholders need to have a clear understanding of how to engage in implementation (Combs et al., 2022). Like delivery, planning for sustainability occurs during the adoption stage; it is part of the blueprint for successful implementation (Reinholz & Andrews, 2020). Sustainability includes the processes for accomplishing long-term production. As discussed previously, FOI is directly associated with successful production, and FOI typically wanes over time unless there are procedures in place for maintaining high FOI (Barwasser et al., 2022). Therefore, sustainability includes strategies for achieving high fidelity (Combs et al., 2022).

      Sustainability is inseparable from learning; planning for sustainability is planning for ongoing learning (Faggella-Luby & Bonfiglio, 2020; Morrison et al., 2021). Learning at this stage considers what stakeholders at all levels of the organization need to stay engaged in the process and what can be done to make implementation even better (Combs et al., 2022; Goodman, 2017; Kwan et al., 2022; Stergiopoulos et al., 2016). These are important questions to ask during feedback cycles (Arden & Benz, 2018; Faggella-Luby & Bonfiglio, 2020; Kwan et al., 2022). However, it is not enough to ask questions and make observations; the data need to be used to improve implementation and plan for sustainability (Horner et al., 2017; Morrison et al., 2021).

Researchers are still trying to understand factors that support implementation and are developing theoretical models for sustaining EBPs (Caves et al., 2021; Combs et al., 2022; Nunnery et al., 2022; Rosenberg et al., 2022). Nunnery et al. (2022) studied the implementation of care coordination interventions to understand how to sustain multidisciplinary health care teams. Findings revealed leadership, engagement, and training impacted FOI and sustainability (Nunnery et al., 2022). Morrison et al. (2021) studied the implementation of MTSS in a rural setting and determined FOI and sustainability were impacted by training, collaboration, and leadership. Three concepts directly associated with high fidelity and sustained practices are ongoing training, process evaluations, and implementation drivers (Combs et al., 2022; Lomis et al., 2021; Morrison et al., 2021). Therefore, having step-by-step plans in the implementation blueprint describing how stakeholders will incorporate these categories is important for sustaining EBPs (Combs et al., 2022; Lomis et al., 2021; Reinholz & Andrews, 2020).

Implementation Drivers

Implementation drivers are the strategies used to increase the capacity of a system to effectively respond to change (Lomis et al., 2021; Neal & Fixsen, 2020; Reinholz & Andrews, 2020). Implementation drivers need to be planned for during adoption and thoroughly detailed in the blueprint to mitigate a knowledge vacuum (T. Choi & Chandler, 2020; Reinholz & Andrews, 2020). As a new initiative is implemented, it is common for stakeholders to have questions and concerns (Goodman, 2017; Horner et al., 2017; Nordstrum et al., 2017). These knowledge gaps are to be expected, but with adequate preparation, training, and support these gaps will be resolved over time (Faggella-Luby & Bonfiglio, 2020; Schultes et al., 2021).

However, cumulative knowledge gaps occur when an implementation team does not understand how the process impacts individuals, departments, and the organization overall (T.

Choi & Chandler, 2020; May et al., 2016). When this information is missing, implementation

cannot be adequately planned for nor sustained (Hagiwara et al., 2022). Cumulative knowledge

gaps result in a knowledge vacuum, where the learning deficit is so high that implementation

ultimately must be abandoned (T. Choi & Chandler, 2020). As has already been discussed, there

is a significant amount of research and learning that is necessary prior to creating an

implementation plan (Alonge et al., 2020; Kwan et al., 2022; Reinholz & Andrews, 2020). When

team members research, discuss, and plan for implementation drivers, communication improves

so that the implementation blueprint created will reduce the potential for a knowledge vacuum

(Alonge et al., 2020; T. Choi & Chandler, 2020; Kittelman et al., 2021). The following sub-

sections include discussions of three types of implementation drivers: organizational drivers,

collaboration, and competency drivers.

Organizational Drivers. *Organizational drivers* refer to the structures and systems

within an organization that support workflow and production (Pierce et al., 2019; Webb &

Michalopoulou, 2021). This includes the organizational hierarchy, teams, schedules, physical

space, staff roles, resources, and salaries (Bolman & Deal, 2017; Goodman, 2017; Northouse,

2019; Wheelan, 2016). Implementation may require changes to any of these elements depending

on the number of evidence-based practices and how the process affects the organization (Bolman

& Deal, 2017; Goodman, 2017). In a school setting, a vocabulary intervention may impact one

classroom (Van Orman et al., 2021), while MTSS, an entire framework of EBPs, impacts the

operation of an entire school (Faggella-Luby & Bonfiglio, 2020). In two studies of MTSS,

researchers explain school psychologists are helpful in evaluating implementation and should be

members of the implementation team (Loftus-Rattan et al., 2023; Webb & Michalopoulou,

2021). As such, it was recommended their schedules and job descriptions be adjusted to reflect

this new role (Loftus-Rattan et al., 2023; Webb & Michalopoulou, 2021). In another example of MTSS, the creation of an intervention block has been recommended (Hall, 2018). This would require changes to the school schedule and staff roles, where most of the staff, including aides and leaders would assist in delivering interventions (Hall, 2018).

In a business setting, the development of new teams that include members with specific skills may be required for implementation (Wheelan, 2016). In a health care setting, interdisciplinary care teams consisting of nurses, doctors, and other health care professionals are a key element of evidence-based medicine (Nunnery et al., 2022). In each of these examples, staff members need organizational support to do their jobs well (Bolman & Deal, 2017). This means they need to have the time, space, and resources to carry out new roles (Lomis et al., 2021; Webb & Michalopoulou, 2021). Organizational drivers to support implementation will vary depending on context, but prior to adopting EBPs these factors need to be considered from multiple perspectives and included in the blueprint (Reinholz & Andrews, 2020).

Collaboration. Implementation success is dependent on units of trained people who are continually increasing their knowledge and skills and are working collaboratively toward common goals (J. H. Choi et al., 2019; Webb & Michalopoulou, 2021; Wheelan, 2016). *Collaboration* involves a process of shared learning, which is possible when teams feel safe to engage in transparent conversations that include discussions on struggles, lessons learned, and resources that help with implementation (Kreutzer et al., 2021; Lomis et al., 2021; Northouse, 2019; Wheelan, 2016).

In one example, schools that partnered with a national implementation center and received technical assistance demonstrated steady growth in achieving positive outcomes and improving FOI (Arden et al., 2017). Housing First, an evidence-based program to assist

individuals who are homeless, was successful because committed provider teams collaborated with agency-level teams to support FOI (Stergiopoulos et al., 2016). During the successful implementation of RTI in a rural setting, stakeholders at all levels, from administrators to staff in the business office, worked collaboratively to support the implementation process (Webb & Michalopoulou, 2021). Leaders, teams, and other professionals implementing EBPs utilized multiple training opportunities, and collaboration with staff in the business office resulted in investments in implementation materials and the attainment of substitutes for in-house training sessions (Webb & Michalopoulou, 2021). Similarly, in the case of SafeCare, an evidence-based behavioral teaching and training model to improve infant and childcare in high-risk situations, implementation was successful because of the teaching, learning, and collaboration that occurred within and between units involved in implementation (Birken et al., 2017).

Findings from one study revealed teachers' adoption and use of EBPs was dependent on the maintenance of collaborative relationships between stakeholders (Poch et al., 2020). Collaboration between teachers and researchers was critical to learning valuable lessons, and through the development of teacher-researcher relationships, researchers evaluated systems and processes and provided feedback on improving outcomes (Poch et al., 2020). A collaborative culture is necessary for supporting positive outcomes, but it takes commitment from organizational members to establish and maintain open communication channels that support steady growth (Fountas & Pinnell, 2021). Likewise, Owen et al. (2020) concluded a positive learning culture with consistent progress monitoring and collaborative implementation processes was important to implementation success.

In another example, process evaluations of the Promoting School-Community-University Partnerships to Enhance Resilience Model, an evidence-based approach to reduce substance

abuse and promote youth and family competencies, revealed that quality ratings were 90% or higher over a 5-year period (Nordstrum et al., 2017). The success of the model is rooted in the partnership between schools, communities, and the local university; collaboration has developed through feedback cycles and partnership functioning assessments that are included in process evaluations (Nordstrum et al., 2017). Additionally, the success of the Nurse-Family Partnership model, an evidence-based health care program to support the health and well-being of families across Colorado, is attributed to the partnership between local public health departments, community health centers, hospital systems, an intermediary organization, and a state university (Neal & Fixsen, 2020). The program's open and collaborative implementation process supports local capacity by building stakeholder competencies and improving feedback and communication (Neal & Fixsen, 2020).

Competency Drivers. *Competency drivers* include strategies and methods that are employed to satisfy the training needs of professionals during the various stages of implementation (Neal & Fixsen, 2020; Pierce et al., 2019; Rowe et al., 2021; Webb & Michalopoulou, 2021). Competency drivers are relevant for practitioners, teams, and technical assistance providers (Odom et al., 2022; Peurach & Neumerski, 2015). Competency drivers are also important for leaders as they need knowledge and skills to better support stakeholders engaged in implementation (Clavijo-Chamorro et al., 2022).

Competency-Based Medical Education, an evidence-based framework implemented in several medical schools, targets physicians' competencies to improve practice outcomes and personal job satisfaction (Lomis et al., 2021). Competency drivers are utilized to improve knowledge, skills, and attitudes to increase medical students' readiness to engage with problems of practice (Lomis et al., 2021). In education settings, competency drivers are integrated

throughout implementation to support the changes in pedagogy that are necessary for EBPs (Varghese et al., 2021). In high-poverty school districts in England, competency training for a vocabulary development intervention targeted educators' literacy knowledge and skills (Cockerill et al., 2021). Teachers integrated the training into daily practice, and students made significant improvements in reading (Cockerill et al., 2021).

Variability in the implementation of evidence-based frameworks such as RTI and MTSS can be partly attributed to the competencies of practitioners (Balu et al., 2015; Fuchs & Fuchs, 2017; Morrison et al., 2021). In a study with 82 participants representing four continents, participants indicated they wanted to acquire new competencies related to the implementation of EBPs: These included competencies related to implementation knowledge and skills, collaboration knowledge and skills, and content knowledge and skills (Schultes et al., 2021). In another study in a middle school context, findings revealed FOI was partly hindered by educators' competencies: knowledge of the core elements of EBPs and an understanding of where adaptations can and cannot occur during implementation (Combs et al., 2022).

Within the context of an online professional development model, teachers indicated their confidence increased because they developed skills to implement EBPs successfully, and seeing results fostered their commitment to implementation (Traga Philippakos & Voggt, 2021). Similarly, FOI increased when teachers participated in training that targeted specific skills for implementing evidence-based literacy practices for individuals who use augmentative and alternate communication (Caron et al., 2022). Positive outcomes were documented for eight out of nine participants in the study (Caron et al., 2022). In another example, a case-based learning model has been employed to increase the individual competencies of health care providers so that health care providers can assist clients more effectively (Serhal et al., 2022).

In a study involving junior faculty in a research training program, junior faculty members improved their capacity by developing their skills, which improved the program capacity and resulted in career development (Wakida et al., 2021). A supportive implementation climate fostered an increase in individual and collective implementation capacity (Wakida et al., 2021). However, it is important to note that individual competencies develop over time (Lomis et al., 2021). Arden and Benz (2018) describe this as operational transformation: Successful implementation entails a slow learning process requiring ongoing shifts in understanding and practice at the individual level. Therefore, professional development needs to be comprehensive and ongoing to satisfy competency needs during phases of implementation (Faggella-Luby & Bonfiglio, 2020; Peurach & Neumerski, 2015).

Learning and the Implementation of Evidence-Based Practices

Knowledge and training are critical in supporting production and sustaining EBPs (Barwasser et al., 2022; Rosenberg et al., 2022; Varghese et al., 2021). Learning needs to occur at the organizational level and the individual level to build implementation capacity and equip stakeholders to effectively respond to change (Carlgren & BenMahmoud-Jouini, 2022; Culph et al., 2021; Goodman, 2017). The following sections address learning at both levels through discussions of ongoing teaching and learning, process evaluations, and self-directed learning.

Ongoing Teaching and Learning

To improve the sustainability of EBPs, detailed plans for ongoing learning should be included in an implementation blueprint (T. Choi & Chandler, 2020; Jankvist et al., 2021; Reinholz & Andrews, 2020). Ongoing learning during implementation occurs in cycles of assessment, adaptation, planning, and learning; it is a plan-do-study-act approach (Lomis et al., 2021). Continual feedback cycles are key in discovering barriers to implementation (T. Choi &

Chandler, 2020). Therefore, organizational systems that foster continuous communication and feedback cycles are needed to properly support staff and the implementation process (Hagiwara et al., 2022). Practitioners need feedback so they learn how to improve the sustainability of EBPs (Arden & Benz, 2018; Romano & Schnurr, 2022). When practitioners have an opportunity to bring their perspectives and insights regarding implementation to meetings and feedback cycles, they help mitigate a knowledge vacuum (T. Choi & Chandler, 2020).

Learning is an iterative process as it relates to implementation; it is the continual movement forward to understand barriers and facilitators during the process (Goodman, 2017). The implementation of educational interventions can support targeted learning that changes practice (Doran & van de Mortel, 2022; Tang et al., 2021). In one study, Doran and van de Mortel (2022) found that an educational intervention in a nursing program that included lectures, workshops, videos, and discussion strategies helped nurses learn to recognize signs of domestic violence and implement EBPs to assist patients. Similarly, an educational intervention in a pharmacy education program improved students' knowledge of eye health conditions, which translated to improved pharmacy practice (Tang et al., 2021). The educational intervention included workshops, interactive activities, and independent learning activities to improve knowledge retention (Tang et al., 2021). In both studies, learning was associated with improved awareness, knowledge, practice, and attitudes during the implementation of best practices (Doran & van de Mortel, 2022; Tang et al., 2021).

Organizational learning occurs when stakeholders regularly examine the inputs and outputs within an organizational system and use the data collected to improve implementation (T. Choi & Chandler, 2020; Morrison et al., 2021; Schneider et al., 2017; Wheelan, 2016). This is a collaborative process that leverages the expertise of others (T. Choi & Chandler, 2020;

Lomis et al., 2021; Wheelan, 2016). In the context of a two-year study examining a personalized professional development program to support the implementation of EBPs, collaborative learning fostered critical discussions that increased stakeholders' motivation, knowledge, and self-concept (Chaipidech et al., 2021). In their 3-year study to expand MTSS in schools across Florida, partnerships were formed with institutions in two states to produce conceptual maps to guide teacher and administrative curricula (Sailor et al., 2021). The goal of the partnership is to equip educators with implementation knowledge and skills prior to employment (Sailor et al., 2021).

Process Evaluations

Organizations that have reached high levels of fidelity have emphasized ongoing learning during implementation to sustain fidelity (Arden et al., 2017; Neal & Fixsen, 2020). FOI is maintained by learning from process data: data collected during implementation, data from other organizations implementing EBPs successfully, and data from research (Ippolito et al., 2021; Schneider et al., 2017). Data collection is relevant during each phase of the implementation process; it is meant to be used for organizational learning to provide the best support during implementation (Alonge et al., 2020; T. Choi & Chandler, 2020). Organizational learning needs to be a priority for stakeholders delivering EBPs to optimize implementation success and positive outcomes over time (Damschroder et al., 2021).

Ongoing process data support the implementation process; it is a barometer to inform stakeholders of problems so that barriers are eliminated (Helsabeck et al., 2022). It is a retrospective analysis to understand what is working, not working, and what improvements will lead to better implementation (D. C. Meyers et al., 2012; Serhal et al., 2022). A process evaluation is a means to increase the learning capacity of the system (Damschroder et al., 2021;

Morrison et al., 2021; Torre et al., 2020). Comprehensive evaluations are important for learning because the data collected lead to the consideration of contextual factors inside and outside of the organization, which builds a better understanding of implementation capacity in a particular setting (Damschroder et al., 2021; Morrison et al., 2021; Torre et al., 2020). Process evaluations are a tool to understand how EBPs are transferred into daily practice and how implementation affects fidelity (Morrison et al., 2021; Nelson & Yang, 2022). Learning from process evaluations allows for informed, localized decision-making so adjustments can be made to support implementation processes and improve outcomes (Damschroder et al., 2021; Morrison et al., 2021; Torre et al., 2020).

Through a process evaluation to increase service capacity for individuals with autism, service providers were able to identify gaps in service plans by gathering data from focus groups (Sheperis & Bayles, 2022). It was the specific process feedback from the focus groups that informed service providers so they could make proper adjustments to implementation (Sheperis & Bayles, 2022). In another example, a process evaluation revealed a science vocabulary intervention resulted in a large effect size because of the ease of implementation, high FOI, and the alignment between the EBPs and science curriculum (Van Orman et al., 2021). Abejirinde et al. (2022) are engaging in a long-term study to collect process data from child-health interventions implemented in sub-Saharan Africa to better support practitioners and reduce child mortality rates. In another study, process data of supplemental EBPs in 30 early childhood classrooms indicated FOI was low, and there were features of the program teachers did not use (Helsabeck et al., 2022). Since these features were designed to assist with differentiation and monitoring students' progress, it is important for future research to engage in comprehensive process evaluations to learn why these features were not utilized (Helsabeck et al., 2022).

Self-Directed Learning

Process evaluations have revealed there is a correlation between sustained practices and self-directed learning (Balu et al., 2015; Combs et al., 2022; Fuchs & Fuchs, 2017; McIntosh et al., 2016; McMaster et al., 2021; Wheelan, 2016). Self-directed learning occurs when stakeholders are motivated and personally invested in implementation (Culph et al., 2021; Nordstrum et al., 2017). When stakeholders believe they can deliver EBPs effectively, have adequate resources to execute delivery, and are supported during implementation, motivation will increase, and they will commit to implementation (Culph et al., 2021; De Clerck et al., 2021). Practitioners are often hesitant to make a commitment because they are not confident there will be leadership buy-in, adequate resources, and follow-through within the organization (Hall, 2018; Lomis et al., 2021; Nordstrum et al., 2017). Practitioners have seen many innovations abandoned, and in education settings, educators perceive new programs are implemented every 2 years (Hall, 2018; Ippolito et al., 2021; C. V. Meyers & Smylie, 2017; Nordstrum et al., 2017). As a result, educators perceive it is not worth the energy to commit to implementation when practices will likely receive minimal support or follow-through (Hall, 2018; C. V. Meyers & Smylie, 2017; Nordstrum et al., 2017).

To eliminate the hesitation to commit to implementation, stakeholders need training to build competence (Culph et al., 2021). Stakeholders become competent when they understand the theories undergirding EBPs and how the practices will accomplish outcomes (Caron et al., 2022; Doran & van de Mortel, 2022; Thoma et al., 2020). They also need intensive methods training that includes time for observations, practice in simulated conditions, and practice in natural conditions (Birken & Currie, 2021; Carlgren & BenMahmoud-Jouini, 2022; Lomis et al., 2021). Stakeholders also need repeated opportunities—at least 10–20 times minimum—in

simulated conditions when learning to implement best practices (Joyce & Showers, 1981; Lomis et al., 2021; Schultes et al., 2021). This is why traditional PD methods, such as workshops and conferences are insufficient by themselves in facilitating self-directed learning (Joyce & Showers, 1981; Meyer et al., 2022; Nordstrum et al., 2017). Practitioners need follow-up sessions and booster sessions to support the training they have received from workshops (Kucharczyk et al., 2022; Ting et al., 2021).

Implementation training needs to be rigorous and ongoing (Meyer et al., 2022). Without adequate practice and time for reflection, it is easy to forget important steps when delivering EBPs (Joyce & Showers, 1981; Lomis et al., 2021; Schultes et al., 2021; Ting et al., 2021). Training also needs to include a debriefing component, where stakeholders receive feedback on delivery and are encouraged to reflect on implementation (Hagiwara et al., 2022; Romano & Schnurr, 2022). Reflection should move beyond surface observations and lead to deep thinking that propels stakeholders toward self-regulation (Romano & Schnurr, 2022; Torre et al., 2020). Self-directed learners are self-regulators who reflect prior to, during, and after delivery (Chaipidech et al., 2021; Tsuda et al., 2019). Self-regulators become increasingly aware of their behavior and activity occurring within the environment, which equips them to make adjustments that result in positive outcomes (Romano & Schnurr, 2022; Torre et al., 2020). Learning is an active and dynamic process, and learners need to be engaged and actively involved to gain insights relevant to implementation (Opre et al., 2022). Findings across 10 educational sites with over 1,500 teachers and 390 students indicated teachers who engaged in more feedback cycles demonstrated improvements in instructional interactions with students (Pianta et al., 2021).

Stakeholders need to feel confident that EBPs will accomplish goals (Crawshaw et al., 2022; Culph et al., 2021; Hall, 2018). This is why having multiple opportunities to observe, and

practice, increases perceptions of competence (Caron et al., 2022; Crawshaw et al., 2022; Traga Philippakos & Voggt, 2021). Understanding the theoretical background, seeing positive results, and feeling competent increases the value of EBPs, making commitment to implementation more likely (Hall, 2018; Joyce & Showers, 1981; Traga Philippakos & Voggt, 2021). When stakeholders perceive implementation is valuable, they will commit to the process and develop agency over their training (Crawshaw et al., 2022; Giordano et al., 2021; Kraft et al., 2018). Competency leads to agency (Caves et al., 2021; Lomis et al., 2021; Wang & Lu, 2020). As stakeholders sense they can effectively deliver EBPs and become better self-regulators, they develop agency by initiating learning opportunities (Elek & Page, 2019; Lomis et al., 2021; Stoiber et al., 2022). This means stakeholders have become aware of their strengths and weaknesses and will seek expert advice, dialogue with peers, and engage in personal study to improve outcomes (Caron et al., 2022; Page & Eadie, 2019; Ramaswamy et al., 2022). When learning becomes personal and meaningful, knowledge is transferred into daily practice (Káplár-Kodácsy & Dorner, 2022). Put another way, when implementation is aligned with stakeholders' value system, they want to transfer knowledge into daily practice and take ownership of their learning (Elek & Page, 2019; McHugh, Yanik, & Mancini, 2021). As a result, stakeholders become self-directed learners who are motivated to continue learning and improving delivery (Arden & Benz, 2018; Lomis et al., 2021; Ramaswamy et al., 2022).

The capacity of stakeholders delivering EBPs will facilitate or hinder implementation, and therefore, effective training is crucial (Caves et al., 2021). Developing capacity at the individual level is what powers collective capacity and provides the energy to work collaboratively and achieve goals (Goodman, 2017; Ippolito et al., 2021). It is recommended future research determine the critical elements of professional development that support

implementation capacity at the individual level (Birken & Currie, 2021; McMaster et al., 2021).

Similarly, Doran and van de Mortel (2022) note there is a need to understand best training

practices that support stakeholders' competence. Hagiwara et al. (2022) explain ongoing work is

needed to explicate the unique contextual factors that improve training practices and support

self-directed learning. Knowing how a program addresses stakeholders' learning needs is helpful

for improving implementation (Helsabeck et al., 2022).

Qualitative data are needed to understand specific behaviors associated with individual

learning and growth during implementation (Lomis et al., 2021). Ramaswamy et al. (2022)

explain that factors facilitating long-term learning that mitigates skill decay in the context of

evidence-based medicine are not well understood. Meyer et al. (2022) develop this further by

conceptualizing long-term learning as the transfer of learning. They assert there is a need to

understand contextual factors and mechanisms supporting self-directed learning (Meyer et al.,

2022). Likewise, Dorsey et al. (2020) highlight the need to understand what training methods

and strategies support stakeholders implementing EBPs. They note training models are especially

needed in low-resource settings (Dorsey et al., 2020).

Coaching and the Implementation of Evidence-Based Practices

Ongoing coaching is a type of competency driver utilized to assist implementers in

acquiring the following competencies to implement EBPs: content knowledge, theoretical and

instructional knowledge, data-based decision-making, and procedures for identifying and solving

challenges (Arden & Benz, 2018; Eagle et al., 2015). Coaching is described as a competency

driver that can be employed to provide technical expertise along a continuum of support to

improve the implementation process from adoption to sustainability (Horner et al., 2017). The

following sub-sections contribute to the understanding of coaching and the implementation of

evidence-based practices through discussions of coaching, coaching and individual engagement, coaching and collaborative engagement, the effectiveness of coaching, limits to coaching effectiveness, and virtual coaching.

Coaching

Coaching has been defined as a collaborative partnership that employs thoughtful and creative processes to help clients achieve their personal and professional goals (International Coaching Federation [ICF], 2015). According to another definition, coaching is an intensive, results-oriented process with a counseling component to help individuals actualize personal and professional goals and develop their self-concept (Greif et al., 2022). Palamara et al. (2022) offer a third definition: Coaching is a personal and professional process that includes goal setting, reflection, and feedback cycles delivered in a non-judgmental and psychologically safe environment. Researchers note there is an emphasis on the characteristics and outcomes of coaching, but it is challenging to locate clear and consistent definitions of coaching (Greif et al., 2022; Hagen et al., 2017; Hunter & Redding, 2023; Hussey & Campbell-Meier, 2021; Lee et al., 2023; Sinaise et al., 2023). However, there is a common theme in the three definitions provided: Coaching is understood as a method to achieve professional and personal goals.

The terms *coaching*, *mentoring*, *counseling*, and *consulting* are used interchangeably (Greif et al., 2022; Hussey & Campbell-Meier, 2021; Stoiber et al., 2022). Ayvazo et al. (2021) note that *training* and *coaching* are also used interchangeably in research and practice. They distinguish between the two by suggesting training refers to a learning experience that introduces a skill, and coaching provides the practice, reflection, and feedback to apply skills (Ayvazo et al., 2021). Coaching and mentoring are both cited in the literature as important pieces of professional development because they impact performance, well-being, and outcomes, but coaching takes a

long-term perspective on learning and development compared to mentoring (Ng, 2012).

Questions regarding differences between coaching and mentoring are frequently raised along with the need to understand why coaching is needed if mentoring programs are already in place (Palamara et al., 2022). Hussey and Campbell-Meier (2021) studied definitions of coaching and mentoring by asking library and information science professionals to define and describe coaching and mentoring. They found that coaching was defined in terms of goals, skills, and outcomes; mentoring was defined in terms of guidance, relationship, personal development, and professional development (Hussey & Campbell-Meier, 2021).

In the context of acute pediatric health care, there is a lack of clarity regarding coaching definitions, models, and characteristics (Lee et al., 2023). Similarly, Sinaise et al. (2023) note that the term *coaching* is used frequently in health care settings, but there is inconsistency in how the term is defined, what coaches are supposed to do, and the features of coaching processes. Coaching definitions and detailed processes are also lacking in education settings, even though coaching is emphasized as a form of PD (Elek & Page, 2019; Hunter & Redding, 2023; Hussey & Campbell-Meier, 2021). To develop coaching as a professional activity, researchers highlight the need to better define coaching and distinguish it from other practices (Greif et al., 2022; Hagen et al., 2017; Hussey & Campbell-Meier, 2021; Lee et al., 2023). Greif et al. (2022) suggest it may be best to conceptualize coaching as an overarching profession, and this seems to leave room for allowing characteristics of counseling and consulting to be incorporated in coaching programs. Hagen et al. (2017) engaged in research to clarify the components of peer coaching to better guide peer coaching practices. They suggest examining the literature from diverse organizational contexts, including educational contexts, to develop a definition of peer coaching (Hagen et al., 2017).

