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A Multiple Case Exploration Of Designers And Reflection In The Design Space

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**A MULTIPLE CASE EXPLORATION OF DESIGNERS AND REFLECTION IN THE
DESIGN SPACE**

by

TAMME QUINN GRZEBYK

DISSERTATION

Submitted to the Graduate School

of Wayne State University

Detroit, Michigan

In partial fulfillment of the requirements

For the degree of

DOCTOR OF PHILOSOPHY

2015

MAJOR: INSTRUCTIONAL TECHNOLOGY

Approved By:

Advisor

Date

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DEDICATION

To my husband, Kevin – you are my one love, my many laughs, and my great equalizer. I could never have done this without your love, support, and reality checks! Everything I do is so much more enjoyable and rewarding because I share it with you. Thank you for allowing me to fly, while also keeping me grounded. I love you.

To my daughters, Genevieve and Cassidy – you are my sweetest cheerleaders, and at the end of a long day, you are my greatest rewards. Always remember: Once you know something, you know it forever; no one can take that from you. I hope you are inspired in your life to be constantly curious.

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CHAPTER 1: INTRODUCTION

For decades, scholars have searched for ways to more effectively teach and practice instructional design. As a result, a variety of possible strategies have been employed to address the ambiguity in and challenges of the field. Some of the most noteworthy include developing and applying models, frameworks, and processes; examining skill sets required in the field; applying new pedagogical strategies; contrasting levels of expertise among designers; and comparing the instructional design discipline to those of other design professions.

Much of the focus in the education of instructional designers has been on teaching students how best to use the many models developed for the field (Rowling, 1992). These efforts, while meant to help the new instructional designer succeed, have often been stifled by the ever-changing landscape of what instructional designers are asked to do in their roles after graduation (Kenny, Zhang, Schwier, & Campbell, 2005). Scholars are attempting to address this issue by also focusing on the development of the skills, traits, and competencies of instructional designers (Wakefield, Warren, & Mills, 2012). As an increasing number of industries have recruited instructional designers, these practitioners have been called on to impact change within their organizations (Campbell, Schwier, & Kenny, 2009) by performing various roles under the single title of “instructional designer.” To respond to this, scholars have examined the required skills in organizations to better prepare instructional designers for professional practice (Schwier, Hill, Wager, & Spector, 2006).

Current research focuses on ways students can fuse their new instructional design knowledge with practical elements. Some of the most common strategies include utilizing model-centered instruction (Kim, 2008); undertaking cognitive apprenticeships (Ertmer & Cennamo, 1995; Bannan-Ritland, 2001); using the studio model (Clinton & Rieber, 2010; Boling & Smith, 2009); and engaging in authentic learning approaches in design education (Herrington & Oliver, 2000; Wilson & Schwier, 2009).

Instructional design scholars have also looked to other design disciplines to find commonalities and to further advance the instructional design field (Boling & Smith, 2009; Gibbons, 2008). As such, instructional design, like these other disciplines, has more recently been examined from a *design thinking* perspective. Design thinking, viewed by some as the space where mental activities are used to design solutions, objects, or even services (Dunne & Martin, 2006), would then be considered a critical activity among instructional designers. Design thinking scholar Nigel Cross (2011) has argued that design thinking is integral even to the fundamental human condition.

Design thinking as an approach to instructional design is a rational progression because it focuses on designers empathizing with users from the outset of the process (Anderson, 2012). The design thinking concept aligns with many of models and processes that have traditionally been used to educate instructional design students (Cennamo & Kalk, 2005; Dick, Carey, & Carey, 2005) in its attention to the learner and environment. On the other hand, design thinking takes a much more holistic view, characterizing the design space as requiring not only iterations as is discussed in traditional instructional design education but also exploration and chaos (Braha & Reich,

2003). How designers see and how designers think are the core of design thinking (Razzouk & Shute, 2012).

Problem

While many scholars have begun to focus on the above-mentioned alternative methods for preparing instructional designers and improving instructional design processes, *instructional designers* themselves have been neglected. We are teaching instructional designers about instructional design without truly understanding instructional designers. This includes students, practitioners, and actual study participants; we have not studied their motivations, learning contexts, or abilities (Cennamo & Kalk, 2004). From a teaching standpoint, this approach contradicts the very foundation of instructional design education: that of recognizing that the learners/users are at the center of instructional design (Cennamo & Kalk, 2004).

Instead of seeing instructional designers simply as individuals who carry out activities to complete design projects, I propose we instead view them as an integral part of design and design products. This approach reflects the position of Tracey and Boling (2013), who state that “designers act as human instruments, analogous to researchers in a naturalistic study, bringing their own acknowledged perspectives to the enterprise, working within emergent frameworks and adapting to situations unknown and unknowable in advance” (from Boling, 2008, p. 655).

Dorst (2008) maintains that there are four elements to design: the design problem, content, design context, and *designer*. In research about design, we have “abstracted from

the complexities of real-life design in order to create models and theories” (p. 11), which has neglected empirical research of the designer. While this may be due to the complicated nature of the designer, a thorough exploration of designers stands to enrich our understanding of the field and of instructional design (Dorst, 2008).

Lawson and Dorst (2009) in their exploration of instructional design found that “designing is not just something you do ... but rather it helps form your identity. Design becomes a part of one’s being because it involves so much that is personal, like your creativity, way of approaching the world’s problems, your own history, learning style and view of the world” (p. 270).

Purpose & Research Questions

The purpose of this qualitative study was to examine instructional designers during design. This study engaged participants in structured reflection as (a.) a way to better understand instructional designers in the design space and (b.) a technique for instructional designers to improve their design. In this study, I viewed instructional designers through the lens of reflection, which asked them to explore their thoughts, feelings, and experiences to arrive at deeper meanings of who they are, what they do, and why (Boud, Keogh, & Walker, 1985).

The research questions that guided this study were as follows:

- 1. How do instructional designers define their design activities in light of reflection?*

2. *In what ways does reflection impact the design products of instructional designers?*
3. *How does structured reflection during design contribute to the reflection abilities of instructional designers?*

While designers have been largely ignored in current instructional design research, the health sciences fields have recognized the prominent nature of their practitioners. Studies of actual practitioners in nursing and psychology are numerous. Psychotherapists have historically viewed themselves as an active and integral part of the therapy sessions to the extent that they measure their own health, processes, and selves when measuring their success (Jennings & Skovholt, 1999).

Often these fields use reflection to develop their practitioners' identities and competencies. Engaging in reflection helps bring patterns of unconsciousness to the forefront so that deeper understanding and meaning can emerge (Friedman, 2012). Little scholarly work exists about how reflection contributes to the instructional design space or to what extent, if any, instructional designers are affected through reflection. The very disciplines where practitioners are seen as integral are also where reflection is encouraged as a means of improving behaviors; this activity has led to increased productivity and an improvement in quality in those disciplines (Taylor-Haslip, 2010; Short & Rinehart, 1993).

Reflection is used frequently in the health sciences field in particular. Psychologists, for example, use reflection to validate their findings and thoughts during client treatment, recognizing they are an active part of the process, just like the patient.

Psychology scholars consistently argue that this form of general knowledge and self-insight is critical to becoming a skilled therapist (Fauth & Williams 2005). Nurses also embrace reflection for the purposes of learning and teaching (Chirema, 2007), and there are numerous studies involving nurses and reflection (Jasper, 1999; Jordan, 2010; Langley & Brown, 2010). Finally, in the field of medicine, medical students are often encouraged to develop reflection abilities in an effort to increase their professional competence and even improve the accuracy of diagnoses (Wald & Reis, 2010).

Reflection has not been regularly used in instructional design; however, two recent studies found that reflection helped student instructional designers develop professional identity (Tracey & Hutchinson, 2013; Tracey, Hutchinson, & Grzebyk, 2014). This current study intended to add to these and other findings within the instructional design space by taking a more in-depth, detailed look at the instructional designers from the viewpoint that they are, in fact, part of the design.

Epistemology & Theoretical Constructs

This study is grounded in constructivism, which argues that knowledge is not best gained simply by listening to a teacher; rather, knowledge is built by learners through their own view of the world (Papert, 1990). Constructivism further sees people as active in developing their own understanding of the world (Kirschner, Carr, von Merriënboer, & Sloep, 2002) and posits that a person's understanding of the world constantly changes based on new experiences (Guba & Lincoln, 1994).

Within constructivism lies my theoretical perspective, which, as Crotty (1998) describes, is a “philosophical stance informing the methodology” (p. 3). My interpretivist theoretical perspective guides this study and asserts that meanings of experiences are gained through the interpretive process of the person/people engaged in the experience (Aldiabat & Le Navenac, 2011). The more specific interpretivist lens that was utilized in the study is symbolic interactionism. Symbolic interactionism follows the fundamental beliefs that (a.) we live in a symbolic world where we create learned meanings (Herman & Reynolds, 1994); (b.) we behave in the midst of things based on the learned meanings we have of them; (c.) meanings continue to arise through interaction among people; and (d.) our meanings are addressed and changed based on our interpretation of what has occurred (Blumer, 1969).

According to Benzies and Allen (2001), the most critical precept of symbolic interactionism is that individuals and contexts are always connected. Further, Benzies and Allen state, “symbolic interaction provides a theoretical perspective for studying how individuals interpret objects and other people in their lives and how this process of interpretation leads to behavior in specific situations” (2001, p. 544).

This study examined instructional designers during the design process and sought deeper understanding by examining their views of their world. That said, as the researcher, I also acted as a *passionate participant* (Guba & Lincoln, 1994; Lincoln, 1991), engaged in incorporating and examining my own views as well.

Definition of Terms

The following list of definitions is meant to provide a general understanding of the terminology used throughout this study. Because some of these terms are complex, they are further expanded during the literature review when necessary.

Instructional design is the “science and art of creating detailed specifications for the development, evaluation, and maintenance of situations which facilitate learning and performance” (Richey, Klein, & Tracey, 2011, p. 3).

Design space is a theoretical zone that consists of a combination and interaction of the designer with inputs and processes to engage in design activities (Rozet, Lebrun, Debrus, Boulanger, & Hubert, 2013).

Design thinking is the “analytic and creative process that engages a person in opportunities to experiment, create and prototype models, gather feedback, and redesign” (Razzouk & Shute, 2012, p. 330).

Metacognition refers to the engagement of higher-order thinking with cognitive processes (Flavell, 1979). For example, when an instructional designer plans or evaluates design, metacognition has occurred.

Reflection has been defined a number of ways. In this study, reflection is a metacognitive process that results in greater insight into the situation and oneself to bring greater understanding to future situations (Sandars, 2009). It is an attempt to make the implicit explicit. Reflection is a continuous process of making sense of one’s own experiences to increase insightfulness (Orchowski, Evangelista, & Probst, 2010).

Summary

Research in instructional design has neglected instructional designers as integral to design. This study, on the other hand, examined instructional designers during design as central to the design. The overarching questions that guided the study were: (1.) *How do instructional designers define their design activities in light of reflection;* (2.) *In what ways does reflection impact the design products of instructional designers;* and (3.) *How does structured reflection during design contribute to the reflection abilities of instructional designers.*

The study utilized reflection as the lens through which to explore instructional designers and incorporated design spaces as the conceptual framework to aid in the study's navigation. This study's approach, then, acknowledged previous suggestions from scholars to expand upon our current literature, particularly in that "Design researchers should join design practitioners in co-creating the design expertise and design practices of the future" (Dorst, 2008, p. 11).

Definitions specific to this study were provided previously in this chapter. Chapter 2 will provide an in-depth review of pertinent literature that guides this study. It also outlines specific studies from applicable disciplines.

CHAPTER 2: LITERATURE REVIEW

The intent of this review is to examine existing literature related to the nature of instructional design; the competencies, characteristics, roles, and activities of instructional designers; and the concept of reflection as a means to further develop practitioners. This review identifies important historical elements and clarifies current trends across these topics. It presents both quantitative and qualitative studies, including pertinent seminal works as well as more recent research. This review also identifies gaps within the existing literature, particularly as they relate to instructional designers in the design space and the use of reflection in the instructional design discipline.

I conducted my searches using EBSCO, