ABSTRACT OF CAPSTONE

Hannah E. Digges Elliott

The Graduate School

Morehead State University

April 14, 2021

MOTIVATIONAL INTERVIEWING TRAINING: IMPROVING SUBJECT
MATTER EXPERT AND INSTRUCTIONAL DESIGNER RELATIONSHIPS
THROUGH CONSULTATION

_____

Abstract of Capstone

_____

A capstone submitted in partial fulfillment of the
Requirements for the degree of Doctor of Education in the
Ernst and Sara Lane Volgenau College of Education
At Morehead State University

By

Hannah E. Digges Elliott

Bowling Green, Kentucky

Committee Chair: Dr. Chris Miller, Professor

Morehead, Kentucky

April 14, 2021

ABSTRACT OF CAPSTONE


MOTIVATIONAL INTERVIEWING TRAINING: IMPROVING SUBJECT
MATTER EXPERT AND INSTRUCTIONAL DESIGNER RELATIONSHIPS
THROUGH CONSULTATION

Instructional designers (IDs) wear many hats, one of which is to be an

effective collaborator with subject matter experts (SMEs).  The SMEs and IDs share

the common goal of providing efficient and excellent instruction to students that

meets stated outcomes.  Despite this shared goal, consultation and the subsequent

working relationship between IDs and SMEs may still be fraught due to the power

dynamics, institution pressures, and individual insecurities that can impact the

communication and collaboration between the parties.  This capstone begins the

process of creating an online training course on the use of motivational interviewing

(MI), a method of counseling used primarily in the health sciences, by IDs in their

consultations as needed to overcome the resistance of SMEs toward changing aspects

of their instruction, thus improving the relationship and likelihood of creating

effective instruction.  The capstone project was created using the ADDIE conceptual

framework and the four-component instructional design (4C/ID) model to guide the

analysis and design of an online training in MI for IDs.  MI is a method commonly

used in mental health environments to help motivate clients to overcome their issues

by exploring their challenges in motivation, or ambivalence (Csillik, 2013; Miller,

1983). By applying MI in consultations between IDs and SMEs, the IDs' goal is to

help SMEs resolve their internal resistance to instructional change and identify their

motivators as they embark on creating effective instruction. MI may prove to be an

essential approach for IDs who want to build and maintain a rapport and trust with

SMEs, and ultimately create better instruction for students due to a more effective

working relationship.

KEYWORDS: motivational interviewing, instructional designer, subject matter

expert, ADDIE, training

_____

Candidate Signature

_____

Date

MOTIVATIONAL INTERVIEWING TRAINING: IMPROVING SUBJECT
MATTER EXPERT AND INSTRUCTIONAL DESIGNER RELATIONSHIPS
THROUGH CONSULTATION

By

Hannah E. Digges Elliott

Approved by

_____
Dr. Rebecca M. Reese
Committee Member    Date


_____
Dr. Wayne Miller
Committee Member    Date


_____
Dr. Chris Miller
Committee Chair        Date


_____
Dr. Timothy Simpson
Department Chair        Date

RULES FOR THE USE OF CAPSTONES

Unpublished capstones submitted for the Doctor's degree and deposited in the Morehead State University Library are as a rule open for inspection, but are to be used only with due regard to the rights of the authors. Bibliographical references may be noted, but quotations or summaries of parts may be published only with the permission of the author, and with the usual scholarly acknowledgements.

Extensive copying or publication of the capstone in whole or in part also requires the consent of the Dean of the Graduate School of Morehead State University.

A library that borrows this dissertation for use by its patrons is expected to secure the signature of each user.


Name                                                                     Date

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

CAPSTONE

Hannah E. Digges Elliott

The Graduate School

Morehead State University

April 14, 2021

MOTIVATIONAL INTERVIEWING TRAINING: IMPROVING SUBJECT
MATTER EXPERT AND INSTRUCTIONAL DESIGNER RELATIONSHIPS
THROUGH CONSULTATION

_____

Capstone

_____

A capstone submitted in partial fulfillment of the
Requirements for the degree of Doctor of Education in the
Ernst and Sara Lane Volgenau College of Education
At Morehead State University

By

Hannah E. Digges Elliott

Bowling Green, Kentucky

Committee Chair: Dr. Chris Miller, Professor

Morehead, Kentucky

April 14, 2021

DEDICATION

This work is dedicated to my husband, Nathan, who sacrificed, supported, and loved me throughout this journey. To my father, Breck Reliford, who consistently pushes me to be more, be better and sacrificed to provide my sisters and I with innumerable opportunities. To my daughter, Caroline, who is my everything. While she likely will not remember this time of her life, her endless enthusiasm and love helped me to move forward when I felt like standing still.

ACKNOWLEDGEMENTS

This would not have been possible without the love and support of my family, friends, and colleagues.

My family has been a source of invaluable support and love throughout this process.  Thank you, Nathan, for always believing in me and supporting me despite embarking on this journey less than six months after the birth of our sweet daughter.  Thank you to my daughter, Caroline, for your love and laughter.  Thank you to my father for always pushing me to move forward.  Thank you to my sisters, Rachel and Sarah, as well as my stepmother, Blair, for always listening to me process my thoughts and for your support.  Thank you to my Great Grand Aunt Evelyn for being an amazing role model and a shoulder upon which to cry and complain.  Thank you to my grandparents, Charlene, Buddy, and Mary, my Aunts, Libby and Vanessa, and my Uncle, Brad, for always believing in me.  A special thank you to my grandmother, Charlene, and my Uncle, Brad, who are no longer with us, but were two of my biggest fans and supporters.  A big thank you to my in-laws, Terry, Elaine, Phoebe, and Lark, for your love, understanding, and support.  My gratitude and love are unending.

My long-suffering friends must also be acknowledged.  Thank you to Nicole Hawk.  It has been wonderful to share this experience with you as you complete your own doctoral journey.  Our nearly yearly trips over this process have been a much-needed source of relaxation.  Thank you to Lauren Moseley for always listening, being understanding when I cancel our plans, and always being down to share a

charcuterie board and a bottle of wine.  Thank you to Whitney Brown as you have the

uncanny ability to lift everyone up around you.  I am so lucky to count you as a

friend.  To all my friends, you are each so special to me.  There is not enough space in

the world to acknowledge the impact that each of you have on my life.  Love you all.

I must also acknowledge and celebrate the support of my colleagues at

Western Kentucky University.  I am incredibly lucky to work with such an amazing,

creative, and brilliant group.  You all support me and challenge me to be the very best

version of my professional self.  Thank you to Dr. Marko Dumancic, who is a fount

of enthusiasm, support, and kindness.  Thank you to Juliana Ortolani who saw

something in me and helped me get started in this field.  You are extraordinarily

generous with your intellect, support, and friendship.  I am so grateful for and to you.

Thank you to Alicia Pennington who has been a source of strength in so many ways,

who was there for me in some of my most critical moments of need and is a constant

model of goodness and professionalism that I can only try to emulate.   Thank you to

Dr. Micah Logan who has provided so much support and encouragement at the end of

this process.  Thank you to former colleagues and supervisors, Anne Honaker, Dr.

Jerry Daday, Dr. Julie Uranis, and Dr. Wren Mills, all who have supported me and

had and continue to have a huge impact on my life, professionally and personally.

Truly everyone in the Center for Innovative Teaching & Learning is so special to me

and have been so supportive of this journey.  Further, across the institution at Western

Kentucky University, I have received so much love and support from faculty, staff,

and our students.  Thank you, all.

Thank you to my fellow AECT interns: Okan Aslan, Pauline Muljana, Rebeca Peacock, and Suthanit Wetcho. Your support has been incredible, and I have become a better writer, researcher, and person from working with each of you.

There have been several faculty who have had a great impact on my work and trajectory. Thank you to Dr. John Curry for helping to prepare me for this process and continuing to be a force of support. Thank you to Dr. Jim Berger who has always been endlessly supportive while I was in his master's program and to this day. Thank you to Dr. Xiaoxia "Silvie" Huang and Dr. Elena Novak for introducing me to the academic side of the field of instructional design.

A very special thank you to my chair, Dr. Chris Miller, who guided me through this process, provided pep talks, and supported not only my doctoral work, but my professional work as well. I have learned so much by working with you. I am the better for this experience.

Dr. Rebecca Reese and Dr. Wayne Miller, thank you both from the bottom of my heart for being on my committee and providing me with such wonderful feedback and support. I appreciate the extra effort that this takes and will always be incredibly grateful.

Thank you also to my BIG cohort. There are too many of us to list and thank individually but thank you to all for the ongoing support, check-ins, and friendship.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

## Executive Summary

## What is the Core of the Capstone?

The state of the working relationship between instructional designers (IDs) and subject matter experts (SMEs), who work in concert to create effective instruction to improve student learning, is affected by various internal and external factors that may include personality, confidence, motivation, administrative pressures, and institutional culture among others (Campbell et al., 2007). The power dynamic compounds this between SMEs and IDs where the ID fills a more advisory or consultant role in the design and development of instruction in higher education (Campbell et al., 2007). Despite the role of IDs as change agents in the design and development of instruction, IDs may only be as effective as the institution's culture and SMEs ultimately allow. IDs, in this capacity, advise and support SMEs in the design and development of instruction, but SMEs may or may not heed said advice. When an SME is reluctant to be open to or make changes in their instruction, this often hinders the instructional design process and may negatively affect the resulting instruction.

The core of this capstone is the analysis and design of an online training for IDs in the use of motivational interviewing (MI) techniques during consultations with SMEs to overcome ambivalence to change. The MI techniques are commonly used in the health sciences for the purpose of diminishing the reluctance to change. This reluctance to change is also often seen with the ID-SME relationship. As such, the capstone project may address a need in the field of instructional design for a strategy

that improves communication skills and the ID-SME relationship and provide for

enduring change.  The goal is to provide IDs, both experienced and novice, with a

tool to use when faced with SMEs who are resistant to change.  By diminishing some

of the SMEs' internal barriers to change through MI techniques, IDs may be more

successful in implementing suggestions for instructional change and improvement,

ultimately leading to enhanced instruction for the students.

The capstone began the process of creating an MI training for IDs by using the

ADDIE conceptual framework to guide the analysis and design phases of the

instructional design process.  A description of MI, discussion of the ID and SME

roles within higher education institutions, the ID-SME consultant-client relationship,

ID competencies, and an exploration of MI as an appropriate technique for use by IDs

as part of the conceptual description of the capstone follows.

**Description of Motivational Interviewing**

MI is a method commonly used in mental health environments to help

motivate clients to overcome their issues through an exploration of their challenges in

motivation, or ambivalence (Csillik, 2013; Miller, 1983).  Conceptually, MI is related

to self-determination theory by invoking the desire of the client to resolve internal

inconsistencies move toward growth (Markland et al., 2005).  It is through exploring

their own beliefs regarding their decisions and values, the clients can break away

from cycles of self-destructive tendencies.  By being more internally aligned with

their decision making to move forward with change, they will have increased

confidence in their decision and are more likely to be successful (Miller & Rollnick, 2002).

In addition to being conceptually linked to self-determination theory, MI owes a debt of gratitude to the work of Carl Rogers' person-centered therapeutic methods. Rogers' (1957) person-centered therapeutic methods are non-directional with the client being solely responsible for their decision making and the counselor facilitates the client's exploration of their goals, values, etc. by providing for an environment that includes empathy and understanding.  In this method, the client finds the motivation for change within due to the environment created by the counselor.  The counselor in this case does not push for change or push their own values but allows the client to direct.

While MI is related to Rogers' methods in that it is very client-centered and focused on self-actualization, the counselor using MI is more directive by encouraging the exploration, identification, and resolution of internal incongruencies to make progress toward change.  Using MI, the counselors do not tell the clients what the clients' motivation may be or should be, but instead help guide the clients so that the desire for change comes from within (Csillik, 2013).  By addressing issues related to intrinsic motivation, self-efficacy and confidence may be increased which hopefully leads to more effective change.  Much like Rogers' person-centered approach, in MI, not only is the client made to feel accepted and safe but also the ultimate responsibility for the behavior change lies with the client which increases autonomy (Csillik, 2013; Markland et al., 2005). In short, MI is more directive and

less explorative than a person-centered approach but has very similar goals (Markland et al., 2005; Mason, 2009).

MI has the goal of improving change readiness by enabling the resolution of ambivalence (Miller & Rollnick, 2002). In addition to being different from Rogers' person-centered approach, MI is also different than other traditional therapeutic methods that center around telling a client to implement a certain solution in that MI simply encourages the consideration of alternative perspectives. The discussion of change is centered on the client and not the counselor. The values and beliefs of the counselor should not be at issue. However, the counselor does encourage ongoing discussion based on the client's given problem (Markland et al., 2005).

MI is unique in that it acknowledges the knowledge and feelings of the clients instead of assuming that they simply do not know what to do. Many clients know what they need to do but may have other obstacles or thoughts that keep that from coming to fruition. If a counselor were to tell the client to take the necessary action, the client would likely feel the need to argue for the other side which pits client against counselor and decreases the odds of change (Mason, 2009). Whereas MI allows for the counselor to acknowledge the reasons for the status quo (not changing) and simply asks exploratory questions to give clients the opportunity to consider another perspective. Clients, in this case, tend to convince themselves and make their own decisions (Blom-Hoffman & Rose, 2007). When clients have more autonomy and are motivated to change through their own decision-making, they are more likely to have a long-term application of their change behaviors (Csillik, 2013). This is

important as professionals who might use MI, whether they are counselors or IDs, are looking for long-term changes in their clients.

MI was initially used in substance use treatment studies in 1980 and expanded into other psychological and medical contexts such as cardiovascular rehabilitation, diabetes management, and hypertension management, as seen in more than 200 associated clinical trials (Miller & Rose, 2009). The success of MI and its continued success in different contexts, such as therapeutic and teacher-student contexts, indicate that MI could be used in instructional design effectively. IDs who use MI techniques in consultations with SMEs may improve the SMEs' willingness to make meaningful changes. The use of MI strategies and techniques may further improve communication, rapport, and trust, ultimately resulting in a more collaborative relationship between IDs and SMEs.

**Instructional Designer and Subject Matter Expert Roles**

IDs are professionals involved in improving student learning and performance through technology (Definition and Terminology Committee of the Association for Educational Communications and Technology, 2008). Change agents that are focused on creating effective instruction, IDs partner with SMEs to create instruction informed by best practices, including educational theories, design models, and technology application, among others (Campbell et al., 2007; Keppell, 1999). The IDs role depends on the context of their employment, as they may work in the public or private industry and the organization in which they work. In the higher education setting, IDs often support faculty, students, and staff and are responsible for course

development in online, hybrid/blended, and classroom instructional modalities, professional development opportunities for SMEs, as well as technical support for the tools needed to develop and support the courses (Kumar & Ritzhaupt, 2017). However, the primary responsibility of IDs in higher education is to support SMEs in identifying, designing, and implementing teaching and learning experiences (Kumar & Ritzhaupt, 2017).

   With the primary role of IDs being a support role, it is crucial to increasing trust and rapport in the ID-SME relationship that may occur over the course of consultations and meetings. The power dynamics at play in the ID-SME relationship can make increasing that trust and rapport difficult at times thus necessitating the potential use of techniques such as MI. These power dynamics along with the IDs and SMEs' unique perspectives and skillsets that may impact the tenor of the collaborative relationship.

   The role of SMEs at higher education institutions may be in flux. Many SMEs hold multiple roles within their institution or department that may include course developer, curriculum coordinator, advisor, assessor, researcher, and teacher (McCowan, 2017). This does not include any additional teacher or consultant role they may engage in outside of their higher education institution. Despite having these multiple roles and the responsibilities therein, SMEs may be trained in their area of expertise, but not necessarily in instruction or design. Further, SMEs may be too busy to train in or create effective instruction or effective instruction with technology (van Leusen et al., 2016; Ziegenfuss & Lawler, 2008).

In contrast, IDs are professionals who promote learning through various technologies, strategies, and resources (Definition and Terminology Committee of the Association for Educational Communications and Technology, 2008). Like faculty, IDs often embody multiple roles including course developer, teacher, trainer, researcher, technical support provider, project manager, and other administrative roles (Ritzhaupt & Kumar, 2015). IDs are generally educated or trained in instructional design or related fields but are often dependent on SMEs to provide content and artifacts specific to a given subject (Morrison, 1988).

**Instructional Designer and Subject Matter Expert Relationships**

What it looks like when IDs and SMEs bring their unique roles, experiences, and knowledge to bear to design and develop instruction varies. The relationship between SME and ID should be collaborative, but often the power dynamic changes depending on context (Richardson et al., 2018). The Richardson et al. (2018) study showed that while an equal partnership is desired by the IDs, in reality, SMEs may simply see them as support. This means that the SME, in some cases, sees themselves as the more important, more valuable party, and the respect level may not be mutual. Further, some SMEs may see the ID as their partial replacement. This perspective of the unbundling of the faculty role may threaten the SME's perceived standing and security which may affect the SME's openness to changes initiated by the ID (McCowan, 2017).

Despite this general power differential in terms of role, IDs working with SMEs do so from different points of power depending on the context of the

relationship.  IDs can be leaders of a project providing concrete instructions and suggestions, while in other contexts IDs may be subservient such as ensuring that the meetings fit within the SMEs' expectations more readily than the IDs (Pan et al., 2003).  It is not clear as to whether an ID is consistently a leader or simply providing much needed support (Pan et al., 2003).  Even though this unclear power dynamic is fluid, IDs tend to be viewed as the responsible party for ensuring the collaborative nature of the working relationship with the SMEs (Richardson et al., 2018; Ritzhaupt & Kumar, 2015).  This perspective of being the responsible party is important as it contributes to the necessity of training for IDs in techniques like MI.

Within the relationship between designers and SMEs, tension can occur due to time constraints and the time it takes to collaborate with a designer in a meaningful way (Richardson et al., 2018).  In addition to tension due to time, another barrier to a collaborative relationship is the ambivalence of the SME to the working relationship or the changes suggested (Richardson et al., 2018).   This ambivalence may be caused by a lack of understanding about what an ID does, a fear of loss of control, a lack of time, a lack of administrative support, a mandate to work with IDs, and an overall lack of incentive (Campbell et al., 2007; Richardson et al., 2018).  Further, due to constant changes within their specific professions, particularly in the realm of higher education, SMEs may have skepticism before launching into a new working relationship, projects, or technology usage that further lead to uncertainty and distraction from their other activities and roles (Bower, 2001).

Many of these perspectives can be viewed in the context of SME's overall emphasis on self-actualization (Schneider & Zalesny, 1982).  SMEs in higher education enter their profession because they value autonomy, challenges, and the low risk involved (Schneider & Zalesny, 1982).  As a result, in the field of higher education, these values come to the forefront through faculty activities such as teaching, service, and research.  When a third-party such as an ID enters their space, their autonomy is threatened and their emphasis on low-risk activities may also be disrupted.  The goal is to use MI to decrease these threats and disruptions to ensure that faculty still can maintain their values and a collaborative relationship between ID and faculty can ensue.

**Instructional Designer Competencies**

Since the responsibility of the working relationship between IDs and SMEs lies with IDs, the interpersonal skills of IDs are crucial, particularly with newer SMEs or SMEs inexperienced with working with IDs (Pan et al., 2003).  This is borne out in the requirements and competencies for IDs in the field.  These include a solid theoretical background in instructional design and technology, project management, and communication skills (Arnold et al, 2018).  Interpersonal skills were listed as one of the most frequently stated abilities desired in job announcements, competency frameworks for designers, as well as in interviews with instructional design managers and IDs (Kang & Ritzhaupt, 2015, Klein & Kelly, 2018; Kumar & Ritzhaupt, 2017; Park & Luo, 2017; Richardson et al., 2018).  With the variety in ID-SME relationships and experiences and the responsibility for the relationship resting on the

shoulders of the IDs, it is important to provide IDs with a myriad of tools that they can use when managing their relationships with SMEs.

The importance of clear communication is due to the high level of interactivity in the role of the ID. IDs must work and often interact with various colleagues within their institution, including SMEs, fellow instructional design and support personnel, information technology professionals, administrators, and others to create effective learning experiences (Klein & Kelly, 2018). It is through the communication between SMEs and IDs about design and learning, meaningful change can occur in instruction (Campbell et al., 2007). This communication can challenge the SME's own ideas regarding teaching and learning. At times this may lead to conflicts and misunderstandings.

Conflicts or misunderstandings in communication can lead to frustration between the parties and, if they escalate, may have a negative impact on student learning (McDonald, 2008). Further, an SME may be ambivalent about working with a designer or making changes suggested by the ID due to time constraints, concerns about their role, the presumption that the ID may be judging their teaching, being told what to do, and other factors. An SME's lack of communication or miscommunication about the underlying issues that have led to the ambivalence to change or work with a designer, the overall instructional design project and relationship will suffer. For example, an SME may be hesitant to make a change to an assessment recommended by the ID that would be better aligned to the learning objectives and the instructional materials. When the ID and SME have a breakdown

in their working relationship due to the ID pushing for this change and the SME

continually resisting, the SME may feel that the ID is there to dictate changes and

may feel threatened.  These feelings can affect their trust and collaboration moving

forward.  As a result, the SME may be more hesitant to make future changes

suggested by the ID or will opt not to work with an ID in the future.  With the

learning development experience and experience with the ID, a SME may be

dissuaded from working with IDs or being open to change in the future.  So, a poor

experience may have a detrimental learning effect on students for a particular project,

as well as future students.

**Motivational Interviewing as an Instructional Design Consultation Strategy**

It is crucial for IDs to have strategies for communicating effectively with

SMEs to avoid decreases in the efficacy of the learning experiences created due to a

dysfunctional working relationship, loss of time and resources, and possible future

collaborations (Keppell, 1999).  As a result, IDs are encouraged to use tools to build

effective relationships with SMEs focusing on interpersonal skills, such as active

listening, paraphrasing, explaining concepts and procedures, questioning, and

summarizing, as noted in the van Leusen et al. (2016) study.  These suggestions,

while helpful to overall communication skills, do not address the root of SMEs'

ambivalence to change.

One possible strategy lies in the realm of the health sciences called

Motivational Interviewing (MI).  MI is commonly used in mental health contexts to

help motivate clients to overcome their issues by exploring their roadblocks in

motivation, or ambivalence (Csillik, 2013; Miller, 1983). Since the 1980s, MI has

been an effective method for helping clients make positive changes in their lives

(Csillik, 2013; Miller, 1983). This method of interaction focuses on listening and

acknowledging the clients' thoughts and feelings and encouraging them to explore

their reluctance to change as well as what motivates them through the act of

examining and discussing change. The goal of MI is to create an environment where

the clients, as autonomous individuals, make their own decision to make changes.

This process helps increase confidence and self-efficacy in clients, allowing for more

effective change due to the breaking down of self-destructive tendencies (Miller &

Rollnick, 2002).

The question as to whether MI applies to the ID-SME relationship in higher

education is a fair one. However, Miller & Rose (2009, p. 534) state that MI is

"…related to generalizable processes of human behavior, and not limited to target

problems." As such, it should be transferrable to other relationships, including the

ID-SME relationship, due to processes of human behavior such as ambivalence to

change and issues of motivation contributing to collaboration issues between IDs and

SMEs. The conceptual description of the capstone will explore the justification for

using MI in the ID-SME context in more depth.

**Conceptual Description of the Capstone**

The rationale behind this capstone lies in the established use of MI in the

health sciences, where professionals encourage change in clients who are ambivalent

about changing (Miller & Rose, 2009). MI could prove to be an effective strategy for

IDs to building and maintaining trust and rapport with SMEs.  Due to the roles of and

power dynamics between IDs and SMEs, MI would be an appropriate strategy.

As a result of their roles within their respective institutions, IDs in higher

education are particularly well-situated to use this technique with SMEs.  The role of

IDs in higher education institutions is to improve teaching and learning by creating

and aligning learning objectives, activities, and assessments in addition to

professional development (Kumar & Ritzhaupt, 2017).  Through the ID's ability to

help SMEs make informed decisions about instruction, IDs operate as change agents

within their institutions (Yusop & Correia, 2012).  The roles of IDs in this capacity

are in-line with Rogers' (1995) Diffusion of Innovations framework where change

agent roles are stated as:

1. To develop a need for change.

2. To establish an information-exchange relationship.

3. To diagnose problems.

4. To create an intent in the client to change.

5. To translate an intent to action.

6. To stabilize adoption and prevent discontinuance.

7. To achieve a terminal relationship. (pp. 336-337)

Many of these roles align with the goals of MI as well.  Both IDs and health

professionals are change agents focusing on helping clients identify ambivalence to

change and encouraging and guiding clients to identify their intrinsic motivation to

move forward to enact change. IDs, like health professionals, are taking a consultant role.

When IDs work with SMEs, they are operating as consultants in varying capacities and should be flexible in their approach with clients (Tessmer, 1988). Kebaetse & Sims (2016) note that there are three phases of the consultation process: exploration, modeling, and reflection (pp. 37-38). Depending on the relationship between the ID and SME and the context of the relationship, the ID may find it necessary to dip in and out of different phases of the consultation process. Like so many education and change processes, this is iterative and flexible. The parameters of the working relationship between ID and SME are often not settled during the initial consultation, but are instead, negotiated throughout the project timeline and over the course of multiple consultations or meetings. IDs must adjust their expectations and approaches based on the SME, the subject matter, and other factors such as availability of resources (Tessmer, 1988).

The critical difference between IDs and health professionals lies in the innovations or changes that the IDs and health professionals are helping their respective clients consider adopting. Again, there is no indication that MI is only applicable to innovations such as substance use or other health concern behavior change. The literature describes multiple instances of MI application outside of its traditional context (Blom-Hoffman & Rose, 2007; Hebard & Watson, 2017; Herd, 2015; Kittles & Atkinson, 2009; Navidian et al., 2015; Reinke et al., 2008; Wells & Jones, 2018). Given the expertise of IDs and their role as agents of change within

their higher education institutions, an improved ID-SME relationship through

communication centered around change may lead to improved teaching and learning.

This improved relationship, in turn, may have a positive impact on student learning

(Campbell et al., 2007).

Currently, a lack of literature exists regarding MI and instructional design

consultation.  Only van Leusen's (2013) dissertation discussed the usage of MI and

Medical Interview strategies and training within the counseling and medical contexts

to inform the teaching of interpersonal skills to ID professionals.  He argued that the

methods used to teach MI and Medical Interview strategies in trainings such as

didactic instruction, audio/video presentations, role-playing, etc. could also be used in

teaching interpersonal skills to IDs.  van Leusen (2013) further noted that the

validated instruments used to assess these skills in the medical and counseling fields

could potentially be used to assess the interpersonal skills of IDs.  Despite the lack of

literature regarding the use of MI in instructional design consultations, MI has been

used successfully in educational contexts such as where school psychologists are

working with students, faculty are working with students, and administrators are

working with faculty (Blom-Hoffman & Rose, 2007; Hebard & Watson, 2017; Kittles

& Atkinson, 2009; Wells & Jones, 2018).  Despite this lack of application to ID-SME

contexts in higher education, Miller and Rose (2009, p. 534) state that MI is

"…related to generalizable processes of human behavior, and not limited to target

problems."  The problems associated with the relationship between IDs and faculty

include issues of power dynamics, communication, self-actualization, and autonomy

are all human behavior issues. As a result, MI could be a powerful strategy in the ID toolbox.

**Description of Capstone Deliverables**

This capstone used the ADDIE (Analyze, Design, Develop, Implement, and Evaluation) conceptual framework to guide the beginning process of creating a training for IDs in MI in higher education. In this case, the planning documents were created for an instructional design unit at a mid-sized regional university in a midwestern state. The capstone focused primarily on the Analyze and Design phases of the ADDIE conceptual framework, as seen in Figure 1, to create a foundation for future grant or organizational funding for the development, implementation, and subsequent evaluation of the training.

**Figure 1**

*ADDIE Conceptual Framework*
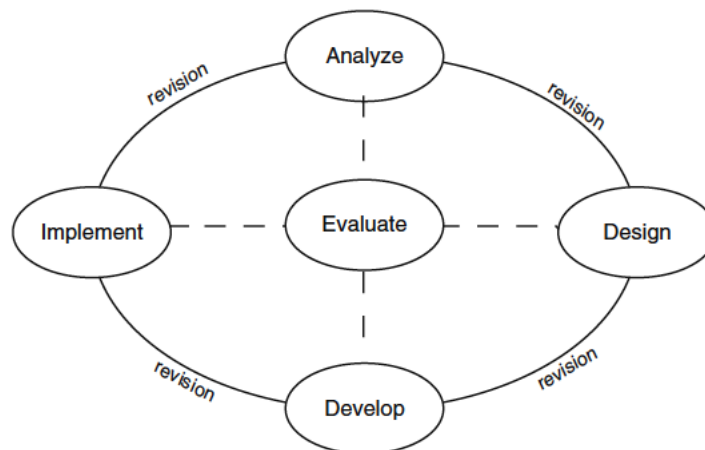


*Note.* From "Fig. 1 The ADDIE concept" by RM Branch, 2009, *Instructional Design: The ADDIE Approach*, p. 2. Copyright 2009 by Springer Science + Business Media.

The capstone (see Appendix A) included both an Analysis Summary and a Design

Brief as described by Branch (2009).  The Analysis Summary of the capstone, as

outlined by Branch (2009) in the ADDIE conceptual framework, included the

following components: performance/needs assessment, purpose statement, list of

instructional goals, learner analysis, required resources, potential delivery systems,

and a project management plan.  The Analysis Summary is a high-level reflection of

the processes outlined by Branch (2009).  While the Analysis Summary is included as

part of the capstone project (see Appendix A), the underlying analysis and

documentation outlined by Branch (2009) were compiled and provided in Appendix

B.  The Design Brief was informed by the following information and analyses: a task

inventory, a list of performance objectives, a set of test items, a testing strategy, and a

cost-benefit calculation (Branch, 2009, p. 81).  The Design Brief is included as part of

the capstone project (see Appendix A), and the underlying analysis and

documentation were compiled and provided in Appendix C.  An outline of the

deliverables of this process and their contributing documentation is in Table 1.  Both

the Analysis Summary and the Design Brief, coupled with the contributing analyses

and processes, will prepare me or others in the future to propose and hopefully

procure funding and resources for the completion of the online training for IDs on the

use of MI in consultation with SMEs.  Each component of the Analysis Summary

and the Design Brief will be explored in turn.

**Table 1**

*Instructional Design Procedures and Proposed Documentation Organized by Analyze and Design Phases of ADDIE Conceptual Framework*

| Analyze | | Design | |
|---|---|---|---|
| Identify the probable causes for a performance gap. | | Verify the desired performances and the appropriate testing methods. | |
| Procedures | Appendix B Documentation | Procedures | Appendix C Documentation |
| 1. Validate the performance gap | • **Training Needs Assessment plan, instrument, and results** (Rossett, 1987) and **purpose statement** (Branch, 2009) | 7. Conduct a task inventory | • **Learning task identification and classification analysis** (van Merriënboer & Kirschner, 2018) |
| 2. Determine instructional goals | • **List of instructional goals** (Anderson et al., 2001; Branch, 2009) | 8. Compose performance objectives | • **Task hierarchy, list of performance objectives, and sequence/learning trajectories of learning tasks analysis** (van Merriënboer & Kirschner, 2018) |
| 3. Confirm the intended audience | • **Learner analysis summary** (Branch, 2009) | 9. Generate testing strategies | • **Assessment strategy including assessment instruments and rubrics** (van Merriënboer & Kirschner, 2018) |
| 4. Identify required resources | • **Resource audit and summary** (Branch, 2009) | 10. Calculate return on investment | • **ROI analysis** (Branch, 2009) |
| 5. Determine potential delivery | • **Estimated cost sheet** (Branch, 2009) | | |

| Analyze | Design |
|---|---|
| system (including cost estimate) | |
| 6. Compose a project management plan | • **Project management plan** (Branch, 2009) |
| **Capstone Artifact: Analysis Summary** (Branch, 2009) | **Capstone Artifact: Design Brief** (Branch, 2009) |

*Note.* This table shows the documents and artifacts created (in Bold) and the source of the strategies, analyses, and processes to develop them aligned to the Branch (2009) procedures.  Adapted from "Fig. 2 Common instructional design procedures organized by ADDIE" by RM Branch, 2009, *Instructional Design: The ADDIE Approach*, p. 2.  Copyright 2009 by Springer Science + Business Media.

*Analysis Summary*

First, the Analysis Summary (see Appendix A) includes the following

components: performance assessment, purpose statement, list of instructional goals,

learner analysis, required resources, potential delivery systems, and a project

management plan (Branch, 2009, p. 25).  The purpose of the Analysis Summary, the

outcome of the Analyze phase within the ADDIE conceptual framework, is to

identify issues associated with performance and their likely cause, whether instruction

will alleviate those issues, and to what extent it would be successful (Branch, 2009).

It is an informational document to be provided to key stakeholders to help inform

their decision on whether to pursue the design project and takes into consideration

issues such as need, cost, and planning. A description of each component that

contributes to the Analysis Summary follows.   A performance assessment was

conducted to confirm the existence of a performance gap (Branch, 2009).  This

validation of performance issues or a gap indicates the need for the potential

instructional intervention.  A purpose-driven training needs assessment (TNA), as

described by Rossett (1987), is ideal for validating the performance gap as

breakdowns in the collaborative relationship between IDs and SMEs as a training

issue.  Specifically, a purpose-based TNA is a front-end analysis that provides for the

"…study of a problem or innovation, incorporating data and opinions from varied

sources, in order to make effective decisions or recommendations…" (Rossett, 1987,

p. 1).  Using the Purpose-Driven TNA approach, the following steps were followed:

assess the context, determine purposes, select techniques and tools, develop a TNA

plan, develop stage planners, and communicate results (Rossett, 1987, p. 225).  The

steps of each of the analyses, including the guiding questions and responses, survey

and interview protocols and results, stage planners, and more, are included in

Appendix B.  However, the overall results of the TNA are included in the Analysis

Summary (see Appendix A) as a high-level summary.

 A purpose statement is described by Branch (2009) as a 25 word or fewer

written statement that connects the training to the organizational needs and is the

outcome of the performance assessment.  It is followed by a list of instructional goals

that describe what participants will do because of the proposed training (Branch,

2009).  Both elements are included in the Analysis Summary (see Appendix A) as

well as in the documentation and analyses found in Appendix B.  The inclusion of the

purpose statement and the instructional goals show the direction of the training,

which may be important to those potentially approving this proposed training and

necessary components that inform other processes included in the Design phase.

 A learner analysis follows, which takes a closer look at the intended audience

for the training.  Learner analysis information includes group identifications, general

characteristics, number of students, location of students, experience levels, student

attitudes, and skills required for learning (Branch, 2009, p. 37-38).  The learner

analysis helps frame recommendations and choices made regarding the format,

instructional materials, and overall design moving forward.  The learner analysis

results are included in the Analysis Summary (see Appendix A), while the actual

analysis is found in Appendix B.

Next, the identification of required resources is included.  The resources to be considered include content, technology, instructional facilities, and human resources (Branch, 2009, p. 43).  Outlining these necessary resources communicates to decision-making stakeholders exactly what is required to implement the training.  Knowledge of necessary resources necessary beyond simple cost analyses is crucial, as it gives a multi-dimensional picture of training requirements.  The identification of required resources analysis results is included in the Analysis Summary (see Appendix A), while the actual analysis is found in Appendix B.

A major component of the instructional analysis is the consideration of potential delivery systems and their accompanying costs.  It includes identifying and evaluating various delivery systems that result in a recommendation to meet best the purpose and objectives (Branch, 2009).  The cost estimates were calculated for three possible delivery methods: webinar training, asynchronous training, and classroom training.  While Branch (2009) offered a means to calculate costs for various delivery methods, no distinctions were made for different types of computer-based training, like webinars and asynchronous training.  The distinctions between the different types of computer-based training are important as they can take many forms resulting in a wide range of costs.  As a result, the outcomes of the Defelice (2021) study conducted in 2020, which provided average lengths of modules and minimum, maximum, and average time to design and develop various types of learning, were used to make more efficient time estimates and resulting in distinct cost estimations.  The Branch (2009) formula was then used to calculate the estimated costs for each phase.  The

overall estimated costs were provided for all three possible delivery methods. Within

each possible delivery method, calculations were also provided to create the training

for only the institution or create a training to be scaled beyond the institution to

benefit IDs statewide. The resulting cost estimates are provided in the Analysis

Summary (see Appendix A), while the fundamental assumptions, formulas, and

calculations are found in Appendix B.

A project management plan is the final part of the Analysis phase (Branch,

2009). This plan includes a list of potential team members by position and role, an

account of constraints, a Gantt chart to indicate the order of operations, the roles

assigned, and an expected delivery time. The project management plan is an

organizational tool meant to communicate requirements, goals, and concerns

associated with completing the project. The analysis related to creating the project

management plan is included in Appendix B, while a summary of the various

components is included in the Analysis Summary (see Appendix A). A final report,

which generally consists of much of this same information but also contains

conclusions and lessons learned, is not provided as part of the project management

plan as the implementation will occur outside the scope of this capstone project.

Instead, a Next Steps section is provided as part of the Analysis Summary (see

Appendix A) to help inform the direction of the project moving forward.

***Design Brief***

Second, the Design Brief (see Appendix A) represents the ADDIE Design

phase and is informed by the following components: task inventory, a list of

performance objectives, a testing strategy, and a cost-benefit calculation (Branch,

2009, p. 81). The Design phase aims to close the gap between current performance

and desired performance (Branch, 2009). It shows the proposed path to desired

performance and provides a blueprint for the development of the project. For the

Design phase of the ADDIE conceptual framework in this capstone, a combination of

analyses and processes from both Branch (2009) and van Merriënboer & Kirschner

(2018) were used. The learning tasks component of the four-component instructional

design model (4C/ID) was used as a guide for the design of complex learning such as

motivational interviewing skills (van Merriënboer et al., 2002, p. 39). As a result, the

Design Brief includes a task inventory, performance objectives, and testing strategies

as suggested by Branch, but is informed by the learning tasks design component of

the 4C/ID model as seen in Figure 2, which focuses on designing learning tasks,

designing performance assessments, and sequencing learning tasks.

**Figure 2**

*Four-Component Instructional Design (4C/ID) Model*
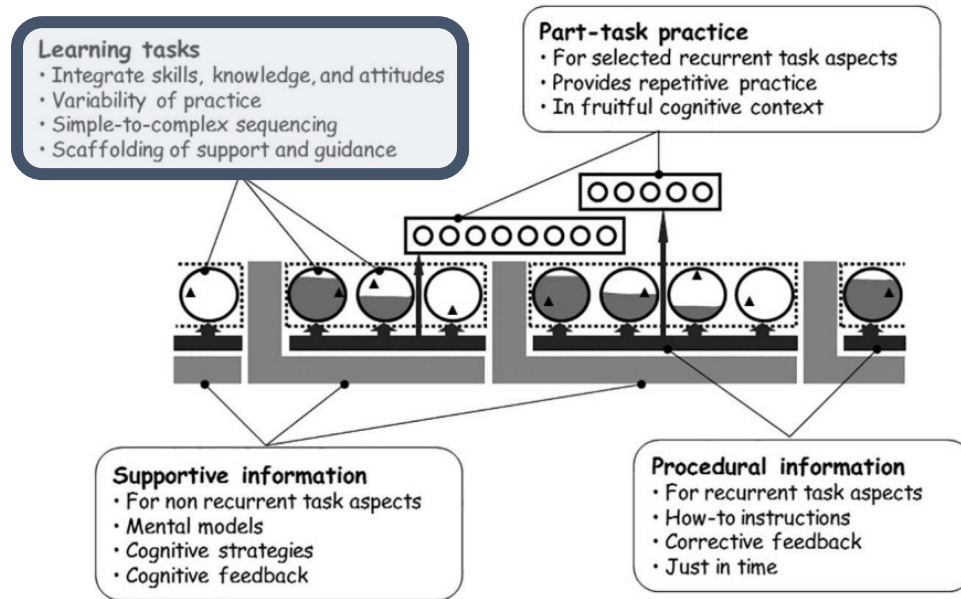


*Note.* Emphasis added with shading and a bounding box to Learning tasks

component.  From "Figure 2.1 A schematic training blueprint for complex learning

and the main features of each of the four components" by J. G. G. van Merriënboer

and P. A. Kirschner, 2018, *Ten Steps to Complex Learning*, p. 13.  Copyright 2018 by

Routledge.

The Design Brief also includes a Return-on-Investment (ROI) analysis using

the Branch (2009) formula and calculations.  Documentation resulting from the

Design phase are found in Appendix C, while a high-level view of that documentation

and a blueprint of the training is in the Design Brief (see Appendix A).

The components that underlie the Design Brief and a brief description of each follows. The purpose of a task inventory was to identify the tasks necessary to meet instructional goals (Branch, 2009). A task inventory was conducted following the 4C/ID model. The task inventory was done by completing a skill hierarchy that broke down the skills needed to accomplish the goals. Then those skills were classified as either recurrent or non-recurrent. This classification of skills is necessary for further elaboration on the Design phase and relates to additional components of the 4C/ID model not addressed by this capstone (Part-Task Practice and Supportive Information). Based on the skills hierarchy, the learning tasks were identified and subsequently classified. The learning tasks stated what the learners are going to do, along with details of generalized support. Once the learning tasks were created, they were then assigned to a specific task class. A task class helps organize the learning classes and inform the sequencing of the learning tasks (van Merriënboer & Kirschner, 2018). The learning tasks and task classes are provided within the Design Brief (see Appendix A), while the underlying analysis that walks through the skill hierarchy, skill classification, and learning task identification are found in Appendix C.

The task inventory step was followed by the statement of the performance objectives that set the tone for instruction. All activities and assessments should align directly with these performance objectives. A task hierarchy was generated that influenced the creation of the performance objectives. In addition, sequencing of the tasks and objectives was completed. The last component of the task inventory would

be the learner trajectory analysis which explored the pathways that learners may progress through during the training.  The list of performance objectives and the sequencing of learning tasks are included in the Design Brief (see Appendix A), while the underlying analyses, including the task hierarchy, sequence, and overall trajectory analysis, may be found in Appendix C.

The next part of the Design phase, according to Branch (2009), is to identify the testing strategies.  Toward that end, assessment instrument descriptions, rubrics, and individual assessment learning trajectory analyses were created as described by van Merriënboer and Kirschner (2018).  Test items and an overall testing strategy were outlined and meant to indicate student performance of the performance objectives.  The alignment of the testing strategy with the learning tasks, task classes, and objectives illustrated in the Design Brief showed the path from the actual performance to the desired performance.  All aspects of the identifying testing strategies step were organized in alignment with learning tasks and task classes within the Design Brief (see Appendix A), while the individual analyses are found in Appendix C.

The final part of the Design phase includes a cost-benefit calculation that builds on the cost estimation described in the Analysis phase described by Branch (2009).  In addition to revising the estimated costs, there is a calculation of potential benefits to estimate the return on investment (ROI).  It is a means of creating a more defined cost estimate based on completing two phases, plus a calculation of the perceived potential benefit.  The revised estimated costs and ROI percentage are

provided in the Design Brief (see Appendix A), whereas the assumptions and

calculations that led to those conclusions are found in Appendix C.  The assumptions

used are regarding the higher education institution for which the project is being

designed and potentially developed.

**Description of Legal and Ethical Issues**

Few legal and ethical issues guide IDs in their consultations with SMEs.

However, this may be due to the contexts in which IDs operate being myriad and

broad and different values held by institutions.  A discussion of both the potential

legal and ethical issues follows.

Some of the legal issues that guide IDs relate to accessibility, copyright, and

student privacy (Lin, 2007).  These issues are important in consultation because they

affect how materials are both designed and developed.  This capstone seeks to ensure

that MI techniques and the design and development of instruction take these issues

into consideration.  Materials meant to inform the subject matter of the capstone did

not include copyrighted material that is not appropriately licensed, the design and

development of the instruction will be accessible, and the method of planned delivery

will ensure student privacy.  Each of these issues will be addressed within the

capstone to ensure compliance with federal regulations for course design and related

activities particularly in higher education at a public institution.

Beyond the legal issues, ethical issues must also be considered.  IDs should be

guided by the professional standards and competencies as well as the organizations

that inform their practice, such as the Association for Educational Communications

and Technologies (AECT).  AECT has created a Code of Professional Ethics for those within the field of educational technology that has expanded over decades (Yeaman, Eastmond, & Napper, 2008).  AECT's Code of Professional Ethics is not specific to instructional design professionals, but all members of AECT.  Potentially at issue within this capstone is Section 3.4 of the Code of Professional Ethics which states that members should strive for the following "…to improve professional knowledge through research and implementation of best learning and teaching practices and shall make available to patrons and colleagues the benefit of those professional attainments through design practices, presentations, and publications" (Association for Educational Communications and Technology, 2018). This standard has the most specific language for IDs, with the phrase "design practices" under which consultations may fall.  While not at this point yet, this capstone supports the use of MI techniques in SME consultations as a best practice through both research and eventual implementation, thus falling in line with AECT's Code of Professional Ethics.

**Definition of Terms**

*4C/ID-Model* – Four-component instructional design model including learning tasks, supportive information, just-in-time information, and part-task practice that allows for complex learning (van Merriënboer et al., 2002, p. 39).

*Analyze, Design, Develop, Implement, and Evaluate (ADDIE)* – ADDIE is a conceptual framework that refers to a generic instructional design process and

includes analysis, design, development, implementation, and evaluation (Molenda,

2003, p. 35).

*Consultation* – An ongoing process where the ID and SME collaborates to create,

edit, and improve learning experiences (Kebaetse & Sims, 2016).

*Collaboration* – A partnership where collaborators use each other's talents to meet a

shared goal (Richardson et al., 2018).

*Instructional Designer (ID)* - IDs are professionals who participate in

"the study and ethical practice of facilitating learning and improving performance by

creating, using, and managing appropriate technological processes and resources."

 (Definition and Terminology Committee of the Association for Educational

Communications and Technology, 2008).  While this definition is specific to

educational technology, it historically has been inclusive of instruction design and

technology (Reiser, 2018).

*Motivational Interviewing (MI)* – "Client-centered, directive method for enhancing

intrinsic motivation to change by exploring and resolving ambivalence" (Miller &

Rollnick, 2002, p. 25).

*Purpose-Based Training Needs Assessment (TNA)* – A collection of analysis activities

used to identify or validate the desire for training including context assessment,

purpose determination, technique/tool selection, needs assessment planning, and

result communication (Rossett, 1987).

*Subject Matter Expert* (*SME*) – An SME is an authority on a certain area of

knowledge (Keppell, 1999).

*Purpose-Based Training Needs Assessment (TNA)* – A collection of analysis activities used to identify or validate the desire for training including context assessment, purpose determination, technique/tool selection, needs assessment planning, and result communication (Rossett, 1987).

## Who is the Capstone Meant to Impact?

The capstone is meant to immediately impact IDs and SMEs with whom they collaborate. Online training in MI will provide IDs with an additional tool to use in consultations with ambivalent SMEs. IDs may at times feel frustrated with the lack of collaboration or progress toward positive change (Bawa & Watson, 2017). By relieving some of the stress through motivating change, the hope is that some frustration will be relieved for both parties and a concerted effort can be made to move forward. This will serve to make the collaborative relationship between SMEs and IDs much more effective and collegial.

The capstone is also meant to impact SMEs individually. A positive impact on course quality because of a collaborative SME-ID relationship may positively impact SME experience with teaching and further instructional development. The Richardson et al. (2019) study explained how different SMEs have varying expectations of IDs and their resulting relationships with them, depending on the context and the individuals involved. As a result, there is always a risk that the ID does not understand the expectations for the relationship or understand how to work with different SMEs. This lack of understanding of roles and expectations in the relationship may cause tension, lack of communication, and a variety of other issues.

Further, there is a current trend of unbundling of the faculty roles where IDs may be

viewed as a threat to the importance of the faculty role within higher education

(Richardson et al., 2019).  In some cases, when an ID suggests changes in course

design, technology usage, or other aspects of course design and development, an

SME may see the ID, not as a partner or collaborator, but as a usurper who is

challenging their expertise and authority.  By employing MI strategies, the goal is to

see an improvement in communication, a decrease in tension, and to view the ID as a

collaborative partner.

Most significant, however, may be the ultimate impact that this capstone may

have on the students who experience the instruction born of the relationship between

SMEs and IDs.  IDs, in the Kumar & Ritzhaupt (2017) study, stated that while they

do help faculty with their instructional goals, the IDs' goal is to serve the students and

their learning.  When the working relationship between SMEs and IDs is successful,

the instruction is more likely to reflect that.  Despite the potential implications, it

should be noted that none of these are direct impacts from this capstone.  The

capstone started the process toward the creation of MI training for IDs that may result

in these implications.  Despite the indirect implications of the MI training, potential

funding departments, institutions, and organizations who may review the Analysis

Summary and Design Brief should be made aware of these as they are important

considerations when making funding decisions.

**How was the Capstone Project Implemented?**

The capstone project itself includes the Analysis Summary and Design Brief artifacts for the proposed creation of a training in MI for IDs.  This capstone project was an idea from a 2019 instructional design project to create a mental health platform for regional and distance learners at a higher education institution in a midwestern state.  I was introduced to the idea of MI and its usefulness in overcoming ambivalence to change by a SME in Social Work.  I was fascinated by the concept and after much research began to question why this was not formally taught to IDs who conduct consultations with SMEs.  With over a decade of experience as an instructional design professional, I have worked with many SMEs who were unwilling to make changes no matter what the literature, experts, and/or my experience bore.   Sometimes those refusals and subsequent persuasion techniques to convince them to make such changes do not affect the relationship between ID and SME, but many times they do have a negative effect.  It is truly dependent on each situation.  While I recognized that MI would not be a panacea, I did see many of the components of the client-counselor motivational interviewing interaction applying to the ID-SME context.   The research that resulted only strengthened my conviction that this is an appropriate technique to use in the context of the ID-SME relationship. It has yet to be studied.

I spoke about the project with the leadership of an instructional design unit in higher education who found it interesting and believed it could be useful for their unit and beyond.  This leader and I have had numerous conversations about the skills that

designers truly need. We both have felt in the past that, with new hires, we can bring

them up to speed easily with technology, processes, and theories, but their ability to

work with faculty is much more difficult to teach and train. This instructional design

unit did not and does not have trainings, materials, or processes to bring employees

up to speed on working with SMEs. While the use of MI in ID-SME consultations

would not solve this problem of overall training on working with SMEs in higher

education, it would provide a tool to those less experienced in working with SMEs.

Further, MI would provide those IDs who are more experienced with something

different to try when typical tactics (including rapid prototyping, demonstration,

timely repeated suggestions, and/or deference) fail to work.

My initial intention was to create the entire training and study the

effectiveness. From late 2019 through mid-2020, my doctoral committee helped me

refine my idea into something more realistic. The entire process of analysis, design,

development, implementation, and evaluation was not a reasonable scope of work for

the capstone. At the time of my proposal, I was still inclined to create the entire

training but was correctly encouraged by my committee to take a step back and focus

on specific phases of an instructional design framework. After my proposal, it was

determined that the best place to start with this project was the beginning, focusing on

the Analysis and Design phases of the ADDIE conceptual framework as outlined by

Branch (2009). This makes sense as it not only created a more manageable scope of

work, but the capstone itself, containing the Analysis Summary and Design Brief,

may be useful in providing potential funding organizations the opportunity to

evaluate the project before committing funds to create, implement, and evaluate the training.

In September 2020, I realized that while Branch (2009) provides a great set of processes and documentation to use alongside the ADDIE conceptual framework, a more complex skillset like MI would require the use of more complex processes and models. Further, in terms of cost calculations, Branch (2009) did not consider differences in computer-based training which is important for the creation of more accurate cost estimates.

To account for the varied needs, given the content and the context of the training, research was conducted to ascertain more appropriate methods. As a result, while the Branch (2009) processes were used to create the artifacts of the Analysis Summary and Design Brief, the analyses and data relied upon diverged from those suggested. For example, instead of the performance gap analysis provided by Branch (2009), I used the TNA outlined by Rossett (1987). Instead of creating a task analysis, performance objectives, and assessment strategy analysis as outlined by Branch (2009), the learning tasks component and analyses in the 4C/ID model as described by van Merriënboer and Kirschner (2018) were used.

Starting in October 2020 through February 2021, I continued to work through the processes and analyses to generate the artifacts of this capstone. The capstone itself included the Analysis Summary and Design Brief resulting from the Analysis and Design Phases of the ADDIE conceptual framework as described by Branch (2009) using a myriad of strategies and processes. The leadership of the instructional

design unit within a medium-sized higher education institution in a midwestern state

previously mentioned was used as the audience for the documentation and analyses.

This instructional design unit collaborates with SMEs on design projects of differing

complexity.  The leadership of the instructional design unit is interested in the design,

development, and implementation of MI training both within the institution and

beyond.  Analyses such as the TNA, learner characteristics, resource identification,

estimated costs, and ROI analysis were based on information provided by the

instructional design unit through survey and interview or other de-identified

secondary research data (salaries, SMEs worked with per year, tuition).  Since the

leadership of the instructional design unit was interested in sharing the training with

others throughout their state, estimated cost calculations and learner characteristics

included information from IDs across the state gathered via survey or other de-

identified secondary research data (salaries).

     The leadership within the instructional design unit viewed the artifacts and

provided some preliminary feedback indicating excitement to press forward with the

project.  Beyond this capstone, the leadership is considering funding the project or

searching for funding for it in the future.  The unit has an ongoing interest in

generating its own research and grant work, and a project such as this would provide

the opportunity to pursue it further.  The unit leadership is aware of the usefulness of

this project beyond the training of the designers and support staff and that it could

generate some interesting research as well as the opportunity to provide training to

other institutions.

## Why were this Capstone and Related Strategies Selected?

The capstone and related instructional strategies were selected to help alleviate a problem facing many IDs who work with SMEs in higher education, that of SME ambivalence to change. While IDs may not be able to resolve ambivalence in every case, a tool like MI would allow for the potential to overcome ambivalence and make enduring changes thus making the ID-SME working relationship exceptionally valuable and productive in improving student learning experience.

The related strategies selected to create the capstone include the use of the ADDIE conceptual framework to guide the analysis and design of the MI training for IDs, the replacement of the Branch (2009) guidance on performing a performance assessment with the Rossett (1987) guidance on performing a purpose-driven training needs assessment, the delivery system options and changes in the cost estimation assumptions used, the use of components the four-component instructional design model in the Design phase, and the adaptation of MI content for the ID context. The various strategies adopted are discussed in turn and illuminate the decision-making process underlying the capstone project.

### ADDIE Conceptual Framework

The related instructional strategies for the analysis and design of the online training of MI for IDs were guided by the ADDIE conceptual framework. ADDIE is a conceptual framework that synthesizes commonly found processes and models within Instructional Design (Molenda, 2003). Many instructional design models can be mapped to the phases found within the ADDIE framework (Dousay, 2018).

Models are meant to provide an operationalized mechanism for meeting the needs of our specific learners and contexts as they provide specificity in both techniques and tools (Dousay, 2018).  In contrast, a conceptual framework like ADDIE provides more general guidance.  By using ADDIE as a conceptual framework to guide the creation of the capstone Analysis Summary and Design Brief and using and/or adapting specific models, tools, and strategies needed to meet the needs of the learners and contexts, the capstone creation process used is indicative of design as practiced by IDs in the field.

While it could be argued that the use of ADDIE is unnecessary when using a traditional instructional design model, it is rare to find a single model that meets the needs of the entire instructional design process from start to finish.  Often, models are adapted and used in tangent with other models and theories to meet the goals of the instructional design process.  By using ADDIE as a conceptual framework, it helps to clarify and organize the goals of the various strategies and model(s) used.  The ADDIE conceptual framework as outlined by Branch (2009) classifies the various analyses, components, tools, and techniques used to create instruction within the ADDIE phases.  It helps to make sense out of what could be difficult to understand and follow.  As Molenda (2003) notes, there is a tendency in the literature to acknowledge ADDIE as an umbrella term and to elaborate within that umbrella using other instructional design models and narratives.  An example of this can be seen in the Dousay & Logan (2011) instructional design case study where the Branch (2009) ADDIE framework and procedures were used with components of different

instructional design models as needed.  As a result, using ADDIE as a conceptual

framework allows for more flexibility in the use of other tools and models.  The

flexibility of using a conceptual framework to organize the processes while

employing a variety of processes and analyses allows for a much more tailored design

process than simply following a single model, theory, or process from start to finish.

      In addition to the flexibility offered by the guidance of a conceptual

framework like ADDIE, using this framework may make the capstone artifacts easier

to place and understand to outside professionals, like administrators and grant

evaluators.  ADDIE remains one of the conceptual frameworks with which training

professionals are most familiar (Tencza & Hale, 2018, p. 215).  As a result, when

working with multiple professionals or submitting documentation to various

organizations and institutions, it may be useful to use a framework as ubiquitous as

ADDIE.  The familiarity of ADDIE to many in and outside of the field of

instructional design may lead to more buy-in from non-instructional design

professionals.

      The capstone focused on the Analysis and Design phases of the ADDIE

conceptual framework as elaborated on by Branch (2009).  Spending a significant

amount of time in these first two phases should lead to a reduced need for further or

duplicative planning and research later (Peterson, 2003).  So, by expending effort,

resources, and time toward the creation of specific and carefully created artifacts like

the Analysis Summary and Design Brief, this capstone should lead to more direct and

efficient development, implementation, and evaluation of the proposed MI training by myself or others interested in the further development of training in this area.

Branch (2009) offers an ADDIE conceptual framework that outlines various steps and procedures that may be done within the various phases.  The ten procedures outlined by Branch (2009) for the Analyze and Design phases can be seen in Table 1 along with the artifacts and analyses that resulted.  Using these procedures as a backbone for the capstone ensured that thorough planning was conducted.  The capstone used these procedures as a guide while adding specificity of other strategies, techniques, and models to meet the needs of the instructional design project.

Within the Analyze phase, Branch (2009) suggests the following processes resulting in the Analysis Summary: validate the performance gap, determine instructional goals, confirm the intended audience, identify required resources, determine potential delivery system including cost estimate, and compose a project management plan.  The processes suggested by Branch (2009) are easy to follow during this phase and largely appropriate.  Three notable changes to the procedures outlined by Branch (2009) in the Analyze phase, for the purposes of this capstone, are related to the first procedure (validate the performance gap) and the aspects of the fifth procedure (determine potential delivery system (including cost estimate)).

Within the Design phase, Branch (2009) suggests the following processes resulting in the Design Brief: conduct a task inventory, compose performance objectives, generate testing strategies, and calculate return on investment.  The Design phase is an optimal time to use appropriate instructional design models to

create the blueprint for the instructional project. While the procedures suggested by

Branch (2009) are adequate, they do not take into consideration different types of

instruction, learner needs, and so forth. To meet the needs of this learning context,

the 4C/ID model was used, and its processes enhanced three of Branch's (2009)

proposed procedures: conduct a task inventory, compose performance objectives, and

generate testing strategies. Also, while not mapped to the Design phase, concerns

regarding the adaptation of MI content to the ID context are explored. A discussion

of the varied instructional strategies used in the Analyze and Design phases follow.

**Purpose-driven Training Needs Assessment**

For the first procedure outlined in the Analyze phase, validate the

performance gap, a different method was chosen than what was provided by Branch

(2009). The guidance provided by Branch (2009) regarding how to validate the

performance gap relies on the identification of the actual performance and

quantifying what percentage of the performance each element contributes to the

whole, the desired performance, the primary cause, as well as the quantification of the

performance gap that each performance contributes. Relationship building,

collaboration, and communication skills are so ubiquitous and underlie so much of

the ID's work and are applied so differently from case to case, it is difficult to make

those sorts of quantifications. A different means for validating the performance gap

was sought. After reviewing the goals of various needs assessments as described by

Kaufman & Guerra-Lopez (2013), it was clear that the goal of this training was to

improve the efficiency of IDs in their consultations and working relationships with

SMEs which indicates that a Quasi-Needs Assessment is appropriate (2013, p.52).

Quasi Needs Assessments are appropriate in several instances but are most

appropriate when an organization is experiencing issues related to processes (such as

communication, consultation, and relationship building in this case) and/or is about to

implement an innovation or process (Kaufman & Guerra-Lopez, 2013). Rossett's

(1987) Training Needs Assessment is considered a Quasi-Needs Assessment. It was

noted that Rossett's (1987) approach is appropriate when there is already awareness

that training is needed (Kaufman & Guerra-Lopez, 2013)

    The training needs assessment conducted was based on the guidance by Rossett

(1987). There are six steps outlined by Rossett to plan and implement a purpose-

based training needs assessment which include: assess the context, determine

purposes, select techniques and tools, develop a TNA plan, develop stage planner(s),

and communicate results (1987, p. 225-226). The results from each step of the

training needs assessment were provided (see Appendix B) and reflected in the

Analysis Summary capstone artifact (see Appendix A).

**Potential Delivery System Options and Cost Estimates**

        Another procedure from Branch (2009) where an alternative strategy

procedure was chosen within the Analyze phase was aspects of the fifth procedure

(determine potential delivery system (including cost estimate)). There were two key

changes made to this procedure that required justification. First, three delivery

systems were chosen to compare: webinar, asynchronous online training course, and

classroom training.  Second, alterations were made to Branch's (2009) assumptions

for the calculations for computer-based training.   Each will be discussed in turn.

***Delivery System Options***

First, the inclusion of three different delivery systems for comparison was

based on the results of the needs assessment in addition to the desires of the

instructional design unit.  While no one doubts the legitimacy of classroom training as

an option for MI training in terms of a delivery system, there has been debate in the

literature regarding MI training in the online environment.   However, online training

in MI is feasible given the prevalence of MI training in the online environment.  The

Motivational Interviewing Network of Trainers (MINT), a nonprofit organization of

trainers in motivational interviewing was started by trainees of Dr. Miller and Dr.

Rollnick to promote MI and effective learning in a variety of contexts.  MINT's

training website lists various trainings of beginner and advanced levels in multiple

modalities including those facilitated by the co-founders of MI, Dr. Miller and Dr.

Rollnick (Motivational Interviewing Network of Trainers, n.d.).  The online trainings

include both synchronous workshops and online courses.  While the ubiquity of

online MI instruction alone does not justify the usage of this practice in this context, it

does illustrate the possibility of training for MI in the online environment.

The difficulty in evaluating the efficacy of MI training in the online

environment lies in varying extremes that it is conducted, and the strategies and

technologies adopted therein.  However, despite this, there is indication in the

literature that interpersonal skills and counseling methods like MI can be done in the

online environment.  The Shafer et al. (2004) study of distance education of MI

training for health professionals where synchronous telecasts of instruction were

provided along with assessment showed that the impact of the training was clinically

insignificant in their long-term practice but noted the small sample size (9) of their

study.  These authors also state that feedback to the trainees is crucial to the process

of MI training which is something that their study lacked and that different

technological applications may be better suited for skill-based objectives (p. 146).

The outcome of the Shafer et al. (2004) study ultimately set the stage for further study

of MI using different distance education strategies and technologies while noting that

student perceptions of their skill and knowledge were not affected by the mode of

learning.

Mullin et al. (2016) approached the study of synchronous online MI training

with a slightly larger self-selected sample size (20 in the in-person, 14 in the online)

and found that the improvement of MI skills in the synchronous online training was

comparable to that of the in-person training (p. 365).  The authors noted that there

should be further study of asynchronous online training as well as a study of the

requisite number of hours required of MI training to be proficient.  Fairweather's

(2018) study in her master's thesis supported the notion that synchronous web-based

training had similar results to that of more traditional training with a randomized

sample.

While still examining synchronous online instruction with a higher level of

technology usage, Mitchell et al. (2011) examined the training of physicians (13) in

MI used both didactic instruction and role-playing in a virtual world which occurred

synchronously as well.  The results indicated that 92% of physicians were able to

demonstrate competency with MI in the context of colorectal screenings.  So even as

they move away from traditional synchronous online training and toward more

technology and resource-driven online training occurs, the results remain that there is

little difference in the outcomes between those who participate in classroom training

and those that do online.

     Asynchronous online instruction that provides MI training has seen limited

study.  In the Mastroleo et al. (2020) study, the training of students in cognitive

behavior therapy including MI through an asynchronous computer-based simulation

indicated that those completing the simulation had an improvement in skills in agenda

setting, explaining concepts, and understanding concepts than those who were

exposed to the more traditional manual-based instruction.  Despite this, there was no

difference in MI skill between the methods of instruction.  Again, there seems to be

an indication of a lack of difference in skill provision between groups.  Cook (2019)

designed, developed, and implemented an asynchronous MI computer-based

instructional module that provided for instruction as well as included an

asynchronous simulation for nurse practitioner students.  Post-test scores significantly

increased based on the instructional instance.  Despite this, the study recognized the

difficulty in the provision of MI training online due to the lack of real-world skill-

building that took place because of the design of the instruction.  Further, it was noted

that peer coaching and feedback were important to MI training but were not included in this instance (Cook, 2019).

Further exploration of asynchronous online experiences required the literature covered to be expanded outside of MI.  The Karvinen et al. (2017) study on the evaluation of online learning modules for nurses counseling skills noted that online learning strategies may be effective in improving some dimensions of counseling skills in nurses, particularly in knowledge transfer.  Wagner et al. (2011) conducted a study where dental students were provided online modules to help improve communication skills and found that those assigned to the online modules showed higher performance on three of the five outcomes.  Despite this including additional online modules to their traditional instruction, they do note that online learning is at its best when there is a quality instructor, technical support is available, technology is integrated, and the faculty are prepared for and supportive of online teaching.  The learning is more likely to be effective in these circumstances. It was found in the Watson (2012) study that students enrolled in online counseling courses had self-perceptions of higher counseling self-efficacy than those in the corresponding classroom courses.  This was likely due to the learning strategies used in the online courses and the demographics of those who typically self-select into online courses. While it is noted that self-perceived self-efficacy is important in the practice of counseling, skill-building is also important and the two do not always correlate.  The effectiveness of the online instruction was not evaluated in terms of skill-building in this case, nor was the type of online instruction considered in this study.

In all these studies there are lessons to be learned. It seems well-documented that synchronous online learning in MI has shown similar results to classroom while not enough research has been done on asynchronous online learning that is easily comparable. The issues in these studies are like the issues we see in the study of online learning in general, it is very difficult to account for the variables associated with the design, development, teaching, and context of the learning experiences. The approaches and studies are not easily generalizable as a result which makes the literature base difficult to wade through. I have yet to see a study that included the work of an experienced ID working with a SME in MI to create a training for MI practitioners, let alone IDs using these strategies.

Despite this, multiple delivery systems including webinars, asynchronous courses, and classroom trainings for the MI training proposed in the capstone were evaluated in terms of cost and shared with the instructional design unit as part of the Analysis Summary. A complete breakdown of the cost calculations for each modality can be found in Appendix B. The choice of delivery system modality was primarily dependent on the desires of the instructional design unit based on cost and scalability with the desires of IDs playing a secondary role in the decision-making process. As a result, the Design Brief capstone artifact found in Appendix A was created within the context of an asynchronous training due to the desires of the instructional design unit leadership.

*Cost Estimation Assumptions*

The second change made to the procedure, determine potential delivery system (including estimated cost) outlined by Branch (2009), included updates made to the assumptions for the calculations for computer-based training.  The procedure outlined nine steps to estimating costs for each phase of the ADDIE conceptual framework.  However, in the Design and Develop phases, Branch (2009) did not make a distinction between different kinds of computer-based training.  Further, these design and development estimates for computer-based training did not consider technology and development innovations in the last 12 years.  As a result, I sought better indicators of the time it takes to develop different types of computer-based training.  In January 2021, Defelice published the results of a study conducted in 2020 that surveyed design and development professionals regarding the time it takes them to design and develop in different modalities.  Defelice (2021) did make a clear distinction between the different kinds of computer-based training.  The design and development data from Defelice (2021) allowed for, what I believe to be, a much more realistic estimate.  The only downside to using the Defelice (2021) data is that the Design and Develop phases had to be conflated.

**Four-Component Instructional Design Model: Learning Tasks**

Within the Design phase of the ADDIE conceptual framework, 4C/ID was chosen to guide the process of creating a task inventory, compose performance objectives, and generate testing strategies.  4C/ID is an instructional design model meant to guide the design and development of complex skills (van Merriënboer,

2019).  There are four key components to this model: learning tasks, supportive

information, procedural information, and part-task practice.  The 4C/ID procedures

used in the capstone are all related to the learning tasks component of the design

model.  The design of the learning tasks encourages design based on real tasks.  Van

Merriënboer and Kirschner (2018) describe real-life tasks as those that may be ill-

structured, multidisciplinary, or team-related.  MI-related tasks and skills fit the

definition of real-life tasks in that the context in which they are used is very ill-

defined.  The opportunity to use MI and the strategies needed may change from

situation to situation.  As a result, MI training for IDs is an appropriate context to use

the 4C/ID model.    Despite the potential regularity of use of these skills, they are

exceedingly complex due to the necessity to bounce between the various strategies

and techniques that comprise MI.  This makes the use of the 4C/ID model justifiable

in the context of creating a training in MI for IDs.

**MI Content Adaptation**

Adapting MI as a content area is challenging.  Barwick et al. (2012, p. 1793)

note the difficulty in the provision of training in that there is no checklist for

practitioners to use in the real world which would guide training and the improvement

of MI skills.  This lack of training guidance is supported by the founders of MI,

Miller & Rollnick (2009) who state that the provision of such would not be in line

with the spirit of MI which requires flexibility and is not a one size fits all approach.

While there is no checklist for the use of MI in the field, Miller and Moyers

(2006) have provided for eight stages of learning MI that include:

1.  Openness to collaboration with clients' own expertise,

2.  Proficiency in client-centered counseling, including accurate empathy,

3.  Recognition of key aspects of client speech that guide the practice of MI,

4.  Eliciting and strengthening client change talk,

5.  Rolling with resistance,

6.  Negotiating change plans,

7.  Consolidating client commitment, and

8.  Switching flexibly between MI and other intervention styles. (p. 3)

This can be used as a guiding framework for the content of the instruction. It was

determined that #1 and #8 were not needed to be included in the training for IDs. The

nature of the ID-SME relationship generally means that the ID already is very open to

collaboration with the SME and their expertise. Further, as this training is only

focused on applying MI in the context of the ID-SME consultation and relationship

and no other intervention styles are discussed, it seems unnecessary to train IDs on

how to switch between MI and other techniques or strategies. This lack of inclusion

is reflected in the skills hierarchy analysis in Appendix C. A breakdown of the tasks

and objectives that were included can also be found in Appendix C. This adaptation

still aligns with Miller and Rollnick (2009) who do not believe in a one size fits all

approach to teaching, learning, and applying MI.

Some considerations rooted in the literature that were and will continue to be

considered while designing and developing this instruction incorporates the inclusion

of instructional strategies traditionally seen in counseling and medication such as

presentations and readings, media, modeling, role-playing, and observation and feedback (van Leusen et al., 2016).  Miller and Rose (2009) note that in studies related to training clinicians in MI a one-time workshop was not sufficient and that to see actual change in practice follow-up observation, coaching, or individual performance feedback was necessary.  After examining the balance of the literature, it seems as though Miller and Rose are discussing one-time workshops over a set (short) period.  There is not, unfortunately, a magic number for how much time it takes for someone to become proficient in MI, let alone using MI strategies in ID-SME consultations.  A longer-form training over 3-4 weeks that includes multiple instances for coaching and feedback that scaffold in complexity would help to combat some of the issues associated with one and done instruction and still very much reflects the spirit of the 4C/ID model.  Further, once the initial training is created and eventually data is collected, more instances of much shorter "check-ins" can become available as seen in many continuing and professional development courses.  For example, a provider of MI training may offer participants the ability to continually send a media recording of their use of MI to be coded and evaluated.  In addition, later a learning community and assessment tool could be created to facilitate additional observation and coaching for those that desire it.  The training should be built upon as it grows and matures.  The beauty of the ADDIE conceptual framework and many theories and design models is that they are iterative allowing for the opportunity to build, change, and expand to meet the needs of the organization and the learners.  Constant evaluation should be encouraged of any resulting training.

## When was the Capstone Implemented?

The capstone is focused on the analysis and design of an online training course for IDs dedicated to using MI skills in consultation resulting in an Analysis Summary and Design Brief. The implementation of the capstone which included the creation of the Analysis Summary and Design Brief occurred over fall of 2020 through February 2021.

The capstone artifacts, Analysis Summary and Design Brief, have been shared with the unit leadership for review and reflection. A rough version of the Analysis Summary was shared with the unit leadership in January for feedback before embarking on the Design Brief. Further evaluation of the project is scheduled for April 2021. In the interim, I will be continuing to review, reflect, and revise the artifacts as internal and external funding opportunities become available. Whatever the disposition, these artifacts provide a solid foundation for the successful continuation of this project.

## Impact of the Capstone

This capstone is focused on the analysis and design of an online training course for IDs in the use of MI strategies for the higher education context. The desire is that the training that the capstone will lead to will result in providing IDs a strategy to use with SMEs to build trust and rapport rapidly as well as to overcome ambivalence to instructional change to improve the effectiveness of instruction. By doing so, the hope is to increase the satisfaction of both parties in the design and development process and to provide exceptional learning experiences for students.

The instructional design unit for whom the capstone artifacts were created is starting to think more critically about how and why designers do what they do. The desire moving forward is to increase ID efficiency and rapport with SMEs especially considering the workload of the ID unit being highly contingent on SME willingness to engage an ID as a consultant. Given the voluntary nature of this relationship at this institution in most case cases, it makes the relationship-building and change-making skills of the ID even more important.

From an instructional design professional perspective, this capstone will provide a base for any professional looking to create a training in MI for IDs. Ultimately, I would be thrilled for anyone to pick up with this project and continue forward with it by revising the Analysis Summary and the Design Briefs to meet their needs and/or moving forward through the Develop, Implementation, and Evaluation phases of the ADDIE conceptual framework. The beauty of using ADDIE as a guiding conceptual framework for this capstone is that it makes it very accessible to many ID or training professionals who may not be familiar with all learning theories and models but are aware of ADDIE. Someone familiar with ADDIE will be able to pick up this capstone and make sense of where they are and where they should go forth. They can then use their own favorite theories, models, and processes to revise or continue forward with the development, implementation, and evaluation.

### Limitations of the Study

MI is not a silver bullet, but a strategy in our toolbox as IDs to use as needed. A key limitation of this capstone is generalizability in the use of MI in the context of

the ID-SME relationship.  The reason is due to the differences that occur in every

consultation, every designer, every SME, every relationship, and every permutation

therein.  As such, the IDs/learners will have to evaluate the use and continued use of

this method in consultations.

Another limitation is that of reliability of use.  Each ID may bring in their own

views and strategies related to MI that could affect its efficacy.  While a training will

help to get them started with MI, it would be impossible to assume every potential use

case and assess based on those situations to ensure coherent and appropriate

responses and reactions.  These limitations need to be further explored through

research on effectiveness and techniques seen within practice after training.

Specifically, when looking at the Training Needs Assessment, the survey

responses and interviews were of a small number thus being limited again in terms of

generalizability.  Further, the responses to the surveys ran the gamut.  It was difficult

to make definitive conclusions about the instructional design professionals' perceived

need for such training.  This could have been a result of the questions or simply the

variability between individual design professionals.  As a result, I would encourage

anyone looking to create this training to conduct another needs assessment using a

case study approach with semi-structured interviews as it will allow for more

flexibility with follow-up questioning.  A more thorough, rich picture particularly of

the institution would emerge as a result.  Despite this, the survey questions could be

used as a starting point for the interviews.

**Reflections**

This capstone was born of my experiences as an ID in higher education. I have ten years of experience working with faculty and other stakeholders on the creation of effective learning experiences and have long been interested in how to make the instructional design consultation more effective. The scholars I follow most closely in the field are not concerned necessarily with the latest technologies or learning strategies, but instead on how designers do what they do (processes) and what we can do to improve on that (performance improvement). My colleagues can attest that I am always questioning our procedures and how we can be more effective.

As previously stated, working as the designer and project lead on an online mental health platform for distance and regional students introduced me to the notion of MI as a means of helping to encourage change in those less interested in doing so, or even more often those who indicate a readiness to change but are not quite ready. As a result of this interest, I pursued online education in MI through the Health Education & Training Institute in Maine. I also spoke to various counseling professionals about this technique, brainstormed my ideas, and made changes based on their informal feedback.

Through this entire process, the capstone has only strengthened my resolve that MI is a suitable strategy for IDs to use in the context of the ID-SME relationship. This was bolstered by the results of the needs assessment where more ID professionals than I expected noted that they are willing to simply drop a suggestion and defer to the SME expert to protect the relationship as seen in Appendix B. While

the relationship is protected in that case, the ID is not necessarily being effective in their duties.

In addition, the capstone has made me more cognizant of my design processes and a bit more deliberate than I have been in the past. After ten years of experience in the higher education context, there are aspects of the design process that get skipped over due to a lack of time, or simply the ability to do some of these steps mentally. I will admit that processes such as creating skill and learning task hierarchies and inventories are rarely done formally unless it is a large-scale, high-priority project. The capstone was a reminder that there is value in the small procedures and processes. They help to create a blueprint that anyone could pick up and run with effectively. I would say it is akin to why programmers add comments to their code. It is to let the next person know (or even remind themselves) of what they did, why they did it, and why it is formatted as such. The impact of my work on this capstone is being seen in my work professionally. In a large-scale project that I am managing for a gatekeeping training for our learning management system, instead of each designer being accountable for the design and development of their assigned modules and simply creating, we are creating documentation that is being reviewed by teams with feedback, and so on. So, in three months, we will be able to point to various points in the design and development process and say why we made the choices we did or if someone gets reassigned to a different process, we can bring a new designer up to speed efficiently.

While the capstone has made me more cognizant of design processes, it also has forced me to think more about the project management and decision-making aspects of creating proposals and blueprints for design projects. My previous experience in creating a budget for a project is limited to calculating my hours for design and development work on grant projects and providing estimates for technology costs. I was floored by the costs of these projects. It is something that just rarely exists in the context that I operate.

Further, the idea of trying to calculate a return on investment is something that my instructional design unit finds difficult to do. Even when working on the institution's strategic plan, we were asked to quantify our impact which we found impossible. Calculating the ROI for such indirect implications, such as increased teaching and learning, seemed a herculean feat. However, I did a bit of research and had to make some assumptions which is not something I always feel comfortable doing. As a result of my discomfort, the ROI is likely far more conservative than it should be.

Beyond a desire to develop, implement, and evaluate the training myself, my goal for the Analysis Summary, Design Brief, and contributing documents is that they may be used to garner support, funding, and additional resources for anyone looking to create this training. Despite the lack of data regarding the efficacy of MI in the ID-SME consultation and the efficacy of the instructional methods and strategies, this is an important first step. The success of the capstone would be measured by the completion of an online training course that other IDs think is instructionally sound

and useful to them as practitioners in the field of ID and that MI practitioners feel is reflective of the spirit of MI and its associated strategies.   Further, a next step should be to study the efficacy after it has been implemented to explore the appropriateness of MI as a technique for IDs to use with SMEs.

**Appendix A**

**Capstone Project**

The Analysis Summary includes a discussion of the purpose of the project, the training needs assessment, the instructional goals, a learner profile, an audit of required resources, options for the delivery of the training including cost estimates, a project management plan, and next steps. The goal of the Design Brief is to not only clarify the skills to be garnered by the learners but to provide a blueprint showing how to get from the current performance to the desired performance. The Design Brief will include a restatement of the project purpose and instructional goal, the instructional sequence and strategy, a cost-benefit calculation, as well as a discussion of next steps.

**Motivational Interviewing Training for Instructional Design Professionals:**

**Analysis Summary**

*Project Purpose*

The purpose of this project is to provide training motivational interviewing to instructional designers and support staff to improve the instructional designer and SME relationship as well as the quality of the resulting work products.

Scholarship on the relationship between instructional designers and subject matter experts have indicated that when instructional designers are encouraging change and subject matter experts are ambivalent to that change, the collaborative relationship suffers. Generally, there are three common outcomes to take: (1) forced acceptance of change, (2) forced acceptance of lack of change, or (3) negotiated acceptance of either 1 or 2. In almost all cases, particularly in 1 or 2, one or both parties are left unhappy with the outcome and with feelings of powerlessness. This can further affect additional decisions regarding other changes and affect the learning that results.

When this occurs, this not only affects instructional designers and subject matter experts but the learners who are involved in the resulting learning experiences. The training needs assessment speaks to the instructional designers' experiences with subject matter experts that support the scholarship in this area.

*Training Needs Assessment Results*

A training needs assessment was conducted in February 2021 to confirm the performance gap that a training in motivational interviewing for instructional design

professionals would try to resolve.  The results of the training needs assessment

verified that the instructional designers do have issues maintaining their relationship

with subject matter experts, they do feel responsible for this relationship, and that the

strategies that they currently use are not related to motivational interviewing.

Additional information was collected from instructional designers outside of the unit

throughout the midwestern state to identify if there is a need for such training to be

scaled outside of this institution.

       The results were gathered via survey for the instructional design professionals.

Two surveys were sent out.  The first survey was sent specifically to instructional

design professionals at this institution.  The second survey was sent to instructional

design professionals throughout the state via the state's instructional design

association email group.  The respondents to both surveys were few with 5 of 7

possible respondents participating from the unit, and 9 of more than 65 possible

respondents participating statewide.  In addition to the survey responses, interviews

were conducted with the (2) instructional design supervisors for the unit.

       The most pertinent results of the needs assessment follow.  Not surprisingly,

instructional design professionals found their relationships with subject matter experts

to be important.  Within the unit, 80% of respondents found the relationship to be

very important as did 77.78% of professionals statewide.  The unit supervisors

confirmed in the interviews that the relationship was important to student learning as

a good instructional design professional and subject matter expert working

relationship can lead to better instruction and teaching.

Given the importance of the relationship, instructional designers need to encourage change and innovation while keeping subject matter experts engaged. While this is a relationship, instructional design professionals feel very responsible for the state of the relationship with subject matter experts. Within the unit, all respondents felt this was the case, while 44.44% of professionals statewide felt very responsible for the relationship and 55.56% felt moderately responsible. The instructional design professionals within the unit found that a subject matter expert's reluctance to make changes is a common challenge that they face in this relationship. This is in contrast with the statewide instructional design professionals who felt that lack of time, a lack of respect for the instructional designers, and a lack of understanding of the instructional designers' role as being the most common challenges faced.

Although it seems as though conflict in the context of this relationship could negatively affect the relationship moving forward, most of the respondents both within the unit and statewide stated that there was no negative impact. However, this lack of negative impact may be due to deference to the subject matter experts and the instructional design professionals dropping their suggestions. While a negative impact on the relationship does not ensue, the benefit of the instructional designer's advice and consultation is lost, that of increased student learning.

In short, the training needs assessment has shown that the current performance by instructional design professionals shows a need for additional tools to help improve the instructional designer-subject matter expert relationship. The current

popular method of outright deference to the subject matter expert does not actually improve the working relationship. This in combination with the instructional design unit's responses that subject matter experts' ambivalence to change is one of their most common challenges indicates that motivational interviewing techniques which are focused on helping clients resolve said ambivalence may be a helpful tool. The training needs assessment also posed questions to the instructional design professionals, both within the unit and statewide, the unit instructional design supervisors regarding professional development preferences. Both within the unit and statewide, webinars were largely preferred with asynchronous courses taking second.

### Purpose Statement

Provide training in motivational interviewing to instructional design professionals to improve the instructional designer-subject matter expert relationship and the quality of the resulting work products.

### Instructional Goal

Conduct a meeting with a subject matter expert applying motivational interviewing effectively to address ambivalence to change.

### Learner Profile

**Student Group.** The student group includes the unit instructional design professionals and potentially statewide professionals as well.

**General Characteristics.** Within the unit, instructional designers all have master's degrees in the field while the support specialists have bachelor's degrees.

Most of the professionals work with between 11 to 30 subject matter experts a year but work intensively with less than 10 a year. Statewide, professionals mostly have master's degrees with a few having doctorates. These professionals work with between 11 to more than 31 subject matter experts a year but work intensively with less than 15 a year.

**Number of Students.** Within the unit, there is the potential for 7 students. Statewide, based on the email group, there is the potential for more than 65 students.

**Student Location.** Within the unit, all students are local. All have offices at the unit but are working remotely during the pandemic. Statewide, all learners are located throughout the state.

**Experience Levels.** Within the unit, at least 3 of the staff have five or more years of experience and at least 2 have less than four years of experience. Statewide, most of the survey respondents had more than five years of experience.

**Student Attitudes.** The instructional design professionals feel responsible for the state of the relationship between the ID-SME and value that relationship's importance. Within the unit, when facing issues in the ID-SME relationship, only one respondent noted that they try to identify the root of the issue. Statewide, no respondents reported trying to identify the root of the ambivalence to change. Many respondents, both within the unit and statewide, defer to the subject matter experts to move forward. In both groups, webinars were chosen as the preferred method of professional development followed by asynchronous courses.

**Skills that Impact Potential to Succeed in the Learning Environment.**

There are no special technology, resources, and skills required to fully participate in

the training.  Typical technology such as a computer or device capable of entering a

learning management system, streaming audio and video, and clicking or swiping is

required.  All elements will need to be made accessible or include equitable

alternatives for those who require accommodations.  In terms of skills, those that are

used daily by instructional designer professionals such as reading, listening, and

observing body language are required to complete this training.

*Required Resources*

The following resources are required for the successful design, development,

implementation, and evaluation of this training: content-related resources,

technology-related resources, facility-related resources, and human resources.

**Content-related Resources.** All materials used as ancillary materials or

supportive materials to inform activities, guidance, practice, and assessments are

available under creative commons licensing (CC BY-SA 4.0).  This means that

content will not need to be purchased to help develop the training materials.  Care

will need to be taken to provide proper attribution.  The balance of the content will be

created by developers and reviewed by content experts.

**Technology-related Resources.** The technology-related resources necessary

are tied directly to the modality of the training.  The results of the training needs

assessment indicate that webinars or asynchronous courses are the most desirable

modes of training for these students.  As a result, access to the learning management

system, audio-video conferencing software, video production facilities, and various e-learning development software is required to develop and implement the training successfully.  All these resources are currently available.  In addition to these resources being available, all will need to be used in such a way that takes into consideration accessibility.  All these technologies do have voluntary product accessibility templates available.  Those will need to be procured and reviewed.

**Facility-related Resources.** Video production space to create and edit instructional video has been identified and reserved as needed.  Office space for the designer/developer is also required that includes necessary technology and has been identified.

**Human Resources.** The primary facilitator has been identified (lead instructional designer) but will need a workload adjustment to account for the design, development, implementation, and evaluation of this project.  A secondary facilitator and subject matter expert have been identified to not only provide feedback on the training but to act as a second reviewer for assessment grading.  The secondary facilitator will need to be compensated for his/her/their time.  A video production specialist has also been identified and is available but will need to be scheduled well ahead of time.  Instructional design support has been identified but will need to be scheduled ahead of time and a workload adjustment will need to be done to account for the increased work that this project brings.

Overall, most of these resources are readily available.  The additional expense of procuring the secondary facilitator and subject matter expert is of the most urgent

need to move forward.  The rest of the required resources are those that already exist

and are available but may need to be scheduled and/or freed up as needed.

### Delivery Options and Cost Estimates

There are three delivery options currently under consideration which include

Option A: Webinar, Option B: Online Course – Asynchronous, and Option C:

Classroom Training.  No matter the modality, student time on task is estimated to be

about 8 hours.  A breakdown of the lengths of the various options can be found in

Table A1.

**Table A1**

*Comparison of Delivery Options and Length of Training*

|  | Option A: Webinar | Option B: Asynchronous | Option C: Classroom |
|---|---|---|---|
| Time on Task | 8 hours | 8 hours | 8 hours |
| Days/Weeks | Over 2 days | Over 4 weeks | Over 2 days |
| Hours Per Day/Week | 4 hours per day | 2 hours per week | 4 hours per day |

The proposed training will be designed using the ADDIE (Analysis, Design,

Develop, Implement, and Evaluate) conceptual framework.  For the ease of

calculating costs, a cost estimate sheet is provided below in Table A2 that provides

estimations for each phase of the ADDIE framework broken down by delivery option.

Each delivery option is further broken down by unit and statewide.  This is to provide

the opportunity to consider scaling the training to meet the needs of other design units

and professionals beyond this institution.  A breakdown of the various calculations

can be provided on request.  A revised calculation will be provided in the Design

Brief.

**Table A2**

*Comparison of Cost Estimates, Delivery Options, and Learner Populations*

| | Option A: Webinar | | Option B: Asynchronous | | Option C: Classroom | |
|---|---|---|---|---|---|---|
| | Unit | Statewide | Unit | Statewide | Unit | Statewide |
| Analysis | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 |
| Design & Develop | $15,864.80 | $15,864.80 | $43,174.92 | $43,174.92 | $19,491.04 | $19,491.04 |
| Implement | $2,841.08 | $19,532.84 | $2,841.08 | $19,532.84 | $2,841.08 | $23,032.84 |
| Evaluate | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 |
| Total | $25,305.12 | $41,995.88 | $52,615.24 | $69,307 | $28,931.36 | $49,123.12 |
| Estimated Cost Range | $20,244.10 to $30,366.14 | $33,596.71 to $50,395.05 | $42,092.20 to $63,138.28 | $55,445.60 to $83,168.40 | $23,145.09 to $34,717.63 | $39,298.50 to $58,947.74 |

*Project Management Plan*

The project management plan includes a discussion of the team and their various responsibilities, the constraints that must be considered with this training, and an estimated schedule for completion based on these resources and constraints.

**Team.** First, the project management plan is dependent on the procurement of the human resources discussed in the resource audit. The plan, in its current state, is based on one designer/developer, one additional facilitator, and one video production specialist. However, if additional instructional design staff can be used such as an additional instructional designer/developer, then the amount of time estimated to complete the project could be decreased. The team members, sans the additional instructional design staff, are as follows:

- Lead Instructional Designer/Developer: This instructional designer will be direct other team members as to their roles, the timelines expected, and will provide feedback as needed. Also, this person will be the primarily responsible designer for the creation of this training from start to finish. Finally, this person will be the lead facilitator.

- Second Facilitator/Subject Matter Expert: The second facilitator/subject matter expert is an expert in the use of motivational interviewing in clinical settings. This person will not only provide their expertise in terms of feedback on the training to the designer but will also be a second reviewer of the learner work that results from the training assessments.

- Video Production Specialist: The video production specialist will organize

  pre-production, recording, editing, and other post-production activities

  associated with the creation of thirty minutes of finished video for this project.

  **Constraints.** While a great team is needed to help launch this training project,

we must always consider the constraints that threaten the success of any project. By

being aware of these constraints, we are more likely to monitor the project to ensure

that its success is not decreased. The primary constraints are that of cost, time, and

scope. Table A3 provides a plan for monitoring those constraints.

**Table A3**

*Description of Constraints and Recommended Actions*

| Constraint | Problem | Recommended Actions |
|---|---|---|
| Time | The project could be delayed due to resource, personnel, etc. issues. The longer a project goes on the more likely it is to see delays. | • Multiple designers/developers working on this project would decrease the development time substantially, thus decreasing the likelihood of delay.<br>• Monitor task completion, follow-up with stakeholders, and report regularly on progress to ensure that project stays on track. |
| Scope | The project's scope could be increased. There is an inevitable desire to overcomplicate training or to add more information than what is necessary. | • Multiple sources of feedback on the development can ensure the scope does not creep too far.<br>• Ensure the development follows the objectives. Instructional alignment helps to create efficient instruction. |
| Cost | The project's cost goes beyond estimations. | • Monitor the budget and report regularly progress.<br>• Training could be revenue-generating and marketing it to instructional design professionals outside of the institution.<br>• Revise cost estimates as costs become clearer and report accordingly. |

**Proposed Schedule.** Given the team members, resources, and constraints, the Figure A1 shows a proposed schedule for completing this training through the implementation.  This schedule is subject to revision based on unit needs, resource availability, and constraints.

**Figure A1**

*High-Level Gannt Chart for Motivational Interviewing Training Completion*

| | 2020 | | | 2021 | | | | | | | | | | | | 2022 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr |
| All Projects | ██ | ██ | ██ | ██ | ██ | ██ | ██ | ██ | ██ | ██ | ██ | ██ | ██ | ██ | ██ | ██ | ██ | ██ | ██ |
| Analyze | ▓ | ▓ | ▓ | ▓ | ▓ | | | | | | | | | | | | | | |
| Design | | ░ | ░ | ░ | ░ | | | | | | | | | | | | | | |
| Review and Revision | | | | | | ▓ | ▓ | | | | | | | | | | | | |
| Develop | | | | | | | | | ░ | ░ | ░ | ░ | ░ | | | | | | |
| Testing and Revision | | | | | | | | | | | | ▓ | ▓ | | | | | | |
| Implementation | | | | | | | | | | | | | | | | ░ | ░ | | |
| Evaluation | | | | | | | | | | | | | | | | | | ▓ | ▓ |
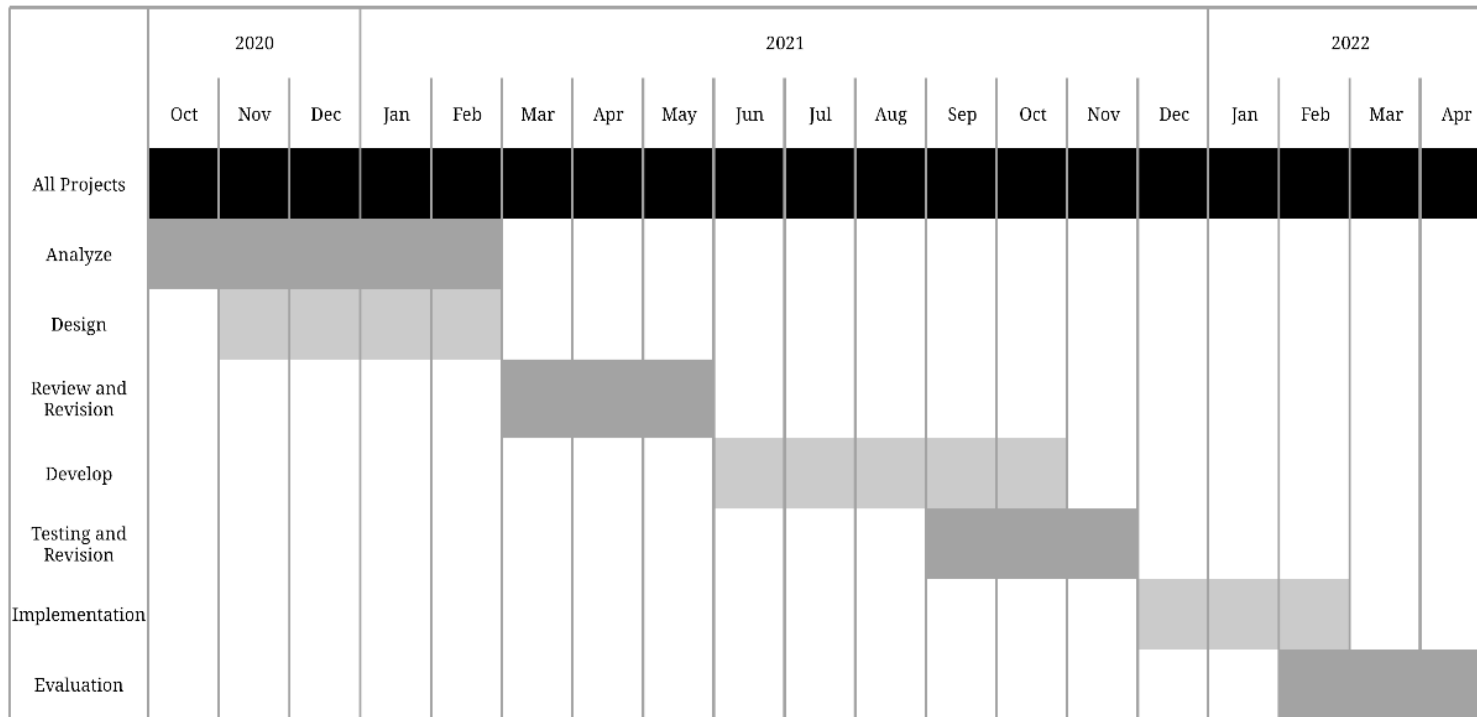
The project will be completed at the end of April of 2022 based on Figure A1.

*Next Steps and Recommendations*

Motivational interviewing offers a tool to instructional design professionals when managing a relationship with a subject matter expert who is ambivalent to change. A tool such as this offers the opportunity to not only make meaningful change in instruction that can have a positive effect on student learning, but also assist in the creation and maintenance of a true collaboration between subject matter experts and instructional designers. In terms of next steps, the following is suggested:

- Decide on the learner population. This could be an opportunity for the unit to start monetizing their trainings as other institutions have done in the past. The recommendation is to use a state-wide learner population. By scaling to this level immediately, the unit learner population can be used as a pilot for the training. This will cut down on the time needed to procure pilot participants for evaluation of the training.

- Decide on a delivery system. While the learners indicated in the training needs assessment that webinar is the desired modality for professional development, it is recommended that an asynchronous course (with or without synchronous elements) be created instead. This is due to the designer's ideas regarding potential designs that are much easier to control for a facilitator than the webinar format. An asynchronous course will allow for the use of the

learning management system which can be used to protect student privacy and provide for accessible content and alternatives.

- Identify funding. If the unit is not interested in or cannot self-fund the project, grant funding should be sought, both internally and externally.

- Create a Design Brief. The project manager/lead instructional designer will create a Design Brief that will identify the tasks associated with the training, the instructional objectives, an assessment strategy, and a calculation of the return on investment of this training along with a revised cost estimation. The Design Brief will give the unit a better understanding of what the training will entail, what skills will be improved, and how they will be assessed.

This training is an exciting opportunity for this unit to develop something novel that could have implications well beyond the institution. In addition to improving student learning at our institution, it could provide the opportunity to generate further revenue or to provide our colleagues across the state (and potentially farther) with free training. Since motivational interviewing has not been evaluated in the context of instructional design-subject matter expert relationships, the conclusion of this training implementation may lead to some interesting research as to its actual efficacy in action.

Your feedback on this is welcome and the consideration is appreciated. Please contact the project manager/lead instructional designer for additional information.

**Motivational Interviewing Training for Instructional Design Professionals:**

**Design Brief**

*Project Purpose*

The ultimate purpose of this project is to provide training motivational interviewing to instructional designers and support staff to improve the instructional designer and subject matter expert relationship as well as the quality of the resulting work products.

*Instructional Goal*

Conduct a meeting with a subject matter expert applying motivational interviewing effectively to address ambivalence to change.

*Instructional Strategy and Outline*

Since motivational interviewing is a complex skill, the Four-Component Instructional Design model was used to identify the components associated with learning tasks such as learning task identification, classification, sequencing, and alignment with the assessment strategy.

Overall, the learning sequencing is tied to the order of operations in motivational interviewing. The instructional strategy below includes the segmentation of instruction based on task classes which were created using emphasis manipulation, performance objectives, learning tasks, an assessment strategy for each learning task, and rubrics as appropriate. Skill hierarchies, task hierarchies, and other forms of underlying documentation that informed this strategy are available upon request.

**Module 1: Appropriateness of Motivational Interviewing in Instructional Design Meetings with Subject Matter Experts.** The performance objectives, instructional strategy, and outline follow.

Performance objective(s):

- In an instructional designer-subject matter expert meeting, learners will determine the appropriate context for using motivational interviewing techniques.

All learning tasks in Module 1 are associated with the following Task class: 1. Apply motivational interviewing in an instructional designer-subject matter expert meeting/consultation, emphasizing determining the appropriate context for using motivational interviewing techniques. Table A4 provides the learning strategy for Module 1 by learning task and Table A5 provides a rubric for the requisite portion of the assessment.

**Table A4**

*Module 1: Description of Assessment Strategy by Learning Task*

| Learning Tasks | Assessment Strategy |
|---|---|
| 1.1 Learners will determine the appropriate context for using motivational interviewing in instructional designer-subject matter expert meetings with full access to support. | **Mode:** e-learning<br><br>**Assessment Items:** Learners will be presented with both easy (1) and moderate (2) difficulty-level questions for a total of three that are randomly selected.<br><br>Easy Questions (minimum pool of 3): Given this scenario, do you think it is appropriate to use motivational interviewing? Yes/No<br><br>Moderate Questions (minimum pool of 5): Given this exchange, select the phrase or sentence that best indicates the use of motivational interviewing may be appropriate. Three answer options will be provided.<br><br>**Support:** The support level is high. A lightbox with background information, procedures, and/or best practices will be available throughout. Further, learners will know immediately once an answer to a question is selected whether it is correct or incorrect along with explanation and re-direction as needed. Learners will not be able to proceed to the next question until the previous one is answered correctly.<br><br>**Criteria for evaluation:** The criteria are content-based as it is an evaluation based on accuracy. The learner identifies cases where motivational interviewing is appropriate to use, and the learner identifies phrases that indicate the subject matter expert is ambivalent to change thus implying that motivational interviewing may be appropriate to use. |

| Learning Tasks | Assessment Strategy |
|---|---|
| | **Grading/Feedback:** Learners will not be able to proceed past any given question without selecting the correct response. Immediate feedback is provided after the answer is selected. Feedback is automated including correct/incorrect designations as well as explanations and re-direction based on selections.

**Learning Trajectory:** Learners (learner control) can repeat this task an unlimited number of times as desired. |
| 1.2 Learners will determine the appropriate context for using motivational interviewing in instructional designer-subject matter expert meetings with little to no access to support. | **Mode:** e-learning

**Assessment Items:** There are two parts to this assessment. In Part I, learners will be presented with both easy (1) and moderate (2) difficulty-level questions for a minimum of three questions. The questions will not be randomly selected as there is a specific adaptive trajectory that learners may experience based on their responses.

Easy Questions (minimum pool of 5): Given this scenario, do you think it is appropriate to use motivational interviewing? Yes/No

Moderate Questions (minimum pool of 7): Given this exchange, select the phrase or sentence that best indicates the use of motivational interviewing may be appropriate. Three answer options will be provided.

In Part II, learners will be presented with the following question/assignment: Write a scenario where the use of motivational interviewing would be appropriate to use within the context of an instructional designer-subject matter expert meeting. |

| Learning Tasks | Assessment Strategy |
| --- | --- |

**Support:** The support level is low. A lightbox with background information, procedures, and/or best practices will no longer be available. Further, while learners will know after submitting a response to a question as to whether their response was correct or incorrect in Part 1, they will not get any feedback and will be pushed to the next question. Further, no immediate feedback will be available to learners for Part II.

**Criteria for evaluation:** For Part I, the criteria for evaluation are content-based as it is an evaluation based on accuracy. The learner identifies cases where motivational interviewing is appropriate to use, and the learner identifies phrases that indicate the subject matter expert is ambivalent to change thus implying that motivational interviewing may be appropriate to use.

For Part II, the criteria for evaluation are content, process, and impac-based. The following holistic rubric will be used to evaluate the written scenario. See Learning Task 1.2 Rubric.

**Grading/Feedback:** For Part I, learners will get automated feedback as to whether their responses were correct or incorrect. Further, learners will be notified if they are required to restart the assessment due to meeting the threshold for incorrect answers. However, they will get no automated feedback as to the rationale. Successful completion of Part I is based on correct responses for 1 easy question and 2 moderate questions. Being prompted to restart the assessment will be based on 3 incorrect responses.

For Part II, learners will get manual feedback from the facilitator after completion.

| Learning Tasks | Assessment Strategy |
| --- | --- |
| | **Learning Trajectory:** For Part I, the e-learning application (system control) will direct the students to different levels of questions. If the first easy question is answered correctly, learners will be directed to moderate-level questions where they will continue to get moderate-level questions until they get 2 moderate-level questions correct or 3 moderate-level questions incorrect. If the first easy question is answered incorrectly, learners will be directed to additional easy-level questions until they get 1 correct. At that point, they will be directed to get moderate-level questions until they get 2 correct or if they get 2 incorrect. Three incorrect questions at any level will direct the learner to restart the assessment. Learners (learner control) will have the ability to restart Part I as many times as required by the facilitator.

For Part 2, the application (system control) will direct the student to the question. |

**Table A5**

*Description of Learning Task 1.2 Rubric*

| | Part II: Written Scenario Rubric |
|---|---|
| 3 | Scenario is more than one paragraph, well-detailed, realistic, and is easy to read.  It includes both the request being made by the instructional designer and the response and attitude of the subject matter expert.  The response and attitude of the subject matter expert reflects clear ambivalence to change. |
| 2 | Scenario is one paragraph and is easy to read but lacks some details and/or may not be realistic.  It includes both the request being made by the instructional designer and the response and attitude of the subject matter expert.  The response and attitude of the subject matter expert reflects ambivalence to change but is not clear. |
| 1 | Scenario is less than one paragraph and lacks detail and/or may not be realistic.  Scenario is not easy to read.  It lacks either or both the request being made by the instructional designer and the response and attitude of the subject matter expert.  The response and attitude of the subject matter expert do not reflect ambivalence to change. |

**Module 2: Applying Client-Centered Communication and Counseling techniques in Instructional Design Meetings with Subject Matter Experts.** The performance objectives, instructional strategy, and outline follow.

Performance objective(s):

- In an instructional designer-subject matter expert meeting, learners will use client-centered communication and counseling skills.

- In an instructional designer-subject matter expert meeting, learners will use client-centered communication and counseling skills such as open questions.

- In an instructional designer-subject matter expert meeting, learners will use client-centered communication and counseling skills such as providing affirmation.

- In an instructional designer-subject matter expert meeting, learners will use client-centered communication and counseling skills such as conducting reflective listening.

- In an instructional designer-subject matter expert meeting, learners will use client-centered communication and counseling skills such as providing summary reflection.

All learning tasks in Module 2 are associated with the following Task class: 2. Apply motivational interviewing in an instructional designer-subject matter expert meeting/consultation, emphasizing using client-centered communication and counseling skills such as using open questions, providing affirmation, conducting reflective listening, and providing summary reflections.  Table A6 provides the learning strategy for Module 2 by learning task and Table A7 provides a rubric for the requisite portion of the assessment.

**Table A6**

*Module 2: Description of Assessment Strategy by Learning Task*

| Learning Tasks | Assessment Strategy |
| --- | --- |
| 2.1 Learners will use client-centered communication and counseling skills in instructional designer-subject matter expert meetings with full access to support. | **Mode:** e-learning<br><br>**Assessment Items:** Learners will be presented with both easy (1) and moderate (1) difficulty-level questions for a total of two questions per component of client-centered communication and counseling skills (open questions, affirmation, reflective listening, and summarizing reflections) for a total of 8 questions randomly selected within the components (ex. 1 easy question randomly selected from a pool of 3 easy questions about open questions).<br><br>Easy Questions (minimum pool of 3 per component): Given this exchange, select the component of client-based communication that best describes the highlighted portion of the transcript. Five answer options including the four components of client-centered communication skills and one option stating none of the above will be provided.<br><br>Moderate Questions (minimum pool of 5 per component): Given the following transcript, match the highlighted portions with the corresponding component of client-centered communication and counseling skills.<br><br>**Support:** The support level is high. A lightbox with background information, procedures, and/or best practices will be available throughout. Further, learners will know immediately once an answer to a question is selected whether it is correct or incorrect along with explanation and re- |

| Learning Tasks | Assessment Strategy |
|---|---|
| | direction as needed.  Learners will not be able to proceed to the next question until the previous one is answered correctly.

**Criteria for evaluation:**  The criteria are content-based as it is an evaluation based on accuracy.  The learner identifies where specific components of client-centered communication and counseling skills are being used by examining both simple and complex examples.

**Grading/Feedback:** Learners will not be able to proceed past any given question without selecting the correct response.  Immediate feedback is provided after the answer is selected.  Feedback is automated including correct/incorrect designations as well as explanations and re-direction based on selections.

**Learning Trajectory:** Learners (learner control) can repeat this task an unlimited number of times as desired.

 For each component of client-centered communication and counseling skills (open questions, affirmation, reflective listening, and summarizing reflections) learners will be presented (system control) at least 2 different cases where they will determine via Multiple Choice questions the appropriate context for using motivational interviewing. |
| 2.2 Learners will use client-centered communication and counseling skills in instructional designer-subject matter | **Mode:** e-learning

**Assessment Items:** There are two parts to this assessment.  In part I, learners will be presented with easy (1) and moderate (1) difficulty-level questions for |

| Learning Tasks | Assessment Strategy |
|---|---|
| expert meetings with diminishing access to support. | a minimum of 2 questions per component of client-centered communication and counseling skills (open questions, affirmation, reflective listening, and summarizing reflections) for a minimum of 8 questions. These questions will not be randomly selected as there is a specific trajectory that learners may experience based on their responses.<br><br>Easy Questions (minimum pool of 5): Given this exchange, select the component of client-based communication that best describes the highlighted portion of the transcript. Five answer options including the four components of client-centered communication skills and one option stating none of the above will be provided.<br><br>Moderate Questions (minimum pool of 7): Given the following transcript, match the highlighted portions with the corresponding component of client-centered communication and counseling skills.<br><br>In Part II, learners will be presented with the same instructions that contain multiple parts: Given the following partial transcript, please fill in the blanks with your own statements reflecting appropriate use of either open questions, affirmation, reflective listening, and summarizing reflections.<br><br>**Support:** The support level is diminishing. A lightbox with background information, procedures, and/or best practices will no longer be available. Further, while learners will know after submitting a response to a question as to whether their response was correct or incorrect in Part 1, they will not get any feedback and will be pushed to the next question. However, correct responses and guidance as well as example responses for Part II will be provided immediately after completion for self-evaluation. |

| Learning Tasks | Assessment Strategy |
| --- | --- |

**Criteria for evaluation:** The criteria are content-based as it is an evaluation based on accuracy. The learner identifies where specific components of client-centered communication and counseling skills are being used by examining both simple and complex examples.

For Part II, the criteria for evaluation are content, process, and impact-based. The following holistic rubric will be used to evaluate the written responses. See Learning Task 2.2 Rubric.

**Grading/Feedback:** For Part I, learners will get automated feedback as to whether their responses were correct or incorrect. Further, learners will be notified if they are required to restart the assessment due to meeting the threshold for incorrect answers. However, they will get no automated feedback as to the rationale. Successful completion of Part I is based on correct responses for 1 easy question and 1 moderate question. Being prompted to restart the assessment will be based on 2 incorrect responses in each section.

For Part II, learners will get manual feedback from the facilitator after completion. In the interim between completion and facilitator feedback, the learners will get immediate sample responses to provide the opportunity for self-evaluation.

**Learning Trajectory:** For Part I, the e-learning application (system control) will direct the students to different levels of questions. If the first easy question is answered correctly, learners will be directed to moderate-level questions where they will continue to get moderate-level questions until they

| Learning Tasks | Assessment Strategy |
|---|---|
| | get 1 moderate-level question correct or they get 2 moderate-level questions incorrect.  If the first easy question is answered incorrectly, learners will be directed to additional easy-level questions until they get 1 correct.  At that point, they will be directed to get moderate-level questions until they get 1 correct or if they get 2 incorrect. Two incorrect questions at any level will direct the learner to restart the specific component question string/path.<br><br>Learners (learner control) will have the opportunity to repeat Part I of this task an unlimited number of times as desired.<br><br>For Part 2, the application (system control) will direct the student to the question. |
| 2.3 Learners will use client-centered communication and counseling skills in instructional designer-subject matter expert meetings with little to no access to support. | **Mode:** e-learning<br><br>**Assessment Items:** There will be three parts to this assessment.  In Part I, learners will be presented with descriptions of three scenarios.  The learners must pick a scenario that is appropriate for the use of motivational interviewing.  The instructions will read as follows: Of the three provided scenarios, which do you think is most appropriate for the use of motivational interviewing?  (Two will be correct, one will be incorrect).<br><br>In Part II, learners will be presented with the chosen branched decision-making scenario.  The application will walk the learner through the role-play exercise with the application acting as the subject matter expert and the learner acting as the instructional designer.  The subject matter expert will say a line (also provided in text form), and the instructional designer (learner) |

| Learning Tasks | Assessment Strategy |
|---|---|
| | will select an appropriate response from a series of multiple-choice options. Based on those responses, the conversation will take various turns. |

In Part III, at the end of the scenario, a transcript will be provided to the learner. The learner will then be prompted to identify the client-centered communication and counseling skills used in the various interactions (each line of the learner's responses will have an accompanying drop-down box to select the appropriate skill).

**Support:** The support level is low. No lightbox with background information, procedures, and/or best practices will be provided. In Part I, the learners will get immediate feedback if they choose the scenario for which motivational interviewing is not appropriate. In Part II, while learners will not know after submitting a response definitively whether it is correct, they will see the response by the subject matter expert which may indicate correctness. In Part III, learners will not get immediate feedback on their responses.

Learners will be able to repeat the entire learning task one additional time with a different scenario.

**Criteria for evaluation:** The criteria for Part I, Part II, and Part III are based on accuracy. The learner identifies a scenario where motivational interviewing is appropriate to use. The learner also correctly identifies appropriate responses to a subject matter expert given the context of the scenario. The criteria for Part III are also based on accuracy as well as explanation and rationale.

| Learning Tasks | Assessment Strategy |
| --- | --- |
| | **Grading/Feedback:** Learners will not be able to proceed past Part I until an appropriate scenario is selected. This feedback will be automated and immediate. Immediate feedback will not be provided for Parts II and Parts III. Learners may be able to infer correct/incorrect responses in Part II due to the changing conversation with the subject matter expert but will not know definitively. Grading will be done automatically after submission of Part III.<br><br>**Learning Trajectory:** Learners (learner control) can choose one of two correct scenarios to complete. Learners (learner control) can reset their assessment or any part of their assessment UNTIL Part III is submitted. The entire assessment can be completed one additional time with the other previously un-picked scenario. The application (system control) will direct students from Part I to Part II to Part III as they progress. The system (system control) will only generate automated feedback for a given scenario after Part III is submitted. |

**Table A7**

*Description of Learning Task 2.2 Rubric*

| | Part II: Partial Transcript Responses |
|---|---|
| 3 | Each blank (4) contains a response that correctly assumes a specific client-based communication and counseling skill.  Responses are all reflective of appropriate client-based communication and counseling skills given the context of the transcript.  Responses are realistic and easy to read. |
| 2 | 75% of blanks (4) or better contain a response that correctly assumes a specific client-based communication and counseling skill.  Responses are mostly reflective of appropriate client-based communication and counseling skills.  Responses are mostly realistic and easy to read. |
| 1 | 50% of blanks (4) or better contain a response that correctly assumes a specific client-based communication skill.  Responses are less reflective of appropriate client-based communication and counseling skills.  Responses are not realistic or easy to read. |

**Module 3: Using Motivational Interviewing Techniques in Instructional Design Meetings with Subject Matter Experts.**  The performance objectives, instructional strategy, and outline follow.

Performance objective(s):

- In an instructional designer-subject matter expert meeting, use motivational interviewing techniques such as recognizing change talk.

- In an instructional designer-subject matter expert meeting, use motivational interviewing techniques such as eliciting change talk.

- In an instructional designer-subject matter expert meeting, use motivational interviewing techniques such as rolling with resistance.

- In an instructional designer-subject matter expert meeting, use motivational interviewing techniques such as negotiating a plan of change.

- In an instructional designer-subject matter expert meeting, use motivational interviewing techniques such as eliciting concrete steps forward.

All learning tasks in Module 3 are associated with the following Task class: 3. Apply motivational interviewing in an instructional designer-subject matter expert meeting/consultation, emphasizing applying motivational interviewing techniques such as recognizing change talk, eliciting change talk, rolling with resistance, negotiating a plan of change, and eliciting concrete steps forward. Table A8 provides the learning strategy for Module 3 by learning task and Table A9 provides a rubric for the requisite portion of the assessment.

**Table A8**

*Module 3: Description of Assessment Strategy by Learning Task*

| Learning Tasks | Assessment Strategy |
|---|---|
| 3.1 Learners will use motivational interviewing techniques in instructional designer-subject matter expert meetings with full access to support. | **Mode:** e-learning<br><br>**Assessment Items:** Learners will be presented with both easy (1) and moderate (1) difficulty-level questions for a total of two questions per component of motivational interviewing techniques (recognize change talk, elicit change talk, roll with resistance, negotiating a plan of change, and elicit concrete steps forward) for a total of 10 questions randomly selected within the components (ex. 1 easy question randomly selected from a pool of 3 easy questions about open questions).<br><br>Easy Questions (minimum pool of 3 per component): Given this exchange, select the component of motivational interviewing techniques that best describes the highlighted portion of the transcript. Six answer options including the five motivational interviewing techniques and one option stating none of the above will be provided.<br><br>Moderate Questions (minimum pool of 5 per component): Given the following transcript, match the highlighted portions with the corresponding component of motivational interviewing techniques.<br><br>**Support:** The support level is high. A lightbox with background information, procedures, and/or best practices will be available throughout. Further, learners will know immediately once an answer to a question is selected whether it is correct or incorrect along with explanation and re-direction as needed. Learners |

| Learning Tasks | Assessment Strategy |
|---|---|

will not be able to proceed to the next question until the previous one is answered correctly.

**Criteria for evaluation:** The criteria are content-based as it is an evaluation based on accuracy. The learner identifies where specific motivational interviewing techniques are being used by examining both simple and complex examples.

**Grading/Feedback:** Learners will not be able to proceed past any given question without selecting the correct response. Immediate feedback is provided after the answer is selected. Feedback is automated including correct/incorrect designations as well as explanations and re-direction based on selections.

**Learning Trajectory:** (Learners (learner control) can repeat this task an unlimited number of times as desired.

For each motivational interviewing technique (recognize change talk, elicit change talk, roll with resistance, negotiating a plan of change, and elicit concrete steps forward) learners will be presented earners will be presented at least 2 different cases where they will determine via Multiple Choice questions the appropriate context for using motivational interviewing.

3.2 Learners will use motivational interviewing techniques in instructional designer-subject matter expert meetings with diminishing access to support.

**Mode:** e-learning

**Assessment Items:** There are two parts to this assessment. In Part I, learners will be presented with easy (1) and moderate (1) difficulty-level questions for a minimum of 2 questions per motivational interviewing technique (recognize

| Learning Tasks | Assessment Strategy |
|---|---|

change talk, elicit change talk, roll with resistance, negotiating a plan of change, and elicit concrete steps forward) for a minimum of 10 questions. These questions will not be randomly selected as there is a specific trajectory that learners may experience based on their responses.

Easy Questions (minimum pool of 5): Given this exchange, select the motivational interviewing technique that best describes the highlighted portion of the transcript. Six answer options including the five motivational interviewing techniques (recognize change talk, elicit change talk, roll with resistance, negotiating a plan of change, and elicit concrete steps forward) and one option stating none of the above will be provided.

Moderate Questions (minimum pool of 7): Given the following transcript, match the highlighted portions with the corresponding motivational interviewing technique.

In Part II, learners will be presented with the same instructions that contain multiple parts: Given the following partial transcript, please fill in the blanks with your own statements reflecting appropriate use of recognize change talk, elicit change talk, roll with resistance, negotiating a plan of change, and elicit concrete steps forward.

**Support:** The support level is diminishing. A lightbox with background information, procedures, and/or best practices will no longer be available. Further, while learners will know after submitting a response to a question as to whether their response was correct or incorrect in Part 1, they will not get any feedback and will be pushed to the next question. However, correct responses

| Learning Tasks | Assessment Strategy |
|---|---|

and guidance as well as example responses for Part II will be provided immediately after completion for self-evaluation.

**Criteria for evaluation:** The criteria are content-based as it is an evaluation based on accuracy. The learner identifies where specific components of client-centered communication and counseling skills are being used by examining both simple and complex examples.

For Part II, the criteria for evaluation are content, process, impact-based. The following holistic rubric will be used to evaluate the written responses. See Learning Task 3.2 Rubric.

**Grading/Feedback:** For Part I, learners will get automated feedback as to whether their responses were correct or incorrect. Further, learners will be notified if they are required to restart the assessment due to meeting the threshold for incorrect answers. However, they will get no automated feedback as to the rationale. Successful completion of Part I is based on correct responses for 1 easy question and 1 moderate question. Being prompted to restart the assessment will be based on 2 incorrect responses in each section.

For Part II, learners will get manual feedback from the facilitator after completion. In the interim between completion and facilitator feedback, the learners will get immediate sample responses to provide the opportunity for self-evaluation.

**Learning Trajectory:** For Part I, the e-learning application (system control) will direct the students to different levels of questions. If the first easy question is answered correctly, learners will be directed to moderate-level questions where

| Learning Tasks | Assessment Strategy |
|---|---|
| | they will continue to get moderate-level questions until they get 1 moderate-level questions correct or they get 2 moderate-level questions incorrect.  If the first easy question is answered incorrectly, learners will be directed to additional easy-level questions until they get 1 correct.  At that point, they will be directed to get moderate-level questions until they get 1 correct or if they get 2 incorrect. Two incorrect questions at any level will direct the learner to restart the specific component question string/path.  Learners (learner control) will have the opportunity to repeat Part I of this task an unlimited number of times as desired. |
| | For Part 2, the application (system control) will direct the student to the question. |
| 3.3 Learners will use motivational interviewing techniques in instructional designer-subject matter expert meetings with little to no access to support. | **Mode:** e-learning |
| | **Assessment Items:** There will be three parts to this assessment.  In Part I, learners will be presented with descriptions of three scenarios.  The learners must pick a scenario that is appropriate for the use of motivational interviewing.  The instructions will read as follows: Of the three provided scenarios, which do you think is most appropriate for the use of motivational interviewing? (Two will be correct, one will be incorrect).  These are different from those seen in Module 2. |
| | In Part II, learners will be presented with the chosen branched decision-making scenario.  The application will walk the learner through the role-play exercise with the application acting as the subject matter expert and the learner acting as the instructional designer.  The subject matter expert will say a line (also provided in text form), and the instructional designer (learner) will select an appropriate response from a series of multiple-choice options.  Based on those responses, the conversation will take various turns. |

| Learning Tasks | Assessment Strategy |
|---|---|
|  | In Part III, at the end of the scenario, a transcript will be provided to the learner. The learner will then be prompted to identify the motivational interviewing techniques and some of the client-centered communication skills used in the various interactions (each line of the learner's responses will have an accompanying drop-down box to select the appropriate skill and technique).

**Support:** The support level is low.  No lightbox with background information, procedures, and/or best practices will be provided.  In Part I, the learners will get immediate feedback if they choose the scenario for which motivational interviewing is not appropriate.  In Part II, while learners will not know after submitting a response definitively whether it is correct, they will see the response by the subject matter expert which may indicate correctness.  In Part III, learners will not get immediate feedback on their responses.

Learners will be able to repeat the entire learning task one additional time with a different scenario.

**Criteria for evaluation:** The criteria for Part I, Part II, and Part III are based on accuracy.  The learner identifies a scenario where motivational interviewing is appropriate to use.  The learner also correctly identifies appropriate responses to a subject matter expert given the context of the scenario.  The criteria for Part III are also based on accuracy as well as explanation and rationale.

**Grading/Feedback:** Learners will not be able to proceed past Part I until an appropriate scenario is selected.  This feedback will be automated and immediate. Immediate feedback will not be provided for Parts II and Parts III.  Learners may be able to infer correct/incorrect responses in Part II due to the changing |

| Learning Tasks | Assessment Strategy |
|---|---|
| | conversation with the subject matter expert but will not know definitively. Grading will be done automatically after submission of Part III.<br><br>**Learning Trajectory:** Learners (learner control) can choose one of two correct scenarios to complete. Learners (learner control) can reset their assessment or any part of their assessment UNTIL Part III is submitted. The entire assessment can be completed one additional time with the other previously un-picked scenario. The application (system control) will direct students from Part I to Part II to Part III as they progress. The system (system control) will only generate automated feedback for a given scenario after Part III is submitted. |

**Table A9**

*Description of Learning Task 3.2 Rubric*

| | Part II: Partial Transcript Responses |
|---|---|
| 3 | Each blank (5) contains a response that correctly assumes a specific motivational interviewing technique.  Responses are all reflective of appropriate motivational interviewing techniques given the context of the transcript.  Responses are realistic and easy to read. |
| 2 | 75% of blanks (4) or better contain a response that correctly assumes a motivational interviewing technique.  Responses are mostly reflective of appropriate motivational interviewing techniques.  Responses are mostly realistic and easy to read. |
| 1 | 50% of blanks (4) or better contain a response that correctly assumes a specific motivational interviewing technique.  Responses are less reflective of appropriate motivational interviewing techniques.  Responses are not realistic or easy to read. |

**Module 4: Applying Motivational Interviewing in Instructional Design Meetings with Subject Matter Experts.** The performance objectives, instructional strategy, and outline follow.

Performance objective(s):

- In an instructional designer-subject matter expert meeting, apply motivational interviewing including client-centered communication and counseling skills and motivational interviewing techniques effectively.

All learning tasks in Module 4 are associated with the following task class: 4. Apply motivational interviewing in an instructional designer-subject matter expert meeting/consultation, emphasizing all the above.  Table A10 provides the learning strategy for Module 4 by learning task and Table A11 provides a rubric for the requisite portion of the assessment.

**Table A10**

*Module 4: Description of Assessment Strategy by Learning Task*

| Learning Tasks | Assessment Strategy |
|---|---|
| 4.1 Learners will apply motivational interviewing including client-centered communication and counseling skills and motivational interviewing techniques in instructional designer-subject matter expert meetings with full access to support. | **Mode:** e-learning<br><br>**Assessment Items:** Learners will be presented with a partial transcript to complete (from a pool of 3 possible transcripts). The instructions will state as follows: Given the following partial transcript, please fill in the blanks with your own statements reflecting appropriate use of client-centered communication skills and motivational interviewing techniques. After each statement, please note the skill(s) or technique(s) being used in parentheses.<br><br>**Support:** The support level is high. A lightbox with background information, procedures, and/or best practices will be available. While learners will not know after submitting their responses which ones were correct or incorrect immediately, correct responses and guidance, as well as example responses for Part II, will be provided immediately after completion for self-evaluation.<br><br>**Criteria for evaluation:** The criteria for evaluation are content, process, impact-based. The following holistic rubric will be used to evaluate the written responses. See Learning Task 4.1 Rubric.<br><br>**Grading/Feedback:** Learners will get manual feedback from the facilitator after completion. In the interim between completion and |

| Learning Tasks | Assessment Strategy |
|---|---|
| | facilitator feedback, the learners will get immediate sample responses to provide the opportunity for self-evaluation.<br><br>**Learning Trajectory:** The e-learning application will direct students to the randomized partial transcript and will release the sample responses after completion. Learners may go back and complete this task one additional time with a different scenario. |
| 4.2 Learners will apply motivational interviewing including client-centered communication and counseling skills and motivational interviewing techniques in instructional designer-subject matter expert meetings with little to no access to support. | **Mode:** e-learning<br><br>**Assessment Items:** There will be three parts to this assessment. In Part I, learners will be presented with descriptions of three scenarios. The learners must pick a scenario that is appropriate for the use of motivational interviewing. The instructions will read as follows: Of the three provided scenarios, which do you think is most appropriate for the use of motivational interviewing? (Two will be correct, one will be incorrect). These are different from those seen in Modules 2 and 3.<br><br>In Part II, learners will be presented with the chosen branched decision-making scenario. The application will walk the learner through the role-play exercise with the application acting as the subject matter expert and the learner acting as the instructional designer. The subject matter expert will say a line (also provided in text form), and the instructional designer (learner) will select an appropriate response from a series of multiple-choice options. Based on those responses, the conversation will take various turns. |

| Learning Tasks | Assessment Strategy |
| --- | --- |
| | In Part III, at the end of the scenario, a transcript will be provided to the learner. The learner will then be prompted to identify the motivational interviewing techniques and some of the client-centered communication skills used in the various interactions (each line of the learner's responses will have an accompanying drop-down box to select the appropriate skill and technique).

**Support:** The support level is low. No lightbox with background information, procedures, and/or best practices will be provided. In Part I, the learners will get immediate feedback if they choose the scenario for which Motivational Interviewing is not appropriate. In Part II, while learners will not know after submitting a response definitively whether it is correct, they will see the response by the subject matter expert which may indicate correctness. In Part III, learners will not get immediate feedback on their responses.

Learners will be able to repeat the entire learning task one additional time with a different scenario.

**Criteria for evaluation:** The criteria for Part I, Part II, and Part III are based on accuracy. The learner identifies a scenario where motivational interviewing is appropriate to use. The learner also correctly identifies appropriate responses to a subject matter expert given the context of the scenario. The criteria for Part III are also based on accuracy as well as explanation and rationale. |

| Learning Tasks | Assessment Strategy |
|---|---|
| | **Grading/Feedback:** Learners will not be able to proceed past Part I until an appropriate scenario is selected.  This feedback will be automated and immediate.  Immediate feedback will not be provided for Parts II and Parts III.  Learners may be able to infer correct/incorrect responses in Part II due to the changing conversation with the subject matter expert but will not know definitively.  Grading will be done automatically after submission of Part III.<br><br>**Learning Trajectory:** Learners (learner control) can choose one of two correct scenarios to complete.  Learners (learner control) can reset their assessment or any part of their assessment UNTIL Part III is submitted.  The entire assessment can be completed one additional time with the other previously un-picked scenario.  The application (system control) will direct students from Part I to Part II to Part III as they progress.  The system (system control) will only generate automated feedback for a given scenario after Part III is submitted. |

**Table A11**

*Description of Learning Task 4.1 Rubric*

| | Partial Transcript Responses |
|---|---|
| 3 | Each blank (varies) contains a response that correctly assumes a specific motivational interviewing technique and/or client-based communication and counseling skills. Responses are all reflective of appropriate motivational interviewing techniques and/or client-based communication and counseling skills given the context of the transcript. Responses are realistic and easy to read. |
| 2 | 75% of blanks (varies) or better contain a response that correctly assumes a motivational interviewing technique and/or client-based communication and counseling skills. Responses are mostly reflective of appropriate motivational interviewing techniques and/or client-based communication and counseling skills. Responses are mostly realistic and easy to read. |
| 1 | 50% of blanks (varies) or better contain a response that correctly assumes a specific motivational interviewing technique and/or client-based communication and counseling skills. Responses are less reflective of appropriate motivational interviewing techniques and/or client-based communication and counseling skills. Responses are not realistic or easy to read. |

***Return on Investment Analysis***

The Return on Investment (ROI) Analysis was based on revised projected cost estimates for each phase of the ADDIE conceptual framework. The total revised cost estimate is calculated at $37,609.36. The benefit to the training which is measured as tuition recovered is calculated as $2,825.56. The ROI is calculated with the following formula: (Training Benefit/Updated Total Cost Estimate) x 100. Given the formula, the ROI for this project was calculated at 7.5%. It should be noted that this is a very conservative calculation and should be revisited as part of an evaluation plan after the

implementation of the training.  The revised cost estimates, calculations, and

assumptions can be provided upon request.

*Next Steps*

Again, training in motivational interviewing may offer instructional designers

an additional tool to use when addressing ambivalence to change in subject matter

experts.  The training acknowledges that motivational interviewing is a complex skill

that will require learners to have more support earlier in the instruction.  As the

learners progress, the support will diminish, and the assessments will be more

reflective of actual desired performance as a result.

In terms of next steps, the following is suggested:

- Feedback on overall design.  Please provide feedback on overall design.  The

    faster feedback is garnered at this stage, the sooner revisions can be made and

    subsequently the Develop phase can commence.

Your feedback on this is welcome and the consideration is appreciated.  Please

contact the project manager/lead instructional designer for additional information

and/or to provide feedback.

**Appendix B**

**Analysis Summary Components**

This appendix contains the components of the Analysis Summary (see Appendix A) as suggested by Branch (2009). It includes the training needs assessment plan, instrument, and results, the purpose statement, instructional goals, learner analysis summary, resource audit and summary, the estimated cost sheet, and a project management plan (Branch, 2009, p. 24).

**Training Needs Assessment Plan, Instrument and Results**

All training needs assessment procedures are from Rossett (1987).

***Step 1: Assess the Context***

To assess the context, the guiding questions for the purposes of this project

were answered in Table B1 (Rossett, 1987, p. 226-227).

**Table B1**

*Step 1 Guiding Questions and Responses*

| Questions | Responses |
|---|---|
| 1. Who wants this problem solved or this new technology introduced? Why? | A combination of the IDs and support staff themselves as well as the leadership within the instructional design unit are interested in solving this problem. The lack of communication and communication can have a detrimental effect on the designers' work and their relationship with faculty. As a result, the designers are interested in improving that. Further, the leadership within the unit are interested in increasing the effectiveness of the designers' collaborative efforts with SMEs. |
| 2. Who doesn't? Is there anyone who prefers for things to stay the same? Why? | No one prefers for things to stay the same. The one hiccup is that some designers may feel like their work and techniques are under attack when this process is not meant to be critical of what they are doing, but merely to add to that toolbox or skillset. Further, some designers may object to the onus of the relationship being entirely on them. |

| Questions | Responses |
| --- | --- |
| 3. Is this a solution to a performance problem or an innovation which is being introduced? If it is a performance problem, who might fear or attempt to block your efforts to find the cause(s) of the situation? If it is a new system, who might not want to support this change? | This is both. It is a possible solution to a performance problem related to the breakdown in the collaborative relationship between SMEs and IDs. MI techniques are an innovation in that it is a set of techniques not well known to be applied in this context. As stated in #2, it is possible that some of the IDs may fear that their performance is being critiqued in a negative way when the focus is not on what is pointing out what is done wrong, but instead on how to improve what they do even further. Since it is an innovation, there may be some question as to its efficacy at first which is understandable as it is untested in this context. |
| 4. Who are the sources of information for this TNA? Will they be accessible? Will you be able to go back to them again and again as you need additional information? | The sources of information will be the leadership within the unit as well as the instructional design staff. There is the possibility of reaching out to IDs at other institutions throughout the state to get a wider span of responses to questions which will lead to a more complete picture as to what the needs of designers in general are. The leadership within the unit will be accessible to me continually and will be resources that I can come back to repeatedly. |
| 5. What records might provide useful information? Will they be accessible? Will you be able to go back to them again and again as you need additional information? | There are not institutional records that will be available. Data associated with consultations are not kept. In my experience, performance appraisals rarely focus on this aspect of the designers work unless it is egregious, and it is felt that the designers did not act in accordance with expectations. |
| 6. How much support does this entire project have? Does the TNA also | This project has the support of the leadership of the unit and are thrilled to |

| Questions | Responses |
| --- | --- |
| have support, or will you have to fight for resources to conduct it? How much time do you have? | participate and ultimately hopefully improve the consultation experiences for both IDs and SMEs.  The TNA also has the support of the leadership.  The designers seem ok with the idea.  I do not have a lot of time to conduct this TNA – maybe a month. |
| 7.  Who must be kept abreast of your findings?  Who else might want to know?  Who must not know – at least at first? | The leadership of the instructional design unit should be kept abreast of the findings.  The capstone chair and committee should be updated as to the findings as well.  The IDs will be interested in the results but should wait until results are aggregated and sanitized to protect anonymity depending on data collection methods. |

## Step 2: Determine Purposes

To determine the purposes for the training, the guiding questions for the

purposes of this project were answered in Table B2 (Rossett, 1987, p. 230-232).

**Table B2**

*Step 2 Guiding Questions and Responses*

| Questions | Responses |
| --- | --- |
| 1.  Is this a problem in a familiar job or is it a new system or technology? | Again, this is both.  This is a performance issue within the job of an ID in higher education.  IDs work constantly with SME often under pressing deadlines which can impact the working relationship.  We are also hoping to introduce an innovation in communication called motivational interviewing to the ID toolbox. |
| 2.  What are my purposes for this study?  Do I seek information about how they should be performing? | To confirm the speculated need for motivational interviewing training for IDs.  I am not looking for information |

| Questions | Responses |
|---|---|
| How they are performing? How they feel about performance or the system? The cause(s) of the problem? Their opinions on solutions? | about how they should be performing, but instead am interested in their current experiences. I am also interested in their openness to motivational interviewing training and in what formats/timeline. As such, I am interested in their thoughts on the proposed solution. I am focused on identifying the feelings of the employees, identifying their current strategies and actions, and their opinion on what causes the breakdown in communication with SMEs. So, my purposes are focused on feelings, actuals, and causes. |
| 3. Once you've acquired some information, what else do you need to know? Are you confident that you have fulfilled that purpose? Which purposes remain? | It is difficult to get a good read on what the actuals are because they are self-reported, and experience based. In the future, it would be interesting to have IDs keep a log and/or to do a survey or interviews with SMEs as well. Also, I would like a much better response rate. However, for this purpose, I feel confident that I have fulfilled the purpose and can expand upon that further later. This is something we can revisit later. |

*Step 3: Select Techniques and Tools*

**Technique Selection and Rationale.**  The technique selected will be that of a needs assessment.  Of the three options available (extant data analysis, needs assessment, and subject matter analysis and task analysis), a needs assessment is most appropriate due to its ability to provide information on a multitude of purposes.  The other techniques require reviewing performance appraisals and/or documents that are not available to me in this context.

**Tool Selection and Rationale.**  The tools selected will include both interviews and questionnaires/surveys.  The questionnaire for the IDs is appropriate because of the rapid nature of the data collection as well as the ability to expand the population pool beyond the organization.  The interviews are appropriate for the ID leadership due to the low number of potential participants (2).  Both tools are appropriate to collect data for all purposes (Rossett, 1987, p. 232-233).

*Step 4: Develop TNA Plan*

The training needs assessment planner as seen in Table B3 followed the pattern and instructions found in Rossett (1987, p. 237-241).

**Table B3**

*Training Needs Assessment Planner*

| Context | | Purposes | | |
|---|---|---|---|---|
| **Resources** | **Constraints** | **Description** | **Status** | **Sources** |
| Unit Leadership | Time | Optimals | Not Applicable | • Leadership |
| Unit IDs | | Actuals | Need | • IDs,<br>• Instructional Support Specialists,<br>• Leadership |
| Unit Instructional Support Specialists | | Feelings | Need | • IDs,<br>• Instructional Support Specialists,<br>• Leadership |
| State-wide IDs | | Cause(s) | Need | • IDs<br>• Instructional Support Specialists |
| --- | | Solutions | Not Applicable | --- |

| **Stages/Techniques** | **Tools and Sources** |
|---|---|
| 1. Needs Assessment | Interview with leadership |
| 2. Needs Assessment | Survey distributed to IDs and support specialists, both within the Unit and state-wide |

*Step 5: Develop Stage Planners*

Two stage planners were created for the purposes of this training needs assessment. Both follow the instructions and pattern outlined in Rossett (1987, p. 241-246).

**TNA Stage Planner 1: Leadership.**

1. Subject of TNA: Leadership of Unit                          Stage No. 1

2. Summary of what you already know about the subject:

Leadership of the Unit of includes the Senior Instructional Designer and the Executive Director. They have day-to-day interactions with both IDs and instructional design staff as well as SMEs. They are privy to breakdowns in communication between staff and SMEs.

3. Summary of information being sought during this stage:

Leadership will speak to their experiences with IDs and SME breakdowns in relationships and communication.

4. Who or what are the sources of information for this stage?

The Senior Instructional Design and Executive Director are the sources of information for this stage.

5. What TNA tool(s) will be used to carry out this stage?

Interviews will be conducted.

6. If you will be interviewing or surveying, what questions will you ask?

The interview questions are as follows:

1. What is your name, and current title?

2. How long have you held your title?

3. How many instructional designers and instructional support staff do you supervise?

4. What is the educational background of your staff?

5. What is the experience of your staff as related to instructional design?

6. What kind of professional development does your staff generally do each year? Focused on learning theory, learning strategies, technology, communication, project management, etc.?

7. What professional development format does your staff generally participate in? face-to-face, webinar, asynchronous course (with or without synchronous elements)

8. How much time do you allow for your staff to participate in professional development a year?

9. What do you think are some of the most important skills for instructional designers and instructional support staff to have? Why?

10. In your experience, do you hear about instructional designers and faculty struggling with their relationships with one another?

11. What have you most often heard as reasons for the breakdown of the instructional designer and subject matter expert relationship?

12. When there is an issue with the instructional designer-subject matter expert relationship, what steps are generally taken? Do the instructional designers handle it? If so, how? Do you step in?

13. Who do you think bears the onus of maintaining the relationship? The instructional designer or subject matter expert? Why?

14. What benefit is there, in your experience, to a well-functioning instructional designer-subject matter expert relationship?

**TNA Stage Planner 2: Instructional Design Professionals.**

1. Subject of TNA: IDs and Instructional Support Specialists,

both within the unit and state-wide                                          Stage No. 1

2. Summary of what you already know about the subject:

Within the unit there are 4 IDs and 3 support specialists that each consult with subject matter experts daily to varying degrees. Within the midwestern state ID association email list/group, there are approximately 65 members who hold varying positions and have myriad experiences with subject matter experts. These members are largely situated in higher education institutions within the state.

3. Summary of information being sought during this stage:

Within the unit, IDs and support specialists will speak to their experiences with subject matter experts, whether they experience issues with subject matter expert ambivalence to change, and what tools they currently use to overcome that ambivalence. Further, preferences regarding professional development activities will also be explored to help guide future development of the training. This information will be specific to the targeted institution. Respondents from the instructional design association email list/group will provide the same information, just not specific to the targeted institution.

4. Who or what are the sources of information for this stage?

   IDs and support specialists are the sources of information for this stage.

5. What TNA tool(s) will be used to carry out this stage?

   A Questionnaire/Survey will be conducted.

6. If you will be interviewing or surveying, what questions will you ask?

   The interview questions are as follows:

Background Information

1. Please provide your current title:

2. Please select the category that best describes your position: instructional designer, instructional support

3. Please select your highest level of educational attainment: high school, college, master's, doctorate, other

4. Please select the range that best describes your years of experience in instructional design: 0-1, 2-4, 5-9, 10 or more

ID-SME Relationship

5. Please select the range that best describes how many subject matter experts you work within a year: 0-10, 11-20, 21-30, more than 31

6. Please select the range that best describes how many subject matter experts you work with over a long period (3 months or more) within a year: 0-5, 6-10, 11-15, 16-20, more than 21.

7. Please rate how important you find the relationship of the subject matter expert and the instructional designer/support specialist: Not important at all to Very Important

8. Please rate how responsible you feel for the state of the relationship with the subject matter experts with whom you work: Not at all to Very

9. Please describe some challenges you have faced working with subject matter experts.

10. Please select how often you generally experience subject matter experts pushing back on your suggestions/advice. Not often at all to very often.

11. Please explain how you handle subject matter experts not following or agreeing with your suggestions/advice. What do you do in these situations?

12. Please describe a time that you were unable to convince a subject matter expert to move forward with a suggestion/piece of advice. What happened? What was the end result? Did it affect your relationship with the subject matter expert?

13. Please describe a time that you were initially unable to convince a subject matter expert to move forward with a suggestion/piece of advice, but eventually convinced them to do so. What happened? What was the end result?

Professional Development

14. Please select the areas that you tend to emphasize for professional

development (for you): Learning Theories, Instructional Design Models,

Technology, Project Management, Leadership, Communication,

Psychology, Other [Enter]

15. Please select the formats you tend to prefer for professional development:

face-to-face, webinar, asynchronous course (with or without synchronous

elements)

16. How much time do you allocate to professional development a year? 0-5

hours, 6-10 hours, 11-15 hours, 16-20 hours, more than 21 hours

17. How much support do you have for pursuing professional development

from your supervisors/institution? Low - High

18. How does professional development focused on strategies to improve the

instructional designer-subject matter expert rate as a priority for your

professional development?  Low – High

### Step 6: Communicate Results

Rossett (1987) recommends six steps to ensure that the TNA is effectively

communicated with stakeholders (p. 251-267).

**Step 1. Determine with whom you must communicate.**  In this case, unit

leadership (supporters, subject matter experts, and managers) and unit IDs and

support specialists (supporters, SMEs) should be communicated with as each group as

a vested interest in the outcome and potential training.

**Step 2. Determine why you are communicating.**  In this case, the goal of communication is to provide information to the stakeholders about the current performance and actual issues facing IDs who work with SMEs, to provide support for the capstone project, to record the results of the TNA for the future, as well as to provide recommendations and requests for future action (in this case, the capstone project implementation).

**Step 3. Determine how to communicate.**  In this case, unit leadership prefers a formal written report to be able to reference and pass along to administrators as needed.  This will be generated in the form of the Analysis Summary (see Appendix A).  The unit IDs and support specialists prefer either an informal oral report or an informal written report.  This will be provided orally during a team meeting at a later date.

**Step 4. Answer typical questions about results.**  The typical questions and responses about the results are as follows:

1.  Why did you carry out this stage of assessment or the entire TNA study?  The goal was to collect information to show that instructional design professionals in the midwestern state and specifically in this instructional design unit does run into issues with working with SMEs and that the design professionals do feel responsible for the course of the relationship.

2.  How did you gather TNA information?  The information was gathered via survey for the instructional design professionals both within the unit and

statewide.  The instructional design supervisors for the unit were also

interviewed to give a bit more context and dimension to the results.

3.  What did you find out?  This most pertinent information is as follows:

- IDs and support staff find their relationships with SMEs to be

   moderately to very important.  Within the unit, 80% of the

   respondents found the relationship to be very important as did

   77.78% of IDs statewide.

- Within in the unit, 100% of IDs feel very responsible for the state

   of the relationship with SMEs.  The unit's supervisors also both

   felt that this was the case.  This is in contrast with 44.44% of IDs

   statewide who felt very responsible for the relationship and

   55.56% who felt moderately responsible.

- Most IDs and support staff indicated that they experience SMEs

   pushing back on their suggestions/advice slightly or moderately

   often.  However, most IDs and support staff stated that it does not

   negatively affect the relationships due to deferring to the SMEs.

- In terms of how IDs and support staff handle SMEs not following

   or agreeing with the advice given, the unit IDs provided a varied

   list of potential solutions including using research or examples,

   using team reinforcement, suggesting incremental change, and

   dropping the suggestion and moving on, among others.  The

statewide IDs indicated that they drop suggestions and move on as
well (mentioned the most), reminded SMEs of their desire to solve
a specific problem, and explain consequences.  The idea of
dropping the suggestion and moving on was echoed by the
supervisors who felt that the designers defer often to the SMEs to
preserve the relationship.

- Those IDs within the unit found largely that SME's reluctance to
make changes is a common challenge that they face working with
SMEs.  Statewide, IDs reported that a lack of time, lack of respect
for the ID, and lack of understanding of the role of an ID were the
most frequently noted challenges they face when working with
SMEs.

- The preferred modes for professional development are webinars
followed by asynchronous courses both within the unit and
statewide.

- Most IDs within the unit and statewide have medium to high
support for pursuing professional development from their
supervisors/institutions.

- Despite IDs agreeing how important the relationship between ID-
SME is and how managing that is difficult, most IDs indicated that
professional development focused on strategies to improve the ID-

SME relationship rated low to medium in terms priority for their

professional development.  However, the unit instructional design

supervisors indicated that such training would be welcome and

warranted for their IDs and support staff.

4.  What does it mean to me? Us? The company or agency? Advanced stages of

TNA? The project?  The results indicate that tools to help IDs maintain

relationships with SMEs and allow for change and innovation is needed.

Simply deferring to the SME does not allow for meaningful change to the

instruction and creates an environment where the ID is unnecessary except as

a helper of sorts.   Despite this, IDs may not recognize and prioritize

professional development in this area.  As a result, it will be necessary for

leadership in the unit and beyond to support training in this area.  In addition,

webinars tend to be the most popular format for professional development.

However, asynchronous courses are a close second.  Either format would

work for this topic area and comes down to preference by the organization,

institution, designer, and facilitator(s).  If one of the IDs is used as a

facilitator, as is the current plan, an asynchronous course would be more

advantageous to allow for the ID to accomplish more in a day than just the

webinar.  Further, it allows for more feedback to learners and continuous

engagement.

**Step 5. Use Computers to facilitate communication.**  The results of the survey

are included below and in Tables B4 – B23 and Figures B1-B2.

Instructional Design Unit, n=5/7, response rate: 71.4%

Statewide, n=9/65, response rate: 13.8%

**Table B4**

*ID Survey Results: Classification of ID Role*

|  | Instructional Designer | Instructional Support |
|---|---|---|
| Instructional Design Unit (n=5) | 60% (3) | 40% (2) |
| Statewide (n=9) | 77.78% (7) | 22.22% (2) |

**Table B5**

*ID Survey Results: Educational Attainment Level*

|  | High School | College | Master's | Doctorate | Other |
|---|---|---|---|---|---|
| Instructional Design Unit (n=5) | 0 | 40% (2) | 60% (3) | 0 | 0 |
| Statewide (n=9) | 0 | 0 | 77.78% (7) | 22.22% (2) | 0 |

**Table B6**

*ID Survey Results: ID Experience in Years*

|  | 0-1 | 2-4 | 5-9 | 10 or more |
|---|---|---|---|---|
| Instructional Design Unit (n=5) | 20% (1) | 20% (1) | 40% (2) | 20% (1) |
| Statewide (n=9) | 0 | 11.11% (1) | 33.33% (3) | 55.56% (5) |

**Table B7**

*ID Survey Results: Number of SMEs Worked with Per Year*

| | 0-10 | 11-20 | 21-30 | More than 31 |
|---|---|---|---|---|
| Instructional Design Unit (n=5) | 20% (1) | 40% (2) | 40% (2) | 0 |
| Statewide (n=9) | 22.22% (2) | 33.33% (3) | 22.22% (2) | 22.22% (2) |

**Table B8**

*ID Survey Results: Number of SMEs Worked Extensively with Per Year (3 Months or More)*

| | 0-5 | 6-10 | 11-15 | 16-20 | More than 21 |
|---|---|---|---|---|---|
| Instructional Design Unit (n=5) | 60% (3) | 40% (2) | 0 | 0 | 0 |
| Statewide (n=9) | 44.44% (4) | 22.22% (2) | 11.11% (1) | 11.11% (1) | 11.11% (1) |

**Table B9**

*ID Survey Results: Importance of ID-SME Relationship*

| | Very Important | Moderately Important | Slightly Important | Not At All Important |
|---|---|---|---|---|
| Instructional Design Unit (n=5) | 80% (4) | 20% (1) | 0 | 0 |
| Statewide (n=9) | 77.78% (7) | 22.22% (2) | 0 | 0 |

**Table B10**

*ID Survey Results: Responsibility of ID for the ID-SME Relationship*

|  | Very Responsible | Moderately Responsible | Slightly Responsible | Not At All Responsible |
|---|---|---|---|---|
| Instructional Design Unit (n=5) | 100% (5) | 0 | 0 | 0 |
| Statewide (n=9) | 44.44% (4) | 55.56% (5) | 0 | 0 |

**Table B11**

*ID Survey Results: Challenges IDs Face When Working with SMEs*

| Themes | Instructional Design Unit (n=5) | Statewide (n=7) |
|---|---|---|
| Ambivalent to Change | 57.14% (4) | 7.14% (1) |
| Lack of Time | 14.28% (1) | 28.57% (4) |
| Maintaining Relationship | 14.28% (1) | 0 |
| Lack of Respect for ID | 14.28% (1) | 14.28% (2) |
| Poor Writing | 0 | 7.14% (1) |
| Lack of Vision | 0 | 7.14% (1) |
| Lack of Commitment | 0 | 7.14% (1) |
| Lack of Understanding of the ID Role | 0 | 14.28% (2) |
| Lack of Understanding of the Importance of Best Practices | 0 | 7.14% (1) |
| Lack of Skill | 0 | 7.14% (1) |

**Table B12**

*ID Survey Results: Frequency of SMEs Pushing Back on ID Advice*

|  | Very Often | Moderately Often | Slightly Often | Not Often At All |
|---|---|---|---|---|
| Instructional Design Unit (n=5) | 0 | 20% (1) | 60% (3) | 20% (1) |
| Statewide (n=9) | 11.11% (1) | 33.33% (3) | 44.44% (4) | 11.11% (1) |

**Table B13**

*ID Survey Results: Techniques Used to Persuade SMEs to Follow ID Advice*

| Themes | Instructional Design Unit (n=5) | Statewide (n=6) |
|---|---|---|
| Use Team Reinforcement | 10% (1) | 10% (1) |
| Remind of Desire to Solve a Specific Problem | 10% (1) | 10% (1) |
| Appeal to Desire to Improve Learning and/or Student Experience | 10% (1) | 10% (1) |
| Suggest Incremental Change | 10% (1) | 0 |
| Identify Root of Resistance | 10% (1) | 0 |
| Identify Alternative Solutions | 10% (1) | 0 |
| Use Research | 20% (2) | 0 |
| Use Examples | 10% (1) | 0 |
| Drop Suggestion and Move On | 10% (1) | 40% (4) |
| Use Supervisor or Key Stakeholder | 0 | 10% (1) |
| Explain Consequences | 0 | 10% (1) |
| Adapt Suggestion | 0 | 10% (1) |

**Table B14**

*ID Survey Results: Frequency of Relationship Implications in ID-SME Disagreements*

| | Negative Affected Relationship | Did Not Negatively Affect Relationship | Notes |
|---|---|---|---|
| Instructional Design Unit (n=4) | 25% (1) | 75% (3) | While 3 did indicate that the overall relationship was not negatively affected, it should be noted that several stated that the SME knew that they did not have to take the ID's advice. |
| Statewide (n=4) | 25% (1) | 75% (3) | All four indicated that faculty do not and/or did not have to take ID suggestions. |

**Table B15**

*ID Survey Results: Techniques Used for Successful Persuasion of SMEs.*

| Themes | Instructional Design Unit (n=4) | Statewide (n=5) |
|---|---|---|
| Offer Temporary Change for Evaluation | 25% (1) | 25% (2) |
| Offer Prototype for Evaluation | 50% (2) | 25% (2) |
| Not an Issue – All Take Suggestions | 25% (1) | 0 |
| Bring Up Suggestion Again | 0 | 12.5% (1) |
| Asking Questions | 0 | 12.5% (1) |
| Listening | 0 | 12.5% (1) |
| Providing Requested Assistance | 0 | 12.5% (1) |

**Table B16**

*ID Survey Results: ID Preferences for Professional Development Topics*

|  | Instructional Design Unit (n=5) | Statewide (n=9) |
|---|---|---|
| Learning Theories | 26.67% (4) | 13.33% (4) |
| Instructional Design Models | 20% (3) | 16.67% (5) |
| Technology | 13.33% (2) | 30% (9) |
| Project Management | 6.67% (1) | 10% (3) |
| Leadership | 6.67% (1) | 6.67% (2) |
| Communication | 6.67% (1) | 13.33% (4) |
| Psychology | 20% (3) | 3.33% (1) |
| Other: Software Applications | 0 | 3.33% (1) |
| Other: LMS | 0 | 3.33% (1) |

**Table B17**

*ID Survey Results: ID Preferences for Professional Development Formats*

|  | Instructional Design Unit (n=5) | Statewide (n=9) |
|---|---|---|
| Face-to-Face | 20% (2) | 16.67% (4) |
| Webinar | 40% (4) | 33.33% (8) |
| Asynchronous Course (with synchronous elements) | 30% (3) | 25% (6) |
| Asynchronous Course (with no synchronous elements) | 10% (1) | 25% (6) |

**Table B18**

*ID Survey Results: ID Time Allocation in Hours Per Year to Professional Development*

|  | Instructional Design Unit (n=5) | Statewide (n=9) |
|---|---|---|
| 0-5 hours | 40% (2) | 11.11% (1) |
| 6-10 hours | 20% (1) | 22.22% (2) |
| 11-15 hours | 0 | 11.11% (1) |
| 16-20 hours | 40% (2) | 22.22% (2) |
| More than 21 hours | 0 | 33.33% (3) |

**Table B19**

*ID Survey Results: ID Institutional/Organizational Support Level for Professional Development*

|  | High | Medium | Low |
|---|---|---|---|
| Instructional Design Unit (n=5) | 80% (4) | 20% (1) | 0 |
| Statewide (n=9) | 44.44% (4) | 33.33% (3) | 22.22% (2) |

**Table B20**

*ID Survey Results: ID Priority Assignment for Professional Development Centered on the ID-SME Relationship*

|  | High | Medium | Low |
|---|---|---|---|
| Instructional Design Unit (n=5) | 40% (2) | 20% (1) | 40% (2) |
| Statewide (n=9) | 11% (1) | 33.33% (3) | 55.56% (5) |

**Table B21**

*ID Survey Results: Relationship between ID Role and Priority Assignment for Professional Development Centered on the ID-SME Relationship*

| | Unit | | | Statewide | | |
|---|---|---|---|---|---|---|
| | High | Medium | Low | High | Medium | Low |
| Instructional designer | 33.3% (1) | 0 | 66.7% (2) | 14.3% (1) | 28.6% (2) | 57.1% (4) |
| Instructional support | 50% (1) | 50% (1) | 0 | 0 | 50% (1) | 50% (1) |

Based on the data in Table B21, there is no statistically significant relationship between the ID role and the priority selected for professional development on the ID-SME relationship for both the unit and statewide. For the unit, the Chi-Square is 2.92 with 2 degrees of freedom. The P-Value is 0.233 and the Effect Size (Cramér's V) is 0.764 with a sample size of 5. Statewide, the Chi-Square is 0.514 with 2 degrees of freedom. The P-Value is 0.773 and the Effect Size (Cramér's V) is 0.239 with a sample size of 9.

**Table B22**

*ID Survey Results: Relationship between Level of Educational Attainment and Priority Assignment for Professional Development Centered on the ID-SME Relationship*

|  | Unit | | | Statewide | | |
|---|---|---|---|---|---|---|
|  | High | Medium | Low | High | Medium | Low |
| College | 50% (1) | 50% (1) | 0 | 0 | 0 | 0 |
| Master's | 33% (1) | 0 | 66.67% (2) | 14.3% (1) | 28.6% (2) | 57.1% (4) |
| Doctorate | 0 | 0 | 0 | 0 | 50% (1) | 50% (1) |

Based on the data in Table B22, there is no statistically significant relationship between the level of educational attainment and the priority selected for professional development on the ID-SME relationship for both the unit and statewide. For the unit, the Chi-Square is 2.92 with 2 degrees of freedom. The P-Value is 0.233 and the Effect Size (Cramér's V) is 0.764 with a sample size of 5. Statewide, the Chi-Square is 0.514 with 2 degrees of freedom. The P-Value is 0.773 and the Effect Size (Cramér's V) is 0.239 with a sample size of 9.

**Table B23**

*ID Survey Results: Relationship between Years of Experience and Priority Assignment for Professional Development Centered on the ID-SME Relationship*

| | Unit | | | Statewide | | |
|---|---|---|---|---|---|---|
| | High | Medium | Low | High | Medium | Low |
| 0-1 Years | 0 | 100% (1) | 0 | 0 | 0 | 0 |
| 2-4 Years | 100% (1) | 0 | 0 | 0 | 0 | 100% (1) |
| 5-9 Years | 50% (1) | 0 | 50% (1) | 0 | 66.7% (2) | 33.3% (1) |
| More than 10 Years | 0 | 0 | 100% (1) | 20% (1) | 20% (1) | 60% (3) |

Based on the data in Table B23, there is no statistically significant relationship between the years of experience and the priority selected for professional development on the ID-SME relationship for both the unit and statewide. For the unit, the Chi-Square is 7.50 with 6 degrees of freedom. The P-Value is 0.277 and the Effect Size (Cramér's V) is 0.866 with a sample size of 5. Statewide, the Chi-Square is 3.04 with 4 degrees of freedom. The P-Value is 0.551 and the Effect Size (Cramér's V) is 0.411 with a sample size of 9.

**Figure B1**

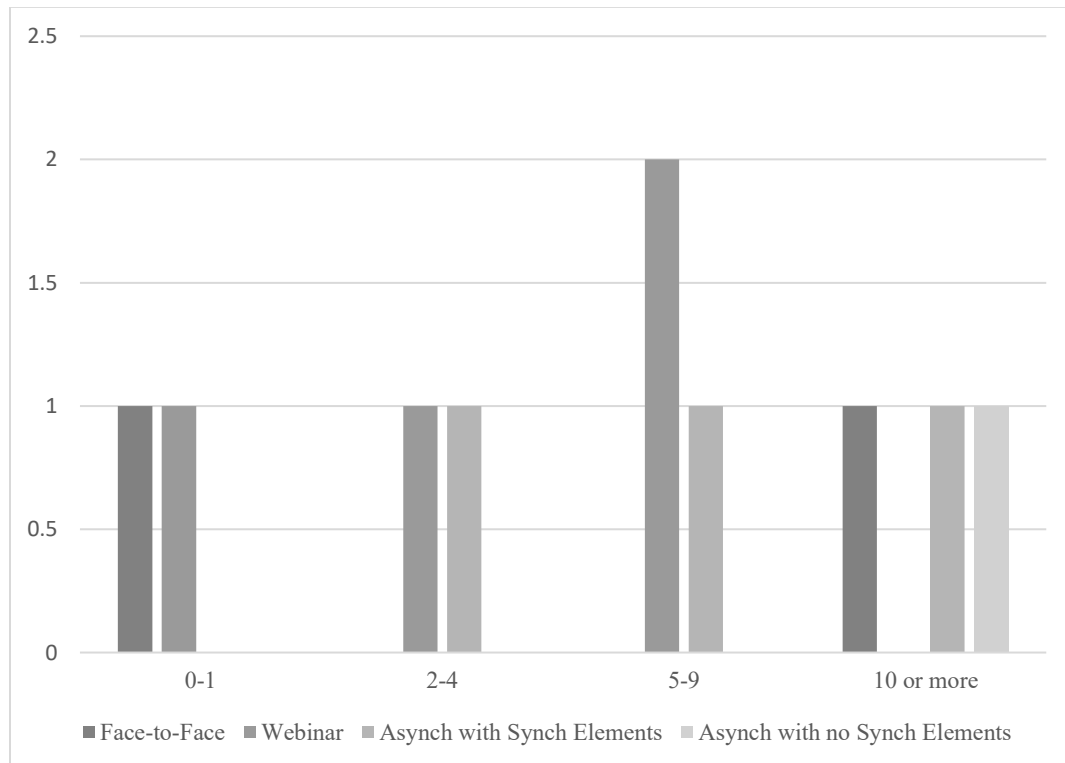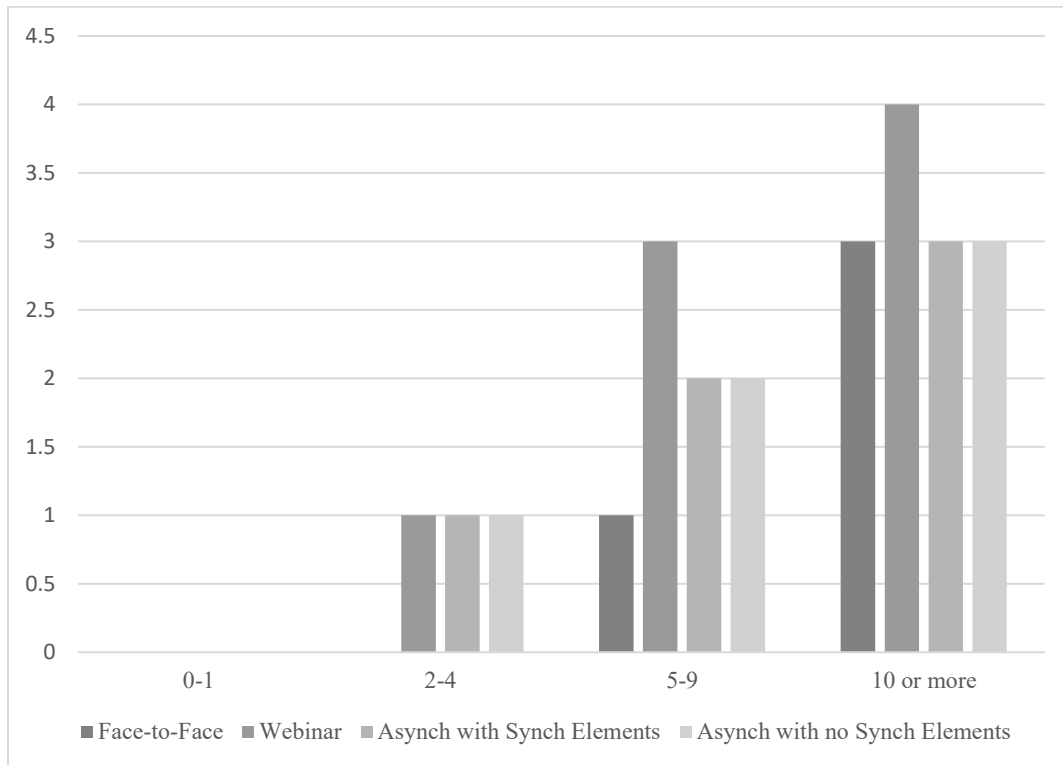*ID Survey Results: Description of Unit Format Preferences based on Years of Experience*

**Figure B2**

*ID Survey Results: Description of Statewide Format Preferences based on Years of Experience*



The results of the interviews follow and are included in Table B24.

**Table B24**

*Unit Leadership Interview Results: Emerging Themes*

| Themes | Codes | Attribution |
|---|---|---|
| IDs have more education and experience than Support Professionals. | • Designers have master's degrees.<br>• Designers are trained formally in teaching and learning.<br>• Some support specialists have some graduate work in the field.<br>• Support professionals are not generally educated formally in the field on a graduate level.<br>• IDs are very experienced in the field.<br>• Designers' experience levels range from moderate to high.<br>• Support specialists have more technical experience, but not super experienced with instructional design. | • Supervisor 2<br>• Supervisor 1<br>• Supervisor 2<br>• Supervisor 1<br>• Supervisor 2<br>• Supervisor 1<br>• Supervisor 2 |
| While there are no limits to the amount of Professional Development available for in which for staff to participate, resources are generally allocated first to those who are interested and highly motivated. | • Highly motivated staff get more resources for PD<br>• Less motivated staff are encouraged to participate in lower commitment to PD<br>• No limit on PD | • Supervisor 1<br>• Supervisor 1<br>• Supervisor 1, Supervisor 2 |

| Themes | Codes | Attribution |
|---|---|---|
| | • Not all staff are interested in PD | • Supervisor 2 |
| | • PD is directed by the interests of the staff | • Supervisor 2 |
| Staff are not generally required to participate in professional development activities. | • Staff are encouraged to participate in as much PD as possible, but not forced. | • Supervisor 1 |
| | • Not all staff are interested in PD | • Supervisor 2 |
| | • Specific PD is generally not required. | • Supervisor 2 |
| While the staff is primarily interested in professional development associated with learning theory and best practices, there should be more emphasis on developing skills such as critical thinking and in the use of tools to help with the ID-SME relationship. | • Topics of interest tend to include learning theory and best practices for online and hybrid learning | • Supervisor 2 |
| | • Psychological skills such as critical thinking are more important than technical skills in staff. | • Supervisor 1 |
| | • Need for training in tools to help with the ID-SME relationship. | • Supervisor 2 |
| | • There is not enough emphasis on training for tools to help with the ID-SME relationship. | • Supervisor 2 |
| Proficiently performing staff are more likely to participate in one-off professional development | • Webinars are the most common form of professional development. | • Supervisor 2 |

| Themes | Codes | Attribution |
|---|---|---|
| opportunities such as webinars, while high performing staff are more likely to participate in longer form, more complex professional development opportunities such a conferences and longer workshops of both asynchronous and synchronous varieties when funds are available. | • Conferences and workshops with asynchronous and synchronous elements are done with the institution pays for it.<br><br>• High performing staff tend to trend towards longer, more complex PD.<br><br>• Proficiently performing staff tends to trend towards one-off, simple PD such as webinars. | • Supervisor 2<br><br><br><br>• Supervisor 1<br><br><br>• Supervisor 1 |
| IDs and SMEs struggle with their relationship with one another and this impacts the SME's willingness to make changes. | • Many SMEs may be ambivalent to change.<br><br>• The relationship between the ID-SME plays a major role in SME willingness to make changes.<br><br>• SME and IDs struggle with their relationship often. | • Supervisor 1<br><br>• Supervisor 2<br><br><br><br>• Supervisor 2 |
| Supervisors rarely step into mediate issues between ID-SMEs but do offer advice to the ID staff as needed. | • Supervisor prefers to not step in, if possible.<br><br>• Supervisor has had to step into an ID-SME conflict rarely.<br><br>• Supervisor will provide advice on how to handle the situation.<br><br>• Supervisor stepping in may undermine ID in the ID-SME relationship | • Supervisor 2<br><br>• Supervisor 2<br><br>• Supervisor 2, Supervisor 1<br><br>• Supervisor 1 |

| Themes | Codes | Attribution |
|---|---|---|
| | • Senior ID may be a better resource for the IDs in terms of advice. | • Supervisor 1 |
| IDs defer to SMEs. | • Designers feel deference to SMEs. | • Supervisor 1 |
| | • IDs get a no and defer to SMEs. | • Supervisor 1 |
| ID bears the responsibility of maintaining the ID-SME relationship. | • If there is a guiding document like a grant or an agreement, the balance of responsibility changes. | • Supervisor 2 |
| | • ID bears the responsibility of the relationship. | • Supervisor 1, Supervisor 2 |
| | • ID-SME relationship is like the teacher-student relationship where the ID is the student. | • Supervisor 1 |
| | • Meet SMEs where they are and try to create forward momentum towards change. | • Supervisor 1 |
| A good ID-SME relationship has a positive impact on student learning. | • ID-SME relationship improves the student experience. | • Supervisor 2 |
| A good ID-SME relationship has a positive impact on SME teaching and research. | • ID-SME relationship also benefits SMEs in terms of teaching and potentially research. | • Supervisor 2 |

**Purpose Statement**

The proposed purpose statement is as follows: Provide training in motivational interviewing to IDs and support staff to improve the ID-SME relationship and the quality of the resulting work products.

**Instructional Goal**

The proposed instructional goal is as follows: Conduct a consultation/meeting with a SME applying motivational interviewing effectively.

**Learner Analysis Summary**

The learner analysis summary is based on a survey conducted with unit instructional design professionals as well as with statewide instructional design professionals.   Table B25 provides a high-level overview of the results of the training needs assessment.

**Table B25**

*Learner Analysis: Unit and Statewide Characteristics*

| Information | Primary Group | Secondary Group |
|---|---|---|
| Student Group | Unit IDs and Support Staff | Statewide IDs and Support Staff |
| General Characteristics | The IDs all have master's degrees in instructional design and related areas. The support professionals all have bachelor's degrees. Most of the IDs and support staff work with 11-30 SMEs each a year but work with less than 10 intensively. | The survey respondents indicated that they largely have at least master's degrees or more. Most of the IDs and support staff, based on the survey, work with from 11 SMEs to more than 31 SMEs a year, but work with less than 15 intensively. |
| Number of Students | 7 potential students (5 survey respondents) | 65+ potential students (9 survey respondents) |
| Location of Students | All are local. All have offices at the unit but are working remotely during the pandemic primarily. | All are located throughout the state. Remote work is dependent on institution. |
| Experience Levels | All are experienced. However, the support professionals have more technical experience than instructional design experience. At least 3 of the staff have five or more years of experience and at least 2 have less than four years of experience. | Most of the survey respondents had more than five years of experience. |
| Student Attitudes | Based on the survey, students feel responsible for the state of the relationship between the ID-SME and value that relationship's importance. When facing issues in the ID-SME relationship, only one student noted that they try to identify the root of the issue. Overall, many of the respondents simply defer | Based on the survey, students feel responsible for the state of the relationship between the ID-SME and value that relationship's importance. When facing issues in the ID-SME relationship, a variety of strategies are used but none try to identify the root of the ambivalence to change. Many of the |

| Information | Primary Group | Secondary Group |
|---|---|---|
| | to SMEs to move forward.  Respondents prefer webinar followed by asynchronous courses. | respondents simply defer to SMEs to move forward. Respondents prefer webinar followed by asynchronous courses. |
| Skills That Impact Potential to Succeed in the Learning Environment | There is no special technology, resources, and skills required to fully participate in the training.  Typical technology such as a computer or device capable of entering a learning management system, streaming audio and video, and clicking or swiping is required. All elements will need to be made accessibly or include equitable alternatives for those who require accommodations.  In terms of skills, skills that are used daily by IDs such as reading, listening, and observing body language are required to complete this training. | There is no special technology, resources, and skills required to fully participate in the training.  Typical technology such as a computer or device capable of entering a learning management system, streaming audio and video, and clicking or swiping is required. All elements will need to be made accessibly or include equitable alternatives for those who require accommodations.  In terms of skills, skills that are used daily by IDs such as reading, listening, and observing body language are required to complete this training. |

**Resource Audit and Summary**

**Table B26**

*Resource Audit Brainstorming*

| Content | Technology | Facilities | Human |
|---|---|---|---|
| • Motivational Interviewing Resources for Trainers is available for use under CC BY-SA 4.0 and will be used to help generate content.<br>• Practice Exercise Guidelines for Participant Trainers is available for use under CC BY-SA 4.0 and will be used to help generate content | • Blackboard Learning Management System is available for use.<br>• Zoom and Blackboard Collaborate Ultra Audio-Video conferencing is available for use.<br>• Video Production facilities are available.<br>• Various e-learning development software including Articulate Storyline, Rise, and SoftChalk area available. | • Office space that has access to all needed software for the duration of the training has been identified.<br>• Video production space has been identified and can be reserved as needed.<br>• Classroom space available for scheduling | • Initial facilitator has been identified, but a facilitator guide will need to be created to help scale training as needed. Facilitators need to have completed MI training.<br>• 1 Social Work faculty member has been identified to review course development and make suggestions as well as to act as a second reviewer for assessment grading/reviewing.<br>• Video Production specialist has been identified but will need to be scheduled well ahead of time.<br>• Instructional Design support has been identified but will |

| Content | Technology | Facilities | Human |
|---------|-----------|-----------|-------|
| | • Server space is available for artifacts. <br> • Classroom technology including Zoom capabilities are available pending scheduling. | | need to be scheduled well ahead of time. |

**Estimated Cost Sheet**

The breakdown of the calculations is based on Branch (2009) nine step process and accompanying formulas except for the Design and Development calculations which are based on averages from a survey done by Defelice (2020). This discrepancy considers changes in design and development because of more efficient technologies and skills.

***Step 1. Identify the Delivery Options under Consideration***

The following delivery options are under consideration: Option A: Webinar, Option B: Online Asynchronous Course, and Option C: Classroom Session(s).

***Step 2. Estimate the Length of Time for Each Delivery Option under Consideration***

**Table B27**

*Proposed Length of Delivery Options*

| Option | Proposed Length | Assumptions |
|---|---|---|
| A: Webinar | 8 hours including 30 minutes of video (2 days at 4 hours a piece for a total of 8 hours) | Average motivational interviewing webinar length in hours: 7.5 hours |
| B: Asynchronous | 4 weeks including 30 minutes of video (estimated 2 hours a week of work for a total of 8 hours) | Average motivational interviewing online course hours: 9 hours |
| C: Classroom | 8 hours including 30 minutes of video (2 days at 4 hours a piece for a total of 8 hours) | --- |

Assumptions for Table B27 are based on trainings conducted by the Health

Education & Training Institute (n.d.), The Institute for Individual and Organizational

Change (n.d.), as well as Dr. William Miller, Dr. Theresa Moyers, and Dr. Stephen

Rollnick (Psychwire, n.d.) as seen in Table B28.

**Table B28**

*Examples of Length of MI Training*

| Training Provider | Online Course | Webinar |
| --- | --- | --- |
| Health Education & Training Institute | 8 hours over 4 weeks | 8 hours over 2 days |
| The Institute for Individual and Organizational Change | --- | 7 hours over 3 days |
| Dr. William Miller, Dr. Theresa Moyers, and Dr. Stephen Rollnick. | 10 hours over 6 weeks | --- |

### Step 3. Estimate Analysis Costs

The following information provides the inputs, the formula, and the

calculations that produced the estimated analysis costs.  The inputs provided describe

the assumptions that help to define the estimated costs.  In this case, for the Analyze

phase, the estimated hours for the phase plus the ID hourly rate was needed.

The inputs were as follows:

- Estimated Hours: 57 hours (Breakdown: 10 for research (academic and

  resource identification), 2 for IRB preparation, 35 for document

  preparation, 10 estimated for survey deployment, interview conducted,

  brief data analysis)); and

- ID Hourly Rate: $28.33/hr (Based on the hourly rate of the most experienced designer in the unit).

The formula provided by Branch (2009) for calculating the analysis costs was as follows: Analysis Costs = 2(Hours x Hourly Rate).  The resulting calculations found the estimated Analysis Costs to be $3,299.62.

### Steps 4 and 5. Estimate Design and Develop Costs

The Defelice (2021) study conducted in 2020 garnered average lengths of modules, and minimum, maximum, and average time to design and develop various types of learning.  This differs from the Branch (2009) formulations in that the Defelice (2021) averages considers instructor-led classroom and online/virtual training as well as various types of e-Learning training based on interactivity.  The breakdown of the assumptions, calculations, and totals for the design and development costs of each delivery option is found in Table B29.

**Table B29**

*Design and Development Calculations for Delivery Options*

|  | Option A: Webinar | Option B: Asynchronous | Option C: Classroom |
|---|---|---|---|
| Formula | (Number of Instructor Led Virtual Learning Segments x Minimum Time to Design & Develop) x Designer and/or Developer Hourly Rate | Cost of Design & Develop of Passive eLearning + Cost of Design & Develop of Moderate Engagement eLearning + Cost of Design & Develop of Full Engagement eLearning | (Number of Instructor Led Classroom Learning Segments x Minimum Time to Design & Develop) x Designer and/or Developer Hourly Rate |
| Inputs/Assumptions | • Average e-Learning Segment Length: 25 minutes<br>• Number of e-Learning Segments Per Hour: 2<br>• Number of Training Hours: 8<br>• Minimum Time to Design & Develop 1 Segment of Instructor Led Virtual Learning: 35 hours<br>• Designer/Developer Hourly Rate: $28.33 | Passive Engagement e-Learning<br>• Average Segment Length: 20 minutes<br>• Number of Segments Per Hour: 3<br>• Estimated Number of Hours of Training: 2 hours<br>• Minimum Time to Design & Develop 1 Segment: 38 hours<br>Moderate Engagement e-Learning<br>• Average Segment Length: 20 minutes<br>• Number of Segments Per Hour: 3 | • Average Instructor Led Classroom Learning Segment Length: 23 minutes<br>• Number of e-Learning Segments Per Hour: 2<br>• Number of Training Hours: 8<br>• Minimum Time to Develop & Develop 1 Segment of Instructor Led Classroom Learning: 43 hours<br>• Designer/Developer Hourly Rate: $28.33 |

| | Option A: Webinar | Option B: Asynchronous | Option C: Classroom |
|---|---|---|---|
| | | • Estimated Number of Hours of Training: 3 hours<br>• Minimum Time to Design & Develop 1 Segment: 74 hours<br>Full Engagement e-Learning<br>• Average Segment Length: 17 minutes<br>• Number of Segments Per Hour: 3<br>• Estimated Number of Hours of Training: 3 hours<br>• Minimum Time to Develop & Develop 1 Segment: 70 hours<br>Designer/Developer Hourly Rate: $28.33 | |
| Calculations | • Total Number of Segments = Number of Instructor Led Virtual Learning Segments per Hour x Total Number of Training Hours<br>  o 16 segments of instructor led virtual learning = 2 segments per hour x 8 hours | Passive Engagement e-Learning<br>• Total Number of Segments = Number of Segments Per Hour x Number of Training Hours<br>  o 6 total segments = 3 segments x 2 hours<br>• Total Number of Design and Develop Hours = Total | • Total Number of Segments = Number of Segments per Hour x Total Number of Training Hours<br>  o 16 segments of instructor led classroom learning = 2 |

| Option A: Webinar | Option B: Asynchronous | Option C: Classroom |
| --- | --- | --- |
| • Total Number of Design & Develop Hours = Total Number of Segments of Instructor Led Virtual Learning x Minimum Time to Design & Develop Instructor Led Virtual Learning<br><br>  o 560 total hours (70 days) = 16 segments of instructor led virtual learning x 35 hours per segment | Number of Segments x Minimum Time to Design and Develop<br><br>  o 228 total hours (28.5 days) = 6 segments x 38 hours per segment<br><br>• Design and Develop Costs = Hours x Hourly Rate<br><br>  o Design & Develop costs: $6,459.24 = 228 hours x $28.33 rate per hour<br><br>Moderate Engagement e-Learning<br><br>• Total Number of Segments = Number of Segments Per Hour x Number of Training Hours<br><br>  o 9 total segments = 3 segments x 3 hours<br><br>• Total Number of Design and Develop Hours = Total Number of Segments x Minimum Time to Design and Develop<br><br>  o 666 total hours (83.25 days) = 9 | segments per hour x 8 hours<br><br>• Total Number of Design & Develop Hours = Total Number of Segments of Instructor Led Classroom Learning x Minimum Time to Design & Develop<br><br>  o 688 total hours (86 days) = 16 segments of instructor led virtual learning x 43 hours per segment |

| Option A: Webinar | Option B: Asynchronous | Option C: Classroom |
|---|---|---|
| | segments x 74 hours per segment | |

<div style="margin-left: 2em;">

- Design and Develop Costs = Hours x Hourly Rate
  - Design & Develop Costs: $18,867.78 = 666 hours x $28.33 rate per hour

Full Engagement e-Learning

- Total Number of Segments = Number of Segments Per Hour x Number of Training Hours
  - 9 total segments = 3 segments per hour x 3 hours
- Total Number of Design and Develop Hours = Total Number of Segments x Minimum Time to Design and Develop
  - 630 total hours (78.75 days) = 9 segments x 70 hours per segment
- Design and Develop Costs = Hours x Hourly Rate

</div>

| | Option A: Webinar | Option B: Asynchronous | Option C: Classroom |
|---|---|---|---|
| | | o  Design & Develop Costs: $17,847.90 = 630 hours x $28.33 rate per hour | |
| Design & Develop Costs | $15,864.80 (560 hours x $28.33 rate per hour) | $43,174.92 ($6,459.24 of passive engagement e-learning + $18,867.78 of moderate engagement e-learning + $17,847.90 of full engagement e-learning) | $19,491.04 (688 hours x $28.33 rate per hour) |

### Step 6. Estimate Implementation Costs.

The breakdown of the assumptions, calculations, and totals for the implementation costs of each delivery option is found in Table B30.  For the purposes of brevity in Table B30, Options A and B are grouped together as the calculations were the same.

**Table B30**

*Implementation Calculations for Delivery Options*

| | Option A: Webinar and Option B: Asynchronous | Option C: Classroom |
|---|---|---|
| Formula | Facilitator Costs + Learner Costs | Facilitator Costs + Learner Costs |
| Inputs/Assumptions | <ul><li>Number of Training Hours: 8</li><li>Facilitator 1 Hourly Rate: $28.33</li><li>Facilitator 2 Hourly Rate: $30.88</li><li>Estimated Facilitator 1 Hours Needed: 28</li><li>Estimated Facilitator 2 Hours Needed: 20</li><li>Average Unit Learner Hourly Rate: $24.54</li><li>Average Statewide Learner Hourly Rate: $33.85</li><li>Facilitator Travel Costs: $0</li><li>Learner Travel Costs: $0</li></ul> | <ul><li>Number of Training Hours: 8</li><li>Facilitator 1 Hourly Rate: $28.33</li><li>Facilitator 2 Hourly Rate: $30.88</li><li>Estimated Facilitator 1 Hours Needed: 28</li><li>Estimated Facilitator 2 Hours Needed: 20</li><li>Average Unit Learner Hourly Rate: $24.54</li><li>Average Statewide Learner Hourly Rate: $33.85</li><li>Facilitator Travel Costs: $1500</li><li>Unit Learner Travel Costs: $0</li><li>Statewide Learner Travel Costs: $500</li></ul> |
| Calculations | Facilitator Costs<ul><li>Facilitator 1 Costs = (Facilitator 1 Hourly Rate x Estimated Facilitator 1 Hours Needed) + Travel Costs</li></ul> | Facilitator Costs<ul><li>Unit Facilitator Costs<ul><li>Facilitator 1 Costs = (Facilitator 1 Hourly Rate x Estimated Facilitator 1 Hours Needed) + Travel Costs</li></ul></li></ul> |

| Option A: Webinar and Option B: Asynchronous | Option C: Classroom |
|---|---|
| o $793.24 Facilitator 1 cost = ($28.33 rate per hour x 28 hours needed) + 0 travel costs | ▪ $793.24 Facilitator 1 cost = ($28.33 rate per hour x 28 hours needed) + 0 travel costs |
| • Facilitator 2 Costs = (Facilitator 2 Hourly Rate x Estimated Facilitator 2 Hours Needed) + Travel Costs | o Facilitator 2 Costs = (Facilitator 2 Hourly Rate x Estimated Facilitator 2 Hours Needed) + Travel Costs |
| o $617.60 Facilitator 2 cost = ($30.88 rate per hour x 20 hours needed) + 0 travel costs | ▪ $617.60 Facilitator 2 cost = ($30.88 rate per hour x 20 hours needed) + 0 travel costs |
| • Total Facilitator Costs = Facilitator 1 Costs + Facilitator 2 Costs | o Total Unit Facilitator Costs = Facilitator 1 Costs + Facilitator 2 Costs |
| o $1,410.84 total Facilitator costs = $793.24 Facilitator 1 cost + $617.60 Facilitator 2 cost | ▪ $1,410.84 total Facilitator costs = $793.24 Facilitator 1 cost + $617.60 Facilitator 2cost |
| Learner Costs | |
| • Unit Learner Costs = ((Number of Learners x Number of Training Hours) x Average Unit Learner Hourly Rate) + (Number of Learners x Number of Training Hours) + Travel Costs | • Statewide Facilitator Costs |
| | o (Facilitator 1 Hourly Rate x Estimated Facilitator 1 Hours Needed) + Travel Costs |
| o $1,430.24 unit learner costs = ((7 learners x 8 hours) x $24.54 average rate per hour) + (7 learners x 8 hours) + 0 travel costs | ▪ $2,293.24 Facilitator 1 cost = ($28.33 rate per hour x 28 hours needed) + $1,500 travel costs |
| • Statewide Learner Costs = ((Number of Learners x Number of Training | |

| Option A: Webinar and Option B: Asynchronous | Option C: Classroom |
|---|---|
| Hours) x Average Unit Learner Hourly Rate) + (Number of Learners x Number of Training Hours) + Travel Costs<br><br>    o  $18,122 statewide learner costs = ((65 potential learners x 8 hours) x $33.85 average rate per hour) + (65 potential learners x 8 hours) + 0 travel costs |     o  Facilitator 2 Costs = (Facilitator 2 Hourly Rate x Estimated Facilitator 2 Hours Needed) + Travel Costs<br>        ▪  $2,117.60 Facilitator 2 cost = ($30.88 rate per hour x 20 hours needed) + $1,500 travel costs<br>    o  Total Facilitator Costs = Facilitator 1 Costs + Facilitator 2 Costs<br>        ▪  $4,410.84 total Facilitator costs = $2,293.24 Facilitator 1 cost + $2,117.60 Facilitator 2 cost<br><br>Learner Costs<br>•  Unit Learner Costs = ((Number of Learners x Number of Training Hours) x Average Unit Learner Hourly Rate) + (Number of Learners x Number of Training Hours) + Travel Costs<br>    o  $1,430.24 unit learner costs = ((7 learners x 8 hours) x $24.54 average rate per hour) + (7 learners x 8 hours) + 0 travel costs<br>•  Statewide Learner Costs = ((Number of Learners x Number of Training Hours) x Average Unit Learner Hourly Rate) + |

| | Option A: Webinar and Option B: Asynchronous | Option C: Classroom |
|---|---|---|
| | | (Number of Learners x Number of Training Hours) + Travel Costs<br>    ○ $18,122 statewide learner costs = ((65 potential learners x 8 hours) x $33.85 average rate per hour) + (65 potential learners x 8 hours) + $500 travel costs |
| Implementation Costs | • $2,841.08 unit costs = $1,410.84 (facilitator costs) + $1430.24 (unit learner costs)<br>• $19,532.84 statewide costs = $1,410.84 (facilitator costs) + $18,122 (statewide learner costs) | • $2,841.08 unit costs = $1,410.84 (facilitator costs) + $1430.24 (unit learner costs)<br>• $23,032.84 statewide costs = $4,410.84 (facilitator costs) + $18,622 (statewide learner costs) |

***Step 7. Estimate Evaluation Costs***

Branch (2009) recommends using the Analyze costs to estimate the evaluation costs.  As a result, the current estimated total evaluation costs: $3,229.62.

***Step 8. Total the Estimated Costs for Each of the Five ADDIE Phases***

The total costs for each delivery option are provided in Table B31.  In addition to being broken down by delivery option, each delivery option is broken down into estimated costs for unit-level deployment and statewide deployment.

**Table B31**

*Estimated Cost Totals for ADDIE Phases*

| | Option A: Webinar | | Option B: Asynchronous | | Option C: Classroom | |
|---|---|---|---|---|---|---|
| | Unit | Statewide | Unit | Statewide | Unit | Statewide |
| Analysis | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 |
| Design & Develop | $15,864.80 | $15,864.80 | $43,174.92 | $43,174.92 | $19,491.04 | $19,491.04 |
| Implement | $2,841.08 | $19,532.84 | $2,841.08 | $19,532.84 | $2,841.08 | $23,032.84 |
| Evaluate | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 |
| Total | $25,305.12 | $41,995.88 | $52,615.24 | $69,307 | $28,931.36 | $49,123.12 |

***Step 9. Provide an Estimated Cost Range (+ or -20%)***

Branch (2009) recommends estimating a cost range that takes the total of each option and both add and subtract 20% to get each end of the range.  The estimated cost range was calculated by using the following formula: Total of Phases + 20% of Total of Phases to Total of Phases – 20% of Total of Phases.  Table B32 builds on the estimated cost totals found in Table B31 and adds the calculated estimated cost range for each delivery option.

**Table B32**

*ADDIE Cost Estimates by Delivery System and Learner Population including Cost Range*

| | Option A: Webinar | | Option B: Asynchronous | | Option C: Classroom | |
|---|---|---|---|---|---|---|
| | Unit | Statewide | Unit | Statewide | Unit | Statewide |
| Analysis | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 |
| Design & Develop | $15,864.80 | $15,864.80 | $43,174.92 | $43,174.92 | $19,491.04 | $19,491.04 |
| Implement | $2,841.08 | $19,532.84 | $2,841.08 | $19,532.84 | $2,841.08 | $23,032.84 |
| Evaluate | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 | $3,299.62 |
| Total | $25,305.12 | $41,995.88 | $52,615.24 | $69,307 | $28,931.36 | $49,123.12 |
| Estimated Cost Range | $20,244.10 to $30,366.14 | $33,596.71 to $50,395.05 | $42,092.20 to $63,138.28 | $55,445.60 to $83,168.40 | $23,145.09 to $34,717.63 | $39,298.50 to $58,947.74 |

**Project Management Plan**

The components of the project management plan include the identification of team members, an analysis of the various constraints of the project, a proposed project schedule, and a discussion of the potential Final Report which takes the form of Next Steps in the Analysis Summary.

*Team Member Identification*

Team members will include:

- One to two IDs – The primary ID will act as the project leader/manager, designer and developer, as well as a facilitator. If approved, a second ID will act as a co-designer and co-developer. A second assigned ID will mean that the time it takes to conduct the project can be minimized.

- One video production specialist – The video production specialist will assist in the design of videos and take the lead as the primary developer of video content.

- An additional facilitator – This facilitator will be a SME in motivational interviewing and will act as a second reviewer of assessment(s) and a reviewer of content as needed.

*Constraints*

There are several constraints to consider with any project including this one including scope creep, issues with time, and issues with budget. First, scope creep is a constraint that will have to be constantly considered. There will be the inevitable

desire to overcomplicate the training or make it flashier than needed. The project will need to stay true to the agreed upon scope to meet time and budget requirements.

Another constraint is that of time. Time is always an issue with almost every instructional design project. The time this project will take can be decreased with the assignment of two designers and developers to produce the content. Splitting this workload between two experienced designers who are on the same page could cut the development time substantially.

Finally, budget is always a constraint to be considered. While the estimated costs are fair, one must consider scalability. To keep costs down, assigning more than one designer (potentially one with the requisite experience and a second to partner to help produce content with less experience) will help to drive down the budget. Further, if considering scaling the project to statewide and charging, the quicker the project is completed, the sooner revenue could potentially start to be generated. Further, if the primary ID can create a template for the e-Learning modules, this has been shown to allow for quicker development. Using a myriad of these techniques can allow for cutting the cost estimates (Defelice. 2021). In addition, the organization already has a strong infrastructure to allow for a quicker design, development, and implementation timeline (Defelice, 2021). The organization could also try to access grant funding both internally and externally to fund this project.

*Proposed Schedule*

Figure B3 describes a preliminary schedule.  This schedule will be expanded and become far more specific as the project moves forward and assignments are made.  Stakeholders will be notified accordingly by the project manager/lead ID.

**Figure B3**

*Estimated Gantt Chart for MI Training Completion*
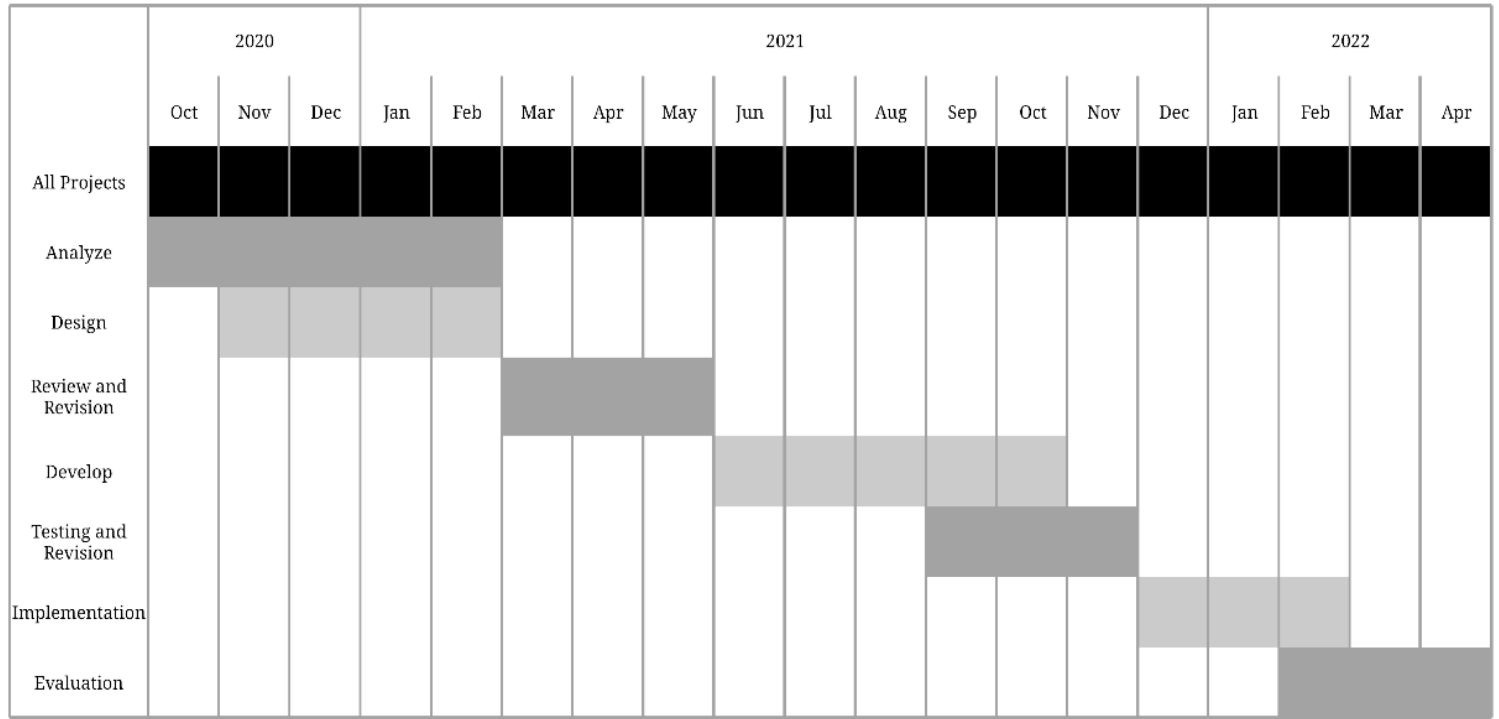
*Final Report/Next Steps*

A final report will be created at the end of the project following the implementation and evaluation phase.  The final report will include the final personnel staffing including their roles, schedules, and revised schedules to show how the project progressed and changed over time, issues that emerged and steps taken to address those issues, various strategies used for project management, testing, quality assurance, implementation, and deployment, as well as evaluation, evaluation results and assessment of success, expenditure and revenue analysis, and recommendations for the future (Branch, 2009).

For the purposes of this capstone, we will create a Next Steps section.  That section will focus on both recommendations and considerations as the project moves forward.  The recommendations will touch on the following:

- Move forward with the asynchronous online course as the desired format;

- Design and develop with statewide use in mind;

- Explore grant funding to offset initial costs; and

- Move forward with the Design phase.

In addition to the recommendations, considerations will be addressed including issues surrounding accessibility and copyright.

**Appendix C**

**Design Brief Components**

This appendix contains the components of the Design Brief as suggested by Branch including a task inventory, performance objectives, testing strategies, and a calculation of the return on investment (2009, p. 61). While the Design Brief will be using these components (see Appendix A), the strategies used to create these components vary between that of Branch (2009) and van Merriënboer (2019).

**Task Inventory**

Branch (2009) suggests the creation of a task inventory to inform the Design Brief and overall design. The creation of the inventory helps to verify the performance required of the learners, identifies the primary learning tasks, and identifies the steps and sequence of steps to successfully complete performance (Branch, 2009, p. 62). While Branch (2009) offers guidance on the creation of a task inventory, van Merriënboer and Kirschner (2018) instructs how to create learning tasks for complex learning relying on a skills hierarchy and classification of those skills as recurrent or nonrecurrent which will help in the future when designing and developing part-task practice, supportive information, and/or just-in-time information. By using the van Merriënboer and Kirschner (2018) approach, this sets up the designer/developer well for the continued use of the 4C/ID approach for design through the identification of pertinent skills, classification of those skills, identification of the learning tasks, and subsequent classification of those learning tasks.

*Skills Hierarchy*

The skills hierarchy was broken into three parts. First, in Figure C1, the macro-view of the skills is presented. This is followed by Figure C2 where there is a zoom into the skills necessary to use client-centered communication and counseling skills. Finally, in Figure C3, there is a zoom into the skills necessary to apply MI techniques.

**Figure C1**

*High-level Skills Hierarchy for MI*
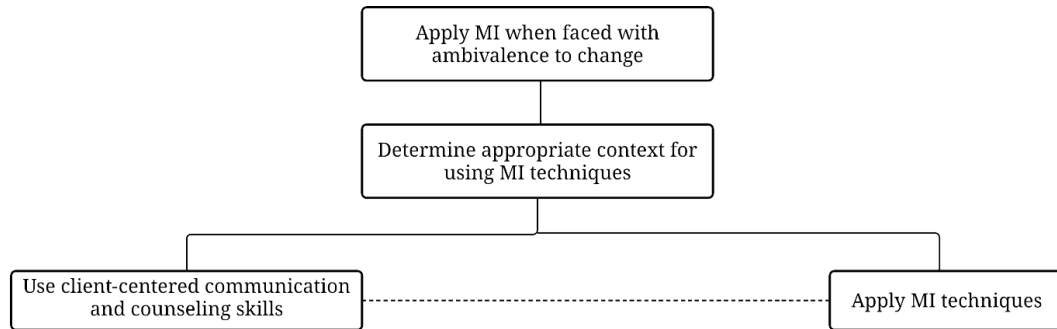


**Figure C2**

*Skills Hierarchy for MI: Emphasizing Use Client-Centered Communication and Counseling Skills*
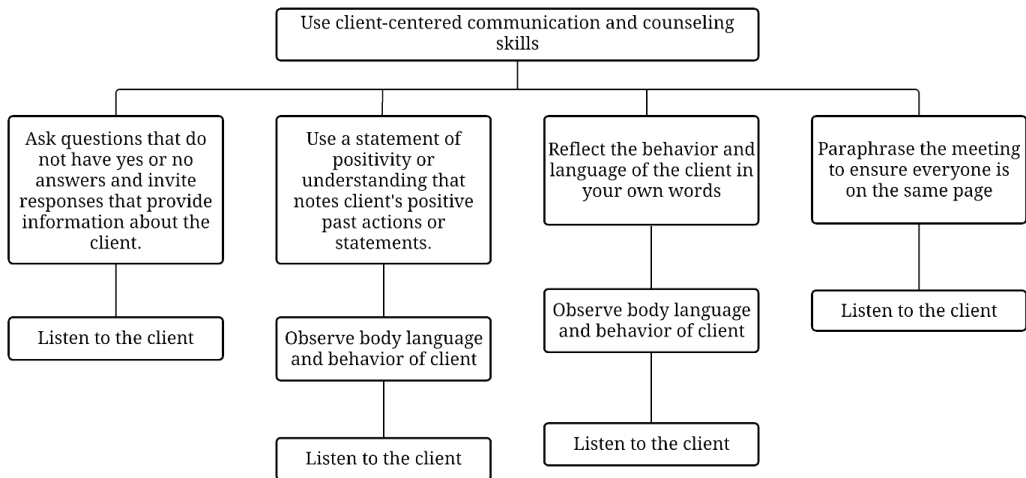
**Figure C3**

*Skills Hierarchy for MI: Emphasizing Apply MI Techniques*
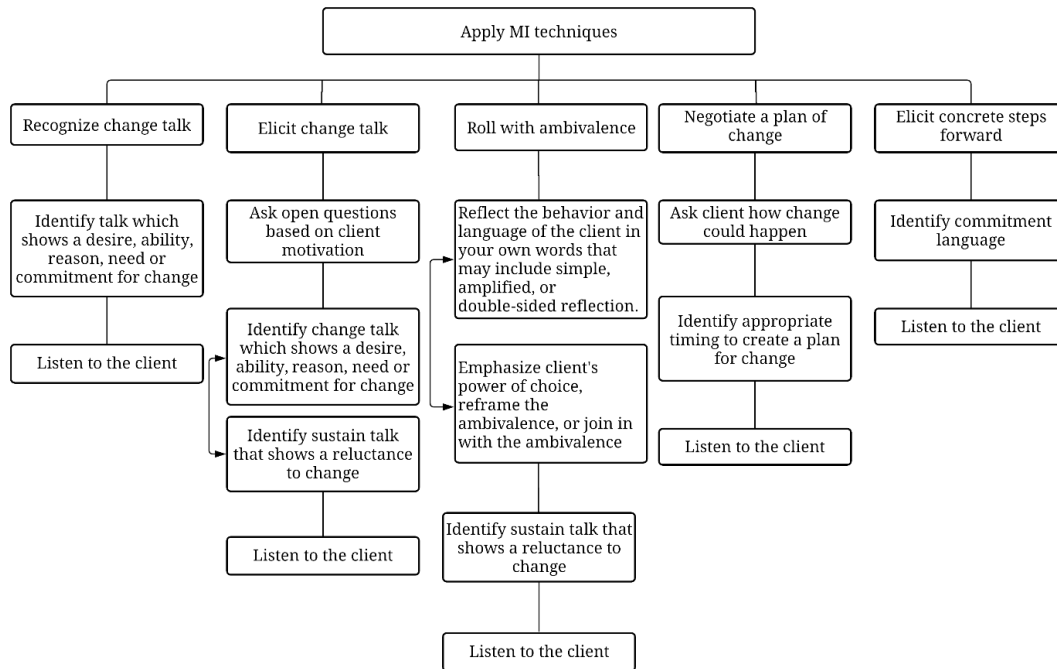


*Skills Classification*

Recurrent skills include the following:

- Listen to the client.

- Observe body language and behavior of client.

These are recurrent skills, because they are skills that remain similar no matter the situation or circumstance (van Merriënboer & Clark, 2002, p. 41).

All the other skills are considered nonrecurrent skills as they actual skill may look different from situation to situation. There are general guidelines and best practices that surround the use of these skills, but their use and what it looks like is entirely dependent on the context. Further, these skills require the use of problem

solving in ways that recurrent skills do not (van Merriënboer & Clark, 2002, p. 41-42).

### *Learning Task Identification*

The primary learning tasks are identified as follows:

- Learners will apply motivational interviewing including client-centered communication and counseling skills and motivational interviewing techniques in ID-SME meetings with full access to support.

- Learners apply motivational interviewing including client-centered communication and counseling skills and motivational interviewing techniques in ID-SME meetings with little to no access to support.

- Learners will use motivational interviewing techniques in ID-SME meetings with little to no access to support.

- Learners will use motivational interviewing techniques in ID-SME meetings with diminishing access to support.

- Learners will use motivational interviewing techniques in ID-SME meetings with full access to support.

- Learners will use client-centered communication and counseling skills in ID-SME meetings with little to no access to support.

- Learners will use client-centered communication and counseling skills in ID-SME meetings with diminishing access to support.

- Learners will use client-centered communication and counseling skills in ID-SME meetings with full access to support.

- Learners will determine the appropriate context for using motivational Interviewing in ID-SME meetings with little to no access to support.

- Learners will determine the appropriate context for using motivational interviewing in ID-SME meetings with full access to support.

### *Learning Task Class Identification*

For the purposes of this learning process, we will use emphasis manipulation to formulate the task classes.  This is where learners perform the whole task from beginning to the end, but different sets of constituent skills are emphasized in each task class.  This has been noted as being particularly good for complex tasks because learners never lose sight of the end goal (van Merriënboer and Kirschner, 2018, p. 114-117).  In this case, learners will be presented meetings with SMEs to different degrees where many of the interactions may be appropriate for all the task classes, however the assessments will be primarily focused on the given area of emphasis. So, they are being constantly exposed to language and experiences that reference other concepts and techniques but are focused on learning a discrete piece of the whole.

The task classes identified are as follows:

- Task Class 1: Apply MI in an ID-SME meeting/consultation, emphasizing determining the appropriate context for using MI techniques.

- Task Class 2: Apply MI in an ID-SME meeting/consultation, emphasizing using client-centered communication and counselling skills such as using open questions, providing affirmation, conducting reflective listening, and providing summary reflections.

- Task Class 3: Apply MI in an ID-SME meeting/consultation, emphasizing applying MI techniques such as recognizing change talk, eliciting change talk, rolling with resistance, negotiating a plan of change, and eliciting concrete steps forward.

- Task Class 4: Apply MI in an ID-SME meeting/consultation, emphasizing all the above.
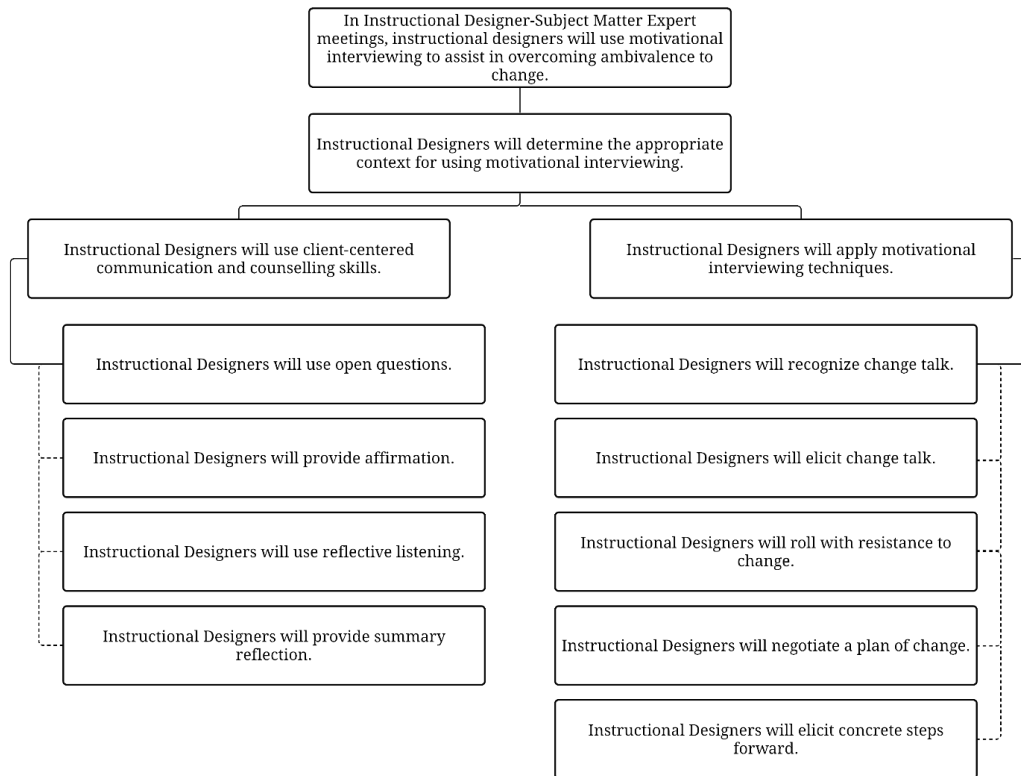
**Performance Objectives**

The performance objectives component of the Design Brief was informed by the task hierarchy, a list of performance objectives, the task sequencing, and a learner trajectory analysis as described by van Merriënboer and Kirschner (2018).

### *Task Hierarchy*

Based on the skills hierarchies seen in Figures C1-C3, the classification of

tasks, and the identification of the task classes, a task hierarchy for the MI Training

for IDs was created as seen in Figure C4.

**Figure C4**

*Task Hierarchy for MI Training for IDs*

| In Instructional Designer-Subject Matter Expert meetings, instructional designers will use motivational interviewing to assist in overcoming ambivalence to change. |
| --- |

| Instructional Designers will determine the appropriate context for using motivational interviewing. |
| --- |

| Instructional Designers will use client-centered communication and counselling skills. | Instructional Designers will apply motivational interviewing techniques. |
| --- | --- |
| Instructional Designers will use open questions. | Instructional Designers will recognize change talk. |
| Instructional Designers will provide affirmation. | Instructional Designers will elicit change talk. |
| Instructional Designers will use reflective listening. | Instructional Designers will roll with resistance to change. |
| Instructional Designers will provide summary reflection. | Instructional Designers will negotiate a plan of change. |
| | Instructional Designers will elicit concrete steps forward. |

### *List of Performance Objectives*

Based on the task hierarchy, performance objectives have been drafted.  The

primary performance objectives are as follows:

- In an ID-SME meeting, learners will determine the appropriate context for

  using MI techniques.

- In an ID-SME meeting, learners will use client-centered communication and counseling skills.

- In an ID-SME meeting, learners will use client-centered communication and counseling skills such as open questions.

- In an ID-SME meeting, learners will use client-centered communication and counseling skills such as providing affirmation.

- In an ID-SME meeting, learners will use client-centered communication and counseling skills such as conducting reflective listening.

- In an ID-SME meeting, learners will use client-centered communication and counseling skills such as providing summary reflection.

- In an ID-SME meeting, use motivational interviewing techniques such as recognizing change talk.

- In an ID-SME meeting, use motivational interviewing techniques such as eliciting change talk.

- In an ID-SME meeting, use motivational interviewing techniques such as rolling with resistance.

- In an ID-SME meeting, use motivational interviewing techniques such as negotiating a plan of change.

- In an ID-SME meeting, use motivational interviewing techniques such as eliciting concrete steps forward.

- In an ID-SME meeting, apply motivational interviewing including client-centered communication and counseling skills and motivational interviewing techniques effectively.

### *Task Sequence*

The task sequence takes all the work up to this point and provides a sequence for the task classes along with the learning tasks for each task class. Each learning task descends in support level meaning that the first learning task will allow the learners to have the most amount of support and subsequent learning tasks will have less and less support (van Merrienboer & Kirschner, 2018). The learning tasks provided below are classified by task class.

Task Class 1: Apply MI in an ID-SME meeting/consultation, emphasizing determining the appropriate context for using MI techniques. Task Class 1 includes the following learning tasks:

- Learning Task 1.1. Learners will determine the appropriate context for using motivational interviewing in ID-SME meetings with full access to support.

- Learning Task 1.2. Learners will determine the appropriate context for using motivational interviewing in ID-SME meetings with little to no access to support.

Task Class 2: Apply MI in an ID-SME meeting/consultation, emphasizing using client-centered communication and counselling skills such as using open

questions, providing affirmation, conducting reflective listening, and providing

summary reflections.  Task Class 2 includes the following learning tasks:

- Learning Task 2.1. Learners will use client-centered communication and

  counseling skills in ID-SME meetings with full access to support.

- Learning Task 2.2. Learners will use client-centered communication and

  counseling skills in ID-SME meetings with diminishing access to support.

- Learning Task 2.3. Learners will use client-centered communication and

  counseling skills in ID-SME meetings with little to no access to support.

Task Class 3: Apply MI in an ID-SME meeting/consultation, emphasizing

applying MI techniques such as recognizing change talk, eliciting change talk, rolling

with resistance, negotiating a plan of change, and eliciting concrete steps forward.

Task Class 3 includes the following learning tasks:

- Learning Task 3.1. Learners will use motivational interviewing techniques in

  ID-SME meetings with full access to support.

- Learning Task 3.2. Learners will use motivational interviewing techniques in

  ID-SME meetings with diminishing access to support.

- Learning Task 3.3. Learners will use motivational interviewing techniques in

  ID-SME meetings with little to no access to support.

Task Class 4: Apply MI in an ID-SME meeting/consultation, emphasizing all

the above.  Task Class 4 includes the following learning tasks:

- Learning Task 4.1. Learners will apply motivational interviewing including client-centered communication and counseling skills and motivational interviewing techniques in ID-SME meetings with full access to support.

- Learning Task 4.2. Learners apply motivational interviewing including client-centered communication and counseling skills and motivational interviewing techniques in ID-SME meetings with little to no access to support.

### *Learning Trajectory Analysis*

Learners will be directed by the learning environment (system control) through the four tasks which build in complexity culminating with whole task skills practice with emphasis on all constituent skills built to that point.  Learners will start with those tasks in Task Class 1 and proceed in sequential order through Task Class 4.  There will be some learner control within the learning tasks themselves as well as some additional systems controls, but those will be discussed within the testing strategies.

### Testing Strategies

The testing strategies section of the Design Brief was informed by the following components: assessment instrument, rubrics, and a learner trajectory analysis.

### *Assessment Instrument*

The assessment details for each learning task are provided below.

**Learning Task 1.1.** Learners will determine the appropriate context for using motivational interviewing in ID-SME meetings with full access to support.    For the assessment, learners will be presented with both easy (1) and moderate (2) difficulty-level questions for a total of three that are randomly selected.  The question stems are provided below:

- Easy Questions (minimum pool of 3): Given this scenario, do you think it is appropriate to use motivational interviewing?  Yes/No

- Moderate Questions (minimum pool of 5): Given this exchange, select the phrase or sentence that best indicates the use of motivational interviewing may be appropriate.  Three answer options will be provided.

**Learning Task 1.2.** Learners will determine the appropriate context for using motivational interviewing in ID-SME meetings with little to no access to support. For the assessment, learners will be presented two distinct sections which are provided below:

- In Part I, learners will be presented with both easy (1) and moderate (2) difficulty-level questions for a minimum of three questions.  The questions will not be randomly selected as there is a specific adaptive trajectory that learners may experience based on their responses.

  - Easy Questions (minimum pool of 5): Given this scenario, do you think it is appropriate to use motivational interviewing?  Yes/No

- o Moderate Questions (minimum pool of 7): Given this exchange, select the phrase or sentence that best indicates the use of motivational interviewing may be appropriate. Three answer options will be provided.

- In Part II, learners will be presented with the following question/assignment: Write a scenario where the use of motivational interviewing would be appropriate to use within the context of an ID-SME meeting.

**Learning Task 2.1.** Learners will use client-centered communication and counseling skills in ID-SME meetings with full access to support. For the assessment, learners will be presented with both easy (1) and moderate (1) difficulty-level questions for a total of two questions per component of client-centered communication and counseling skills (open questions, affirmation, reflective listening, and summarizing reflections) for a grand total of 8 questions randomly selected within the components (ex. 1 easy question randomly selected from a pool of 3 easy questions about open questions).

- Easy Questions (minimum pool of 3 per component): Given this exchange, select the component of client-based communication that best describes the highlighted portion of the transcript. Five answer options including the four components of client-centered communication skills and one option stating none of the above will be provided.

- Moderate Questions (minimum pool of 5 per component): Given the following transcript, match the highlighted portions with the corresponding component of client-centered communication and counseling skills.

**Learning Task 2.2.** Learners will use client-centered communication and counseling skills in ID-SME meetings with diminishing access to support. For the assessment, learners will be presented with two sections which are provided below:

- In Part I, learners will be presented with easy (1) and moderate (1) difficulty-level questions for a minimum of 2 questions per component of client-centered communication and counseling skills (open questions, affirmation, reflective listening, and summarizing reflections) for a minimum of 8 questions. These questions will not be randomly selected as there is a specific trajectory that learners may experience based on their responses.

  o Easy Questions (minimum pool of 5): Given this exchange, select the component of client-based communication that best describes the highlighted portion of the transcript. Five answer options including the four components of client-centered communication skills and one option stating none of the above will be provided.

  o Moderate Questions (minimum pool of 7): Given the following transcript, match the highlighted portions with the corresponding component of client-centered communication and counseling skills.

- In Part II, learners will be presented with the same instructions that contains

   multiple parts: Given the following partial transcript, please fill in the blanks

   with your own statements reflecting appropriate use of either open questions,

   affirmation, reflective listening, and summarizing reflections.

   **Learning Task 2.3.** Learners will use client-centered communication and

counseling skills in ID-SME meetings with little to no access to support. For the

assessment, learners will be presented with three sections which are provided below:

- In Part I, learners will be presented with descriptions of three scenarios. The

   learners must pick a scenario that is appropriate for the use of motivational

   interviewing. The instructions will read as follows: Of the three provided

   scenarios, which do you think is most appropriate for the use of motivational

   interviewing? (Two will be correct, one will be incorrect).

- In Part II, learners will be presented with the chosen branched decision-

   making scenario. The application will walk the learner through the role play

   exercise with the application acting as the SME and the learner acting as the

   ID. The SME will say a line (also provided in text form), and the ID (learner)

   will select an appropriate response from a series of multiple-choice options.

   Based on those responses, the conversation will take various turns.

- In Part III, at the end of the scenario, a transcript will be provided to the

   learner. The learner will then be prompted to identify the client-centered

   communication and counseling skills used in the various interactions (each

line of the learner responses will have an accompanying drop-down box to select the appropriate skill).

**Learning Task 3.1.** Learners will use motivational interviewing techniques in ID-SME meetings with full access to support. For the assessment, learners will be presented with both easy (1) and moderate (1) difficulty-level questions for a total of two questions per component of motivational interviewing techniques (recognize change talk, elicit change talk, roll with resistance, negotiating a plan of change, and elicit concrete steps forward) for a grand total of 10 questions randomly selected within the components (ex. 1 easy question randomly selected from a pool of 3 easy questions about open questions). The question stems are provided below:

- Easy Questions (minimum pool of 3 per component): Given this exchange, select the component of motivational interviewing techniques that best describes the highlighted portion of the transcript. Six answer options including the five motivational interviewing techniques and one option stating none of the above will be provided.

- Moderate Questions (minimum pool of 5 per component): Given the following transcript, match the highlighted portions with the corresponding component of motivational interviewing techniques.

**Learning Task 3.2.** Learners will use motivational interviewing techniques in ID-SME meetings with diminishing access to support. For the assessment, learners will be presented with two sections that are outlined below:

- In Part I, learners will be presented with easy (1) and moderate (1) difficulty-

  level questions for a minimum of 2 questions per motivational interviewing

  technique (recognize change talk, elicit change talk, roll with resistance,

  negotiating a plan of change, and elicit concrete steps forward) for a minimum

  of 10 questions.  These questions will not be randomly selected as there is a

  specific trajectory that learners may experience based on their responses.

  o Easy Questions (minimum pool of 5): Given this exchange, select the

    motivational interviewing technique that best describes the highlighted

    portion of the transcript.  Six answer options including the five

    motivational interviewing techniques (recognize change talk, elicit

    change talk, roll with resistance, negotiating a plan of change, and

    elicit concrete steps forward) and one option stating none of the above

    will be provided.

  o Moderate Questions (minimum pool of 7): Given the following

    transcript, match the highlighted portions with the corresponding

    motivational interviewing technique.

- In Part II, learners will be presented with the same instructions that contains

  multiple parts: Given the following partial transcript, please fill in the blanks

  with your own statements reflecting appropriate use of recognize change talk,

  elicit change talk, roll with resistance, negotiating a plan of change, and elicit

  concrete steps forward.

**Learning Task 3.3.** Learners will use motivational interviewing techniques in ID-SME meetings with little to no access to support. For the assessment, learners will be presented with three sections as outlined below:

- In Part I, learners will be presented with descriptions of three scenarios. The learners must pick a scenario that is appropriate for the use of motivational interviewing. The instructions will read as follows: Of the three provided scenarios, which do you think is most appropriate for the use of motivational interviewing? (Two will be correct, one will be incorrect). These are different from those seen in Task Class 2.

- In Part II, learners will be presented with the chosen branched decision-making scenario. The application will walk the learner through the role play exercise with the application acting as the SME and the learner acting as the ID. The SME will say a line (also provided in text form), and the ID (learner) will select an appropriate response from a series of multiple-choice options. Based on those responses, the conversation will take various turns.

- In Part III, at the end of the scenario, a transcript will be provided to the learner. The learner will then be prompted to identify the motivational interviewing techniques and some of the client-centered communication skills used in the various interactions (each line of the learner responses will have an accompanying drop-down box to select the appropriate skill and technique).

**Learning Task 4.1.** Learners will apply motivational interviewing including client-centered communication and counseling skills and motivational interviewing techniques in ID-SME meetings with full access to support. For the assessment, learners will be presented with a partial transcript to complete (from a pool of 3 possible transcripts). The instructions will state as follows: Given the following partial transcript, please fill in the blanks with your own statements reflecting appropriate use of client-centered communication skills and motivational interviewing techniques. After each statement, please note the skill(s) or technique(s) being used in parentheses.

**Learning Task 4.2.** Learners apply motivational interviewing including client-centered communication and counseling skills and motivational interviewing techniques in ID-SME meetings with little to no access to support. For the assessment, learners will be presented with three sections as outlined below:

- In Part I, learners will be presented with descriptions of three scenarios. The learners must pick a scenario that is appropriate for the use of motivational interviewing. The instructions will read as follows: Of the three provided scenarios, which do you think is most appropriate for the use of motivational interviewing? (Two will be correct, one will be incorrect). These are different from those seen in Task Classes 2 and 3.

- In Part II, learners will be presented with the chosen branched decision-making scenario. The application will walk the learner through the role play

exercise with the application acting as the SME and the learner acting as the

ID. The SME will say a line (also provided in text form), and the ID (learner)

will select an appropriate response from a series of multiple-choice options.

Based on those responses, the conversation will take various turns.

- In Part III, at the end of the scenario, a transcript will be provided to the

  learner. The learner will then be prompted to identify the motivational

  interviewing techniques and some of the client-centered communication skills

  used in the various interactions (each line of the learner responses will have an

  accompanying drop-down box to select the appropriate skill and technique).

### *Rubrics*

There are three instances in which rubrics are to be used and are included in

Tables C1-C3 below.

**Table C1**

*Learning Task 2.2 Rubric*

| Part II: Partial Transcript Responses | |
|---|---|
| 3 | Each blank (4) contains a response that correctly assumes a specific client-based communication and counseling skill. Responses are all reflective of appropriate client-based communication and counseling skills given the context of the transcript. Responses are realistic and easy to read. |
| 2 | 75% of blanks (4) or better contain a response that correctly assumes a specific client-based communication and counseling skill. Responses are mostly reflective of appropriate client-based communication and counseling skills. Responses are mostly realistic and easy to read. |
| 1 | 50% of blanks (4) or better contain a response that correctly assumes a specific client-based communication skill. Responses are less reflective of appropriate client-based communication and counseling skills. Responses are not realistic or easy to read. |

**Table C2**

*Learning Task 3.2 Rubric*

| | Part II: Partial Transcript Responses |
|---|---|
| 3 | Each blank (5) contains a response that correctly assumes a specific motivational interviewing technique. Responses are all reflective of appropriate motivational interviewing techniques given the context of the transcript. Responses are realistic and easy to read. |
| 2 | 75% of blanks (4) or better contain a response that correctly assumes a motivational interviewing technique. Responses are mostly reflective of appropriate motivational interviewing techniques. Responses are mostly realistic and easy to read. |
| 1 | 50% of blanks (4) or better contain a response that correctly assumes a specific motivational interviewing technique. Responses are less reflective of appropriate motivational interviewing techniques. Responses are not realistic or easy to read. |

**Table C3**

*Learning Task 4.1 Rubric*

| | Partial Transcript Responses |
|---|---|
| 3 | Each blank (varies) contains a response that correctly assumes a specific motivational interviewing technique and/or client-based communication and counseling skills.  Responses are all reflective of appropriate motivational interviewing techniques and/or client-based communication and counseling skills given the context of the transcript.  Responses are realistic and easy to read. |
| 2 | 75% of blanks (varies) or better contain a response that correctly assumes a motivational interviewing technique and/or client-based communication and counseling skills.  Responses are mostly reflective of appropriate motivational interviewing techniques and/or client-based communication and counseling skills.  Responses are mostly realistic and easy to read. |
| 1 | 50% of blanks (varies) or better contain a response that correctly assumes a specific motivational interviewing technique and/or client-based communication and counseling skills.  Responses are less reflective of appropriate motivational interviewing techniques and/or client-based communication and counseling skills.  Responses are not realistic or easy to read. |

### Learning Trajectory Analysis

There are two primary means of learner trajectory: system control and learner control.  System control accounts for much of the trajectory.  The application will dictate to the students how to progress through the modules, though plenty of opportunities will be available to re-take assessments and review activities as needed.  Within the assessments, the system will dictate the questions to be answered, either randomized or specific paths.  Examples of system control include:

- Application sequences paths through activities and assessments.

- Application randomly chooses questions to display.

- Application displays questions based on responses by the learners (specific

  paths). An example of a specific path within an assessment can be seen in

  Figure C5.

**Figure C5**

*Example Adaptive Learner Trajectory through Learning Task 1.2*
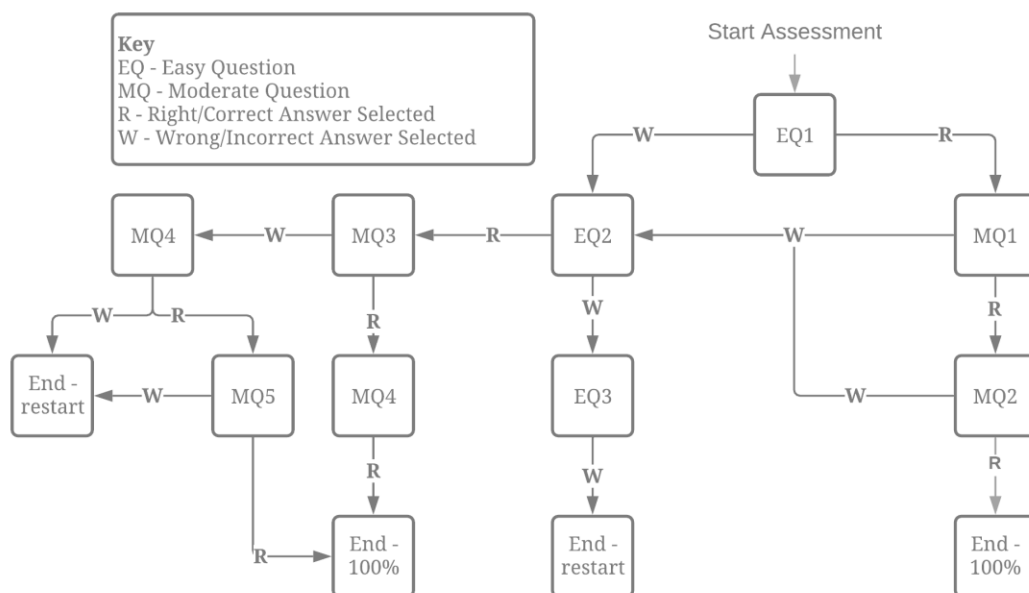


- Immediate feedback and redirection will be provided by the application.

Examples of learner control include:

- Learners can repeat some tasks an unlimited number of times.

- Learners will also at times get to choose their scenarios (or context) for the

  assessments.

- Learners will get the opportunity to self-evaluate written work informally.

- Learners will at times get unfettered or diminished access to guidance and
  procedures.

## Calculation of the Return on Investment

The final component of the Design Brief is the calculation of the return on investment. Contributing to this analysis is the revised projected cost estimates, an analysis of the potential benefit to training, and an assigning value analysis as outlined by Branch (2009).

### *Revised Projected Cost Estimates*

The revised projected cost estimates for each phase are provided in Tables C4-C8. Table C9 contains the revised total projected costs for all phases.

**Table C4**

*Revised Cost Estimate for Analyze Phase*

| Item | Cost |
|---|---|
| Instructional Designers' Salaries/Benefits | $3,229.62 |
| Meals, Travel, and Incidental Expenses | $0 |
| Office Supplies and Related Expenses | $360 (Software – annual) |
| Printing and Reproduction | $0 |
| Outside Services | $0 |
| Equipment Expenses | $0 |
| Professional Fees | $0 |
| Miscellaneous Expenses | $0 |
| Total | $3,589.62 |

**Table C5**

*Revised Cost Estimate for Design Phase*

| Item | Cost |
|---|---|
| Instructional Designers' Salaries/Benefits | $5,439.36 (192 hours at $28.33/hr) |
| Meals, Travel, and Incidental Expenses | $0 |
| Office Supplies and Related Expenses | $96 (Software – annual) |
| Printing and Reproduction | $0 |
| Outside Services | $308.80 (Subject Matter Expert Consulting/Feedback) (10 hours at $30.88/hr) |
| Equipment Expenses | $0 |
| Professional Fees | $0 |
| Miscellaneous Expenses | $0 |
| Total | $5,844.16 |

**Table C6**

*Revised Cost Estimate for Develop Phase*

| Item | Cost |
|---|---|
| Instructional Designers' Salaries/Benefits | $18,414.50 (650 hours x $28.33/hr) |
| Meals, Travel, and Incidental Expenses | $0 |
| Office Supplies and Related Expenses | $0 |
| Printing and Reproduction | $0 |
| Production Services | $1,400 (Multimedia Specialist recording and editing)(60 hours x $23.33/hr) |
| Equipment Expenses | $0 |
| Outside Services | $617.60 (Subject Matter Expert Consulting/Feedback)(20 hours x $30.88/hr) $722.22 (Programmer Consulting/Feedback)(20 hours x $36.11/hr) |
| Professional Fees | $0 |
| Miscellaneous Expenses | $0 |
| Total | $21,154.32 |

**Table C7**

*Revised Cost Estimate for Implement Phase*

| Item | Cost |
| --- | --- |
| Student (meals, travel, lodging, salaries) | $0 |
| Instructor | $1,699.80 (15 hours a week x 4 weeks = 60 hours x $28.33/hr) |
| | $617.60 (5 hours a week x 4 weeks = 20 hours x $30.88/hr) |
| Employee Replacement | $0 |
| Tracking and Scheduling | $100 |
| Training Materials and Supplies | $0 |
| Lost Production | $1,374.24 (7 learners x 8 hours at $24.54) |
| Facility | $0 |
| Miscellaneous Expenses | $0 |
| Total | $3,791.64 |

**Table C8**

*Revised Cost Estimate for Evaluate Phase*

| Item | Cost |
| --- | --- |
| Salaries/Benefits | $3,229.62 |
| Learner Expenses | $0 |
| Office Supplies and Related Expenses | $0 |
| Printing and Reproduction | $0 |
| Outside Services | $0 |
| Equipment Expenses | $0 |
| Miscellaneous Expenses | $0 |
| Total | $3,229.62 |

**Table C9**

*Revised Cost Estimate for ADDIE Conceptual Framework*

| Phase | Cost |
| --- | --- |
| Analysis | $3,589.62 |
| Design | $5,844.16 |
| Development | $21,154.32 |
| Implementation | $3,791.64 |
| Evaluation | $3,229.62 |
| Total | $37,609.36 |

*Potential Benefit to Training*

The potential calculable benefit to training IDs is difficult as it should help increase learning down the road. One could argue that a potential benefit may be that of increased persistence of students.

*Assigning Value*

To calculate the return on investment, we must make some assumptions that inform the return-on-investment calculations. The assumptions which try to assign value to persistence of students resulting from a better ID-SME relationship are provided below:

- The ID unit works on an average of 443 projects a year (using 2016-2019 data)

  - An average of 21% of those projects are in-depth, longer term projects = 93 projects a year include high impact ID work

  - An estimated 10% of those projects include SMEs who may show ambivalence to one or more instances of change = 9 projects a year

- Average class size at the institution is 24 students per class.

- Average tuition for a 3-credit hour class is $1,256.25.

- Two students on average may not continue after the class has been taken. Of those two, maybe only one student may have been affected to a large degree by the resulting relationship between SME and ID. Using the assumption of 9 projects a year, this amounts to a loss of persistence of 9 students.

- MI may be effective 25% of the time based on transference of skill,
  experience, and frequency of use as well as additional considerations.

- Those non-persisting students are assumed to be taking one class at a time –
  so the loss of revenue is based on not taking 1 additional course.

The following calculations are meant to reflect an estimated return on investment
based on the above assumptions:

- Number of Projects (9) x Number of Non-Persisting Students Per Class (1) =
  Number of Non-Persisting Students Over Multiple Projects (9)

- Number of Non-Persisting Students Over Multiple Projects (9) x Potential
  Effectiveness of MI (25%) = Students Potentially Affected by Use of MI
  (2.25)

- Students Potentially Affected by Use of MI (2.25) x Tuition of a 3 Credit
  Hour Course ($1,256.25) = Training Benefit ($2,826.56 a year)

- Return on Investment (in percentage) = (Training Benefit x Training Cost) x
  100

  - (Training Benefit ($2,826.56)/Updated Cost Estimate (37,609.36)) x
    100 = 7.5% Return on Investment

Based on the assumptions provided and the subsequent calculations, the return on
investment is estimated at 7.5%.

**Reference List**

Anderson, L. E. & Karthwohl, D. (Eds.). (2001). *A taxonomy for learning, teaching and assessment.* New York: Longman.

Association for Educational Communications and Technology. (2018, October 19). *AECT Code of Professional Ethics 2018*. https://www.aect.org/docs/AECT_Code_of_Ethic-Current.pdf.

Arnold, D., Edwards, M., Magruder, O., & Moore, S. (2018). *The competencies and goals of instructional designers: A survey study*. UPCEA. https://upcea.edu/wp-content/uploads/2018/04/The-Competencies-and-Goals-of-Instructional-Designers-A-Survey-Study.pdf

Barwick, M. A., Bennett, L. M., Johnson, S. N., McGowan, J., & Moore, J. E. (2012). Training health and mental health professionals in motivational interviewing: A systematic review. *Children and Youth Services Review*, *34*(9), 1786–1795. https://doi.org/10.1016/j.childyouth.2012.05.012

Bawa, P., & Watson, S. L. (2017). The chameleon characteristics: A phenomenological study of instructional designer, faculty, and administrator perceptions of collaborative instructional design environments. *The Qualitative Report, 22*(9), 2334-2355.

Blom-Hoffman, J., & Rose, G. S. (2007). Applying motivational interviewing to school-based consultation: A commentary on "Has consultation achieved its primary prevention potential?," an article by Joseph E. Zins. *Journal of*

*Educational & Psychological Consultation*, *17*(2/3), 151–156.

https://doi.org/10.1080/10474410701346451

Bower, B. L. (2001). Distance education: Facing the faculty challenge. *Online*

*Journal of Distance Learning Administration*, *4*(2).

https://www.westga.edu/~distance/ojdla/summer42/bower42.html

Branch, R. M. (2009). *Design: The ADDIE approach.* New York: Springer.

Campbell, K., Schwier, R. A., & Kenny, R. F. (2009). The critical, relational practice

of instructional design in higher education: An emerging model of change

agency. *Educational Technology Research and Development*, *57*(5), 645–663.

https://doi.org/10.1007/s11423-007-9061-6

Cook, M. J. (2019). *Designing motivational interviewing instruction employing the*

*First Principles of Instruction* (Publication No.13807515) [Doctoral dissertation,

Indiana University - Purdue University Indianapolis]. ProQuest Dissertations

Publishing.

Csillik, A. S. (2013). Understanding motivational interviewing effectiveness:

Contributions from Rogers' client-centered approach. *The Humanistic*

*Psychologist*, *41*(4), 350–363. https://doi.org/10.1080/08873267.2013.779906

Defelice, R. A. (2021, January 13). How long does it take to develop training?

New question, new answers. *Association for Talent Development*.

https://www.td.org/insights/how-long-does-it-take-to-develop-training-new-

question-new-answers

Definitions and Terminology Committee of the Association for Educational

      Communications and Technology (2008). Definition. In A. Januszewski & M.

      Molenda (Eds.), *Educational technology: a definition with commentary* (pp. 1-

      14). New York: Lawrence Erlbaum.

Dousay, T. A. (2018). Instructional design models. In R. E. West (Ed.), *Foundations*

      *of learning and instructional design technology*. EdTech Books.

      https://edtechbooks.org/lidtfoundations/instructional_design_models

Dousay, T. A., & Logan, R. (2011). Analyzing and evaluating the phases of ADDIE.

      In Proceedings from Design, Development and Research Conference 2011 (pp.

      32–43). Cape Town, South Africa.

Fairweather, A. E. (2018). *Comparison of face-to-face and synchronous web-based*

      *training in motivational interviewing for health and human service*

      *professionals: Does training method matter?* (Publication No. 10790724)

      [Master's thesis, North Dakota State University].  ProQuest Dissertations

      Publishing.

Health Education & Training Institute. (n.d.). *Our current training calendar.*

      https://www.hetimaine.org/workshop-calendar

Hebard, S. P., & Watson, D. M. (2017). Motivational interviewing as a framework for

      consultation with school administrators. *Journal of Counselor Practice*, *8*(2),

      83–102. https://doi.org/10.22229/cyi368201

Herd, A. (2015). The case of "Not Enough Time:" Using GROW and motivational

interviewing coaching frameworks. *New Horizons in Adult Education & Human Resource Development*, *27*(3), 46–49.

Institute for Individual and Organizational Change. (n.d.). *List of 2021 trainings.* https://www.ifioc.com/list-of-2021-trainings/

Kang, Y., & Ritzhaupt, A. D. (2015). A job announcement analysis of educational technology professional positions: Knowledge, skills, and abilities. *Journal of Educational Technology Systems*, *43*(3), 231–256. https://doi.org/10.1177/0047239515570572

Karvinen, K. H., Balneaves, L. G., Courneya, K. S., Perry, B., Truant, T., & Vallance, J. (2017). Evaluation of online learning modules for improving physical activity counseling skills, practices, and knowledge of Oncology nurses. *Oncology Nursing Forum*, *44*(6), 729–735. https://doi.org/10.1188/17.ONF.729-738

Kaufman, R., & Guerra-Lopez, I. (2013). *Needs Assessment for Organizational Success*. ASTD Press.

Kebaetse, M., & Sims, R. (2016). Using instructional consultation to support faculty in student-centered teaching. *Journal of Faculty Development*, *30*, 31-40.

Keppell, M. (1999). The crucial roles of the instructional designer and the subject matter expert in multimedia design. In B. Collis & R. Oliver (Eds.), *Proceedings of ED-MEDIA 1999--World Conference on Educational Multimedia, Hypermedia & Telecommunications* (pp. 598-603). Seattle, WA USA: Association for the Advancement of Computing in Education

(AACE). Retrieved February 3, 2020

from https://www.learntechlib.org/primary/p/6676/.

Kittles, M., & Atkinson, C. (2009). The usefulness of motivational interviewing as a

consultation and assessment tool for working with young people. *Pastoral Care*

*in Education*, *27*(3), 241–254. https://doi.org/10.1080/02643940903133870

Klein, J. D., & Kelly, W. Q. (2018). Competencies for instructional designers: A view

from employers. *Performance Improvement Quarterly*, *31*(3), 225–247.

https://doi.org/10.1002/piq.21257

Kumar, S., & Ritzhaupt, A. (2017). What do instructional designers in higher

education really do? *International Journal on E-Learning*, *16*(4), 371–393.

Lin, H. (2007). The ethics of instructional technology: Issues and coping strategies

experienced by professional technologists in design and training situations in

higher education. *Educational Technology Research and Development*, *55*(5),

411–437. https://doi.org/10.1007/s11423-006-9029-y

Markland, D., Ryan, R. M., Tobin, V. J., & Rollnick, S. (2005). Motivational

interviewing and self-determination theory. *Journal of Social and Clinical*

*Psychology, 24*(6), 811–831.

http://dx.doi.org.libsrv.wku.edu/10.1521/jscp.2005.24.6.811

Mason, M. J. (2009). Rogers redux: Relevance and outcomes of motivational

interviewing across behavioral problems. *Journal of Counseling and*

*Development, 87*(3), 357–363. http://dx.doi.org.libsrv.wku.edu/10.1002/j.1556-

6678.2009.tb00117.x

Mastroleo, N. R., Humm, L., Williams, C. M., Kiluk, B. D., Hoadley, A., & Magill,

    M. (2020). Initial testing of a computer-based simulation training module to

    support clinicians' acquisition of CBT skills for substance use disorder

    treatment. *Journal of Substance Abuse Treatment*, *114*, 108014.

    https://doi.org/10.1016/j.jsat.2020.108014

McCowan, T. (2017). Higher education, unbundling, and the end of the university as

    we know it. *Oxford Review of Education*, *43*(6), 733–748.

    https://doi.org/10.1080/03054985.2017.1343712

McDonald, J. K. (2008). Translate to communicate: Facilitating client understanding

    of design languages. In L. Botturi & S. T. Stubbs (Eds.), *Handbook of visual*

    *languages for instructional design: Theories and practices* (pp. 18-32). Hershey,

    PA: IGI Global.

Miller, W. R. (1983). Motivational interviewing with problem drinkers. *Behavioral*

    *Psychotherapy, 11*, 147-172.

Miller, W. & Moyers, T. (2006). Eight stages in learning motivational interviewing.

    *Journal of Teaching in the Addictions*, 5, 3-17. doi: 10.1300/J188v05n01_02

Miller, W. R., & Rollnick, S. (2002). *Motivational interviewing: Preparing people for*

    *change* (2nd ed). New York: Guilford Press.

Miller, W. R., & Rollnick, S. (2009). Ten things that motivational interviewing is not.

    *Behavioural and Cognitive Psychotherapy*, *37*(2), 129–140.

    https://doi.org/10.1017/S1352465809005128

Miller, W. R., & Rose, G. S. (2009). Toward a theory of motivational interviewing. *The American Psychologist*, *64*(6), 527–537. https://doi.org/10.1037/a0016830

Mitchell, S., Heyden, R., Heyden, N., Schroy, P., Andrew, S., Sadikova, E., & Wiecha, J. (2011). A pilot study of motivational interviewing training in a virtual world. *Journal of Medical Internet Research*, *13*(3), e77. https://doi.org/10.2196/jmir.1825

Molenda, M. (2003). In search of the elusive ADDIE model. *Performance Improvement, 42*: 34-36. https://doi.org/10.1002/pfi.4930420508

Morrison, G. R. (1988). The instructional designer-subject specialist relationship: Implications for professional training. *Journal of Instructional Development*, *11*(2), 24. https://doi.org/10.1007/BF02905000

Motivational Interviewing Network of Trainers. (n.d.). *Motivational interviewing training.* https://motivationalinterviewing.org/motivational-interviewing-training

Mullin, D. J., Saver, B., Savageau, J. A., Forsberg, L., & Forsberg, L. (2016). Evaluation of online and in-person motivational interviewing training for healthcare providers. *Families, Systems, & Health*, *34*(4), 357–366. https://doi.org/10.1037/fsh0000214

Navidian, A., Rostami, Z., & Rozbehani, N. (2015). Effect of motivational group interviewing-based safety education on workers' safety behaviors in glass manufacturing. *BMC Public Health*, *15*(1), 1–7. https://doi.org/10.1186/s12889015-2246-8

Pan, C., Deets, J., Phillips, W., & Cornell, R. (2003). Pulling tigers' teeth without getting bitten. *Quarterly Review of Distance Education*, *4*(3), 289–302.

Park, J.-Y., & Luo, H. (2017). Refining a competency model for instructional designers in the context of online higher education. *International Education Studies*, *10*(9), 87. https://doi.org/10.5539/ies.v10n9p87

Peterson, C. (2003). Bringing ADDIE to life: Instructional design at its best. *Journal of Educational Multimedia & Hypermedia*, *12*(3), 227–241.

Psychwire. (n.d.). *Our online motivational interviewing courses.* https://psychwire.com/motivational-interviewing/courses

Reinke, W. M., Lewis-Palmer, T., & Merrell, K. (2008). The Classroom Check-up: A classwide teacher consultation model for increasing praise and decreasing disruptive behavior. *School Psychology Review*, *37*(3), 315–332.

Reiser, R. (2018). What field did you say you were in? Defining and naming our field. In R. Reiser & J. Dempsey (Eds.), *Trends and Issues in Instructional Design and Technology* (pp. 1–7). New York: Pearson.

Richardson, J. C., Ashby, I., Alshammari, A. N., Cheng, Z., Johnson, B. S., Krause, T. S., Lee, D., Randolph, A., & Wang, H. (2019). Faculty and instructional designers on building successful collaborative relationships. *Educational Technology Research and Development*, *67*(4), 855–880. https://doi.org/10.1007/s11423-018-9636-4

Ritzhaupt, A. D., & Kumar, S. (2015). Knowledge and skills needed by instructional designers in higher education. *Performance Improvement Quarterly*, *28*(3), 51–69. https://doi.org/10.1002/piq.21196

Rogers, C. R. (1957). The necessary and sufficient conditions of therapeutic personality change. *Journal of Consulting Psychology, 21*(2), 95–103.

Rogers, E. M. (1995). *Diffusion of innovations* (4th ed.). New York: The Free Press.

Rossett, A. (1987). *Training needs assessment*. Englewood Cliffs, NJ: Educational Technology Publications.

Schneider, B. and Zalesny, M.D. (1982). Human needs and faculty motivation. *New Directions for Teaching and Learning*, 1982: 37-46. https://doi.org/10.1002/tl.37219821006

Shafer, M. S., Rhode, R., & Chong, J. (2004). Using distance education to promote the transfer of motivational interviewing skills among behavioral health professionals. *Journal of Substance Abuse Treatment*, *26*(2), 141–148. https://doi.org/10.1016/S0740-5472(03)00167-3

Tencza, Catherine and Hale, Judith. (2018). Performance consulting. In R. A. Reiser & J. V. Dempsey (Eds.), *Trends and Issues in Instructional Design and Technology* (pp. 213–219). New York: Pearson.

Tessmer, M. (1988). Subject specialist consultation in instructional design: Higher education. *Journal of Instructional Development*, *11*(2), 29–36.

van Leusen, P. (2013). *Interpersonal consulting skills among instructional technology consultants at an institution of higher education in the midwest – A multiple case*

*study* (Publication No. 1377282220) [Doctoral dissertation, Indiana University]. ProQuest Dissertations Publishing.

van Leusen, P., Ottenbreit-Lefwich, A. T., & Brush, T. (2016). Interpersonal consulting skills for instructional technology consultants: A multiple case study. *TechTrends: Linking Research and Practice to Improve Learning*, *60*(3), 253–259.

van Merriënboer, J. J. G. (2019) *The four-component instructional design model: An overview of its main design principles.* 4CID.org. https://drive.google.com/file/d/1PzcSSeOAZnYRjeBvWNp8lnwtUlsoh2R9/view?usp=sharing

van Merriënboer, J. J. G., Clark, R. E., & de Croock, M. B. M. (2002). Blueprints for complex learning: The 4C/ID-model. *Educational Technology Research and Development*, *50*(2), 39–61. https://doi.org/10.1007/BF02504993

van Merriënboer, J. J. G., & Kirschner, P. A. (2018). *Ten steps to complex learning: A systematic approach to four-component instructional design (3rd ed.)*. New York: Routledge.

Wagner, J. A., Pfeiffer, C. A., & Harrington, K. L. (2011). Evaluation of online instruction to improve medical and dental students' communication and counseling skills. *Evaluation & the Health Professions*, *34*(3), 383–397. https://doi.org/10.1177/0163278710380612

Wells, H., & Jones, A. (2018). Learning to change: The rationale for the use of motivational interviewing in higher education. *Innovations in Education &*

*Teaching International*, *55*(1), 111–118.

https://doi.org/10.1080/14703297.2016.1198714

Watson, J. C. (2012). Online learning and the development of counseling self-efficacy beliefs. *The Professional Counselor*, *2*(2), 143–151.

https://doi.org/10.15241/jcw.2.2.143

Yeaman, A. R. J., Eastmond, J. N. Jr & Napper, V. S. (2008). Professional ethics and educational technology. In A. Januszewski & M. Molenda (Eds.), *Educational technology: a definition with commentary* (pp. 283–326). New York: Lawrence Erlbaum.

Yusop, F. D., & Correia, A.-P. (2012). The civic-minded instructional designers framework: An alternative approach to contemporary instructional designers' education in higher education. *British Journal of Educational Technology, 43*(2), 180–190. https://doi-org.libsrv.wku.edu/10.1111/j.1467-8535.2011.01185.x

Ziegenfuss, D. H., & Lawler, P. A. (2008). Collaborative course design: Changing the process, acknowledging the context, and implications for academic development. *International Journal for Academic Development*, *13*(3), 151–160.

https://doi.org/10.1080/13601440802242309

VITA

HANNAH E. DIGGES ELLIOTT

## EDUCATION

| August, 2006 | Bachelor of Arts<br>Western Kentucky University<br>Bowling Green, Kentucky |
|---|---|
| December, 2013 | Master of Arts in Education<br>Western Kentucky University<br>Bowling Green, Kentucky |
| Pending | Doctor of Education<br>Morehead State University<br>Morehead, Kentucky |

## PROFESSIONAL EXPERIENCES

| 2017 - Present | Instructional Designer II<br>Western Kentucky University<br>Bowling Green, Kentucky |
|---|---|
| 2014 - 2017 | Instructional Designer<br>Western Kentucky University<br>Bowling Green, Kentucky |
| 2012 - 2014 | Distance Learning Associate<br>Western Kentucky University<br>Bowling Green, Kentucky |
| 2011 - 2012 | Instructional Support Specialist<br>Western Kentucky University<br>Bowling Green, Kentucky |

## PUBLICATIONS

Anton, A., Digges Elliott, H., Swanson, A. (2016) Interactive self-checks. In Magna

Publications (Eds.), *Grading strategies for the online classroom: A*

*collection of articles for faculty* (pp. 119). Madison, Wisconsin: Magna

Publications.

Anton, A., Digges Elliott, H., Swanson, A. (2016). Tips from the pros: Interactive

    self checks. *Online Cl@ssroom, 16*(4), 1 & 7

Reliford H. (2015) Jones, Margaret Ellen Barnes. In Smith, G., McDaniel, K. C., &

    Hardin, J. (Eds.), *The Kentucky African American Encyclopedia* (pp. 287).

    Lexington, Kentucky: The University Press of Kentucky.