There is agreement that coaching improves implementation processes and the outcomes of EBPs (Kraft et al., 2018; Page & Eadie, 2019; Pianta et al., 2021; Pierce et al., 2019), and therefore, coaching is becoming a widely recognized tool to develop professional skills and competencies (Giordano et al., 2021; Khumra et al., 2022). Coaching has been featured as a key support during the implementation of EBPs across initiatives (Jakopovic, 2021; Khumra et al., 2022; Kraft & Blazar, 2017; Page & Eadie, 2019; Stoiber et al., 2022). Coaching is also important for leadership; leaders need to develop and build skills as much as other stakeholders (Anthony & van Nieuwerburgh, 2018; Pierce, 2019). In a study to describe processes supporting successful implementation, findings indicated leaders need coaching to support teachers as they implement EBPs because leadership support positively impacts implementation and student outcomes (Owen et al., 2020).

Coaching is labor intensive, but it helps professionals acquire and integrate knowledge and skills into their daily practice (Joyce & Showers, 1982). Instead of operating as a mandated district-wide PD initiative, coaching is effective when it includes a small group of expert coaches and individuals willing to be coached who are all committed to the process (Kraft et al., 2018). Ongoing coaching is a staple component of implementation science frameworks because coaching is understood to be an important part of achieving practice change (Fixsen et al., 2005; Nordstrum et al., 2017). As such, ongoing coaching is needed throughout all stages of implementation because the needs of practitioners change over time, and coaching helps reinforce and sustain implementation knowledge and skills (Arden & Benz, 2018). However, coaching can be costly both financially and in terms of the time required (Giordano et al., 2021). Coaching programs are expensive because they are individualized and intensive (Kraft & Blazar, 2017).

Coaching includes focused observations and individualized feedback, known as coaching cycles, to inform implementation practice (Kraft & Blazar, 2017; Kraft et al., 2018). Coaching cycles are included in implementation science frameworks (Fixsen et al., 2005). Coaching varies in practice and intensity across settings with some models offering one observation a month and others a few each year (Ayvazo et al., 2021). Coaches may serve in a variety of different roles and engage in a range of activities (Kraft et al., 2018). Coaches are helpful in developing systematic plans for attaining goals because stakeholders in education settings need assistance in identifying what elements of their practice need attending to first (Jakopovic, 2021).

Coaching and Individual Engagement

Coaching promotes active engagement through interactive discussions, modeling, feedback cycles, and opportunities for practice; each of these components is linked to positive outcomes (Barrett, 2021). Coaching improves professional learning, and the longer it is sustained, the deeper the learning that occurs (Joyce & Showers, 2002). Poch et al. (2020) determined it was the shift from knowledge acquisition to knowledge transformation, where teachers' new learning was activated through ongoing support and resources, that resulted in improvements in the implementation of EBPs. Through the coaching process, roles shift where professionals implementing EBPs take on the role of active learners rather than just being receptors of information; professionals learn to take the initiative, share ideas, and make suggestions for improvement (Jakopovic, 2021; Kraft & Blazar, 2017). In one study, teachers who participated in coaching improved their noticing, planning, and reflection, which fostered successful implementation (Jakopovic, 2021).

Johnston (2021) explored how coaching facilitated critical thinking, and through 40 interviews concluded there was a relationship between reflection and critical thinking. Reflection

facilitated learning and critical thinking; this encouraged professionals to investigate assumptions, beliefs, and alternative scenarios to improve practice (Johnston, 2021). In a medical school context, coaching increased self-directed learning through feedback cycles where learners reflected on learning and made implementation plans based on reflection (Lomis et al., 2021). Coaching supports individualized learning pathways that in turn supported the overall learning and efficacy of medical teams to provide better patient care (Lomis et al., 2021). D. K. Shannon et al. (2021) found through coaching, teachers became more proficient in identifying the next steps for implementation; they became active learners and communicated what they needed from the coaching process.

In a random controlled trial (RCT), Wang and Lu (2020) evaluated a coaching program to understand how to improve learning dispositions, and they found that coaching encouraged participants to notice new things. Learners gained a better understanding of themselves as learners and were able to improve cognitive and emotional self-regulation which allowed them to be more self-determined in their actions (Wang & Lu, 2020). Findings from a consultative coaching approach in high-poverty urban early childhood classrooms indicated coaching fostered the transfer of knowledge and supported teachers' implementation of EBPs through an increase in self-reflection (Stoiber et al., 2022). Ramaswamy et al. (2022) established an evidence-based medicine curriculum with a coaching component and feedback cycles; practitioners' self-direction and confidence increased after participation. Similarly, learner-centered coaching delivered in a virtual setting led to an increase in undergraduate students' self-directed assessment where they gained an awareness of their developing competencies (McHugh, Yanik, & Mancini, 2021).

In two different studies exploring coaching, reflection was a key component of educators' and leaders' improved learning and understanding (Eadie et al., 2017; Pilsworth et al., 2017). In another example, surgeons who increased their skills as the result of a peer coaching professional development program noted learning was accomplished through video review, analyzing technical skill report comments, and discussions with their coach (Kreutzer et al., 2021). They gained new perspectives by re-examining their practice (Kreutzer et al., 2021). In a RCT trial with participants from six universities in the U.S., data systems were found to support coaching and learning when participants were given a detailed record of organized data that was discussed and analyzed during coaching (McHugh, Feinn, et al., 2021). In another study, Beckers et al. (2021) found students' motivation and commitment to learning increased when teachers guided them in a process of self-coaching. Learning is an active and dynamic process, and learners need to be engaged and actively involved to gain insights relevant to implementation (Opre et al., 2022). Findings across 10 educational sites with over 1,500 teachers and 390 students indicated teachers who engaged in more feedback cycles demonstrated improvements in instructional interactions with students (Pianta et al., 2021).

There is a relationship between engagement and FOI, and coaching was found to support individual engagement through reflection and goal setting, where professionals became self-directed in their learning (Elek & Page, 2019). In the context of a social work setting, participants reported it was the knowledge they gained through coaching that enabled them to engage in their work differently and move forward in developing and evaluating solutions that change practice (Du Toit & Reissner, 2012). In an online professional development model which included coaching, feedback opportunities, and maintenance activities, teachers indicated they learned how to implement EBPs, which increased their engagement and confidence (Traga

Philippakos & Voggt, 2021). The written feedback they received from coaches helped them address challenges and implement EBPs with fidelity (Traga Philippakos & Voggt, 2021).

Coaching and Collaborative Engagement

Coaching that facilitates trust promotes freedom in thinking, which is important for successful learning (de Bruin, 2019). Coaching brings learning to the surface when it operates as an invitation for participants to become active co-learners and learn something new (Beckers et al., 2021). Anthony and van Nieuwerburgh (2018) analyzed the experience of education teams introducing coaching into schools and concluded organizations that develop coaching cultures create positive and nurturing environments that encourage individual growth. Stout-Rostron (2019) argues that coaching conversations lead to the development of a deeper coaching relationship, which facilitates a safe thinking environment that helps coaching participants initiate learning and actualize change. Johnston (2021) found that when coaches and clients became active participants in creating a critical-thinking environment instead of being passive recipients, this was positively associated with the coach-client relationship. When coaching conversations support a partnership of co-inquiry, both parties gain expertise and experience, which strengthens learning, and both are enriched because of the experience (Fountas & Pinnell, 2021). There is a collaborative negotiation of new skills that occurs through coaching and facilitates risk-taking that improves processes and outcomes (de Bruin, 2019). Participants in an online-training program to improve implementation competencies indicated they wanted to acquire collaborative knowledge and skills, such as learning through peer groups and coaching (Schultes et al., 2021).

Collaborative components of coaching foster self-directed learning (Elek & Page, 2019; McHugh, Yanik, & Mancini, 2021; Stoiber et al., 2022; Wang & Lu, 2020). Self-directed

learning is predicated on a foundation of collaborative learning that is focused on growth and development over performance and immediacy (Lomis et al., 2021). Social support puts learners in a position to receive instruction and increase their self-direction (Lomis et al., 2021). In one example, collaborative partnerships between coaches and learners were vital to undergraduate students becoming self-determined in their learning (Wang & Lu, 2020). In another study, the collaboration and partnership aspects of a consultative coaching model supported self-directed learning that led to improved implementation in high-poverty early childhood classrooms (Stoiber et al., 2022).

Collaborative feedback cycles that occur during coaching are a promising strategy for improving teachers' application of knowledge (Pas et al., 2016). Educators in two studies indicated collaborative coaching strategies supported reflective practices, FOI, and the development of specific instructional methods that improved practice (Eadie et al., 2017; Pilsworth et al., 2017). It was the partnership approach to coaching, where educators provided input in discussions that strengthened the coaching and learning processes (Page & Eadie, 2019). In another example, a collaborative and learner-centered coaching approach was key in improving undergraduate students' self-awareness, self-efficacy, and self-directed learning (McHugh, Yanik, & Mancini, 2021). In a program with over 400 employee participants, the relational aspects of collaborative conversations facilitated a sense of belonging and intra-group cohesion, which in turn, supported self-reflection, critical analyses, and transformation in thinking and development (Káplár-Kodácsy & Dorner, 2022).

Effectiveness of Coaching

In a commonly referenced literature review, Kretlow and Bartholomew (2010) found that in 13 studies, coaching improved the degree that teachers implemented EBPs with accuracy, and

fidelity levels doubled with ongoing coaching practices. Education professionals need ongoing coaching because the implementation of evidence-based frameworks such as RTI requires extensive and ongoing support to be successful (Arden et al., 2017). Targeted Reading Intervention, a Tier 2 reading program within RTI, includes a weekly virtual coaching component and has positively impacted students' reading scores (Varghese et al., 2021). In another study, student participation was very low during instruction prior to the implementation of a coaching intervention, but once teachers engaged in iCoaching to support the implementation of EBPs, student responses increased (Randolph et al., 2020). In a virtual coaching program with bug-in-the-ear technology, preservice teachers increased their use of targeted practices after engaging in reflection mediated through the coaching process (Nagro et al., 2022). Coaching is an effective tool for improving the quality of training programs and increasing professionals' capacity for learning, which in turn, positively affects the overall implementation capacity to actualize change (Ayvazo et al., 2021). Cornelius et al. (2020) found weekly coaching sessions supplied teachers with strategies to improve the implementation of EBPs, and teachers indicated that implementation improved because coaching targeted specific aspects of their instruction.

Professional development programs with a coaching component have resulted in significant increases in practitioners' development and application of new skills (Joyce & Showers, 2002). Coaching offers more opportunities for deeper professional learning compared to traditional training practices (March et al., 2020). Coaching models are associated with the transfer of learning and increases in positive outcomes, and research findings suggest there is a difference in implementation success between those who have and those who have not received coaching (Cornett & Knight, 2009). Effective coaches are knowledgeable about EBPs and have

the interpersonal skills to develop relationships with those implementing EBPs (Rowe et al., 2021).

In a study of over 1,400 teachers in urban schools in the United States, findings indicated there was a relationship between the presence of curricular coaches in schools and teacher retention (De Jong & Campoli, 2018). Coaching impacted practitioners' competencies, communication skills, and commitment to implementation, and coaching helped schools transition to a responsive learning mindset, where staff focused on improving student outcomes (De Jong & Campoli, 2018). In a study where coaching was used to support the implementation of EBPs in early childhood preservice special education settings, coaching was effective in increasing preservice teachers' use of EBPs, and these practices were maintained at high levels a week after coaching was withdrawn (McLeod et al., 2019). In a meta-analysis of 60 causal studies, coaching resulted in a pooled effect size of 0.49 for instructional outcomes and 0.18 for student outcomes, and content-specific coaching was more effective for achieving positive student outcomes than content-neutral coaching (Kraft et al., 2018).

In an elementary school setting, instructional math coaching resulted in improvements in teachers' noticing as it related to implementing EBPs, and this noticing helped teachers develop plans to improve practice (Jakopovic, 2021). Across subjects, grades, and schools, teachers in charter schools who received coaching attained evaluation ratings from outside observers, principals, and students that were 0.59 standard deviations higher than teachers who received school-based traditional PD (Kraft & Blazar, 2017). In another example, coaching improved pharmacists' knowledge, skills, and confidence in implementing EBPs as it related to antimicrobial stewardship, and participants indicated that one-on-one coaching was more effective in applying knowledge and skills to current patient scenarios than lectures or guideline

procedures (Khumra et al., 2022). In the context of a health care organization, employees who participated in more coaching-based implementation strategies implemented more of the quality improvement EBPs that were recommended for improved practice (Walunas et al., 2021). Similarly, findings from a study evaluating a consultative coaching model in early childhood classrooms revealed coaching increased implementation transfer, where strategies were applied in daily practice (Stoiber et al., 2022). In five high-poverty schools in the U.S., teachers' use of EBPs increased when coaching was implemented (Shernoff et al., 2020). Likewise, Pianta et al. (2021) noted that the implementation of EBPs improved with coaching, and when coaching was implemented with fidelity it positively affected student outcomes.

Coaching Activities. Coaching approaches that include a combination of modeling, observation, and feedback are more effective than other models at improving outcomes and sustaining the implementation process (Nordstrum et al., 2017). Two additional elements of effective coaching include implementation planning and using data for problem-solving (Page & Eadie, 2019; Sanetti & Collier-Meek, 2019). Similarly, Reddy et al. (2021) note that coaches in their study used observation data to identify needs, create plans, and monitor progress of the plans. Following this approach to coaching, general and special education teachers in the RCT significantly improved their implementation and management of EBPs compared to teachers in the control group (Reddy et al., 2021).

Coaching activities to support middle school teachers during the implementation of an evidence-based reading comprehension approach included a process of planning, modeling, observing, reflecting, and examining student data (Jacobs et al., 2018). When considered as a process, coaches provide technical feedback, encouragement, and assist professionals with applying knowledge in their everyday practice settings (Joyce & Showers, 1982). In an urban

School Turnaround school, coaching activities to support the implementation of EBPs included bimonthly observations and post-conferences where practitioners were given opportunities to reflect on their practice (Wright & Steed, 2021).

      Building Relationships. In two studies of coaching models to support EBPs, professionals praised the coaches for providing instructional and relational support (Page & Eadie, 2019). Coaches need to have skills in interdisciplinary collaboration as a study found that interpersonal competencies may be required to extend partnerships across disciplines and support whole-school implementation of EBPs (Kucharczyk et al., 2022). In another example, surgeons who built relationships with their coaching partners indicated the coaching approach provided emotional and technical support for improving practice (Kreutzer et al., 2021). Like other professionals, coaches need access to social capital because support increases motivation and effort to overcome challenges (Hannan & Russell, 2020). When coaches built relationships with expert coaches and peer coaches, they facilitated rigorous coaching practices across rural, urban, and suburban settings (Hannan & Russell, 2020).

      However, of the 49 studies of coaching in early childhood settings that were examined, only six studies indicated that building collaborative partnerships was a core component of the coaching programs (Artman-Meeker et al., 2015). In another example, Partee et al. (2022) determined that while the consultant-teacher relationship quality impacted implementation, it did not affect FOI. Similarly, when teachers perceived a more positive relationship with their coach, they implemented EBPs more frequently, but this did not affect the quality of implementation (Johnson et al., 2018). While building relationships is important in setting coaching routines, it is *coaching heavy* that leads to effective implementation and sustained change (J. Knight, 2009).

Coaching heavy is digging deeply into the work of learning and problem-solving to increase competencies and confidence; this drives the implementation of EBPs (J. Knight, 2009).

Expert Coaches. Like professionals who implement EBPs, coaches also need to improve their competencies to support implementation (Pierce et al., 2019). Coaches need coaching to improve fidelity and better support successful implementation (Kucharczyk et al., 2022; Tschannen-Moran & Carter, 2016). In one study, instructional coaches received coaching and their self-awareness, self-regulation, and social skills improved, and this equipped the instructional coaches to coach practitioners from a wide range of disciplines (Tschannen-Moran & Carter, 2016). In a study of caregiver coaching, findings indicated interventionists need coaching from external experts who provide opportunities for reflection and feedback (Romano & Schnurr, 2022).

In another example, external coaching resulted in positive implementation outcomes in an urban School Turnaround school (Wright & Steed, 2021). Similarly, coaching models implemented in two different states revealed external expert coaching increased practitioners' knowledge and application of EBPs, and practitioners reported that having access to specialist knowledge was important in their success (Page & Eadie, 2019). Educators also noted that external expert coaching sessions helped them integrate EBPs in their daily practice (Page & Eadie, 2019). Gilmour et al. (2017) compared the coaching practices of university-based coaches and school-based coaches who were implementing coaching programs to support the implementation of EBPs. They determined school-based coaches struggled with implementing the coaching program with fidelity and were less effective in supporting implementation compared to university-based coaches (Gilmour et al., 2017). However, Wright and Steed (2021) found that while external coaches were helpful at the beginning of an implementation process,

the long-term and sustainable implementation of EBPs relied on insight from internal coaches. Giordano et al. (2021) found that internal peer coaches were more effective than external coaches at supporting the implementation of EBPs with fidelity in early childhood classrooms, and children in classrooms with internal coaches demonstrated a significant increase in social skills.

Limits to Coaching Effectiveness

Coaching is increasing in popularity, but the elements of coaching processes are often not clearly defined in advance nor integrated into a specific coaching model (Greif et al., 2022; Hussey & Campbell-Meier, 2021; Lee et al., 2023; Sinaise et al., 2023). Investments in coaching to support programs such as Head Start are frequently not associated with a particular coaching approach, and coaching practices in these settings are not implemented with fidelity (Pianta et al., 2021). Randolph et al. (2020) suggest that coaching in a school setting typically follows the traditional template of observations and delayed feedback, which is ineffective in changing practice. While coaching programs are worth the investment to improve the implementation of EBPs, coaching programs are only effective to the degree that they are supported by systems, schools, and districts (Ippolito et al., 2021). Weak organizational support for coaching facilitates weak outcomes (Pianta et al., 2021). Wright and Steed (2021) found that even though school personnel received coaching to support the implementation of an evidence-based framework, a lack of leadership may inhibit the implementation and sustainability of a program.

Findings from one study indicated there may be a nonlinear relationship between coaching and overall implementation, which suggests coaching is likely a more complicated variable than expected (Steinbrenner et al., 2020). Likewise, findings from the Kansas Coaching Project revealed supporting teachers during the implementation of EBPs is more complex than

developing workshops and expecting teachers to learn all they need to learn to successfully

implement EBPs (V. F. Knight et al., 2019). Fettig and Artman-Meeker (2016) note that while

exploratory data of group coaching to support an evidence-based framework increased use of

practices, 6 months of coaching may be inadequate to support the kind of growth and

development required for the sustainment of evidence-based frameworks. Additionally, in a

study examining the impact of instructional coaching on teachers' implementation of EBPs in

science, 12 weeks of coaching were insufficient in helping teachers incorporate more than half of

the EBPs recommended (Furman et al., 2021). However, findings indicated coaching positively

influenced the amount of time teachers spent teaching science (Furman et al., 2021). In another

study, coaching was negatively associated with implementation when a group of coaches in the

research study underperformed in supporting implementation, and administrators had to take

corrective action (Odom et al., 2022). This led to the conclusion that an adequate level of

coaching may be necessary to support the implementation of EBPs (Odom et al., 2022). When

coaches have too many responsibilities or have a large coaching load, it diminishes their capacity

to provide support that improves implementation (Ayvazo et al., 2021; Hannan & Russell, 2020).

Coaches need access to resources, training, and support to deliver effective coaching

practices (Hannan & Russell, 2020). Additionally, coaches need to be experts in professional

coaching to be most effective in supporting the implementation of EBPs (Ippolito et al., 2021). A

coaching program where coaches focus on a mindset of industry and production instead of a

mindset of growth and development can also limit the effectiveness of coaching (Shoukry &

Cox, 2018). In many organizational settings coaching is used as a tool to encourage adoption of

social conformity rather than a tool for promoting reflection, agency, and critical thinking

(Shoukry & Cox, 2018).

However, Jacobs et al. (2018) note that there is another side to coaching effectiveness as the recipients of coaching are also part of the coaching equation, and practitioners can be resistant to coaching. Giordano et al. (2021) found that levels of personal interest and motivation can limit coaching effectiveness because active participation in coaching sessions and the completion of coaching tasks varied amongst the professionals receiving internal and external coaching. In a peer coaching professional development program for surgeons to increase their skills for a specialized procedure, some surgeons reported their practice did not change because they did not have an intention to change their practice prior to participation (Kreutzer et al., 2021). Surgeons in this category did not think they needed to improve their skills (Kreutzer et al., 2021).

Practitioners need to be willing to open themselves up to learning and critique, where they are ready to recognize areas for improvement: This can be facilitated through a school culture that prizes ongoing learning and growth (Kraft et al., 2018). Resistance occurs because teachers are used to working in isolation, and it is difficult to transition to a place of vulnerability and openness (Musanti & Pence, 2010). In a study exploring instructional coaching to support the implementation of an evidence-based reading comprehension approach, nearly 20% of the teachers were resistant to coaching, and these findings suggest one-on-one coaching may not be the best fit for all staff (Jacobs et al., 2018). Teachers were assigned to an instructional coach and those who were resistant indicated lower buy-in, commitment, and confidence regarding the implementation of the evidence-based approach (Jacobs et al., 2018). Findings from a combined lifestyle intervention and coaching program indicated competing interests and a lack of resources decreased stakeholders' willingness and capacity to engage in implementation (Bekker & Wagemakers, 2021).

In a coaching initiative to support surgeons' ongoing learning and development, some surgeons indicated that negative feedback was discouraging, led to disengagement, and diminished their openness to receiving feedback (Kreutzer et al., 2021). Additionally, the initiative was implemented within a surgical culture that associated coaching with deficiencies, and the designation of being one who receives coaching was embarrassing for some surgeons (Kreutzer et al., 2021). In a study with 270 medical residents, coaching improved self-reflection, which was associated with positive change, but burnout and well-being during residency were still concerns for non-Caucasian and female residents (Palamara et al., 2022). These findings suggest coaching practices may need to be adapted and are not effective for all participants (Palamara et al., 2022).

Virtual Coaching

Web-based coaching may be a viable solution for addressing the need of high-quality coaches amidst resource constraints because it is more cost-effective and potentially more practical to implement (Kraft et al., 2018). Caron et al. (2022) concur and explain that online training may increase access to learning that supports implementation because it more readily fits the schedules, needs, and interests of professionals. Randolph et al. (2020) determined a virtual iCoaching program improved the overall professional development process by supplementing what is missing from traditional PD: follow-up sessions and implementation support. In another example, a web-based coaching model that incorporated structured analyses of educators' teaching videos and ongoing feedback cycles was associated with improved implementation and student outcomes (Pianta et al., 2021).

In a peer coaching initiative to support surgeons' acquisition and development of skills, some surgeons found the video-based coaching program and peer assessments were valuable for

learning and improving skills (Kreutzer et al., 2021). In another study, an eCoaching model with bug-in-the-ear technology, along with repeated opportunities to practice skills, provided teachers with ongoing support that resulted in improved instructional practices and outcomes (Horn et al., 2021). In one study, surgical residents perceived video coaching provided insightful feedback about their practice and helped them identify their strengths and weaknesses (Esposito et al., 2022). McLeod et al. (2019) determined a virtual coaching program with video and email feedback supported preservice teachers in early childhood special education settings and increased their use of EBPs. Rosenberg et al. (2022) used an implementation science framework to design and implement an online peer coaching model to support undergraduate students because virtual coaching has been identified as an implementation support. Similarly, Romano and Schnurr (2022) suggest using implementation science frameworks and peer coaching to support interventionists because video-coaching tools can be widely applied in community settings. In a virtual caretaker-coaching model to support parents implementing therapeutic EBPs, parents gained knowledge and skills, and there were positive changes for children on six out of seven outcomes (Zylstra & Sidhu, 2021). Once parents could see the results, they were motivated to continue the coaching process and implement the practices (Zylstra & Sidhu, 2021).

However, Caron et al. (2022) concluded from their study of an online-training model supporting the implementation of EBPs, that more introspection opportunities may have supported higher FOI and decreased variability in implementation outcomes. Since coaching as a support is part of the implementation process, process evaluations of coaching structures need to be included in future implementation evaluations (Barrett, 2021). Ayvazo et al. (2021) propose coaching models should be virtual and self-paced, with self-directed training modules, remote observations, and immediate and delayed performance feedback. However, Rosenberg et al.

(2022) determined there is a lack of contextual detail regarding delivery practices and FOI in virtual coaching models. Likewise, Locke et al. (2022) explain that remote coaching may increase reach, but without an understanding of contextual factors and end-users, remote coaching may decrease FOI and increase attrition.

Summary

The implementation of evidence-based practices is a challenging process requiring a significant investment in professional learning throughout the process (Carlgren & BenMahmoud-Jouini, 2022). While acquiring knowledge and skills is important, knowledge acquisition alone is insufficient in improving implementation and achieving adequate FOI (Johnston, 2021; Joyce & Showers, 1981; Opre et al., 2022). Professionals implementing EBPs need transfer of learning, where they apply knowledge and skills in daily practice, to become self-directed (Lomis et al., 2021; Romano & Schnurr, 2022). Self-directed learning is important in stakeholders committing to consistent implementation and sustaining EBPs (Crawshaw et al., 2022; Kittelman et al., 2021). The beliefs and values of practitioners influence their commitment to the implementation process (Kittelman et al., 2021).

Descriptions of self-directed learning correspond to descriptions of self-determination (Chaipidech et al., 2021; Joyce & Showers, 1981; Lomis et al., 2021; Ryan & Deci, 2020; Torre et al., 2020). According to self-determination theory, stakeholders become autonomously motivated and self-determined when they satisfy their psychological needs for autonomy, competence, and relatedness (Ryan & Deci, 2000). Similarly, self-directed learning is associated with improved competencies, ownership in learning, and collaboration during implementation (Beckers et al., 2021; Johnston, 2021; Romano & Schnurr, 2022; Stoiber et al., 2022; Tsuda et al., 2019). There is a relationship between autonomous motivation and increased engagement

(Ryan & Deci, 2020; Ryan & Niemiec, 2009), and likewise, there is a relationship between self-directed learning and stakeholders' commitment to implementation (Crawshaw et al., 2022; Giordano et al., 2021). Therefore, self-determination theory was an applicable framework for this study.

The literature highlight coaching as a competency driver to support ongoing learning throughout the implementation process (Arden & Benz, 2018; McMaster et al., 2021). Many studies indicate a positive relationship between coaching, learning, and implementation outcomes (Curran et al., 2022; Giordano et al., 2021; Jakopovic, 2021; Johnston, 2021; Pianta et al., 2021; D. K. Shannon et al., 2021). Coaching is associated with improved FOI and overall implementation (Elek & Page, 2019; Traga Philippakos & Voggt, 2021). Additionally, there are positive associations between coaching and the transfer of learning, self-regulated learning, and self-initiated learning (Poch et al., 2020; Stoiber et al., 2022; Wang & Lu, 2020).

Findings from the literature focus on coaching and implementation outcomes (Curran et al., 2022; Hsieh et al., 2021) and coaching and learning outcomes (Lomis et al., 2021; Wang & Lu, 2020), but there are inconsistencies in coaching definitions, features, and models (Hunter & Redding, 2023; Locke et al., 2022; Odom et al., 2022). Discussions in the literature lack contextual detail of how coaching practices support self-directed learning during the implementation process (Barrett, 2021; Fleddermann et al., 2023; Meyer et al., 2022; Rosenberg et al., 2022). Specifically, coaching processes in virtual professional development settings are not clearly defined, developed, or understood (Ayvazo et al., 2021; Caron et al., 2022; Locke et al., 2022; Rosenberg et al., 2022). Understanding the features of successful coaching is important for improving professional development and sustaining evidence-based practices (Curran et al., 2022; Fleddermann et al., 2023; V. F. Knight et al., 2019). This case study helped fill in the

literature gap by exploring how a virtual coaching program provided opportunities for adults to

become self-directed learners during the implementation of evidence-based practices.

CHAPTER THREE: METHODS

Overview

The purpose of this single instrumental case study was to understand how a virtual coaching program provides opportunities for self-directed learning during the implementation of evidence-based practices for adults at Navigator Coaching. Chapter 3 begins with a general discussion of educational research and funnels into a rationale for selecting a qualitative, single instrumental case study as the research design for this study. Following the research design is a list of the research questions and a description of the research setting, participants, and recruitment plan. Then, a section describing researcher positionality includes a discussion of the interpretive framework, philosophical assumptions, and the role of the researcher. Next, procedures for the following are discussed: collecting data, analyzing data, data synthesis, and obtaining necessary permissions. The data collection methods utilized in this study include observations, audiovisual materials, and individual interviews. Rationales for data collection and data analysis methods are included in this discussion. Finally, methods for increasing trustworthiness, ethical considerations, and a summary of the research methodology are provided.

Research Design

The goal of educational research is to develop descriptive knowledge, predictive knowledge, and explanatory knowledge as it relates to educational processes and practices (Gall et al., 2007). This study developed descriptive knowledge regarding opportunities for self-directed learning in a virtual coaching program. When designing methodology, educational researchers determine what type of study, quantitative or qualitative, will yield useful,

persuasive, and theoretical knowledge (Gall et al., 2007). This was a qualitative study with theoretical and practical value, responding to calls for future qualitative researchers to continue investigations into social contexts that foster self-determination (Ryan & Deci, 2020) and detail coaching approaches that support successful implementation (Ayvazo et al., 2021; Ramaswamy et al., 2022). Qualitative studies are undertaken to generate rich and thick descriptions of activity in natural settings (Geertz, 1973). When collecting data, qualitative researchers include the perspectives of research participants to identify patterns and build interpretations (Creswell & Poth, 2018; Denzin & Lincoln, 1994; Stake, 1995). During data collection, this qualitative study incorporated the experiences of 12 adults in a real-life virtual coaching setting to interpret findings and synthesize themes.

Case study research is a type of qualitative methodology employed to investigate a single case or multiple cases to better understand problems and issues (Creswell & Poth, 2018; Gall et al., 2007; Stake, 1995). Case studies are intrinsic or instrumental depending on the focus of the research; an instrumental case represents a particular instance of a general issue to understand and make sense of phenomena (Stake, 1995). Case studies are bounded by type, foci, unit of analysis, setting, and participants (Gall et al., 2007). To better understand the general phenomenon of how a virtual coaching program provided opportunities for self-directed learning during the implementation of evidence-based practices, a particular type of virtual coaching case was investigated: virtual life coaching.

The focus of a case study includes a thesis or proposition that is like a research hypothesis being argued or defended (Gall et al., 2007). The foci guiding this case were related to the research questions, which developed from the theoretical framework undergirding the study; the foci were inquiries into the opportunities available for psychological need satisfaction.

The unit of analysis is the general level at which a phenomenon will be studied across a single case or multiple cases (Gall et al., 2007). It is from the unit of analysis that case researchers, guided by research aims, further refine the criteria for selecting a case or cases that best represent the phenomena being studied (Stake, 1995). The unit of analysis for this case study was virtual coaching programs in North America. This was further refined to include virtual life-coaching programs in North America. This study was a single instrumental case examining one virtual life-coaching program in North America. The case setting and research participants further define the boundaries of this study and are discussed in later sections.

Research Questions

According to Deci and Ryan (1985), self-determination improves when autonomous motivation increases. Autonomous motivation is facilitated through opportunities for psychological need satisfaction (Deci & Ryan, 1985). Since descriptions of self-determination parallel descriptions of self-directed learning, self-determination theory (SDT) was employed as a lens to understand how a virtual coaching program provided opportunities for adults to become self-directed in their learning. The central research question and sub-questions framed the case by exploring the opportunities available for satisfying basic psychological needs.

Central Research Question

How does a virtual coaching program provide opportunities for self-directed learning during the implementation of evidence-based practices?

Sub-Question 1

How does the coaching program provide opportunities for adults to satisfy their need for autonomy?

Sub-Question 2

How does the coaching program provide opportunities for adults to satisfy their need for competence?

Sub-Question 3

How does the coaching program provide opportunities for adults to satisfy their need for relatedness?

Setting and Participants

The case study setting and participants must be carefully selected and represent the best options for understanding the case (Stake, 1995). A case is not selected based on typicality; it is selected to get the best data from which to learn (Stake, 1995). It is the opportunity to learn that is of greatest importance (Stake, 1995). Therefore, the selection of the case setting and research participants were opportunities to learn about virtual coaching and self-directed learning during the implementation of EBPs.

Setting

A case study setting is one where the case researcher can maximize learning (Stake, 1995). Data must be gathered using multiple methods in an environment where the researcher has an opportunity to get inside the case (Stake, 1995). An ideal case setting is the place where a researcher will likely encounter a hospitable environment to observe phenomena, speak with participants, and better understand case issues (Stake, 1995). The setting for this study was Navigator Coaching, a virtual life-coaching center for adults living in North America. The coaching center is headquartered in the United States and employs over 40 coaches. The leadership structure of the center consists of the founder and CEO, program director, technology director, coaching director, and 10 lead coaches. The leadership team meets once a week and

employs a participatory leadership style, where decisions are made cooperatively. The center has a brick-and-mortar office, where the coaches meet at least once a month. Several coaches work at the office, but the majority work remotely. The coaches hold college degrees, and many of them have advanced degrees. The coaches have completed a coaching certification program through the coaching center, and they have earned certificates in coaching. The coaches participate in monthly professional development and attend conferences quarterly.

There are over 4,500 adults enrolled in the coaching program, and these adults come from diverse vocational backgrounds. Adults enroll in the program to accomplish professional and personal goals. Professional goals are related to entrepreneurship, leadership, management, marketing, workplace relations, and sustainability. Personal goals are related to health and wellness, family relationships, parenting, organization, time management, and financial planning. The coaching program is individualized for each client according to their needs. Program members learn how to implement evidence-based practices to accomplish goals, and all members have access to weekly instruction, large group coaching, and small learning group sessions, which occur in an online format. Program members also have access to the Facebook group and recorded modules in the program library. Private coaching sessions are also available and planned according to members' goals. The main coaching technique employed is the Socratic Method.

I selected this setting because I had significant access to the daily activity occurring in the coaching program. This included access to live instruction sessions, large group coaching sessions, and small learning group sessions, as well as access to video recordings via the program library. I also had access to the social media activity that occurs within the program's private Facebook group. The opportunities for data collection, along with the hospitality toward

research I experienced through a conversation with the program director, helped me determine this research setting was an ideal case for learning about virtual coaching as a facilitative context for self-directed learning during the implementation of evidence-based practices.

Participants

As with the case setting, the pool of potential research participants should reflect the best opportunity to learn about research issues (Stake, 1995). From the sample pool, 12 adults were selected to participate in the study as this was a manageable size from which to gather rich and thick descriptions of the case (Gall et al., 2007). The case was further bounded by the requirements for participation (Stake, 1995): Participants were required to be at least 18 years old, current enrollees in the program, and members who were enrolled for a minimum of 6 months. The recruited participants in this study were 12 women from diverse backgrounds who had been enrolled in the program for a minimum of 1.5 years. Participants engaged in weekly instruction, coaching, and small learning group sessions. The participants also interacted with other members in the Facebook group and completed activities in the program workbook.

Recruitment Plan

Once my research proposal was approved by Liberty University's institutional review board (IRB; Appendix A), an invitation to participate in this study was emailed to potential participants (Appendix D). I utilized *purposeful sampling* to recruit participants. The goal of purposeful sampling is to include participants who will provide rich information relative to the research purposes (Creswell & Poth, 2018; Gall et al., 2007). The sample pool consisted of approximately 1,700 adults, and the sample size included 12 participants from this pool.

The sample pool included adults who have participated in the program for at least 6 months. Adults who have participated for this length of time are more likely to be established in

the program, thus increasing the likelihood participants have integrated routines and understand their learning experiences (Joyce & Showers, 1981; Lomis et al., 2021). Established clients may also mitigate withdrawal from the coaching program and consequently, the research study as well (Bekker & Wagemakers, 2021).

To increase visibility and reach, I also created and posted a social media invitation (Appendix E) on the coaching program's Facebook page. Between the invitation to participate sent via email and social media invitation, 17 program members indicated interest in participating in the study. As such, follow-up invitations were unnecessary. Participants received an information sheet of the study (Appendix B), which provided details of the study's purpose and requirements for participation. Though 13 program members confirmed their participation, one participant was unable to complete the study requirements because of a family emergency.

Researcher's Positionality

Qualitative research is understood to be interpretive research (Creswell & Poth, 2018; Gall et al., 2007). Researchers interpret the data collected to make sense of the issues relevant to the research study (Creswell & Poth, 2018). Interpretations are impacted by researchers' backgrounds and personal experiences, which help to form the lens of interpretation; therefore, it is important for researchers to position themselves in the research (Creswell & Poth, 2018). This section includes a discussion of my interpretive framework, philosophical assumptions, and my role as a researcher. This information will help readers understand how I position myself within this study, and it will help them understand what they can expect from me (Stake, 1995).

Interpretive Framework

Throughout this study, I employed a social constructivist framework. Social constructivist researchers focus on specific social contexts to better understand research issues

(Creswell & Poth, 2018). In this case study, I described a virtual coaching context to understand case phenomena. I believe the unique, combined perspectives of research participants and researchers are important in understanding case issues. Participants provide insight into perspectives that researchers cannot see from their vantage points (Stake, 1995). I believe researchers also offer unique perspectives because they have understood case issues through a study of relevant literature. As case outsiders, researchers have an opportunity to view contextual details through an objective lens. I think this fusion of inside and outside perspectives result in rich and thick descriptions of the case context that are necessary to make credible interpretations (Beuving & de Vries, 2015).

Philosophical Assumptions

Philosophical assumptions shape what people understand to be truth, how they pursue truth, and how they interpret reality (Lincoln & Guba, 2016). It is important for researchers to understand and communicate their philosophical assumptions because it is philosophical assumptions that provide the framework for a justifiable research methodology study (Bhangu et al., 2023). In this section, my ontological, epistemological, and axiological assumptions are presented. These assumptions include discussions about the nature of reality, what is knowable, and what knowledge is most valuable (Lincoln & Guba, 2016).

Ontological Assumptions

Ontological assumptions are what researchers believe about the nature of reality (Lincoln & Guba, 2016). I believe the human experience is part of a singular objective reality that is God's truth. I believe God has created a rational universe with natural and supernatural laws that contain symmetry and patterns. I think scientific investigation is possible because of the predictability and consistency of God's established laws (Jaki, 1978). I believe humans were

created as rational creatures who have common natures and have been endowed with the ability to reason. I think it is this gift of reason that enables humans to perceive the form and function of objects in the universe, along with the symmetry, patterns, inconsistencies, and contradictions found within social contexts. In this case study, I discovered patterns and outliers within a virtual coaching context to make assertions and articulate the meaning of the case.

Epistemological Assumptions

Epistemological assumptions are what researchers believe about knowledge; it is what is knowable (Lincoln & Guba, 2016). I believe the rational universe God has created, along with the gift of reason he has bestowed on humans, makes it possible to capture observational data, organize knowledge, and think critically about the data gathered and what it means for the case. I think categorization is possible in case studies because humans can perceive general and particular categories through a process of analysis and reasoning (Feser, 2023). In this case study, I collected data about a particular virtual coaching context to better understand research phenomena. This data was organized by categories which were used to code segments and develop themes that contributed to the current body of knowledge regarding research issues.

Axiological Assumptions

Axiological assumptions refer to what is valuable (Lincoln & Guba, 2016). I believe generally that human senses can be trusted because humans are rational creatures who can sense and perceive reality (Feser, 2023; George, 2016). I think human sense impressions correspond to what is really happening, and therefore, humans can make sense of phenomena through careful observations and critical thinking (Feser, 2023; George, 2016). This is why I have confidence in and highly value the perspectives of research participants. Participants in this study provided insights into what they have sensed, perceived, and understood, which was important in

understanding and articulating the truth of the case. However, I also believe humans are prone to distorting reality through selective data collection, hasty judgments, biases, and by muting the gift of reason (Crawford et al., 2021). As such, during data collection and interactions with participants, I endeavored to be aware of imposing my subjective limitations on the data that were collected and analyzed. I purposed to strike a balance between being open and welcoming of case data and retaining a healthy amount of skepticism of my interpretations so that I articulated the truth of the case instead of my truth.

Researcher's Role

The role of the case researcher as an *interpreter* is central to social constructivism (Stake, 1995). As the human instrument in this study, my role was to make interpretations of case data through careful analysis procedures. I endeavored to represent the perspectives of research participants and the full spectrum of patterns and outliers in my interpretations. I believe an honest synthesis that demonstrates evidence of researchers trying to understand the case through multiple vantage points is important in making truthful interpretations. Even with triangulation safeguards in place, I recognize that my interpretations are subjective and prone to influence from my previous experiences.

I have experience with the implementation of EBPs from the perspective of a student, teacher, and principal. Having been formerly employed as a teacher in public and private school settings, and as a middle school principal in a private school setting, I have experience implementing evidence-based practices in both settings. I have achieved low fidelity of implementation (FOI) and high FOI at different times. I have fully engaged with some practices and minimally engaged with others. I sustained some implementation efforts and abandoned others. As a principal, I tried implementing new practices. Some were successful and others

failed. I found FOI to be challenging amidst organizational constraints. I also have prior experience with coaching. In my second year of teaching, I enrolled in a literacy coaching program, where I received training to pilot a literacy program through a university in New York. My experience was positive, and the program was tremendously helpful in achieving goals. In my own experience, the degree of FOI I achieved was related to training, practice, and personal values.

After researching implementation processes and writing Chapter 2, I understand my own experience with implementation processes better. I have found much agreement between my own experience and the factors affecting fidelity of implementation and implementation capacity in the literature. I am aware that this understanding may have influenced my interpretations of the case (Creswell & Poth, 2018). However, I utilized reflexive journaling to remain aware of my prior and ongoing presumptions and generalizations. I bracketed my experience out of the research while learning about this case so that I did not map my own experience into the data collected (Stake, 1995). I consistently memoed throughout this study to minimize biases that could impact the trustworthiness and credibility of my case interpretations.

Procedures

A rigorous qualitative study incorporates systematic procedures and protocols for each step of the research process (Beuving & de Vries, 2015). Procedures for data collection, data analysis, data synthesis, trustworthiness, obtaining necessary permissions, and ethical considerations are discussed in this section. There is an emphasis on triangulation to increase the trustworthiness of data collection and analysis. Triangulation increases the likelihood of actualizing credible and authentic procedures that reflect the moral and ethical obligation to pursue and present the truth (Lincoln & Guba, 2016).

Data Collection Plan

Like the other elements of a case study design, data collection ought to be systematic, thus demonstrating purpose, thoughtfulness, and trustworthiness (Stake, 1995). Data was collected from Navigator Coaching. Collecting data through virtual platforms has several advantages: decreasing the cost of travel, improving the efficiency of data transcription, and providing flexibility in time and space for research participants as well as researchers (Creswell & Poth, 2018). Additionally, virtual platforms provide a nonthreatening environment where participants are likely to feel comfortable discussing issues and reflecting at a deeper level (Creswell & Poth, 2018).

To make interpretations of case issues, I compiled multiple perspectives through a collection of data episodes to build a full empirical record of the case (Beuving & de Vries, 2015; Stake, 1995). Through rational, multimethod data collection and analysis methods, qualitative researchers can further the understanding of complex phenomena (Bhangu et al., 2023). The following sections include a discussion of the multimethod approach to data collection employed in this case study: observations, audiovisual materials, and individual interviews. Corresponding data analysis plans are also discussed, along with an overview of how data was synthesized into themes.

Observations Data Collection Approach

Observations are opportunities for case researchers to see issues relevant to the case for themselves (Stake, 1995). Observations bring layers of meaning to the case because observed conversations, activity, behaviors, body language, and silence disclose issues of importance and the nuances that surround case phenomena (Stake, 1995). Case researchers are interpreters who seek to objectively record what is happening during observations to refine the meaning and

understanding of phenomena (Stake, 1995). It is best if case researchers remain passive and stand back during observations to catch the totality of activity within an observation episode (Beuving & de Vries, 2015; Goffman & Lofland, 1989; Stake, 1995). The goal is to minimize distractions during observations because case researchers need to see issues for what they really are (Beuving & de Vries, 2015; Goffman & Lofland, 1989; Stake, 1995).

Though it has been recommended that observations occur after interviews so that research participants and researchers establish a rapport, and participants feel more comfortable (Beuving & de Vries, 2015), that recommendation was based on the researcher being seen and specifically observing recruited participants. It would be best if all case data could be collected through observations, and while other data collection methods are necessary to learn about the case, observations should be emphasized in case study research (Stake, 1995). It is for this reason that observations were the first method of data collection employed.

During these observations, I was a complete observer who was not seen or noticed (Creswell & Poth, 2018). I observed two live instruction sessions, two large group coaching sessions, and two small learning group sessions. Each observation lasted for approximately 1.5 hours. Observations occurred via the Zoom conferencing platform, where I received a link to join the sessions from the program director. The individuals being observed volunteered to participate in the live sessions. The volunteers were aware the coaching program records instruction and large group coaching sessions and makes the recordings available to all members enrolled in the program.

While research participants' perspectives were of immense value to this case study, this study was not a phenomenology where the focus is entirely on understanding participants' experience (Creswell & Poth, 2018). By nature of being a case study, observations are used to

understand the innerworkings of program activity and case phenomena (Stake, 1995). This requires collecting data representative of the entire case, which includes participants' experiences, but the case is not bounded by their experiences alone (Stake, 1995). As such, program members were not recruited to participate in this method of data collection. The following sections provide additional details regarding the observations.

Instruction and Large Group Coaching Observations

Instruction and large group coaching sessions are open to all adults in the program. There are pre-established viewing protocols overseen by program leaders. I observed two instruction sessions and two large group coaching sessions, where I observed the coaches and program members who volunteered to participate in the coaching activities. During the observations, I could view two people at a time: one coach and one program member. Within the pre-established protocols, any members attending the live sessions were complete observers, and likewise, when I attended live sessions, I was a complete observer and none of the program members, including the members being coached, could see me. Any individuals referenced in the live observations received confidential and general designations of *volunteer* or *program member*. Over 400 program members attended the live instruction and coaching sessions.

Live instruction and large group coaching sessions are recorded and stored in the program's library and are available for viewing. I observed the live sessions and watched the recordings. The focus of the live observations included listening and watching to obtain the overall initial impressions from each observation episode (Stake, 1995). The first viewing diminished the pressure of having to take rapid notes at the expense of missing issues, behaviors, and the context relevant for understanding a particular episode of data. However, I utilized the

First Viewing Observation Protocol (Appendix G) to note important details, memos, or questions during the first viewing.

The sessions were viewed a second time via the recordings stored in the program library. It is up to the case researcher to record the most relevant and significant happenings within an observation episode (Stake, 1995). During this second viewing, I completed the Detailed Observation Protocol (Appendix H), where I wrote detailed descriptions of the most relevant activities, behaviors, conversations, and body language. Observation notes were numbered using the line-by-line format modeled by Stake (1995).

Small Learning Group Observations

I also observed two small learning group sessions, which lasted approximately 1.5 hours and took place via the Zoom platform. The small group learning sessions are limited to 18 program members. As with the instruction and large group coaching sessions, I was a complete observer. The observations followed the same format as the live instruction and large group coaching sessions with one exception: The coaching program does not record the small group sessions. Therefore, I had one opportunity to observe and take notes of the session. I took notes of the most significant happenings using the Detailed Observation Protocol (Appendix H). The focus of these observations was to document descriptions of behavior, activities, and conversations as applicable (Stake, 1995). Observation notes were numbered using the line-by-line format modeled by Stake (1995).

Audiovisual Materials Data Collection Approach

Audiovisual materials include the examination of photographs, videos, websites, and data from social media, such as Tweets and Facebook messages (Creswell & Poth, 2018). Facebook posts have significant potential for research because social media activity is mainly content that

has been created by users: posts, threads, and comments (Franz et al., 2019). Social media interactions provide rich data to qualitative researchers who are developing an understanding of phenomena within a specific context because social media users exchange information in the form of a social dialogue (Li et al., 2015). Therefore, Facebook messages were an opportunity to collect snapshots of social activity to understand how a virtual coaching program provided opportunities for self-directed learning during the implementation of EBPs. The type of Facebook data available for researchers to study include text (posts, comments, links), videos, and images (Franz et al., 2019). It is important to negotiate access to audiovisual materials ahead of time and clearly define what data will be included or excluded during data collection (Creswell & Poth, 2018).

Facebook posts were the second method of data collection employed in this study. The program director at Navigator Coaching emailed me a link to join the Facebook group, and the administrator of the group granted me access. I examined 2 weeks of Facebook posts within Navigator Coaching's private Facebook group. As with the observations, I was a complete observer. I engaged in passive social media analysis where I looked for information patterns within the data segments being studied (Franz et al., 2019). I divided the Facebook activity into seven episodes. Two days of Facebook activity counted as one episode of data collection. I captured screenshots of the posts and comments and saved them to the research folder on my computer. The concept of collecting the best data within a case (Stake, 1995) is also applicable to audiovisual materials. The focus of Facebook data included written text: posts and comments. However, I also reviewed and included the content of posted videos and images when they seemed relevant to understanding case issues.

Individual Interviews Data Collection Approach

Interview questions ought to be reserved for answering the questions the case study researcher cannot obtain through direct observation (Stake, 1995). Therefore, individual interviews were the last method utilized in this multimethod data collection approach. Interviews should provide observations of what others have seen (Stake, 1995). Each individual interview represents an episode of collected data (Stake, 1995). Program members were recruited for this method of data collection, and they received an information sheet detailing the particulars of the study. The purpose of interviews in this case study was to describe and understand research participants' perspectives because program members are direct observers of their learning processes. As such, program members were valuable in presenting multiple perspectives, which provided a fuller understanding of the case as it concerns research issues (Stake, 1995).

Research participants received interview questions at least 3 days in advance so they had time to think about the questions and prepare any notes prior to the interview. Though notes were not required, seven of the participants wrote and referenced their notes during interviews. In the coaching program, participants use the Zoom video-conference platform to attend instruction, coaching, and small group learning sessions. Since participants were familiar with this format, individual interviews were conducted and recorded via the Zoom platform. Participants were emailed a link to join the interview sessions. During the interviews, I focused on listening and acquiring impressions (Stake, 1995). However, I also utilized the Individual Interview Protocol (Appendix J) to take relevant notes and memos and record additional questions. Interview questions were piloted with the first research participant, and findings indicated adjustments to the questions were unnecessary. NVivo software was employed to transcribe the recordings of participant interviews.

Participant background information was collected via an electronic questionnaire prior to the completion of individual interviews. The Participant Background Questionnaire (Appendix F) was attached to the participant invitation email, along with the information sheet. Participants were asked to read the information sheet prior to completing the questionnaire.

Table 1

Participant Background Questionnaire

1. What is your gender?

2. What is your age? If you prefer, you may list a 10-year range such as 45–54.

3. Please briefly introduce yourself by sharing: the state or province in which you live and your work experience (being a stay-at-home spouse and/or parent is most certainly a vocation).

4. What is your highest educational degree?

5. Please briefly describe how you heard about this life-coaching program.

The next section includes a list of the individual interview questions. Interviews should start in a comfortable zone where the researcher simultaneously breaks the ice and collects introductory information relevant to the topic (Beuving & de Vries, 2015). Therefore, the first question was the grand tour question designed to make research participants comfortable so they could more easily transition to the deeper case questions. Citations from the related literature are included in a separate section after the research questions to support the inclusion of the questions.

Table 2

Individual Interview Questions (also found in Appendix I)

Introductory (Grand Tour) Question:

1. What are the reasons you decided to join a virtual life-coaching program?

Interview Questions:

1. How would you describe your program participation? CRQ, SQ1

2. How has your participation changed since beginning the program? CRQ, SQ1

3. How has the program's virtual library helped you achieve your goals? SQ1, SQ2

4. How do the instruction sessions help you achieve your goals? SQ1, SQ2

5. How do the coaching sessions help you achieve your goals? SQ1, SQ2

6. What *aha* learning moments have you had? CRQ, SQ1–SQ3

7. How has the program surprised you? CRQ, SQ1–SQ3

8. What are the top two or three things that you have learned that you apply in daily practice? CRQ, SQ1–SQ3

9. What program activities help you stay engaged and why do you think these activities help? CRQ, SQ1–SQ3

10. What opportunities are available for connecting with others in the program and how have you utilized these opportunities? SQ3

11. How has connecting with others helped you achieve your goals? SQ3

Individual Interview Questions Rationale

Qualitative researchers use open-ended questions to learn from participants so that researchers can describe complex phenomena in detail and elucidate understanding (Bhangu et al., 2023). The perspectives of research participants contributed to the understanding of how a virtual life-coaching program provided opportunities for self-directed learning as I did not observe their personal participation in the coaching program. Interview questions were based on the theoretical framework provided by Deci and Ryan's (1985) self-determination theory and the

related literature regarding learning during the implementation of EBPs and learning during coaching.

According to SDT, a social context that facilitates self-determination provides opportunities for the satisfaction of universal psychological needs: autonomy, competence, and relatedness (Ryan & Deci, 2000). The research questions flow from these theoretical concepts. Questions 1 and 2 were relevant for understanding the central research question: *How does a virtual coaching program provide opportunities for self-directed learning during the implementation of evidence-based practices?* These questions developed the participatory context of adult learners in the virtual coaching program and provided data related to Sub-Question 1: *How does the coaching program provide opportunities for adults to satisfy their need for autonomy?* Questions 3–5 also focused on research Sub-Question 1. These questions were related to research Sub-Question 2 as well: *How does the coaching program provide opportunities for adults to satisfy their need for competence?* Questions 6–9 addressed the central research question and the three sub-questions. Questions 10 and 11 focused on research Sub-Question 3: *How does the coaching program provide opportunities for adults to satisfy their need for relatedness?*

Interview questions were also aligned with findings and assertions from the related literature. Questions 1 and 2 asked participants to describe their program participation and reflect on how their participation has changed over time. In the context of a competency-based medical education program, adequate FOI was attained through a transformation in participation and pedagogy, which was related to the degree the implementation process was acceptable to faculty and students (Lomis et al., 2021). The third question asked participants how the program's virtual library has helped with goal attainment. Caron et al. (2022) suggest that virtual training

programs may increase access to learning that supports implementation because the programs align more with professional learners' schedules, needs, and interests. Question 4 asked about the program's instruction sessions and goal attainment as Sanetti and Collier-Meek (2019) determined there was an association between training during implementation and professionals' capacity to engage in implementation and achieve adequate FOI. Question 5 asked how the program's coaching sessions help with goal attainment because coaching is conceptualized as a competency driver in implementation frameworks to assist professionals in acquiring competencies to successfully implement EBPs (Eagle et al., 2015).

Question 6 was an inquiry into participants' *aha* learning moments as Meyer et al. (2022) contend there is a need to examine contextual details and mechanisms influencing the transfer of learning. Question 7 asked participants to consider how the program has surprised them. To improve implementation efforts, it is important to understand how programs or innovations support professionals during the implementation process (Helsabeck et al., 2022). Question 8 was an inquiry into how participants apply learning in daily practice as Faggella-Luby and Bonfiglio (2020) note that the satisfaction of competency needs is dependent on comprehensive and ongoing professional development practices, where educators apply knowledge. Question 9 asked participants to reflect on what program activities help with engagement and why these activities are helpful. In the context of implementing Positive Behavior Intervention and Support frameworks, engagement in professional learning decreases the risk of abandoning implementation plans (McIntosh et al., 2016). Questions 10 and 11 inquired about opportunities for connecting with others in the program and how these connections help with goal achievement. In the context of a business setting, collaborative connections that occurred through coaching facilitated a sense of belonging and encouraged critical thinking (Káplár-Kodácsy &

Dorner, 2022). Hannan and Russell (2020) found that access to social capital through coaching was related to increased motivation and effort to overcome challenges.

Data Analysis

Data analysis consisted of two parts for each data collection method employed: interpretational analysis and data analysis steps. Interpretational analysis was employed to identify segments of text and code categories. Direct interpretation, categorical aggregation tables, correspondence tables, and interpretive commentaries guided the analysis of each data episode collected.

Interpretational Analysis

As part of my researcher's role as an interpreter, I engaged in *interpretational analysis* for all episodes and methods of collected data. Interpretational analysis is the process of investigating data to identify categories, patterns, and themes which are then used to develop a formal synthesis where the phenomena being studied are described and explained (Gall et al., 2007). Researchers engage in interpretational analysis manually or with the aid of a computer program. In this study, case data was coded, organized, and analyzed manually to see the wider context of text. As I learned when writing Chapter 2, it was important to my understanding and synthesis of the related literature to have segments of text along with pertinent details of the broader research context readily available. However, I utilized computer files and folders to aid with organization. All handwritten notes were scanned into computer files and stored in computer folders.

I analyzed case data by breaking the text of each data episode into relevant segments. The text came from observation protocols, social media posts, and individual interviews. Segments (also known as *theory units* or *analysis units*) contain any part of the text that indicates meaning

and can be comprehended outside of the context in which the segments are situated (Gall et al., 2007). A segment can be a phrase, fragment, sentence, paragraph, or multiple pages of text (Gall et al., 2007). Segments are identified by noting the lines on which the segment begins and ends (Gall et al., 2007). Each line of text was numbered using a line-by-line format (Stake, 1995), and I employed an alphabetical and numerical system to identify each segment. For example, the first segment in the text of an individual interview was denoted as *A,1–7*. This indicates it is segment *A*, which begins on line 1 and ends on line 7. The researcher is the primary measuring instrument, and therefore, it is up to the case researcher to determine what data is noteworthy and how to break the text into segments (Gall et al., 2007).

From these segments, I engaged in the second part of interpretational analysis: coding the segments of text by using a category system that defines, describes, and summarizes the data collected (Gall et al., 2007). A category is a clearly defined construct referring to a particular phenomenon in the data collected (Gall et al., 2007). A list of categories can be developed from other researchers, theories, and relevant literature (Gall et al., 2007). In case study research, categories to be coded are often pre-established as the researcher knows ahead of time, from the literature and experience, what issues are most relevant to the case (Stake, 1995). However, as data is collected, new categories are likely to develop from analyzing the emic perspectives of research participants (Lincoln & Guba, 2016; Stake, 1995). It is typical for the category system to be revised several times (Gall et al., 2007).

For this case study, I created a list of 15 categories (codes) related to the following foci of the case study: virtual coaching as a facilitative context, self-directed learning, the implementation of EBPs, and opportunities to satisfy basic psychological needs. These categories developed from the theoretical framework and related literature discussed in Chapter

2. The list of categories was refined to include eight of the original categories and 41 new categories. The list of categories was used to code segments of data, where I determined whether the data in a segment fit the definition, descriptions, and characteristics of one or more of the categories (Gall et al., 2007).

During coding, I utilized a coding system that represented an abbreviation of the category being coded. For example, one of the categories that emerged from case data was *Facilitative Language*, which I abbreviated FL, using uppercase letters (Gall et al., 2007). Within one segment, multiple categories may be present and therefore need to be coded (Gall et al., 2007). After all segments were coded, I manually grouped and organized all the segments that were coded under the same category in separate computer files. As previously noted, these segments were not isolated but also included portions of text that occurred before and after the segment to provide a fuller understanding of the context in which the text was situated. The Grouping Categories Protocol can be found in Appendix Q.

Analysis Steps

I followed Stake's (1995) framework of data analysis recommended for instrumental case studies closely. This included direct interpretation, categorical aggregation, correspondence tables, and interpretative commentaries. Immediately following each data collection episode, I typed a brief account of my initial impressions of the episode using the Direct Interpretation Protocol (Appendix K). Direct interpretation captures the overall broad meaning associated with the etic and emic issues during a particular episode of data collection (Stake, 1995). The direct interpretation protocol also provided space for memoing and identifying relevant questions.

After completing direct interpretation, I engaged in interpretational analysis where I identified and organized segments of text and coded the segments. Using the coded segments, I

completed a Categorical Aggregation Table (Appendix L) and Correspondence Table (Appendix N) for each episode as modeled by Stake (1995). These tables are helpful for noticing and developing patterns within the data, and they are also methods of triangulation that provide an audit trail, which increases the credibility of data analysis (Stake, 1995). The categorical aggregation and correspondence tables provide a quick look of recurring categories and possible relationships between categories (Stake, 1995). In my analysis, I looked for evidence of emerging issues (new categories) and potential correspondence between them (Stake, 1995). Correspondence refers to consistent patterns within certain conditions; the analysis of episodes should be done with a sense of correspondence to understand the behaviors, issues, and contexts relevant to the case (Stake, 1995). A categorical aggregation sample can be found in Appendix M, and a correspondence table sample can be found in Appendix O.

Finally, I utilized the direct interpretation account, coded segments, categorical aggregation table, and any correspondence tables to write an interpretative commentary (Appendix P) of each data-collection episode (Stake, 1995). The case researcher looks for meaning by pulling episodes apart and putting them back together (Stake, 1995). It is through reading, rereading, and deep thinking that understanding bursts forth (Stake, 1995). It involves a process of mental dissection to see the parts separately and how they may relate to each other or other case issues (Stake, 1995). The interpretive commentaries provided a synthesis of the analyzed data of each episode (Stake, 1995). Interpretive commentaries were written like mini reports that highlighted interpretations of the best data; the commentaries were helpful in developing themes and compiling a synthesis of case interpretations (Stake, 1995).

Data Synthesis

Data synthesis is a continuation and refinement of data analysis resulting in the identification of the most significant themes representing the totality of data collected and analyzed (Gall et al., 2007). Data synthesis entails a process of grouping the coded segments of data and using the constant comparison method to refine categories and highlight the most significant categories (Gall et al., 2007). After each episode of data collection was coded and analyzed, I grouped the coded segments of data by category using the Grouping Categories Protocol (Appendix Q). In addition to the coded segments, I included enough text in the grouping process to provide a snapshot of how the coded segment fits within the context of the episode.

After every two episodes of data were segmented, coded, analyzed, and grouped using the Grouping Categories Protocol, I engaged in *constant comparison,* which is a method for clarifying and creating distinct boundaries between categories (Gall et al., 2007). Though it developed as a method for grounded theory methodology, constant comparison is also applicable to case study analysis (Gall et al., 2007). During constant comparison, I compared segments within and across categories to determine the following: if the segment properly fits the definition of a particular category, if the segment needs to be coded with a different category, or whether a new category was needed (Glaser & Strauss, 1999). The constant comparison method is helpful in determining which categories are most important to the study, but it is also a form of triangulation to increase the likelihood of accuracy and consistency in data analysis (Gall et al., 2007). Once constant comparison was completed for all data and resulted in bounded categories that were most important to the study, I utilized the grouped segments and interpretive commentaries to synthesize broader themes of the case (Gall et al., 2007). Data synthesis was

important for developing interpretations and discussing the practical, empirical, and theoretical implications that resulted from case findings.

Trustworthiness

Qualitative researchers have an ethical obligation to participants, readers, and themselves to make every effort to minimize misrepresentations and misunderstandings (Beuving & de Vries, 2015). Therefore, a systematic plan to increase trustworthiness is critical throughout all stages of the case study process (Stake, 1995). The following subsections address trustworthiness through a discussion of credibility, dependability, confirmability, and transferability.

Credibility

Credibility refers to the accurate representation of the case issues and the inclusion of the perspectives of research participants (Beuving & de Vries, 2015). Thoroughly studying the case is necessary to credibly collect rich and thick descriptions of phenomena (Stake, 1995). Additionally, getting the meaning right and developing understanding entails the utilization of multiple data collection methods, data analysis methods, and triangulation methods with which to interpret the entire case (Stake, 1995).

Triangulation

Triangulation begins with a commitment to present the truth of the case (Stake, 1995). As such, I developed a synthesis that includes discussions of outliers and how case data aligns, diverges, and adds to the relevant literature (Stake, 1995). Triangulation protocols should provide evidence of location: Triangulation is a navigational tool to avoid getting lost in the data and to remain true to the research paradigm (Stake, 1995). Therefore, I employed three triangulation protocols to assure readers that data collection and data analysis occurred with checks and balances throughout the entire process (Stake, 1995). The following triangulation

methods were utilized to increase the credibility of this study: constant comparison, data source triangulation, and member checking.

Constant Comparison Method. The coding process increases in strength and accuracy and becomes more trustworthy when researchers regularly go back to the segments that have been coded and ensure the segments fit within the assigned categories (Glaser & Strauss, 1999). As such, I utilized constant comparison after every two episodes of data were collected and analyzed. With each observation, Facebook episode, and interview, I used the data to build my case. As I analyzed and synthesized the new data, I compared the new information with the established categories and vice versa so that I could combine categories, determine whether segments needed to be placed in alternate categories, and determine if new categories emerged (Glaser & Strauss, 1999). This created distinct boundaries between the categories (Gall et al., 2007). By constantly measuring any new data with the standards and meaning of the category system and previously collected data, I minimized neglected, misunderstood, and misplaced meaning, thus improving the trustworthiness of my analyses and subsequent interpretations.

Data Source Triangulation. I employed data source triangulation by generating a comprehensive description of the case (Stake, 1995). Data collection should be pursued vigorously so that the descriptions provide insight into the complex case patterns, thus allowing the evidence to speak for itself (Stake, 1995; Yin, 2014). Multiple data collection methods were employed to understand case issues at different times and through different modes: observations, audiovisual materials, and individual interviews. Data source triangulation also includes the concept of *comprehensibility*, which improves the trustworthiness of the case (Stake, 1995). Comprehensibility includes examining phenomena at various times and in several spaces as actors interact in different ways (Stake, 1995). As such, I observed three different types of live

activity sessions: instruction sessions, large group coaching sessions, and small learning group sessions. This broadened the contextual conditions by providing readers with a comprehensive set of data with which to understand case issues.

Member Checking. Research participants play an important role in triangulating researchers' interpretations and explanations (Stake, 1995). Member checking typically involves participants examining written drafts after the researcher has determined they will collect no additional data from participants (Stake, 1995). Research participants reviewed interview transcripts and the interpretive commentaries of their interviews. Participants made comments and offered points of clarification. This provided yet another reference point along the research path to ensure my navigation within the case was trustworthy and that I got the story right (Stake, 1995). As a result, readers can be assured efforts have been made to minimize bias and increase the trustworthiness of the report so that they can make their own naturalistic generalizations and applications (Stake, 1995; Yin, 2014).

Transferability

Transferability refers to the potential that the interpretations and explanations may be applicable to other settings (Lincoln & Guba, 2016). Though readers must make the decision as to whether the study warrants applicability, the researcher provides readers with a pathway to transferability by incorporating thick and rich descriptions throughout the case study (Geertz, 1973; Stake, 1995). Therefore, I provided detailed descriptions of the context, participants, activities, and processes inherent in the case (Lincoln & Guba, 2016). I also endeavored to bring forth the tacit knowledge of the participants and the meanings they ascribe to the case (Lincoln & Guba, 2016). The role of the researcher as an interpreter is highlighted here because it was my responsibility to provide case details to illuminate the path of interpretation so that readers can

comprehend assertions and make their own applications between contexts (Lincoln & Guba, 2016).

Dependability

Dependability refers to how well the research process was systematic and demonstrates consistent findings so that the case study framework can be repeated (Beuving & de Vries, 2015). Details of data collection and analysis procedures have been provided, and I regularly engaged in memoing and reflexive journaling throughout data collection and analysis (Creswell & Poth, 2018; Janesick, 1999). My dissertation chair, committee member, and methodologist have conducted a thorough review of my procedures and methods to ensure dependability is present.

Confirmability

The confirmability of a study refers to the rigor involved in using a social constructivist framework representing etic and emic perspectives with evidence of intentionality in minimizing researcher bias (Beuving & de Vries, 2015). The researcher's memos, reflexive journaling, and multistep data analysis process serve as audit trails for confirming the case evidence and steps taken throughout data collection and analysis. Additionally, the triangulation strategies previously discussed were utilized regularly to ensure that the coded segments represent the meaning of participants, categories, and the case overall.

Ethical Considerations

According to the Belmont Report, the principles of respect of persons, beneficence, and justice must be incorporated throughout the research process (U.S. Department of Health & Human Services [HHS], n.d.). As such, participants had the opportunity to ask questions and receive answers prior to confirming participation in the study. The following subsections include

discussions of how permissions were obtained and how the research site and participants were protected.

Permissions

For this case study, I secured initial site permission from the program director at Navigator Coaching to conduct research at this organization. After sending a permission request and a couple of follow-up emails, I received permission via an email reply from the program director, and this was included in my IRB application. The proposal approval letter from the IRB granting permission to collect data is in Appendix A. After receiving this approval, I emailed a Site Approval Letter (Appendix C) to the program director at Navigator Coaching for formal consent to conduct research at the organization.

Navigator Coaching has email lists for communicating with program members who are at different levels in the program. The program director emailed the participant invitation to potential participants on my behalf (Appendix D). Once potential participants responded to the email invitation, I communicated with them personally via email to send them the Study Information Sheet (Appendix B) and Participant Background Questionnaire (Appendix F). The participant invitation included an overview of the research process. Participation in the study entailed individual interviews and reviews of interview transcripts and interpretive commentaries. Participants were asked to read the study information sheet and complete a background questionnaire prior to their interview. Participants were directed to reply to the email invitation with any questions prior to completing the background questionnaire and interview.

Other Participant Protections

In the participant invitation email and study information sheet, participants were assured that their participation was voluntary, and they could withdraw at any time. Pseudonyms were

used to protect participants and the organization. Pseudonyms were selected randomly from a computer-generated program of historical female saints. A confidential designation of *program member* or *volunteer* was assigned to conversations quoted during observations or collected during the examination of Facebook posts. Participants were informed via the participant invitation email, social media invitation, and study information sheet that they would receive a $25 Visa gift card through email for completing their interviews and reviewing interview transcripts and interpretive commentaries.

Interview recordings and transcripts, data collection protocols, and all digitized notes completed during data collection and analysis are stored in case study research folders on my password protected computer. Handwritten notes and protocols were scanned into computer files and saved in the research folders as well. After being digitized, handwritten notes were shredded. Case study data will remain in research folders on my password protected computer, and after 3 years electronic records will be deleted.

Respect of persons, beneficence, and justice requires that research participants are made aware of any potential risks and benefits associated with participation (HHS, n.d.). The risks were minimal and were no more than what participants would encounter during everyday activities. While there were no direct benefits aside from participants potentially understanding their own thinking and learning processes better, research participants added to the body of knowledge through their own voices and experience by furthering the current understanding of virtual coaching, self-directed learning, and the implementation of EBPs.

Summary

The qualitative, single instrumental case study described in this chapter was the best research design for understanding how a virtual coaching program provided opportunities for

self-directed learning during the implementation of EBPs. Through a social constructivist

framework, case data represent a fusion of the emic perspectives of research participants and the

etic issues relevant to the case. To fulfill the role of an interpreter, rich and thick descriptions

were developed to sophisticate the meaning of the case. Procedures for securing site permission,

recruiting participants, and engaging in data collection and analysis were outlined so that this

study could be replicated by another researcher. Multiple data collection methods were employed

to learn about case issues: observations, audiovisual materials, and individual interviews. A

detailed multistep data analysis process of direct interpretation, coded segments, categorical

tables, correspondence tables, and interpretive commentaries resulted in a synthesis of data

themes and a coherent report of findings. Trustworthiness procedures, including multiple

triangulation methods and ethical considerations, contributed to a credible, valid, and reliable

case study.

CHAPTER FOUR: FINDINGS

Overview

The purpose of this single instrumental case study was to understand how a virtual coaching program provides opportunities for self-directed learning during the implementation of evidence-based practices for adults at Navigator Coaching. To answer the central research question and three sub-questions, three methods of data collection were employed: individual interviews, observations, and audiovisual materials. This chapter begins with a description of the participants in tabular and narrative form. Next, a presentation of the themes and subthemes, with quotations from all three methods of data collection, are highlighted. This is followed by outlier data, research question responses, and a concluding summary.

Participants

Participants in this case study were adults currently enrolled in the coaching program for a minimum of 6 months. Participants were active members who participate in weekly coaching activities. All 12 participants were women who ranged in age from 23 to 68 years old. The participants represent diverse backgrounds, vocations, degrees, and work experience. Participants hail from 11 states and one Canadian province.

All 12 participants completed individual interviews, transcript reviews, and interpretive commentary reviews. Initially, 13 participants were recruited, but one of the participants was unable to complete the interview because of a family emergency. The background information of this participant was deleted from the data. Participants received interview questions at least 3 days in advance of the interview, and prior to their interview, seven of the participants wrote notes relevant to answering the questions. Interviews were scheduled through Microsoft Mail

and Calendar applications, where participants received an email offering available interview times.

Once scheduled, an interview invitation was sent via the Calendar application to confirm the interviews. Four of the interviews were rescheduled because two participants were sick, and the other two participants had last-minute changes associated with the holiday season. The interviews occurred through Zoom, which is also the application participants use in the coaching program, and therefore, participants were familiar with the Zoom interface. The rest of this section consists of participant portraits, which provide a brief introduction of participants and their experience in the coaching program. The chart below displays the participant background information.

Table 3

Participant Background

Name	Gender	Age	State/ Province	Highest degree	Work experience	Program enrollment years
Adelaide	Female	68	North Carolina	Associate	Human resources	1.5
Agnes	Female	37	Michigan	Masters	Executive assistant	2
Angela	Female	39	Georgia	Bachelors	Health coach	3
Bernadette	Female	43	Missouri	High school	Sales associate	3
Catherine	Female	57	Indiana	Masters	High school English teacher	2
Clare	Female	32	Ontario, Canada	Masters	Neonatal nurse	2
Genevieve	Female	49	California	Masters	Marketing director	3

Joan	Female	62	Colorado	High school	Real estate agent & undergraduate student	2
Mary	Female	46	Florida	High school	Small business owner	2.5
Paula	Female	58	Maryland	Medical doctorate	Physician	3
Rita	Female	29	Pennsylvania	Bachelors	Internet sales	2
Teresa	Female	23	Texas	High school	Veterinary assistant & undergraduate student	2

Adelaide

Adelaide is 68 years old and has been enrolled in the program for 1.5 years. She is retired and lives in North Carolina, but explains, "I still have a full-time job, it just revolves around helping my children and taking care of grandchildren, which is really wonderful. I am loving it." Adelaide has an associate degree, and she worked in the human resources department at a financial institution for 35 years. Adelaide learned about the program from her niece. She is thankful for the instruction and guidance she has received in the program. She said,

> After retirement I was very depressed. I learned that I associated my self-worth with my job, but that isn't true. Purpose and meaning, being fulfilled is an emotional experience. We can be doing or not doing something and still experience a meaningful life now; because I understand I am in control of my belief system and experience of life, I can share my joy and meaning by helping my family.

Agnes

Agnes is 37 years old and has been a member of the coaching program for 2 years. Agnes lives in Michigan, where she is currently employed as an executive assistant, a position she has

held for 8 years. Agnes has a master's degree in business administration. She learned about the coaching program through a friend, who is also enrolled in the program. Agnes is passionate about sharing the results she has experienced since joining the program. She often posts pictures of her progress on social media and encourages friends to enroll as well. Agnes expressed what surprised her most about the program,

> When I first heard the teaching that nothing in my circumstances has to change for me to love the experience of my life, I thought these people were crazy, but now I get it. It's how I'm thinking about the circumstances and the story I tell myself, that is what has to change.

Angela

Angela is 39 years old and has been enrolled in the coaching program for 3 years. She lives in Georgia where she is a self-employed health coach. Angela has a bachelor's degree in computer science, and prior to resigning her position 1 year ago, she was employed at the same company for 15 years, where she worked in IT. Angela learned about the coaching program through social media. Angela is very pleased with the changes in her life and the goals she has accomplished. She shared, "I didn't even recognize myself, I was so depressed. I basically worked, ate, and slept. I was a zombie; I was stuck." After weekly coaching and practicing the tools in the program, Angela exclaimed, "And now I live a full life. I rewired my brain. I am now physically, mentally, and emotionally healthy, and I am passionate about other people getting healthy and thriving and feeling better."

Bernadette

Bernadette is 43 years old and has been a member of the coaching program for 3 years. She lives in Missouri and has worked in sales for the last 13 years at a small, family-owned

business. Bernadette has a high school diploma, and she volunteers 1 day a week at an elementary school, where she tutors students who struggle with reading. She learned about the program through her friend, who is a coach in the program. Bernadette enjoys sharing about her transformation from being bitter to being a person who is joyful so much more of the time. Bernadette revealed,

> I was such a resentful, bitter, miserable person. I had all of these reasons for why I was bitter, and they were all true things I experienced, but I learned that I was holding on to this story and carrying it with me everywhere. The story was me; it's who I saw myself as being.

Catherine

Catherine is 57 years old and has been enrolled in the coaching program for 2 years. She is a high school English teacher who lives in Indiana and has been employed at her current district for 22 years. Catherine has a master's degree in curriculum and instruction. She learned about the coaching program through a friend. Catherine appreciates what she's learning in the program. Though she has accomplished three big goals, she emphasized that the success is in learning to manage her mind, not attain goals. Catherine said,

> But it's not even about the goals, though they are part of the process. Change was learning to control my thinking. Who knew thoughts were optional [laughs], but they are, and now I have the skills to reframe my thinking. It works.

Clare

Clare is 32 years old, and this is her second year in the coaching program. She lives in Ontario, Canada, where she is employed as a nurse in the neonatal intensive care unit at a local hospital. Clare has practiced nursing for 9 years and recently earned a master's in clinical

nursing. Clare learned about the coaching program through a cousin. Clare is passionate about using what she has learned to serve others. She explained,

> I see myself and others so differently because I have developed emotional resilience; I can truly be present at work. I enjoy taking time to really listen and support the families of patients and my coworkers. I wasn't really present for myself and them previously.

Genevieve

Genevieve is 49 years old and has been a member of the coaching program for 3 years. Genevieve lives in California, where she has been employed as a marketing director for a skincare company for 11 years. Genevieve has a master's degree in marketing. She learned about the coaching program through social media. Genevieve appreciates the self-paced structure of the program and the modules available in the program library. She said,

> I love that I get to be in the driver's seat. There are the weekly live sessions that I do attend, but I have access to a whole library of instruction and coaching. I think about what would help me most that month and look for those resources.

Joan

Joan is 62 years old and has been enrolled in the coaching program for 2 years. She lives in Colorado and works in real estate with her husband. She has a high school degree and is enrolled in an online undergraduate program, where she is majoring in history. She learned about the program through social media. Joan is passionate about living the highest version of herself after years of going through the motions of life. She shared,

> I was numb, on antidepressants, going through days, weeks, years without really feeling, or being present in my life. But now, look at me; I'm 62 and [laughs] studying my favorite subject because it is fun; [I'm] living the life I love.

Mary

Mary is 46 years old and has been a member of the coaching program for 2.5 years. She lives in Florida where she opened her own hair salon approximately 1 year ago. In addition to her high school diploma, Mary is a licensed cosmetologist with a master stylist certification. This is her 27th year working in the hair industry. Mary is grateful and excited for the goals she has accomplished in the program. She said, "I never would have opened my own salon if it wasn't for what I have learned I can do." Mary enjoys sharing the tools she has learned with her clients,

> I just coach everyone now, [laughs] myself, my employees, and my clients. I just told a client the other day, "Hey, can I offer you this thought," and I started laughing inside; I was like, "Hey, I sound just like the coaches."

Paula

Paula is 58 years old, and this is her third year in the coaching program. She lives in Maryland and is employed as a family physician. Paula's highest degree is a medical doctorate; she has been practicing medicine for 24 years. Paula heard about the coaching program through a friend. Paula appreciates the structure and flow of the coaching program. She mentioned, "I like the variety of activities [and] learning from different coaches. The topics and instruction are thoughtfully curated to reach a diverse audience." Paula is thrilled with the changes she has experienced; she is especially pleased her colleagues and family have noticed. She said,

> Oh, the things you don't learn in medical school, [laughs]or kindergarten for that matter [laughs]. No, but sincerely, the connection between cognitive health, physical health, and emotional health is at the forefront of my mind these days. I had migraines for over 15 years and didn't realize they were rooted in years of unprocessed emotion. I have the skills to process emotion instead of buffering; I'm a better physician because of it.

Rita

Rita is 29 years old and has been a member of the coaching program for 2 years. She lives in Pennsylvania, where she has been working remotely in internet sales for 7 years. Rita has a bachelor's degree in marketing and learned about the coaching program through social media. Rita appreciates the quarterly workbooks, and the planner has helped her accomplish goals and live and think differently. She said,

> Oh, it's all about the planner for me. I was just flying by the seat of my pants all the time—disorganized, procrastinated—Now I know how to get my thoughts down first and then prioritize my day. But first, I have to know what is even going on in my brain and get that out.

Teresa

Teresa is 23 years old and is the youngest participant in the study. She has been a member of the program for 2 years. Teresa lives in Texas, where she is currently a freshman at a public university, majoring in animal science. Teresa has a high school diploma and works part-time at a veterinary office. Teresa heard about the coaching program from a family member. Teresa is excited about the changes in her life since joining the program. She said, "I was just going from job to job—no direction—now my life is meaningful; I have a vision." Teresa thought it was important to emphasize that it wasn't the external changes that give life meaning:

> But it's important for me to say this over and over. It is me that has changed—my thoughts, emotions, actions—that had to come first. These goals I'm accomplishing are because I have changed on the inside not because I have a 1-2-3 step program.

Results

      This section provides an overview of the themes and subthemes that emerged from data collection and analysis. Codes were clustered to form two subthemes for each of the four themes. A brief description of each theme and subtheme are provided, along with quotations from the interviews, observation protocols, and Facebook posts. This is followed by outlier findings, which also include quotations from the data collected.

Table 4

Themes and Subthemes

Theme	Subtheme 1	Codes: Subtheme 1	Subtheme 2	Codes: Subtheme 2
1. Becoming students of self	Highest self and Ego self	Identification Highest-self thinking Ego-self thinking Course correction Guided motivation Controlled motivation	Belief cycle	Brainstorming Beliefs Honesty Emotions Change Choices
2. Becoming skilled through practice	Consistent implementation	EBPs Consistency Practice Skill development Competence	Willing to fail	Normalization Mindset Teaching tools Accepting failure Evaluation
3. Purposeful community	Participatory environment	Internal safety Participation Welcoming Facilitative language Voicing questions Sharing struggles	Solutions-based encouragement	Getting unstuck Unity Caring members Problem-solving Encouragement
4. Becoming agents of highest selves	Self-coaching	Self-awareness Curiosity Intentionality Questioning beliefs Observing patterns	Self-determined action	Making decisions Committed action New patterns Rewiring

_____

Becoming Students of Self

The virtual coaching program teaches members to become students of themselves. Program members are instructed, through the implementation of evidence-based practices, to recognize their thinking, emotional state, and actions or inactions. This understanding provides members with information they can use to create a plan for change. Elements of this theme appeared in all 12 interviews, the three types of observations, and Facebook posts. Data from the three methods are included below.

During an interview, Catherine explained, "It is hard to learn about yourself, to see yourself in the light, I guess, to identify your own thinking. But it is where change has to begin." One member posted in the Facebook group, a response to a prompt from a live instruction session she attended earlier that day: "I learned today that it is about seeing what my thoughts are creating in my life, personally and professionally." In a coaching observation, one of the coaches responded to a program member who was brainstorming with the coach to understand her thinking: "Then we take that information from our study of self so we can offer our brains more information, to open up a bigger picture for our brain."

Highest Self and Ego Self

Program members are taught their belief system, which includes their thoughts, feelings, and actions, is either guided by their highest self, which is also called the true self, or ego self, which is also known as the false self. As members become more aware of their thinking, they can identify when they are living as their highest self and when they are living as their ego self. The codes *identification*, *highest-self thinking*, *ego-self thinking*, *course correction*, *guided motivation*, and *controlled motivation* were clustered to form the subtheme of *highest self and*

ego self. These codes appeared 417 times in interview transcripts, observation protocols, and Facebook posts. There was correspondence between highest-self thinking and ego-self thinking because within the contexts in which these terms were used, they were highlighted as contrasts and what program members were moving from or moving toward. As such, these terms were typically found within the same segments of data. Data from the three methods are included below.

During an interview, Adelaide shared, "It's learning to identify when I am living my highest self or ego self. This is so I can live more as my highest self." One program member posted in the Facebook group a response from her experience in a small learning group: "I thought this teaching was so weird at first, but it's true. We are either living as our highest selves or we're letting ego control our thoughts and actions." During an instruction observation the coach explained: "Ego, false self, operates from fear and is closed, defensive, unaware, knowledge-avoiding, self-serving. Highest self, true self, operates from love and is open, vulnerable, aware, knowledge-seeking, serves others."

Belief Cycle

The belief cycle, also known as the B-E-A cycle, is one of the evidence-based practices program members are taught to help them become students of self. There are three components of the belief cycle: beliefs, emotional state, and actions or inactions. Program members start with some type of journaling to focus their brains and attend to what they are thinking. They then take one recurring thought, feeling, action or inaction and work through the belief cycle until they have identified the state of their belief system; this information is used to recognize ego self and make changes that support highest-self thinking. The codes *brainstorming*, *beliefs*, *honesty*, *feelings*, *change*, and *choices* were clustered to form the subtheme *belief cycle*. These codes

appeared 391 times in interview transcripts, observation protocols, and Facebook posts. Data from the three methods are included below.

During an interview Joan revealed,

There is something scary and raw about going through B-E-A cycles and seeing your thoughts, emotions, and actions on paper. I tell my friends, you want life to be better, do these in your journal, learn where ego is controlling you.

In one data collection episode of Facebook posts, 32 program members posted screenshots of their B-E-A cycles. One member captioned her screenshot: "What I am thinking becomes the experience of my life. I am being vulnerable; here is my B-E-A cycle from this morning." In a small learning group observation with new members the coach explained the belief cycle and wrote a diagram on a white board: "The belief cycle, here is how it works. Our thoughts generate emotions, which then generate actions or inaction. This is a cycle so here, we can start with either the thoughts, emotions, or actions."

Becoming Skilled Through Practice

Program members are becoming skilled at brainstorming, identifying and changing their belief system (which includes thoughts, emotions, action/inaction), processing emotions, developing resilience, living more as their highest self and less as their ego self, planning, creating measurable goals, and evaluating progress. Program members and coaches acknowledge that the program is a lot of work, but practice is critical to becoming skilled and actualizing change. Elements of this theme appeared in all 12 interviews, the three types of observation protocols, and Facebook posts. Data from the three methods are included below.

In an interview, Rita explained, "You can't get around the work. It's a lifestyle of practicing, but it pays off. I now have skills." One member posted in the Facebook group, in

response to instruction on processing emotion that she had watched earlier in the week, "I am becoming skilled at sitting with and processing any emotion. Here are my wins this week." During an instruction observation where the coach was teaching members the difference between high-value cycles and low-value cycles, the coach said, "Rewatch this video several times for your homework so you can practice the skill of identifying when you are in a high- or low-value cycle."

Consistent Implementation

As program members consistently implement evidence-based practices, they develop skills that assist them to live as their highest selves. There is an emphasis on utilizing one practice consistently instead of implementing multiple practices sporadically. Daily practice is encouraged. Program members and coaches frequently highlight that doing one small action every day to support goal attainment will result in compounded momentum that encourages further action. The codes *evidence-based practices*, *consistency*, *practice*, *skill development*, and *competence* were clustered to form the subtheme *consistent implementation*. These codes appeared 408 times in interview transcripts, observation protocols, and Facebook posts. Data from the three methods are included below.

In an interview Genevieve revealed,

There is nothing like achieving that first quarterly goal. It is because I used the planner and did one thing each day that would move me closer to the goal. Planning in smaller steps takes skill; it has made all the difference.

In the Facebook group one of the coaches extended the discussion from a coaching session and posted, "Tell us all the ways you are consistently using the tools this week. How are you building resilience? What are your wins? Share pics and videos." During an instruction observation one of

the coaches explained, "Studies show you are 50% more likely to achieve it by saying it and writing it down. So, let's direct our brains. Let's determine to be consistent with our planning and journaling [and] using the workbook this week."

Willing to Fail

Failure is framed positively in the program. It is understood to be a normal part of the human experience. Failure is an asset for understanding beliefs in particular contexts; it helps program members trace their thoughts, emotions, and actions in response to situational factors. It also provides information on what to practice. The codes *normalization*, *mindset*, *teaching tools*, *accepting failure*, and *evaluation* were clustered to form the subtheme *willing to fail*. These codes appeared 349 times in interview transcripts, observation protocols, and Facebook posts. Data from the three methods are listed below.

In an interview Bernadette shared, "It's not if you fail, it's when. But failure is important for learning." One coach posted in the Facebook group in response to a discussion on failure, "Failure is part of the process. It's learning to live as true selves 10% of the time, then 20%, then 50%. It's part of the process." During a group discussion in a small learning group observation, one member responded, "Me too, I had to identify the story I was telling myself about failure. It's to be expected. Then I knew what skills to practice."

Purposeful Community

Community through collaborative learning is emphasized in the program. The discussions that occur in instruction, coaching, small learning group sessions, along with Facebook interactions, center on active and focused learning and organic accountability. Program members highlight that the community is united in learning to live as their highest

selves. Elements of this theme appeared in all 12 interviews, the three types of observations, and Facebook posts. Data from the three methods are included below.

In an interview Clare revealed, "I think if we're honest, communities need a purpose, a focus. Here it is all about conversations with a point. We feel better because we're thinking higher together." One member posted in the Facebook group, "We brainstormed together in my small learning group this morning so I could get out of a low-value cycle. The feedback was so helpful. Everyone, here are my next steps." During a coaching observation, a coach responded to a program member who was frequently changing jobs:

> Let me tell you what is terrible about giving us purpose: any kind of job. The reason is: it's external and what you're looking for can only be satisfied internally. So let me offer this, and tell me what comes up as we work through this together.

Participatory Environment

Program members have weekly opportunities to interact with others during live sessions and daily opportunities to interact in the Facebook group. Findings indicate program members feel safe to participate and ask questions. The coaches encourage participation through facilitative language. The codes *internal safety*, *participation*, *welcoming*, *facilitative language*, *voicing questions*, and *sharing struggles* were clustered to form the subtheme *participatory environment*. These codes appeared 503 times in interview transcripts, observation protocols, and Facebook posts. There was correspondence between participation and facilitative language. Data from the three methods are included below.

In an interview, Paula shared, "When I made my first post in the [Facebook] group, it was a 30-day evaluation. I never dreamed over a hundred people would reply. Participation is just high because we feel safe to share." One member posted a question to the Facebook group to

gather information about a recent workshop in the program: "Who attended the building relationships in business workshop? Tell me your thoughts; would it be helpful for a new entrepreneur?" During a coaching observation, the coach asked the members in attendance, "So tell me in the chat your first thought about goal setting and do not filter. Be honest. We are going to work through these together."

Solutions-Based Encouragement

Findings indicate program members are united in their focus to help other members move from being stuck in ego-self living to living as their highest selves. Coaches and program members are caring and sympathetic in their interactions, but their encouragement emphasizes solutions. The codes *getting unstuck*, *unity*, *caring members*, *problem-solving*, and *encouragement* were clustered to form the subtheme of *solutions-based encouragement*. These codes appeared 426 times in interviews, observation protocols, and Facebook posts. There was correspondence between solutions and encouragement. Data from all three sources are listed below.

In an interview, Teresa shared, "If you're looking for a program that affirms you being stuck in your current state, this ain't it. You can even see that in the Facebook group. We are trying to encourage each other to get unstuck." One member responded to the Facebook post of another member who was expressing feeling stuck in a pattern of procrastination. The response was, "Here is my number; I will help you work through a B-E-A cycle. Please join our small group too. We've got this." During a small learning group observation, the coach asked one of the program members, "What do you think you need right now? Your brain is going to want to go to the negative, so let's brainstorm. What is one thing that will help the most?"

Becoming Agents of Highest Selves

The purpose of the program is for program members to become agents of their highest selves. This means members learn to identify their belief system, distinguish between highest-self living and ego living, and develop skills to live more as their highest selves. Program members learn to exercise agency over their thoughts, emotions, and actions. Elements of this theme appeared in all 12 interviews, the three types of observations, and Facebook posts. Data from the three methods are listed below.

In an interview, Mary explained, "The tools, the goals, [and] coaching: It is all for us to grab hold of agency. We can control of our thinking." One member posted a picture of B-E-A cycles she recently completed and said, "Here are the receipts. I have agency over my brain." During an instruction observation one of the coaches asked, "So tell me in the chat, what would it look like to be an agent of your true self? To create from your future instead of your past?"

Self-Coaching

The program is designed to teach program members how to coach themselves. The evidence-based practices support program members in gathering information to investigate their thoughts and behaviors. There is an emphasis on members becoming curious about their beliefs by noticing patterns and asking themselves questions. The codes *self-awareness*, *curiosity*, *intentionality*, *questioning beliefs*, *observing patterns*, and *coaching myself* were clustered to form the subtheme *self-coaching*. These codes appeared 479 times in participant interview transcripts, observation protocols, and Facebook posts.

During an interview Angela revealed, "Now I just coach myself all day long. I pay attention and make adjustments. The journaling, workbook, and coaching all help me learn to coach myself better and recognize what I need to live as my true self." In the Facebook group

one of the coaches asked the program members what behaviors they noticed when they had moved back into a low-value cycle. One member responded, "I know when I start complaining it's time to coach myself and get to the root of what is going on." During a coaching observation one of the coaches said,

> I am in this with you all. There is one thought I have been struggling with; I went to my own coaching group this morning so that I can better coach myself. And that just helps all of us because when I am living more as my highest self, I am more effective at coaching.

Self-Determined Action

Program members learn to make changes to their belief system that result in highest-self actions. Program members learn that the human brain uses indecision as a protection from the unknown and to expend less energy. The program emphasizes that members will learn to rewire their brains as they become agents of highest selves. The codes *making decisions*, *committed action*, *new patterns*, and *rewiring* were clustered to form the subtheme of *self-determined action*. These codes appeared 468 times. There was correspondence between making decisions and committed action.

In an interview Agnes explained, "I can make a decision now. I know my brain was protecting me, but now I have better thoughts, more true-self thoughts. I'm taking action that reinforces the good thinking." In the Facebook group, one of the coaches posted, "Hey friends, how are you living the action part out loud? What is your highest-self up to these days?" One program member replied with a picture of a landscaping project she finished and said, "After 5 years of putting this off and living with bushes and shrubs that cover the whole house, I am finally taking action. Goodbye procrastinating brain and hello action brain." During a coaching observation one of the coaches responded to a program member who was experiencing

resistance, "It does feel huge, that is what our brains tell us. It's our brain's job to protect us, but we know how to coach ourselves and rewire our brains. We can sit with this negative emotion, process it, and take action."

Outlier Data and Findings

Outlier codes were clustered to form two outlier themes: risk-taking and learning to dream. The outlier themes did not align with the research questions. Elements of risk-taking were present in all 12 interviews but not the observations or Facebook posts. Elements of learning to dream were present in the three types of observations but not the interviews or Facebook posts.

Risk-Taking

In the interviews, participants explained that there was a moment when they had to take the first step toward participation even if they were skeptical or unsure the program would help. The codes *willing to try*, *willing to listen*, *trust*, and *suspend initial dislikes* were clustered to form the outlier theme *risk-taking*. These codes appeared 133 times in the interview transcripts. Data from three of the interviews are included below.

Catherine said, "Yeah [laughs] to be honest, I found the coaches super annoying. I did not like them, but I was so tired of feeling stuck that I decided to give them the benefit of the doubt and try." Genevieve shared, "Initially I was not willing to listen because I thought some of this was just woo-woo, but once I stopped judging the other people and started going to coaching sessions things started to click." Paula explained, "I had to trust that they [coaches] were the experts and really did know how to help us. So, I gave it a chance and [laughs] I was paying for it so . . ."

Learning to Dream

Program members are instructed that dreaming, though irrational, is important in learning to write rational and practical goals. Dream journaling is recommended for program members who struggle with writing meaningful quarterly goals. In the three types of observations, the codes *waking up our brains*, *seeing possibilities*, and *dream life* were clustered to form the outlier theme *learning to dream*. These codes appeared 127 times in the observation protocols. Data from three observation sessions are included below.

In a small learning group observation, one coach said, "Okay yes, we are going to practice dream journaling because listen, we are bad at dreaming. After childhood this gets really hard, but we need to tell our brains there are other possibilities out there." In a coaching observation one of the coaches responded to a program member who could not decide on a quarterly goal:

So, let me offer you this, what if you took this week to do some dream journaling? And I'm going to show you mine right here; I do this too to wake my brain up. We tend to rush to the practical side, the planning, the steps, but before we can even go there, we really need time to dream.

In an instruction observation one of the coaches shared,

Before we can take our dreams and put some flesh on them, bring them down from up in the air to something concrete, we need a vision for our dream life. And listen, I know this is weird and some of you are like, "Am I really paying for this?" but hear me out—just trust me. Our brains are on autopilot and have no idea how to dream. The point isn't even the dream; it's to wake up our brains and learn to live from our future. It's how we are going to eventually write goals that matter.

Research Question Responses

This section includes a brief discussion of the responses to the research questions. The themes that answer each question are identified. Quotations from interviews, observation protocols, and Facebook posts are incorporated to support the responses.

Central Research Question

How does a virtual coaching program provide opportunities for self-directed learning during the implementation of evidence-based practices? Each of the four themes, across all three data collection methods, helped answer the central research question. Opportunities for self-directed learning included instruction relevant to program members becoming students of self. Program members had opportunities to become self-directed through the weekly live sessions and the modules available in the program library. Within the instruction opportunities, program members learned to identify their belief systems and implement EBPs to assist them in identifying highest-self living and ego-self living. Once program members developed skills to live more as their highest selves, they became agents of highest selves. As program members lived more as their highest selves, by satisfying their needs of autonomy, competence, and relatedness, this fostered additional self-directed learning. Program members became adept at recognizing learning opportunities and created their menu of weekly activities to assist them in highest-self living.

Genevieve noted in an interview, "It starts with me. How do I move forward without starting to see who I really am? I have to study my thinking first." During a coaching observation, one of the coaches responded to a program member who was working on becoming a student of self by changing her thoughts, "Right, so let's work through some questions together

to understand the context of that. What are the beliefs and actions that go with that emotion?" In the Facebook group one member said,

I did journaling for the first time. I can't believe all the thoughts that keep swirling in my brain. Guess what? It actually worked; I was able to find the thought giving me the most trouble. Now I can work on changing it #win #thought work.

Instruction is applied through the implementation of evidence-based practices that facilitate skill development. During an interview, Rita expressed,

I know how to use a planner so that it serves me now. It's a skill I had to learn. It's not just writing things down. It's really thinking through my week, prioritizing, not whatever comes along, but planning on purpose.

In response to an instruction session from earlier in the day, one coach posted in the Facebook group: "Okay so let's tie this with a bow. What tools, this week, will help you practice that thought you wrote down this morning?" During a coaching observation, one of the coaches asked a program member,

Okay, what if I offer you this, that you just try only the belief cycles consistently for one week and see what happens. Then you get to decide from there, but maybe just offering your brain, "Hey, let's commit to this for seven days." Maybe, does that feel more freeing and lighter for your brain?

Consistent implementation and active participation in the purposeful community result in program members becoming agents of highest selves who are successful at self-coaching and taking self-determined action. Mary shared during an interview, "We have so much connection in our community. We have determined it's worth it to focus on learning together, so we just practice consistently." In the Facebook group, members shared how they were rewiring their

brains in response to a coach who posted: "Rewiring our brains: tell us how and give us some hashtags." One member posted in response, "Rewiring my brain: Here are my highest-self emotions this week #practicing #skills," and another member posted, "Rewiring my brain: Here are my highest-self thoughts this week #work #beliefs." During a small group observation, the coach asked the group, "Does anyone, off the top of their head, have some thoughts/suggestions of what actions to take to lean into true-self action? To say, 'I have agency brain, here are some things you really could do'."

Sub-Question 1

How does the coaching program provide opportunities for adults to satisfy their need for autonomy? Each of the four themes, across all three data collection methods, answered Sub-Question 1. Opportunities for satisfying the need for autonomy included participation in instruction, coaching, small learning groups, and the Facebook group. Purposeful community interactions and ongoing practice aided program members in becoming students of self and exercising agency as they live as their highest selves. Once program members identified the instruction and EBPs as being valuable in helping them achieve goals and make life improvements, they increased their participation in the program. When program members realized they could make changes to their belief systems and felt competent to implement EBPs, they exercised autonomy by utilizing weekly opportunities for learning and practice.

In an interview, Paula shared,

It's like ping-pong. We just keep bouncing the ball back to each other, offering new thoughts to each other in the small learning groups. Sometimes we go crazy with the brainstorming, but the point is to help each other become agents over our thoughts and actions.

In the Facebook group one member posted, "This was the best teaching session; thank you to everyone who shared. Life is hard, as we have learned; that is a given. What isn't a given is what we are going to think and do. I needed that today." During an instruction observation, one of the coaches said,

> This is literally a fight for our lives. We either learn to control our thinking or not. It's how we experience a life we love, but let's be real, this is work. It's every day doing the work, putting in our planners when we are going to do something and working through those belief cycles when we aren't sure. It's how we live more as our highest selves.

Sub-Question 2

How does the coaching program provide opportunities for adults to satisfy their need for competence? The themes *becoming skilled through practice* and *purposeful community* answered Sub-Question 2. Opportunities for satisfying the need for competence included participation in instruction, coaching, small learning groups, and the Facebook group. Purposeful community interactions assisted program members in becoming skilled through practice. Program members started practice routines once they identified the value of the instruction and practice. Learning about the theoretical framework of the coaching program and the EBPs helped program members understand how the EBPs would assist them personally and professionally. Case findings indicated skill development was related to program members practicing activities to completion. When members utilized opportunities to practice activities, such as a B-E-A cycle, from beginning to end, they felt competent to practice skills throughout the week.

During an interview, Bernadette shared,

Let me hold up my workbook and show you my thought work this week. This hasn't happened overnight. I'm still practicing every week and getting better. It's the

encouragement and accountability I get through coaching and small groups, and even just

reading Facebook comments.

In one of the coaching observations, one coach responded to a program member, "So what if you

practice journaling skills this week to help you process those emotions? What do you think,

would that help?" In the Facebook group one member posted,

Please celebrate with me; I have done the workbook for a whole month. I have written

down in the planner and then done it, one thing every day to get me to my goal. It feels

amazing. I haven't even gotten to the goal, but this feels so good.

Sub-Question 3

How does the coaching program provide opportunities for adults to satisfy their need for

relatedness? The theme *purposeful community* answered Sub-Question 3. Opportunities for

satisfying the need for relatedness included purposeful community interactions in instruction,

coaching, small learning group, and social media contexts that facilitated participation and

solutions-based encouragement. Case findings suggest program members experienced

relatedness by connecting with caring coaches and program members who were focused on

problem-solving and assisting one another in becoming "unstuck." The facilitative language the

coaches employed provided opportunities for relatedness, where program members wanted to

participate, practice skills, and make changes. Findings indicate solutions-focused opportunities

also supported program members' need for autonomy and competence. As program members

utilized the opportunities for satisfying relatedness, their participation increased. As a result,

program members were invested in creating plans for self-directed learning to live more as their

highest selves.

During an interview, Genevieve said, "I think the coaches really set the tone for the community. Now we just copy them; it's who we are now. We imitate their caring demeanor, but we also offer solutions." During an instruction session, one of the coaches asked the whole group,

> So, tell me in the chat, since so many people listed the emotion *insecure*, what thoughts would you offer yourself if you're feeling insecure? Is there a way to reframe that and make feeling that emotion of insecurity okay? Because we do need to process that emotion. What could you offer your brain?

In the Facebook group, one of the coaches posted, "Has anyone been offering themselves false affirmations or trying to *Pollyanna* their way through the week? Let's chat about that and work through it together."

Summary

Four themes and eight subthemes developed through data collected from observations, Facebook posts, and interviews. Codes were clustered to form the subthemes. The four themes were *becoming students of self*, *becoming skilled through practice*, *purposeful community*, and *becoming agents of highest selves*. Each of the four themes helped answer the central research question and Sub-Question 1. *Becoming skilled through practice* and *purposeful community* aided in answering Sub-Question 2, and *purposeful community* assisted in answering Sub-Question 3. Program members learned to become self-directed by studying their belief system, which includes their thoughts, emotional state, and actions. Evidence-based practices were implemented to assist program members in becoming students of self. As program members became skilled through consistent implementation, they learned to live more as their highest selves. This means program members pursued self-determined action, where they recognized

what practices to integrate and where to focus their problem-solving. The theme *purposeful*

community helped answer each of the research questions, which indicates that a focused and

encouraging learning community was important for program members becoming self-directed

learners.

CHAPTER FIVE: CONCLUSION

Overview

The purpose of this single instrumental case study was to understand how a virtual coaching program provides opportunities for self-directed learning during the implementation of evidence-based practices for adults at Navigator Coaching. This chapter begins with a discussion of thematic findings which is followed by the interpretation of findings, implications for practice, and empirical and theoretical implications. Next, limitations and delimitations and recommendations for future research are presented. The chapter concludes with a summary of the entire study.

Discussion

In this section, a discussion of the study's findings is provided in consideration of the developed themes. The voice of the researcher is highlighted along with empirical and theoretical sources and evidence from the study. The implications are relevant for developing and improving coaching and professional development programs that support stakeholders' self-directed learning.

Summary of Thematic Findings

A brief summary of the thematic findings discussed in Chapter 4 is provided to orient readers ahead of the interpretation of findings. Four themes developed from coding research data and were used to answer the research questions. The first theme is *becoming students of self*, and this answered the central research question and Sub-Question 1. Program members learned to become students of self by examining their belief system, which consists of thoughts, emotions,

and actions. Program members also learned to identify highest self and ego-self living using two frequently mentioned evidence-based practices (EBPs): the belief cycle and journaling.

The second theme is *becoming skilled through practice*, and this theme answered the central research question and Sub-Question 2. Program members learned that it takes ongoing practice to develop skills that foster highest-self living. Consistently implementing the EBPs aids program members in becoming students of self, accomplishing goals, and actualizing change. Findings indicate it was better for members to start small and integrate one practice regularly than to attempt multiple practices infrequently, as daily, consistent practice builds momentum. A willingness to accept failure and recognize its place as a teaching tool was also important for developing skills. Engaging in practice-fail-practice-fail cycles of learning was key in members developing emotional resilience.

The third theme is *purposeful community*, and this theme answered the central research question and each of the sub-questions. Case findings indicate the coaching program was focused on encouragement through solutions. While members and coaches in the program were caring and sympathetic in their interactions, the ultimate goal of the community was to help members become better students of self, practice EBPs together, and brainstorm solutions.

The fourth theme is *becoming agents of highest selves*, and this theme answered the central research question and Sub-Question 1. Study findings reveal program members developed skills to identify current elements in their belief system and ascertain where to make changes through consistent practice and community support. Program members exercised agency over their thoughts, emotional state, and actions, and consequently, learned to coach themselves and pursue self-determined action that supports highest-self living.

Interpretation of Findings

Three interpretations are presented to understand how a virtual coaching program provided opportunities for self-directed learning during the implementation of evidence-based practices. The three interpretations are *scope of knowledge*, *transferring knowledge into practice*, and *reinforcing knowledge and practice through community participation*. This section includes a discussion of the interpretations through a synthesis of case findings, theoretical propositions, and research from the relevant literature.

Scope of Knowledge

The first interpretation is that the scope of information available to program members provided opportunities for members to become self-directed learners by satisfying autonomy needs. In self-determination theory (SDT), opportunities for satisfying the psychological need of autonomy provide stakeholders with freedom and choice over actions, resulting in stakeholders experiencing a sense of ownership (Ryan & Deci, 2020). Case findings indicate opportunities for satisfying the need for autonomy were related to the sources of information available in the program and specific topical discussions, as these factors contributed to program members exercising ownership over their weekly learning plans.

Sources of Information. According to the literature, stakeholders need more information, and not less, as it relates to implementing evidence-based practices and becoming self-directed learners (Culph et al., 2021; Kucharczyk et al., 2022; Ting et al., 2021). This is because the implementation of EBPs is a value-oriented change and stakeholders need information to integrate practices with their value systems (Birken & Currie, 2021; Carlgren & BenMahmoud-Jouini, 2022; Nordstrum et al., 2017). Case findings indicate three streams of knowledge were available in the program and occur simultaneously. In the first stream of

knowledge, program members received instruction through weekly programming provided in the instruction, coaching, and small learning group sessions. The quarterly workbook and Facebook group were two additional sources of information that corresponded with, reinforced, and added to the knowledge obtained from weekly live sessions. The second stream of knowledge consists of the recorded modules in the program library. Program members selected modules that met their learning needs from week to week, and they incorporated the information in their learning plans for the following weeks. Case findings revealed members selected from previous instruction and coaching sessions, virtual and residential workshops, and special topics modules. The third stream of knowledge included quarterly virtual and residential workshops, which program members expressed were helpful for integrating instruction from the weekly sessions and modules in the program library. The three streams of knowledge provided program members with options for tailoring instruction to weekly, monthly, and quarterly learning needs. Members perceived they had numerous opportunities for developing weekly learning plans because of the amount of information available within the three streams of knowledge.

Topical Discussions. In addition to the amount of information available, program members expressed specific topics were important for learning how to implement EBPs. According to the literature, stakeholders need to understand the theories behind EBPs and how the practices will assist them in accomplishing positive outcomes (Caron et al., 2022; Doran & van de Mortel, 2022; Thoma et al., 2020). This is because background information assists stakeholders in discerning the value of implementation and committing to learning and ongoing practice (Crawshaw et al., 2022; Culph et al., 2021; Hall, 2018). Three topical discussions were referenced multiple times within the context of understanding EBPs and creating weekly learning plans. The first is the orientation module in the program library. Though this module was

designed for new members, program members at all stages of learning viewed the orientation module as needed. The orientation module provided, among other discussions, instruction regarding the theoretical framework guiding the program and the EBPs. This was important for program members understanding how the program would assist them personally and why particular practices were necessary components of the learning process. Information about the relationship between belief systems and physiological and psychological factors helped program members identify connections between elements in their belief system and the theories presented. This identification encouraged members to develop weekly learning plans.

The second topical discussion commonly referenced was the weekly live planning session that is provided on Saturday evenings. The planning session was also intended for new members, but long-time program enrollees also attended the planning session an average of once a quarter. New program members received step-by-step instructions for planning, and viewing a completed weekly plan helped them create their first learning plans. Seasoned program members received new information through the social dialogue that occurred between the coach and members in attendance. Additionally, the coach leading the planning sessions changed weekly, which provided long-term members with new information relevant to planning as each coach modeled how they created their weekly learning plans.

The third topical discussion frequently mentioned by members at all levels of learning was the goal-setting workshop module in the program library. The theoretical instruction of goal setting was a paradigm shift compared to what members had previously understood about setting goals. Program members previously understood goals through a lens of external outcomes, and the instruction in this module assisted members in shifting their understanding of goals through a lens of internal change. Through this lens, goals were understood to be a byproduct of changes

made to members' belief system. This understanding of goal setting motivated program members to continue creating weekly learning plans because members had greater freedom and choice regarding what daily actions would move them closer to their quarterly goals.

Transferring Knowledge into Practice

The second interpretation is that opportunities for transferring knowledge into practice supported self-directed learning and coincided with program members satisfying competence needs. According to SDT, satisfying the need for competence includes opportunities where people perceive the following: skills can be mastered, they are capable of being effective, and learning is possible and will lead to success (Ryan & Deci, 2020). Case findings indicated the satisfaction of competence needs was related to opportunities for integrating knowledge into daily practice and consistent transfer of practice over time, which resulted in skill development and the refinement of learning plans.

Integrating Knowledge. Once program members explored the scope of knowledge available in the coaching program and identified the instruction that was valuable to their learning needs, they implemented their weekly learning plans by participating in practice cycles. In their model of peer coaching, Joyce and Showers (1981) emphasized that stakeholders need to transfer and integrate knowledge into their daily practice to mitigate the abandonment of practices. Knowledge becomes integrated when it is personally meaningful (Joyce & Showers, 1981). In this coaching program, knowledge became meaningful when program members practiced the activities they identified as valuable. Specifically, it was practicing skills to completion, such as identifying belief system elements and developing a new belief cycle, that resulted in the transfer of knowledge. This is because identifying belief system elements, while important, was only part of the B-E-A cycle. Completed practice also included the creation of a

new belief cycle that program members could practice. It was the totality of identifying the elements, making changes, and putting the changes into practice that resulted in a sense of completion, where program members practiced skills from beginning to end, with success. Program members had daily opportunities, through the program workbook and modules in the program library, to participate in practice cycles, and there are weekly opportunities, through the live sessions, to practice skills to completion.

Consistent Transfer of Practice. Program members transferred knowledge into practice by consistently practicing skills to completion. Findings from the literature indicate stakeholders need repeated opportunities to apply knowledge to their personal practice because this fosters skill development (Caron et al., 2022; Crawshaw et al., 2022; Joyce & Showers, 1982; Traga Philippakos & Voggt, 2021). When program members utilized the opportunities available for practice, they satisfied their need for competence. Consistent, small successes motivated members to attend more coaching and small learning group sessions, where they utilized additional opportunities for practice. When program members utilized opportunities for practicing skills, they transferred knowledge into practice, thus creating high-value learning cycles, where cumulative practice resulted in committed action. As program members committed to their learning plans, they were motivated to participate in additional learning opportunities, which encouraged members to engage in more positive action. High-value learning cycles were associated with competence momentum, where the ongoing satisfaction of competence needs facilitated self-directed learning and program members became adept at refining their learning plan to meet current needs.

Reinforcing Knowledge and Practice Through Community Participation

The third interpretation is that knowledge and practice were reinforced through community participation, which provided program members with opportunities to satisfy their need for relatedness. According to SDT, the satisfaction of relatedness involves opportunities where people experience connection and belonging (Ryan & Deci, 2020). Study findings suggest relatedness needs were satisfied when program members utilized additional opportunities for practicing skills with coaches and other members. Two types of opportunities were frequently referenced: modeling and group coaching in small learning group sessions.

Modeling. In the literature, modeling is understood to be a core element of effective coaching (Jacobs et al., 2018; Joyce & Showers, 1981; Nordstrum et al., 2017). Stakeholders need ongoing opportunities to observe the implementation of EBPs so that they continue to layer and integrate instruction and practice into their implementation processes (Reddy et al., 2021; Wright & Steed, 2021). Case findings indicate community participation was high because program members wanted to utilize opportunities for observing implementation and coaching. Specifically, it was the instruction that naturally resulted from the dialogue between coaches and program members during modeling that significantly assisted members. For example, as the coaches modeled how to implement the planner in the workbook, they offered adaptations, problem-solving advice, and tips for consistency. Modeling became a repository of learning. Program members valued the instruction available during modeling and integrated meaningful elements into their implementation process, thus reinforcing knowledge and practice, which encouraged members to become self-directed learners. Program members experienced relatedness as they made connections between the modeling they observed and their personal practice. The coaches provided additional opportunities for program members to satisfy relatedness needs when they modeled their personal implementation processes and shared

examples of their journaling techniques, thought work, goal setting, and weekly planning. Program members found the concrete examples meaningful, and they experienced a sense of unity within the community when coaches were transparent about their successes and struggles.

Group Coaching. According to the literature, effective coaching programs facilitate collaborative learning and self-reflection (Jakopovic, 2021; Johnston, 2021; Lomis et al., 2021; Stoiber et al., 2022). When stakeholders engage in collaborative learning during coaching, they have opportunities to experience companionship and encouragement (Joyce & Showers, 1981; Kreutzer et al., 2021). Study findings indicate collaborative learning and self-reflection were opportunities for program members to satisfy relatedness needs and become self-directed learners. During small learning group sessions, program members participated in group coaching, where the lead coach and other members assisted one member at a time in finding solutions to improve implementation. Socratic questioning fostered self-direction, and program members valued this technique because coaches and program members were learning together through the questioning process. The Socratic questioning occurred in an environment where program members experienced psychological safety; they felt safe to demonstrate vulnerability and share concerns. Program members also demonstrated vulnerability when they openly received the questioning process. It was the open reception to participate in collaborative learning that facilitated self-reflection. When program members pursued the truth, by confronting and sharing issues and receiving the guiding instruction from group coaching, they made connections with the questions and answers that were part of co-learning. The learning from group coaching was integrated into program members' weekly learning plans, thus satisfying relatedness needs and guiding program members to increase their self-direction.

Implications for Practice

Study findings indicate that program members utilized numerous opportunities available in the coaching program to satisfy psychological needs. The satisfaction of psychological needs fostered self-directed learning, where program members integrated instruction into their daily practice and developed skills to sustain EBPs. Case findings revealed implications for practice include the program structure, learning systems, and community support as these elements provided opportunities for self-directed learning. These implications add to current understanding of coaching as much of the literature emphasizes the outcomes of coaching without providing specific details of coaching practices and processes (Curran et al., 2022; Hsieh et al., 2021; Lomis et al., 2021; Wang & Lu, 2020).

Process data from coaching models are lacking, and research regarding the coaching structures, systems, and practices that support self-directed learning is needed (Elek & Page, 2019; Locke et al., 2022; Odom et al., 2022). As such, process data from effective coaching models may have relevant implications for practice because opportunities for psychological need satisfaction impact self-directed learning and the sustainability of EBPs (Barrett, 2021; Fleddermann et al., 2023; Meyer et al., 2022; Ramaswamy et al., 2022; Rosenberg et al., 2022). Findings indicate this coaching program provided support for program members' participation, engagement, psychological need satisfaction, and self-directed learning. Therefore, the implications for practice gleaned from this case provide a starting point for program developers wanting to increase the opportunities available for psychological need satisfaction and self-directed learning.

Program Structure

The virtual setting, curriculum, and program library were defining components of the coaching structure that facilitated psychological need satisfaction. The first implication for practice is that the virtual setting overall was convenient for program members. Therefore, stakeholders implementing professional development programs need to consider how convenient it is for program members to participate in program activities and make appropriate adjustments because this was an important part of satisfying autonomy needs. One question program developers need to ask is: Are the live sessions offered at a time when members are likely to attend?

In this case, program members could log into the program on their computers, tablets, and cell phones at times when the activities best fit members' schedules. Live instruction and large group coaching sessions were offered during the lunch hours, and approximately 10% of adults enrolled in the program attended the live sessions. Research participants indicated they were able to attend at least partial live sessions because it corresponded with lunch hours. However, it is important for program developers to consider if another time, such as during evening hours, would increase attendance in live sessions. The small learning group sessions were at capacity and program members appreciated that these sessions were offered morning, afternoon, and evening throughout the week as they were able to find times that worked well with their schedules. While these sessions were offered at convenient times, additional small learning group sessions need to be added to meet program demands. The small learning group sessions were important for the satisfaction of all three psychological needs, and therefore, incorporating small learning group sessions in coaching and professional development programs is worth consideration.

Another implication for practice is that the virtual setting provided more opportunities for self-directed learning because the costs were lower compared to what it would cost for the same opportunities in a residential setting. This means that stakeholders developing professional development programs need to consider virtual learning options, as they may lower costs and increase reach, as Dorsey et al. (2020) and Locke et al. (2022) suggest. Stakeholders also need to consider that when organizational costs are lower, they have opportunities to provide more high-quality learning opportunities to support implementation (Kraft et al., 2018). In this study, members had daily and weekly opportunities to satisfy needs for autonomy, competence, and relatedness. Coaches and program members expressed that the virtual setting lowered program costs; the program was approximately one eighth to one quarter less than average residential coaching programs. Additionally, program members had access to more instruction and coaching activities and workshops compared to residential programs because organizational costs were lower in a virtual setting.

A third implication for practice was that having a program overview provided program members with a map for learning. It was an opportunity for members to identify the value of the instruction and then utilize opportunities to integrate the instruction into their belief system. This also established the program as professional and legitimate, which impacts decisions of participation (Horn et al., 2021; Kreutzer et al., 2021). Program members consider several questions when evaluating a program and deciding to participate, as revealed in participant interviews. These questions include: What is the purpose of the program? How are the instruction and program activities going to help me? Have the program developers put in the effort to create a worthwhile program that demonstrates evidence of pre-planning or is this an unplanned-we-will-decide-the-week-before program? As such, program developers need to make

sure that instruction is provided that explains the purpose, value, goals, and processes of the program (Alonge et al., 2020; Jankvist et al., 2021; Reinholz & Andrews, 2020; Rowe et al., 2021). Developers also need to invest in creating well-planned, professional learning products that facilitate engagement.

In this case, the entire yearly curriculum was easily accessible online and included an overview of the program, quarterly themes, monthly topics, and weekly activities. Links to the curriculum were provided via email, the program library, and live sessions. Program members also had the option of receiving hard copies of the curriculum, which were divided into quarterly workbooks. Program members expressed their appreciation for digital and hard copy options. As such, another point of consideration for program developers is to provide hard copies of learning materials in addition to digital options.

A fourth implication for practice was the consistent communication program members received throughout the week so that they could plan for live events and coaching activities. The communication supported their need for autonomy because program members utilized this information to plan and adjust their learning plans. Stakeholders creating professional development programs need to consider how well they are communicating with practitioners. Developers need to ask the following questions and adjust their programs: Has the program provided key information that will assist members in planning and learning? Are announcements timely and clear? Are practitioners receiving reminders about activities and events?

In this study, members received a weekly Sunday email with a list of announcements, weekly activities, links to live sessions, and links to additional resources. Program members utilized this email for planning and as a curriculum reference throughout the week. On the day of the live sessions, brief reminder emails were sent to program members, and according to research

participants, the reminders helped them stay connected to the program and encouraged them to follow through with their weekly plans. Therefore, program developers may want to consider sending a similar weekly email detailing announcements and activities so that program members have a reference for planning and participation.

Another implication for practice was that the virtual coaching program library in this study was easy for program members to use and navigate, and it provided significant opportunities to satisfy autonomy and competence needs because of the scope of information available. Klein and Sorra (1996) posited in their theory of implementation effectiveness that ease of use was a factor in stakeholders implementing practices and committing to implementation. As such, developers of professional development programs need to consider whether their program is user-friendly and make appropriate adjustments. Is it easy for practitioners to find information? Are topics clearly labeled? Are links to resources provided? Is there a search function available to quickly find resources? Are the modules self-paced so that practitioners are motivated to create their own learning plans? Are there daily and weekly instructional opportunities available? Developers of ongoing learning programs need to consider these questions because in this study, the answers impacted participation in the program.

In this case, the program library was a large repository of the following recorded modules: instruction sessions, coaching sessions, special topics, and workshops. Program members received access to the library once they enrolled in the program. The modules were self-paced, and sessions within the modules could be paused for members to return to later. The modules were organized according to type of module, such as instruction session, and each session within the module had a title denoting a theme or topic. Program members utilized the search function to type in key words and select specific modules. The scope of information

available in the library was motivating for members because they could integrate modules into their weekly learning plans. Therefore, program developers may want to consider integrating self-paced modules and recordings of live instruction in their coaching and professional development programs.

Learning Systems

Two learning systems were available to program members: live and recorded sessions and workbook activities. Research participants indicated it was highly motivating to mix and match program activities week-by-week, and it encouraged them to participate in program activities. The options available for learning satisfied the need for autonomy, and as program members engaged in coaching regularly, they also satisfied competence needs. The learning systems provided multiple opportunities for program members to pursue high-value cycles, where members achieved goals and developed skills.

Live and Recorded Sessions. A fifth implication for practice is the relevance of the instruction provided in the coaching program for program members from diverse backgrounds. Program members will not participate if they do not identify the instruction as valuable and worth their time (Caron et al., 2022; Culph et al., 2021; Doran & van de Mortel, 2022; Hall, 2018; C. V. Meyers & Smylie, 2017; Traga Philippakos & Voggt, 2021). This is important because it is participation, engagement, and practice that are essential for transferring knowledge into practice (Crawshaw et al., 2022; Joyce & Showers, 1981; Neal & Fixsen, 2020; Rowe et al., 2021; Webb & Michalopoulou, 2021). A few questions for program developers to consider are: Is this instruction helpful for a new practitioner as well as a seasoned one, or do we need to create different levels of instruction? Will practitioners identify with the value of this instruction, or will they think it is a waste of time? What instructional content and modes for providing

instruction will be engaging for practitioners and likely to facilitate psychological need

satisfaction and self-directed learning?

During the instruction sessions in this study, program members received weekly teaching

that corresponded to the monthly topic in the curriculum. All program members were invited to

participate in weekly instruction sessions, and research participants indicated the teaching was

relevant for members at all levels of the program because understanding occurred in layers, and

as members integrated instruction, they assimilated additional instruction into their current

practice. Though the needs of program members differed, there was a balance of general and

homogenous instruction and specific and diverse instruction. Program members suggested the

weekly instruction sessions fostered connection, community, and unity because when members

interacted in the Facebook group and referenced the instruction, program members at all levels

could relate to the post and respond. Recordings of the instruction sessions were uploaded and

stored in the program library, where program members could view sessions for the first time or

watch the replays. As such, creators of ongoing learning programs need to consider who they

expect their clients to be, what instructional needs are likely, and adjust practices accordingly to

meet the instructional needs of new and seasoned practitioners.

Another implication for practice is that the coaching techniques and participatory

communication styles invited program members to participate and practice, thus providing

opportunities for satisfying all three psychological needs. Therefore, developers of coaching and

professional development programs need to consider the teaching and communication styles of

the instructors in the program. Questions program developers need to ask are: Are instructors

talking to practitioners like they are adults and professionals? Are instructors talking above

practitioners and using jargon that distorts meaning? Are instructors inviting practitioners to join

them in co-inquiry and collaborative learning? The answers to these questions impact

participation in coaching, and participation affects psychological need satisfaction and self-

directed learning (Beckers et al., 2021; Jakopovic, 2021; Johnston, 2021; Joyce & Showers,

1981; Kraft & Blazar, 2017; Kreutzer et al., 2021; Stout-Rostron, 2019).

In this case, it was the communication styles of the coaches that fostered participation

and practice. Though members came from diverse backgrounds, the facilitative language and

Socratic questioning were applicable across situations. Program members appreciated the

question-answer-question-problem-solving cycle aspect of the coaching, and they integrated

Socratic questioning into their practice. Program members adopted the language coaches

employed, and by observing and watching replays, they incorporated the language into their

daily lives. Program members found this helpful for self-coaching and problem-solving, and the

facilitative language extended to relationships at work and home, which produced positive

results. The coaching approach became a way of life for program members, as self-coaching

skills were understood to be valuable and meaningful. As such, program developers may want to

incorporate Socratic questioning and employ facilitative language in their instructional methods.

A seventh implication for practice is that instruction and practice provided in an ongoing

learning program needs to be reinforced through opportunities for booster learning sessions that

support the satisfaction of psychological needs and self-directed learning. Program members

need extensive practice opportunities to integrate instruction into daily practice (Joyce &

Showers, 1981; Lomis et al., 2021; Meyer et al., 2022; Schultes et al., 2021; Ting et al., 2021).

Practitioners need to hear and practice instruction repeatedly (Joyce & Showers, 1981; Lomis et

al., 2021; Schultes et al., 2021;). Modeling and participating in observations are important for

practice (Caron et al., 2022; Crawshaw et al., 2022; Traga Philippakos & Voggt, 2021).

Therefore, creators of coaching and professional development programs need to consider that providing a few opportunities for instruction and practice are insufficient for supporting self-directed learning. Practitioners need numerous opportunities for modeling, observations, simulated practice, and individual practice (Birken & Currie, 2021; Carlgren & BenMahmoud-Jouini, 2022). As such, program developers need to incorporate these elements in their programs.

In this study, the small learning group sessions provided opportunities for reinforcing knowledge and practice; they were booster sessions for learning. The structure of the small groups in this case included teaching that reinforced the live instruction, group coaching, and individual practice. The groups were at capacity at 18 members per small group, and program members suggested the groups were even more effective when there were 12 members or less because it was difficult for each member's top concern to be addressed in 1.5 hours. Program members valued the instruction in the small learning group because the coach highlighted the main points of the weekly live instruction and extended the teaching, which provided members with additional opportunities to make connections and integrate knowledge in their daily practice. Learning from other members was also meaningful because they shared tips, pitfalls, and tricks-of-the-trade as they worked through their own implementation cycles, and this was a helpful resource for improving practice. Therefore, program developers may want to consider small learning groups as a method for providing booster learning sessions. It is important to recognize that groups of 12 participants or less may be more effective.

Quarterly Workbook. Another implication for practice is that the content, accessibility, and ease of use of the coaching activities provided for individual practice impacts psychological need satisfaction and self-directed learning. Effective coaching includes opportunities for individual practice so that practitioners become skilled and self-determined (Barrett, 2021;

Nordstrum et al., 2017; Reddy et al., 2021; Sanetti & Collier-Meek, 2019). As such, developers of coaching and ongoing learning programs need to consider the following questions and make appropriate adjustments: Are there opportunities for individual practice that support competence needs? Is it easy for practitioners to access and complete these activities? Are the instructions for individual practice clear? Are the activities meaningful?

In this study, the quarterly workbook was another source of learning, with opportunities for individual practice. Program members appreciated having all the coaching activities in one location. The workbook was divided into three monthly sections and was easy to navigate. Even new members who enrolled in the program in the middle of a quarter felt prepared to utilize the workbook. Each monthly section was divided into weekly subsections with activities and homework that corresponded with live sessions. The weekly planner, goal-setting pages, evaluations, self-coaching pages, journaling pages, and B-E-A cycles were also included in each weekly subsection. Program members found the organization helpful and appreciated the numerous opportunities to practice skills. Approximately one quarter of the members enrolled in the program preferred a hard copy of the workbook, because it evolved into a resource for encouragement and a learning booster as program members frequently referred to previous workbooks. Having hard evidence of their progress was motivating for program members. As such, program developers need to consider implementing a similar workbook product in their programs. Additionally, providing program participants with a hard copy option may positively impact participation and implementation.

Community Support

The final implication for practice is that participation in a purposeful community focused on solutions provided opportunities to satisfy all three psychological needs, thus facilitating self-

directed learning. Therefore, developers of coaching and professional development programs need to consider the atmosphere of the learning culture they are creating and make adjustments so that practitioners experience encouragement through solving problems. It is recommended that program developers ask the following questions of their programs: How does the learning community emphasize problem-solving? Has internal safety been established so that program members feel comfortable to ask questions and share concerns? Are there daily and weekly opportunities for collaborative learning?

In this case, there was a unified focus on solving problems, and program members frequently expressed that community support was purposeful. They appreciated minimal small talk, and this atmosphere of focused and productive support was especially important in providing opportunities for program members to satisfy their need for relatedness. The coaches created a safe and participatory environment for the live sessions, where program members wanted to engage in learning, ask questions, and participate in the activities. Coaches accomplished this through facilitative language, modeling, and sharing successes and struggles. The coaches were open and vulnerable in conversation, demonstrating how to ask questions and seek knowledge, thus providing real-life examples of highest-self living and self-directed learning. Therefore, program developers may want to consider the interpersonal skills and coaching capabilities of program instructors to ensure they have the skills to develop learning communities where practitioners feel comfortable to ask questions and participate in collaborative learning.

The implications for practice discussed are relevant for stakeholders creating and implementing coaching and professional development programs because the satisfaction of psychological needs fosters self-directed learning that results in sustained practices and positive

outcomes. The program structure, learning systems, and community support provide opportunities for psychological need satisfaction so that program members become autonomously motivated and self-directed to improve implementation. When program members become self-directed, they create their own learning plans and utilize additional opportunities for active participation and practice (Caron et al., 2022; Caves et al., 2021; Lomis et al., 2021; Wang & Lu, 2020). As program members' capacity for learning increases, it positively impacts the capacity for learning available in the program (Goodman, 2017; Ippolito et al., 2021; Lomis et al., 2021; Romano & Schnurr, 2022; Ting et al., 2021). Self-directed and knowledgeable program members become a source of learning for other members (Damschroder et al., 2021; Neal & Fixsen, 2020; Nordstrum et al., 2017; Sanetti & Collier-Meek, 2019), thus multiplying the opportunities available for psychological need satisfaction and self-directed learning.

Empirical and Theoretical Implications

This section addresses the theoretical and empirical implications of the study. The empirical implications provide a comparison between case findings and the relevant literature, along with a discussion of how the study extends previous research. The theoretical implications present a discussion of how case findings aligned with self-determination theory.

Empirical Implications

This section considers the empirical implications of the case study. Findings from the case are compared with research from the literature review. Points of alignment and divergence are discussed through an examination of each theme from the study.

Becoming Students of Self. Case findings indicate the coaching program provided opportunities for program members to become self-directed learners. Through coaching practices, which included the implementation of EBPs, program members developed self-

awareness and practiced skills to become students of self. There is alignment between case findings and the literature as coaching is recommended across organizational settings to improve the implementation of EBPs and support self-directed learning essential for sustaining practices (Poch et al., 2020; Stoiber et al., 2022; Wang & Lu, 2020). There are also points of divergence. Findings from the literature suggest there is distinction between instruction stakeholders receive through traditional professional development at conferences and workshops and the learning that occurs during coaching processes (Joyce & Showers, 1981; March et al., 2020; Meyer et al., 2022; Nordstrum et al., 2017). Coaching practices reinforce instruction, skills, and practice (Arden & Benz, 2018; Kucharczyk et al., 2022; Ting et al., 2021), whereas training includes learning experiences that introduce skills (Ayvazo et al., 2021). In this case, instruction and training are integrated elements within coaching practices. This is an important difference because case data revealed it was the integration of these elements that provided numerous opportunities for psychological need satisfaction and self-directed learning. Coaching practices in this study included instruction, training, modeling, feedback cycles, and practice. Findings revealed each type of live session integrated these coaching practices despite the sessions being distinguished as instruction, coaching, and small learning group sessions. Program members became students of self because knowledge and practice were reinforced through instruction, training, and other coaching practices within the same virtual format.

Program members in this case received a significant amount of instruction in the coaching program as instruction was understood to be a core component of the coaching process. This finding adds to the literature as effective coaching is known to include modeling, observation, feedback, planning, and using data to problem-solve (Nordstrum et al., 2017; Page & Eadie, 2019; Sanetti & Collier-Meek, 2019). Discussions of instruction as an effective element

of coaching contribute new details to the current literature on coaching and self-directed learning. In this case, instruction included background information with explanations of the theories, purpose, and implementation associated with EBPs. This was key in program members identifying the value of EBPs and taking action to integrate practices within their value systems. These findings align with research from Kittelman et al. (2021), as their discussion highlighted the relationship between stakeholders' beliefs and values and their commitment to implementation processes. Additional findings from the literature explain implementation as a value-oriented change that is related to effective training (Birken & Currie, 2021; Carlgren & BenMahmoud-Jouini, 2022; Nordstrum et al., 2017). Evidence-based practices and coaching processes must be accepted by stakeholders or EBPs will likely be abandoned (de Waal & Heijtel, 2016; Joyce & Showers, 1981; Nordstrum et al., 2017).

Program members received instruction in each type of live session, the Facebook group, emails, and the quarterly workbook. Instruction was provided through video recordings and written text. Information was crucial to program members becoming students of self, as members needed to understand the purpose of developing three skills: self-awareness, self-reflection, and self-regulation. Instruction also included the introduction of these skills, where the connection between skills and becoming students of self was described in detail, and participants expressed this was valuable and meaningful to their learning. This adds to the literature as future research exploring coaching models in diverse settings was encouraged (Arden et al., 2017) because details of coaching processes are lacking (Barrett, 2021).

Becoming Skilled Through Practice. Study findings indicate program members satisfied competence needs by utilizing opportunities for practicing skills. Informal and formal evaluations and feedback cycles during coaching were important for members' skill

development. These findings align with data from the literature. Lomis et al. (2021) determined the learning process during implementation included cycles of planning-assessment-learning-adaptation. In this study, program members informally evaluated their progress weekly and used this data to plan and adjust practice routines for the following week. Program members also completed formal 30-day, 60-day, and 90-day evaluations, which provided detailed process data. The formal evaluations were understood to be teaching tools, which provided opportunities for self-reflection and critical thinking. There is agreement between these case findings and research in the literature. Helsabeck et al. (2022) and Serhal et al. (2022) explain in their research findings that ongoing process data is a retrospective analysis to determine what improvements will result in better implementation. In Sheperis and Bayles' (2022) study, service gaps were identified through process data from focus groups, which led to an increase in service capacity for individuals with autism. Likewise, case findings highlight evaluations provided opportunities for program members to become students of self and identify what steps they wanted to take to improve implementation in the next 30 days. Just as service providers identified service gaps by examining process data (Sheperis & Bayles, 2022), program members in this case identified implementation gaps. Specifically, the formal evaluations provided information about practice routines and established habits, and contextual data helped members recognize situational factors impacting implementation and practice.

In other research from the literature, individualized feedback was a component of coaching cycles (Ayvazo et al., 2021; Fixsen et al., 2005; Kraft & Blazar, 2017; Kraft et al., 2018). However, details about the components of feedback cycles are lacking as feedback cycles are referenced generally in the literature. Barrett (2021) explained feedback cycles foster active engagement, and Lomis et al. (2021) determined in a medical school context feedback cycles

facilitated self-directed learning as students reflected on learning and adjusted learning plans. This study contributes to the understanding of feedback cycles during coaching because case findings indicate that in addition to written evaluations, feedback cycles with coaches also provided process data and were important for improving practice. This finding aligns with the literature as Sheperis and Bayles (2022) noted it was specific process data gathered from feedback in focus groups that helped service members identify gaps in service plans for individuals with autism. Similarly, in the context of a government organization, T. Choi and Chandler (2020) determined feedback cycles were key in identifying implementation barriers and solving problems. Pianta et al. (2021) found that ongoing feedback cycles in a virtual coaching model included analyses of educators' teaching videos, which improved implementation and student outcomes. This study also adds to the literature because findings revealed feedback cycles incorporated the following elements: instruction, training, modeling, co-inquiry, and collaborative practice. Program members needed additional background instruction and the reintroduction of skills to support implementation and practice. Socratic questioning was employed in each feedback cycle, and it informed coaches and members as to what elements were needed to support members during feedback cycles.

Purposeful Community. In this study, an encouraging and solutions-focused community provided opportunities for program members to satisfy all three psychological needs. Participation in the purposeful community resulted in program members expressing that they felt connected to the coaches and other members, which helped them engage in collaborative learning opportunities where they took the initiative to improve implementation and learning plans. These case findings align with data from the literature as Anthony and van Nieuwerburgh (2018) determined organizations that fostered coaching cultures created positive and nurturing

environments to support individual growth. Johnston (2021) found when coaches and clients were both active participants in the coaching process, it supported a critical thinking environment. Stout-Rostron (2019) suggested a safe thinking environment helps stakeholders initiate learning that facilitates change.

Case findings indicated the emphasis on establishing and maintaining a solutions-focused coaching community stems from the purpose of the virtual coaching program, which is for members to become self-directed learners. This occurs through program members becoming students of self, where they receive the instruction, training, and practice to develop self-awareness and reflection skills to identify elements in their belief system. Members implemented EBPs that aid in program members becoming students of self, and one of these EBPs is setting quarterly goals. In the literature there is agreement that coaching is a method to achieve personal and professional goals (Greif et al., 2022; ICF, 2015; Palamara et al., 2022). Greif et al. (2022) add that coaching is a results-oriented process to support the development of stakeholders' self-concept. Palamara et al. (2022) suggest reflection and feedback cycles that occur in a psychologically safe environment are additional components of coaching descriptions. In this case, elements of each of the coaching descriptions were found to be present in the coaching program, thus highlighting agreement between the study and the literature. However, findings in this study also diverge from the research data as case findings indicate the focus of coaching was to provide opportunities for instruction and practice in a participatory environment that facilitates self-directed learning.

Instruction opportunities were associated with the satisfaction of autonomy, and opportunities for practice were associated with the satisfaction of competence needs. The participatory environment provided opportunities for the satisfaction of relatedness needs. When

members utilized these opportunities, they became students of self and developed skills to become agents of highest selves, who were self-directed to create and adjust learning plans to improve implementation and practice. These findings add to the current literature regarding definitions of coaching and descriptions of effective coaching because there is a focus on the outcomes of coaching, but clear and consistent definitions and descriptions of coaching are lacking (Greif et al., 2022; Hunter & Redding, 2023; Hussey & Campbell-Meier, 2021; Lee et al., 2023; Sinaise et al., 2023). The difference between the purpose of coaching in this study and the understanding from the literature that coaching is a method of goal setting is highlighted here. Case findings revealed goal setting was one of the EBPs employed to aid program members in becoming students of self. In this study, goal attainment was a product of program members' internal changes as they developed self-awareness and became self-directed. This focus diverges from the literature where the focus was on goal setting to accomplish positive external outcomes (Greif et al., 2022; Hussey & Campbell-Meier, 2021; Palamara et al., 2022). As a significant point of divergence, this contributes to the understanding of effective coaching because goal setting in this case was a tool implemented to assist members as they recognized successful change was an internal matter. When program members developed skills to become self-directed, goal attainment was the natural product of accomplishing internal changes in thinking, emotions, and actions.

Becoming Agents of Highest Selves. In this study, when program members had opportunities to satisfy psychological needs, they became self-directed learners who exercised agency over their belief system. This resulted in program members living as their highest selves more frequently. There was a process of skill development that occurred prior to members exercising agency and self-direction. Program members developed self-awareness by learning

how to identify elements in their belief system (thinking, emotions, and actions). Through self-reflection, engagement in coaching processes, and practice, program members became skilled at self-regulation. This closely aligns with research from the literature as self-awareness, self-reflection, and self-regulation were associated with self-directed learning (Chaipidech et al., 2021; Tsuda et al., 2019). Romano and Schnurr (2022) and Torre et al. (2020) noted reflection that supports self-regulation involves moving beyond surface observations. These researchers further determined self-regulators become increasingly aware of their actions in diverse environments so that they can make adjustments that result in positive outcomes (Romano & Schnurr, 2022; Torre et al., 2020). Likewise, in a RCT in an undergraduate context, Wang and Lu (2020) found that students improved cognitive and emotional self-regulation, where they better understood themselves as learners and engaged in self-determined action.

Case findings also add to the understanding of self-regulation in a coaching context as program members employed self-coaching by completing B-E-A cycles, and it was the self-coaching that provided the process data members used to make decisions regarding what elements in their belief system needed adjustments. As a result, program members pursued self-determined actions that supported highest-self living. Ongoing cycles of self-determined action were identified as high-value cycles, where committed action facilitated opportunities for more positive action, and program members exercised agency over their belief system. Case data revealed self-determined action was associated with sustained practices because program members in the coaching program were motivated to utilize opportunities that reinforced knowledge and practice. This also aligns with findings from the literature as Culph et al. (2021) and Nordstrum et al. (2017) explained there is a relationship between stakeholders' motivation and personal investment in implementation and self-directed learning. Additionally, process

evaluations in four studies indicated connections between self-directed learning and sustained

practices (Balu et al., 2015; Combs et al., 2022; McIntosh et al., 2016; McMaster et al., 2021).

Faggella-Luby and Bonfiglio (2020) and Morrison et al. (2021) determined that plans for

sustainability are inseparable from plans of ongoing learning during implementation. This is

because stakeholders need to understand how to implement EBPs and why the practices will aid

them in achieving positive outcomes so that they can determine the practices are valuable and

worth sustaining (Combs et al., 2022; Sanetti & Collier-Meek, 2019).

Similarly, in this study, coaching practices assisted program members in developing

learning plans to improve implementation. Specifically, case findings add to the literature

because it was the instruction, training, modeling, and practice components of coaching that

facilitated self-directed learning, where members became skilled at self-regulation. Once

program members learned to self-regulate, they exercised agency over their belief system and

participated in high-value cycles. As Nordstrum et al. (2017) and Reinholz and Andrews (2020)

highlighted, implementation processes must be viable to become sustainable. Case findings

support this claim because it took time for program members to develop skills that support viable

implementation processes and practice routines. When opportunities for psychological need

satisfaction were utilized, program members became adept at self-regulation, and they were

motivated to sustain implementation. This motivation resulted in high levels of participation and

engagement, where program members pursued high-value cycles that supported self-

determination.

Theoretical Implications

Deci and Ryan's (1985) self-determination theory was the lens used to inform this case

study. This theory was selected because there were parallels between descriptions of self-

directed learning and self-determination in the literature (Chaipidech et al., 2021; Lomis et al., 2021; Torre et al., 2020). As a result, self-directed learning was conceptualized as self-determined learning in this study. The combination of evidence from the literature suggesting coaching practices can support self-directed learning (Poch et al., 2020; Stoiber et al., 2022; Wang & Lu, 2020), and the call for researchers to employ qualitative methods to investigate teaching and learning environments that facilitate self-determination (Ryan & Deci, 2020), were instrumental in developing the research questions guiding this study.

According to SDT, humans need to satisfy three basic psychological needs to become self-determined: autonomy, competence, and relatedness (Deci & Ryan, 1985). As these needs are satisfied, people become autonomously motivated and self-determined in their actions (Deci & Ryan, 2008). The research sub-questions asked how a virtual coaching program provided opportunities for program members to satisfy the three psychological needs. Each of the themes and interpretations discussed earlier are relevant in explaining the alignment between case findings and SDT. Findings indicate program members experienced opportunities to satisfy their need for autonomy through the scope of knowledge available in the program. Program members received instruction through live teaching, coaching, and small group learning sessions. Program members also incorporated instruction from modules available in the program library. The instruction helped program members become students of self, and as program members utilized opportunities for satisfying autonomy, they became agents of highest selves.

Case findings suggest program members had opportunities to satisfy their need for competence by transferring knowledge into practice through skill development. Once program members recognized and understood their thinking, emotional state, and actions/inactions and successfully practiced making changes to these elements in their belief system, they were more

invested in consistent implementation. Program members became curious about themselves and desired to understand why they were pursuing or not pursuing action, and they developed skills to adjust their belief system so that they were living as their highest selves more of the time.

Data from the case indicate program members had opportunities to satisfy their need for relatedness when knowledge and practice were reinforced through community participation. Opportunities to satisfy the needs of autonomy and competence were also facilitated through participation in an encouraging and solutions-focused community. Program members experienced connection and belonging through shared learning and collaborative partnerships, where members were caring and sympathetic but united in the mission to help each other "get unstuck" and live more as their highest selves.

According to SDT, self-determination exists on a continuum of motivation; the higher the autonomous motivation, the higher the self-determination (Deci & Ryan, 2008). Controlled motivation is associated with diminished health and wellness, lower quality of learning, and decreased transfer of learning (Ryan & Niemiec, 2009). Autonomous motivation is associated with improved health and wellness, higher quality of learning, and increased transfer of learning (Ryan & Niemiec, 2009). Program members learn how to distinguish between ego-self thinking and highest-self thinking. Ego-self thinking aligns with introjected regulation, a type of controlled motivation (Gagné & Deci, 2005). Introjected regulation is associated with ego involvement and maintaining self-worth (Gagné & Deci, 2005). It is contingent on self-esteem, and the perceived locus of causality is external (Gagné & Deci, 2005). In this study, program members learned that the purpose of the program is to help members move from ego-self thinking (controlled motivation) to highest-self thinking (autonomous motivation). The pinnacle of highest-self thinking, where people pursue action for the sake of enjoyment because an

activity is interesting and meaningful, aligns with intrinsic motivation in SDT. Intrinsic motivation is the highest form of motivation on the continuum of self-determination; intrinsically motivated people are highly self-determined (Ryan & Deci, 2020).

According to SDT research, intrinsic motivation significantly decreases after childhood (Deci & Ryan, 1985). However, through psychological need satisfaction, people can ascend the continuum of motivation and become autonomously motivated and self-determined (Deci & Ryan, 2008). Two types of autonomous motivation are associated with increasing self-determination: identified regulation and integrated regulation (Gagné & Deci, 2005). When people pursue an action because they recognize the value in an activity, they experience identified regulation and move beyond introjected regulation (Gagné & Deci, 2005). Once this activity becomes personally meaningful and integrated within their value systems, people experience integrated regulation, which is directly below intrinsic motivation along the continuum of self-determination (Gagné & Deci, 2005).

Data from the case indicate that scope of knowledge, as described in the first interpretation, is important in program members experiencing opportunities to satisfy psychological needs and becoming autonomously motivated. Through the scope of knowledge, program members learn about the characteristics of ego-self living versus highest-self living and the role of their belief system in living one or the other. Program members learn how to implement EBPs that will assist them in identifying introjected regulation (ego-self), and they develop skills, as described in the second interpretation, by transferring knowledge into practice, thus utilizing opportunities to satisfy their need for competence. Findings indicate program members experienced identified regulation as they recognized the value of instruction sessions, coaching, and implementing EBPs. As program members utilized opportunities to satisfy

psychological needs, highest-self values were integrated into their belief system. As a result, program members lived more as their highest selves and adjusted their belief system through self-determined action.

In summary, this case study helped answer the call for additional qualitative research in teaching and learning contexts that provide opportunities for psychological need satisfaction (Ryan & Deci, 2020). Findings from this study reveal that opportunities to satisfy psychological needs occurred through the scope of knowledge, transferring knowledge into practice, and the reinforcement of knowledge and practice through community participation. Case findings align with SDT research: As program members utilized opportunities to satisfy their needs for autonomy, competence, and relatedness, they became self-directed learners who ascended the continuum of motivation and learned to live more as their highest selves. As a result, program members pursued activities that led to improvements in health and wellness at home and work. This study further contributed to SDT research as case findings indicate participation in a purposeful community that is focused on solutions provided opportunities for satisfying all three psychological needs.

Limitations and Delimitations

This section presents a discussion of the limitations and delimitations of the study. The limitations are potential weaknesses of the study that are outside the researcher's control. The delimitations are purposefully selected boundaries placed on the case to limit the focus of the study.

Limitations

One limitation of the study is that all participants were women, as participation in the study was voluntary. There are high percentages of women in education (Organization for

Economic Co-operation and Development [OECD], 2022) and health care settings (G. Shannon et al., 2019), and the percentage of women in leadership and corporate settings is increasing (Gregoratti et al., 2018). However, having no male participants is inconsistent with the ratios in these settings, and this limits the findings of the study.

Another limitation includes the education and work experience of participants. Most participants had a bachelor's degree or higher and reported at least a decade of steady work experience. These background factors could have influenced participants' level of participation, experience in the program, and commitment to coaching, compared to participants from other backgrounds.

A third limitation was that a few of the research participants knew each other well because of being enrolled in the program for two or more years. These participants attended the same small learning group sessions and frequently communicated with one another. As such, program members may have discussed answers to the interview questions with one another and formulated a collective response, which would limit case findings.

Delimitations

This case was bounded by the participants, setting, and focus of the study. One delimitation was that only currently enrolled program members were selected to participate in the study. Coaches and organizational support staff were not selected. This was a chosen delimitation to understand opportunities for self-directed learning from the perspective of those receiving the coaching.

A second delimitation was that participants were required to have been enrolled in the program for a minimum of 6 months. This delimitation was chosen because 6 months likely provided program members with time to establish participation routines, and as a result

participants may have a better understanding of their learning processes compared to members who were enrolled for less than 6 months.

Study participants were selected through purposeful sampling, and this was an additional delimitation. Case findings indicate participants in this sample were highly motivated, appreciated the coaches, and enjoyed participating in the coaching program. Most participants indicated they would continue participation indefinitely because of their positive experience. A random sample may have yielded participants who had different experiences and results. Participants in a random sample may also have had different attitudes regarding the coaching curriculum, coaching process, resources, and cost of the program. All these factors could influence the understanding of opportunities available for self-directed learning.

A final delimitation was that only one virtual life-coaching program was the focus of this study as studying multiple programs may have reduced the depth of information available for analysis. A large amount of qualitative data was key in creating rich descriptions, answering research questions, and making connections between the themes and relevant literature. Stake (1995) explains that it takes a long time to understand what is going on in a case, and therefore, having a deeper understanding of one case was deemed to be better for the purpose of this study.

Recommendations for Future Research

In this section, recommendations for future research are discussed in consideration of case findings and the study limitations and delimitations. This study investigated one virtual life-coaching program, and all the participants were women. Diversified samples that include male and female participants would further contribute to the understanding of opportunities for self-directed learning available in a coaching program. Four mixed methods studies with random samples are recommended to make comparisons between coaching programs. One study could

compare three different life-coaching programs, and another study could compare virtual and residential life-coaching programs. A third study could consider coaching programs in three different settings: education, health care, and business. A fourth study could incorporate a longitudinal design to investigate whether participants maintained life changes 5 years later. In each of these studies, quantitative measures of self-determination and qualitative data of the opportunities available for satisfying psychological need satisfaction would add to the current understanding of how coaching facilitates self-directed learning.

Quantitative studies are recommended to continue investigations in virtual coaching settings. One of the subthemes was *consistent implementation* as regular practice helped program members develop skills. In the literature, fidelity of implementation was essential in sustaining EBPs (Barwasser et al., 2022; Faggella-Luby & Bonfiglio, 2020; Kwan et al., 2022). Though peripheral evidence suggests FOI was high, fidelity measures in this study are unknown. A comparison study of the types of EBPs program members implemented, along with fidelity measurements, would contribute to the understanding of implementation at the individual level and how this impacted skill development and participation. Additional quantitative studies could examine correlations between levels of participation and measures of self-directed learning. Factors to consider include live session attendance, module usage, and Facebook interactions.

A phenomenological study is recommended to explore the outlier theme of risk-taking. Each of the 12 participants indicated they had to take a risk and decide to participate. Two participants indicated it took 1 year before they decided to fully participate. It would be helpful to consider the factors associated with risk-taking that encouraged members to begin participating in the program. Another phenomenological study is recommended to explore the subtheme *willing to fail*. Peripheral case findings indicate the participants in this study had

already worked through cycles of practice-fail-practice and were living as their highest selves most of the time. It would be helpful to understand how participants work through this process and what it looks like in comparison to the motivation continuum. How do participants remain motivated as they work through this process?

Finally, two mixed methods studies are recommended to further understand the process of becoming autonomously motivated. In this study, findings suggest participants were already experiencing integrated regulation and intrinsic motivation. It would be helpful to have quantitative data that examines measurements of self-determination, along with qualitative data to explore how participants move from introjected regulation to identified regulation and from identified regulation to integrated regulation. Another mixed methods study, with a random sample, could consider the process of participation in the study. Studying different groups of participants, such as those enrolled for 1 to 6 months, 6 months to 1 year, and 1 year to 2 years would be helpful for understanding the needs of participants at different stages of implementation. Qualitative data could consider participants' transition from beginner to seasoned member, the process of self-direction, and how participants negotiated autonomy. Each of the recommendations presented would contribute to the understanding of coaching, implementation, and self-directed learning. Study findings would be relevant for stakeholders developing coaching and professional development programs.

Conclusion

This single instrumental case study considered how a virtual coaching program provided opportunities for self-directed learning during the implementation of evidence-based practices. The data collected through observations, audiovisual materials, and individual interviews were categorized into four themes and eight subthemes to answer the research questions.

Opportunities for program members to satisfy their need for autonomy occurred through the scope of knowledge available in the program. Opportunities for satisfying the need for competence occurred through the transfer of knowledge into practice. Opportunities for program members to satisfy their need for relatedness occurred when knowledge and practice were reinforced through community participation. A purposeful community focused on solutions-based encouragement was important for satisfying all three psychological needs and facilitating self-directed learning. This study contributed to the understanding of self-directed learning in a virtual coaching setting as the program structure, learning systems, and community support provided numerous opportunities for psychological need satisfaction. Findings from this study may have implications for stakeholders developing and implementing coaching and professional development programs. However, it will be up to the readers of this study to determine if the findings and implications are applicable to their organizational contexts.

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APPENDIX A

IRB Approval Letter

November 3, 2023

Elisabeth Myers

Christine Saba

Re: IRB Exemption - IRB-FY23-24-547 Virtual Coaching, Self-Directed Learning, and the Implementation of Evidence-Based Practices: A Qualitative Case Study

Dear Elisabeth Myers, Christine Saba,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

Category 2.(ii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:

Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at [email removed].

Sincerely,

G. Michele Baker, PhD, CIP

Administrative Chair

Research Ethics Office

APPENDIX B

Study Information Sheet

Title of the Project: Virtual Coaching, Self-Directed Learning, and the Implementation of Evidence-Based Practices: A Qualitative Case Study
Principal Investigator: Elisabeth Myers, Doctoral Candidate, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be 18 years of age, currently enrolled in the coaching program, and have participated in the program for a minimum of six months. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of this single instrumental case study is to understand how a virtual coaching program provides opportunities for self-directed learning during the implementation of evidence-based practices for adults at Navigator Coaching. This study will contribute to the current understanding of professional learning models that support ongoing learning and sustained implementation.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following:

1. Complete a brief participant questionnaire (Time estimate: 10 minutes).
2. Participate in a video- and audio-recorded individual interview via Zoom (Time estimate: 1 hour). Interview questions will be emailed to participants once participants have agreed to participate. Participants will be given at least 3 days to prepare for the interview.
4. Interview transcript review (Time estimate: 20 minutes). The researcher will transcribe the interviews and email transcripts to participants within 1 week of the completion of

the interview. Participants will be asked to review the transcripts for accuracy and return them via email within 1 week of receipt of the transcripts.

5. Interview interpretive commentary review (Time estimate: 15 minutes).
The researcher will complete interpretive commentaries of the interviews. Interpretive commentaries will be emailed to participants within 2 weeks of completing the interview. Participants will be asked to review these commentaries for accuracy and credibility and return them by email within 1 week of receipt.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study.

Benefits to society include increased knowledge regarding research issues and improving

professional learning models to support ongoing learning and sustained implementation.

What risks might you experience from being in this study?

The expected risks from participating in this study are minimal, which means they are equal to

the risks you would encounter in everyday life.

I am a mandatory reporter. During this study, if I receive information about child abuse, child

neglect, elder abuse, or intent to harm self or others, I will be required to report it to the

appropriate authorities.

How will personal information be protected?

The records of this study will be kept private. Published reports will not include any information

that will make it possible to identify a participant. Research records will be stored securely, and

only the researcher will have access to the records.

- Participant responses will be kept confidential by replacing names with pseudonyms.
- Interviews will be conducted in a location where others will not easily overhear the conversation.
- Data will be stored on a password protected computer. After three years, all electronic records will be deleted.

- Recordings will be stored on a password protected computer for three years and then deleted. Only the researcher will have access to these recordings.

How will you be compensated for being part of the study?

Participants will be compensated for participating in this study. Participants will receive a $25 Visa gift card through email after completing the following procedures: participant background questionnaire, individual interview, interview transcript review, and interview interpretive commentary review. Any participant who chooses to withdraw from the study after beginning but before completing all study procedures will not receive compensation.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please contact the researcher at the email address included in the next paragraph. Should you choose to withdraw, data collected from you will be deleted immediately and will not be included in this study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Elisabeth Myers. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at [email removed]. You may also contact the researcher's faculty sponsor, Dr. Christine Saba, at [email removed].

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the IRB. The physical address is [address removed]; the phone number is [phone number removed], and the email address is [email removed].

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

APPENDIX C

Site Approval Letter

Dear Program Director,

I am writing to obtain permission for members in your program to participate in research regarding opportunities for self-directed learning in a virtual coaching program during the implementation of evidence-based practices. The adults at your organization were selected because they are implementing evidence-based practices to achieve goals. Please read this form and ask any questions before providing consent.

Elisabeth Myers, a doctoral candidate in the School of Education at Liberty University, is the researcher conducting this study.

Background Information: The purpose of this study is to understand how a virtual coaching program provides opportunities for self-directed learning during the implementation of evidence-based practices.

Study Procedures: If you agree to allow participation in this study, I would ask the program members to agree to do the following:

1. Complete a brief participant background questionnaire (Time estimate: 10 minutes).

2. Participate in an audio- and video-recorded interview (Time estimate: 1 hour).

3. Review the interview transcript (Time estimate: 20 minutes).

4. Review the interpretive commentary (written by the researcher) of the interview (Time

estimate: 15 minutes).

Risks: The expected risks from participating in this study are minimal, which means they are

equal to the risks one would encounter in everyday life. I am a mandatory reporter. During this

study, if I receive information about child abuse, child neglect, elder abuse, or intent to harm self

or others, I will be required to report it to the appropriate authorities.

Benefits: Participants should not expect to receive a direct benefit from taking part in this study.

Confidentiality: The records of this study will be kept private. Published reports will not include

any information that will make it possible to identify a participant. Research records will be

stored securely, and only the researcher will have access to the records.

- The organization will be assigned a pseudonym.

- Participant responses will be kept confidential by replacing names with pseudonyms.

- Data will be stored on a password protected computer. After 3 years, all electronic

  records will be deleted.

- Interviews will be recorded and transcribed. Recordings will be stored on a password

  protected computer for 3 years and then deleted. Only the researcher will have access to

  these recordings.

Compensation: Participants will receive a $25 Visa gift card through email after completing the

following procedures: participant background questionnaire, individual interview, interview

transcript review, and interview interpretive commentary review. Any participant who chooses to

withdraw from the study after beginning but before completing all study procedures will not receive compensation.

Voluntary Participation: Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions: The researcher conducting this study is Elisabeth Myers. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at [email removed]. You may also contact the researcher's faculty sponsor, Dr. Christine Saba, at [email removed].

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board. The physical address is [address removed]. The phone number for the IRB is [phone number removed] and the email address is [email removed].

Please notify the researcher if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the information in this form. I have asked questions and received answers. I consent to allow adults in the program I oversee to participate in this study.

_____

Signature of Director   Date

_____

Signature of Investigator   Date

APPENDIX D

Participant Email Invitation

Dear Members of Navigator Coaching:

I am a doctoral student in the School of Education at Liberty University, and I am conducting a research study as part of the requirements for degree completion. The purpose of my case study is to understand how a virtual coaching program provides opportunities for self-directed learning during the implementation of evidence-based practices. Members of Navigator Coaching will provide valuable insight regarding their own learning process and opportunities available for learning in the program overall. This information is important in understanding the issue of self-directed learning within the context of a virtual coaching program. I am writing to invite eligible adults to join my study.

Research participants must be 18 years of age or older, currently enrolled in the coaching program, and have participated in the program for a minimum of 6 months. Research participants will be asked to complete a brief participant questionnaire that will take approximately 10 minutes and one recorded Zoom interview that will take approximately 1 hour. Participants will be asked to review the interview transcript (approximately 20 minutes) and review an interview interpretive commentary written by the researcher (approximately 15 minutes). Participant names and other identifiers will be requested as part of the research study, but this information will remain confidential.

I have attached an information sheet form to this email. The information sheet provides additional details about my case study. If you would like to participate in the research study, I have included a participation response template below that you can copy and paste into an email. Additionally, I have attached a participant background questionnaire. Please complete the

questionnaire and attach it to your participation response. Please send your response and

completed questionnaire to [email removed].

Participation Response Template

Greetings Elisabeth,

I would like to participate in your case study. I have completed and attached the participant

background questionnaire. I live in [City, State/Province, Country] and the best times to conduct

an interview via Zoom are [Days and Times].

Sincerely,

[Your Name]

Thank you for your time and consideration. I look forward to hearing from you.

Kind Regards,

Elisabeth Myers

APPENDIX E

Participant Social Media Invitation

To increase the likelihood of potential participants accessing a research invitation, I posted a social media invitation to Navigator Coaching's Facebook page in addition to sending an email invitation. This is a private Facebook group and only verified program members have access to the group. Once potential participants sent a direct message indicating they were interested in participating and learning more about the research study, I sent them a copy of the Participant Email Invitation with an attached information sheet and participant background questionnaire.

ATTENTION MEMBERS OF NAVIGATOR COACHING: I am conducting research as part of the requirements for a doctoral degree in education at Liberty University. The purpose of my research is to understand how a virtual coaching program provides opportunities for self-directed learning during the implementation of evidence-based practices. To participate, you must be 18 years of age or older, currently enrolled in the coaching program and have participated in the program for a minimum of 6 months. Participants will be asked to complete a background questionnaire (10 minutes), an individual interview (1 hour), review interview transcripts (20 minutes) and review interview interpretive commentaries written by the researcher (15 minutes). If you would like to participate and meet the study criteria, please direct message me for more information. An information sheet and participant questionnaire will be emailed to you. Participants will be given a $25 Visa gift card as compensation.

APPENDIX F

Participant Background Questionnaire

This questionnaire was emailed to research participants as an attachment to the participant invitation email. The study information sheet was attached to the email as well. Participants were given directions in the invitation email to complete the questionnaire only after they read the information sheet. For any participants who did not complete the background questionnaire, these questions were asked at the beginning of their interview.

1. What is your gender?

2. What is your age? If you prefer, you may list a 10-year range such as 45–54.

3. Please briefly introduce yourself by sharing: the state or province in which you live and your

work experience (being a stay-at-home spouse and/or parent is most certainly a vocation).

4. What is your highest educational degree?

5. Please briefly describe how you heard about this life-coaching program.

APPENDIX G

First Viewing Observation Protocol

The First Viewing Observation Protocol was used for taking notes during live instruction and large group coaching sessions. While the focus of the observation was to listen and watch, the following form was utilized as needed during these live observations.

Date: _____   **Context:** _____

Notes

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Memos

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Questions

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APPENDIX H

Detailed Observation Protocol

The Detailed Observation Protocol was utilized for taking notes during the second viewing of the instruction and large group coaching sessions. The First Viewing Observation Protocol was used during the first viewing of these sessions. This form was used for observations of small learning group sessions. I followed the line-by-line numbering format modeled by Stake (1995).

Observation Date: _____

Observation Context: This was the second viewing of an instruction session or large group coaching session. It was the first and only viewing of a small group learning session.

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APPENDIX I

Individual Interview Guide

An interview guide was emailed to research participants once participants read the study information sheet, asked questions, and agreed to participate in the study. Participants received the interview guide at least 3 days prior to their scheduled interview so that they had time to reflect on the questions and their answers as well as write down pertinent notes they wanted to share.

Purpose of the Study

The purpose of this single instrumental case study is to understand how a virtual coaching program provides opportunities for self-directed learning during the implementation of evidence-based practices for adults at Navigator Coaching. Program members will provide valuable insight regarding their own learning processes and opportunities available for learning in the program overall. This information is important in understanding the issue of self-directed learning within the context of a virtual coaching program.

Research Questions

The research questions that will guide this case study are:

How does a virtual coaching program provide opportunities for self-directed learning during the implementation of evidence-based practices?

- SQ1: How does the coaching program provide opportunities for adults to satisfy their need for autonomy?
- SQ2: How does the coaching program provide opportunities for adults to satisfy their need for competence?
- SQ3: How does the coaching program provide opportunities for adults to satisfy their need for relatedness?

Interview Questions

Introductory (Grand Tour) Question:

　　1. What are the reasons you decided to join a virtual life-coaching program?

Interview Questions:

　　1. How would you describe your program participation?

2. How has your participation changed since beginning the program?

3. How has the program's virtual library helped you achieve your goals?

4. How do the instruction sessions help you achieve your goals?

5. How do the coaching sessions help you achieve your goals?

6. What *aha* learning moments have you had?

7. How has the program surprised you?

8. What are the top two or three things that you have learned that you apply in daily practice?

9. What program activities help you stay engaged and why do you think these activities help?

10. What opportunities are available for connecting with others in the program and how have you utilized these opportunities?

11. How has connecting with others helped you achieve your goals?

APPENDIX J

Individual Interview Protocol

The individual interview protocol was used for taking notes during individual interviews. While the focus of the interview was on listening to the research participants, the following form was utilized as needed during interviews.

Date: _____   **Context:** _____

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Memos

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Questions

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APPENDIX K

Direct Interpretation Protocol

The direct interpretation protocol was employed for all data collection methods. It was completed immediately after observations, the examination of audiovisual material episodes, and individual interviews. The purpose of direct interpretation was to write one paragraph with details of initial impressions of what issues were most relevant in the data episode. This protocol also provided space for memoing and documenting follow-up questions. The direct interpretation protocol was used along with coded segments of text, and categorical aggregation and correspondence tables to write an interpretive commentary of each data episode. This was important for triangulating data and establishing an audit trail.

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APPENDIX L

Categorical Aggregation Table

Categorical aggregation tables were used for data analysis once segments of text were coded. The following table was modeled after an example provided by Stake (1995).

TITLE: DESCRIPTION OF THE AGGREGATION CONTEXT							
Segment	**Lines**	Categories					

APPENDIX M

Categorical Aggregation Table Sample

The following table is an example of a categorical aggregation table.

INDIVIDUAL INTERVIEW WITH PARTICIPANT A							
Segment	**Lines**	Categories					
A	2–4	Participation					
B	7–10			Skills			Choices
C	14–16	Participation					
D	17–25	Participation				Self-awareness	
E	30–39			Skills	Practice		
F	41–43					Self-awareness	
G	47–51		Connection				
H	52–60	Participation		Skills			Choices
I	67–70	Participation		Skills			Choices
J	72–78					Self-awareness	
K	84–89	Participation				Self-awareness	
L	96–100	Participation				Self-awareness	
M	102		Connection				
N	106		Connection				
O	111–118		Connection				
P	126–139		Connection				
Q	144		Connection				
R	146–148						Choices
S	152–154						Choices
T	155–159			Skills	Practice		
U	167–168			Skills	Practice		
V	174–177			Skills	Practice		
W	185–190			Skills	Practice		
X	197–200			Skills	Practice		
Y	204–210		Connection			Self-awareness	

APPENDIX N

Correspondence Table

Categorical aggregation tables were examined for potential correspondence between two categories that appeared together repeatedly. The following correspondence table was modeled after an example provided by Stake (1995).

DESCRIPTION OF THE CORRESPONDENCE CONTEXT			
Correspondence between Category 1 & Category 2	Category 2 evidenced	Category 2 not evidenced	Totals
Category 1 evidenced			
Category 1 not evidenced			
Totals			

APPENDIX O

Correspondence Table Sample

The following table is an example of a correspondence table completed from coded segments found in the categorical aggregation sample in Appendix M. The closer the off-diagonal cells (highlighted in yellow) are to zero, the more significant the correspondence between the two categories of skills and practice (Stake, 1995).

DESCRIPTION: CORRESPONDENCE TABLE ACCOMPANYING CATEGORICAL AGGREGATION FOR INDIVIDUAL INTERVIEW WITH PARTICIPANT A			
Correspondence between skills and practice	Practice evidenced	Practice not evidenced	Totals
Skills evidenced	6	3	9
Skills not evidenced	0	16	16
Totals	6	19	25

APPENDIX P

Interpretive Commentary Protocol

The interpretive commentary protocol was the last of a multistep data analysis process employed for each data episode collected. Raw data from each episode along with accompanying analyses from the direct interpretation protocol, categorical aggregation table, and any correspondence tables were synthesized in the interpretive commentary protocol. The commentary was written in paragraph form and included an overall analysis of the relevance of each episode to case issues. Case issues included the research questions and emergent issues evidenced through data collection and analysis. Interpretive commentaries were used to write the final case synthesis. Interpretive commentaries were also used for member checking. Interpretive commentaries of interviews were given to research participants for them to review and add their comments. This was also a means of triangulation to ensure the interpretive commentaries captured the meaning of each data episode.

Date: _____   Context: _____

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APPENDIX Q

Grouping Categories Protocol

After every two episodes of collected data were coded and analyzed, the text segments belonging to the same category were identified and grouped together. The constant comparison method (Glaser & Strauss, 1999) was utilized to create distinct boundaries between categories and ensure the data fit the categories. This protocol was utilized to combine categories, organize segments into alternate categories, and generate new categories. The goal was to synthesize broader themes within the case study.

Category: _____

Definition of the Category:
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Description/Characteristics of the Category:
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_____

Segment Identification and Text:

Segment Identification and Text:

Segment Identification and Text:

APPENDIX R

Audit Trail

Data Collection Timeline
Data Collection Notes for Direct Interpretation and Category Development

11/5/23 Initial Categories

Self-awareness	Connection	Autonomous Motivation
Choices	Belonging	Decisions
Skills	Direction	Change
Practice	Controlled Motivation	Outcomes
Participation	EBPs	Capacity

11/7/23 Live Instruction Observation
-Ego self (false self) vs. highest self (true self) - opportunities for competence
-Characteristics of ego self - unaware, avoids knowledge, closed, fear
-Characteristics of highest self - aware, seeks knowledge, open, love
-B-E-A cycles - autonomy opportunities
-Agents of true selves - opportunities for autonomy
-Visualizing life, dreams to goals - opportunities for competence
-Guided thinking - consistency with planner - opportunities for all 3 psychological needs
-Socratic questioning, facilitative language (let's chat) - opportunities for relatedness

11/9/23 Live Coaching Observation
-Brainstorming technique - opportunities for all 3 psychological needs
-Information from study of self - opportunities for autonomy
-More info=bigger picture for our brains - opportunities for autonomy
-More choices & options - opportunities for autonomy
-Facilitative language - so what if we tried? - opportunities for relatedness
-Skills and practicing from beginning to end - opportunities for competence
-Modeling from coach - how to coach self - all 3 psychological needs
-Processing negative emotions - modeling - all 3 psychological needs
-Protective job of brains - how to guide brain instead - not ego & controlled but guided
motivation - examples of controlled vs. autonomous motivation

11/14/23: Participant email invitations sent in weekly reminder email. Social media invitation
post.

11/14/23: Live Instruction Observation
-High-value vs. low-value cycles - opportunities for autonomy and competence
-Plan execution, quarterly goals - saying it, writing it, doing it - opportunities for autonomy and
competence
-Focusing, rewiring brains - opportunities for competence
-Consistency with EBPs - opportunities for competence
-Creating from future - how and why - opportunities for autonomy

-Emotion of insecurity - comes up repeatedly - opportunities for competence
-Practicing processing emotions and reframing thoughts - time give, interactions, participants share - opportunities for all 3 psychological needs
-Socratic questioning and facilitative language (How does this feel when I say . . .)

11/16/23 Live Coaching Observation
-Purpose - internal needs, not external - controlled vs. autonomous motivation - opportunities for autonomy
-Meaningful life is an internal job, not circumstances - opportunities for autonomy
-Facilitative language - "Let me offer this" - opportunities for relatedness, and competence, by moving into practice
-Collaborative learning - current B-E-A cycle - opportunities for all 3 psychological needs
-Move to new B-E-A cycle - completed practice from current to new - opportunities for all 3 needs
-Thoughts about goal setting - how to reframe thinking - opportunities for autonomy and competence
-Coach demonstrates belief cycles - struggles and successes, modeling - opportunities for all 3 needs

11/20/23 Interview with Rita
-Workbook and planner very important to Rita - opportunities for autonomy and competence
-Showed completed workbook pages and explained the divisions in the workbook - opportunities for autonomy, competence
-Mix and matching activities - opportunities for autonomy
-Highly active in the FB group - opportunities for all 3 needs
-Internal changes - highest-self living, opposite of ego self
-Lifestyle of practice, work = skills

11/21/23 Small Learning Group Observation
-Coach uses white board, completes diagrams of B-E-A cycles - opportunities for all 3 needs
-Focused on new members - opportunities for all 3 needs
-Reinforcing previous instruction - opportunities for competence
-Overview, purpose, theories, instruction, and training - opportunities for all 3 needs
-Demonstrated three ways to identify elements (beliefs, emotions, actions/inactions) in the belief system - opportunities for all 3 needs
-When completing new belief cycles, the coach modeled she starts with the actions to adjust belief system - opportunities for all 3 needs, especially relatedness?
-Socratic questioning & facilitative language - "What do you need right now?" - opportunities for all 3 needs

11/25/23 Interview with Mary
-Understanding goal setting, emphasizing difference in this program - competence opport.
-New business owner - credits coaching program for skills - competence opport.
-Coaching herself - very important to Mary that she learned these skills - all 3 psych needs
-Coaches everyone now - integration? - all 3 psych needs, auton. mot?
-Active in the FB group - autonomy opport.

-Role of program library - all 3 psych needs
-Highest and ego self - agency over thoughts - all 3 needs, autonomy emphasized

11/27/23 Category Development for Data Analysis

Self-awareness	Connection	Autonomous Motivation
Choices	Belonging	Decisions
Skills	Direction	Change
Practice	Controlled Motivation	Outcomes
Participation	Attention	Capacity
Information	Planning	Weekly Activities
Virtual Setting	Journaling	Thought Work
Belief Cycle	Organization	Workbook
Trust	Willing to Try	Facilitative Language
Getting Unstuck	Coaching Self	Suspend Dislikes
Ego Self (false self)	Instruction	Highest Self (true self)
Students	Training	Effort
EBPs	Goal Setting	Internal Transformation

11/27/23–11/28/23 Facebook Data Episode 1

-Morning Minutes - hundreds of comments - go back and count when doing line-by-line segments - all 3 psych needs
-Extensions of teaching - competence and autonomy opport.
-Examples, with videos - What are thoughts creating? All 3 psych needs
-Responding to prompts from coaches - autonomy opport., all 3 needs
-A lot of posts from new members, screenshots of planning and execution success - go back and count when doing line-by-line segments - relatedness opport.

11/28/23 Interview with Adelaide

-Program guided her to understanding her purpose - autonomy opport., self-directed
-Moved from ego (false self) to highest self (true self) - emphasized this is her purpose, to live as highest self - all 3 psych needs
-Emotional regulation - resilience is important for meaningful life - all 3 psych needs
-Facebook interactions - relatedness opport.
-Program library - learning systems? Autonomy and competence opport. emphasized

11/29/23 Small Learning Group Observation

-Identifying the story we tell ourselves - How, why, what? Is it true? Self-directed learning? Autonomy opport.
-Then, new thoughts, how to reframe the story so it is the truth, but it is a more hopeful story that serves us in living as highest selves - all 3 psych needs
-When is it an ego-self story vs. a highest-self story? - all 3 psych needs
-Identifying the thoughts, most troubling thoughts of that story and reframing those - autonomy and competence opport.
-Socratic questioning & facilitative language - "What will help the most?" - opport. for all 3 psych needs, relatedness emphasized

11/29/23–11/30/23 Facebook Data Episode 2
-Morning Minutes, hundreds of responses - go back and count when doing line-by-line segments - all 3 psych needs
-Extensions of ego-self vs. highest-self thinking, with examples – opport. for autonomy emphasized
-Similarities between controlled motivation and autonomous motivation in SDT?
-Pathway to autonomous motivation - moving from ego to identified and then to integrated?
-Role of process data - many evaluations posted - go back and count when doing line-by-line segments - opport. for all 3 psych needs

12/1/23–12/2/23 Facebook Data Episode 3
-Morning Minutes, hundreds of responses - go back and count when doing line-by-line segments - all 3 psych needs
-Examples of thought work, extending instruction - autonomy and competence opport. emphasized
-Working through B-E-A cycles - go back and count screenshots when doing line-by-line segments - all 3 psych needs
-Screenshots of weekly plans - go back and count for line-by-line segments – opport. for all 3 psych needs, relatedness emphasized
-Screenshots of responses to journal prompts - go back and count for line-by-line segments - opport. for competence emphasized

12/2/23 Interview with Genevieve rescheduled to 12/7/23 (illness)

12/3/23–12/4/23 Facebook Data Episode 4
-Morning Minutes, hundreds of responses - go back and count when doing line-by-line segments - all 3 psych needs
-Extensions of instruction - processing emotions, emotional resilience – opport. for all 3 psych needs
-Examples of emotions being processed - insecurity occurs frequently – opport. for competence emphasized
-Why it matters at work and home to have the skills for processing emotions instead of buffering - opport. for autonomy emphasized
-Coaches posted reteachings of theories and emotional processing - physiological and psychological responses - what is going on in the brain – opport. for autonomy emphasized
-Practice with coaching self - opport. for competence emphasized

12/5/23 Interview with participant canceled because of family emergency. Participant withdrawal, and background information was deleted.

12/5/23–12/6/23 Facebook Data Episode 5
-Morning Minutes, hundreds of responses - go back and count when doing line-by-line segments - opport. for all 3 psych needs
-Feedback cycles - Coaches follow-up on implementation practices and emotional resilience - opport. for relatedness emphasized
-Screenshots of wins, sharing encouragement - videos - opport. for relatedness emphasized

-Resistance discussion - opport. for all 3 psych needs
-Members initiating discussions, asking questions, changing learning plans - opport. for autonomy
-Discussion of the difference between false affirmations and changing elements of belief cycle
-Belief cycle requires processing emotions, false affirmations = buffering, not getting to the truth - opport. for autonomy and competence

12/7/23 Interview with Genevieve
-Initially skeptical of program - thought woo-woo - initial participation?
-Virtual program - structure? Learning systems? - opport. for all 3 psych needs
-Library - structure? - opport. for all 3 psych needs
-Viewing replays very important to Genevieve - opport. for competence
-Revisited self-paced modules over and over - opport. for competence
-Learning plans - difference between highest self and ego self - opport. for autonomy
-Planner and role in goal achievement - opport. for all 3 psych needs
-One daily activity, planning in smaller steps - time and patience - opport. for autonomy and competence

12/7/23–12/8/23 Facebook Data Episode 6
-Morning Minutes, hundreds of responses - go back and count for line-by-line segments - opport. for all 3 psych needs
-Extensions of teaching on accepting failure - opport. for competence
-Purpose and acceptance of failure - role in learning - opport. for competence
-Expectations of highest selves - living 10% of time, failure expected, working up to 20% and higher - opport. for competence
-Practicing high-value cycles - the difference between high-value and low-value - opport. for all 3 psych needs
-Process of implementation: time, consistency, practice - opport. for all 3 psych needs

12/8/23 Category Refinement After Constant Comparison Cycles

Self-awareness	Connection	Guided Motivation
Choices	Belonging	Decisions
Skills	Direction	Change
Practice	Controlled Motivation	Outcomes
Participation	Attention	Capacity
Information	Planning	Weekly Activities
Virtual Setting	Journaling	Thought Work
Belief Cycle	Organization	Workbook
Trust	Willing to Try	Facilitative Language
Getting Unstuck	Coaching Self	Suspend Dislikes
Ego Self (false self)	Instruction	Highest Self (true self)
Students	Training	Effort
EBPs	Goal Setting	Internal Transformation
Skepticism	Purpose	Impact
Questioning	Dream Life	Waking up Brains
Seeing Possibilities	Willing to Listen	Course Correction

Old Patterns	New Patterns	Curiosity
Intentionality	Encouragement	Solving Problems
Committed Actions	Beliefs	Emotions
Failure	Evaluation	Initiative

12/9/23 Interview with Angela

-Internal changes - moving from false self to true self - opport. for autonomy and competence
-Goal setting is a product - emphasis - opport. for autonomy and competence
-Moving from stuck to unstuck - opport. for competence
-Rewiring brain to live as true self - opport. for competence
-Coaching self throughout the day, skills to make adjustments, way of life now - opport. for autonomy and competence
-Journaling and the workbook, learning to coach self better - opport. for competence

12/9/23–12/10/23 Facebook Data Episode 7

-Brainstorming examples - opport. for all 3 psych needs
-Journaling techniques - opport. for competence
-Modeling of brainstorming in the workbook - opport. for all 3 psych. needs
-Screenshots of evaluations - go back and count when doing line-by-line segments - opport. for all 3 psych needs
-Members asking questions - safety to participate? - opport. for relatedness and competence emphasized
-Living action part aloud - coaches asking questions and getting hundreds of responses - go back and count when doing line-by-line segments - opport. for autonomy and competence

12/10/23 Interview with Bernadette rescheduled to 12/14 (helping with holiday event)

12/14/23 Interview with Bernadette

-Transformation - from ego to highest self; move from bitter to joyful - opport. for autonomy and competence
-Instruction on the story we tell ourselves, getting to the truth was very important to Bernadette - opport. for autonomy and competence
-Understanding failure and its place - learning tool - opport. for competence
-Belief system - opport. for autonomy and competence
-Students and self-coaching - opport. for autonomy and competence
-Solutions and problem-solving in the community - opport. for all 3 psych needs, relatedness through problem-solving
-Options for instruction and choices - opport. for autonomy and competence

12/16/23 Interview with Paula

-Variety, settings - structure? - opport. for all 3 psych needs
-Options for the week, making learning plans - opport. for autonomy and competence
-Had to trust the process, skeptical, trusting experts - Initial participation and motivation?
-Internal change, external products, focus on internal change very important to Paula - opport. for all 3 psych needs, self-direction

-Emotional processing and resilience, the physical impact - opport. for autonomy and competence
-Holistic wellness - connections between physical, emotional, cognitive health important to Paula
-Ego living vs. true self living - opport. for all 3 psych needs
-Process data from evaluations, posted on FB, appreciative of responses - opport. for all 3 psych needs
-Members help each other, high participation, safe to share - opport. for relatedness emphasized

12/18/23 Interview with Agnes
-Highly active in FB group - interactions are important to Agnes - she has learned a lot via FB - opport. for all 3 psych needs
-Emotional experience of life - opport. for autonomy and competence
-Resilience and internal changes - highest-self living more, compared to ego self - did not help with resilience, highest-self does - opportunities for all 3 psych needs
-External circumstances don't have to change, change is internal - emphasized repeatedly - opport. for autonomy and competence
-Group learning and coaching - opport. for all 3 psych needs, relatedness through problem-solving
-Self-coaching and agency - opport. for autonomy and competence

12/21/23 Interview with Catherine rescheduled to 1/4/24 (holiday demands)

12/22/23 Interview with Joan rescheduled to 1/7/24 (illness)

12/28/23 Interview with Teresa
-Changes to belief system matter for life to get better - opport. for autonomy and competence
-External changes don't give life meaning - opport. for autonomy and competence
-Beliefs, emotions, actions - which are ego self and which highest self - opport. for autonomy and competence
-Goals are the result of belief system changes - emphasized - opport. for all 3 psych needs
-Program is a lot of work and practice, investment required - opport. for competence
-Helping each other get unstuck - community participation - opport. for relatedness

12/29/23 Interview with Clare
-Emotional resilience skills through processing emotions - opport. for competence
-Being present because of processing emotions - opport. for competence
-Impact of internal changes on others - can better help other people now - opport. for all 3 psych needs
-Skill development and ongoing practice - ego self and highest self - opport. for autonomy and competence
-Unity in program members and coaches, wanting to help each other get unstuck and work through concerns and problems - opport. for all 3 psych needs, relatedness emphasized

1/3/24 Final Category Refinement After Constant Comparison Cycles

Identification	EBPs	Participation

Highest-self Thinking	Consistency	Welcoming
Ego-self Thinking	Practice	Facilitative Language
Course Correction	Skill Development	Voicing Questions
Guided Motivation	Competence	Sharing Struggles
Controlled Motivation	Normalization	Getting Unstuck
Brainstorming	Mindset	Unity
Beliefs	Teaching Tools	Caring Members
Honesty	Accepting Failure	Problem-solving
Change	Evaluation	Encouragement
Choices	Internal Safety	Self-awareness
Curiosity	Intentionality	Questioning Beliefs
Observing Patterns	Coaching Myself	Making Decisions
Committed Action	New Patterns	Rewiring
Willing to Try	Willing to Listen	Trust
Suspend Initial Dislikes	Waking up Brains	Dream Life
Seeing Possibilities		

1/4/24 Interview with Catherine
-Belief system changes - managing thoughts - opport. for autonomy and competence
-Skeptical of program, gave coaches benefit of doubt, decided to try program - Initial participation and motivation?
-Goal attainment is secondary - occurring through highest-self living - opport. for all 3 psych needs
-Motivation to continue highest-self living and reaching more goals because of that – emphasized - opport. for all 3 psych needs
-Skill development and EBPs - opport. for competence
-Reframing beliefs - opport. for autonomy and competence
-Learning about self - opport. for autonomy and competence

1/7/24 Interview with Joan
-Living as highest self, decreasing time living as ego self - opport. for autonomy and competence
-Belief system - accepting she can make changes to beliefs and actions - emphasized - opport. for competence and autonomy
-Learning about herself and then coaching herself - emphasized - opport. for autonomy important, self-directed emphasized, all 3 psych needs
-Self-awareness? Opened door for learning for Joan - opport. for all 3 psych needs, autonomy emphasized
-Now pursuing degree because of belief system changes - opport. for competence and autonomy
-Journaling to learn where ego is controlling - opport. for autonomy and competence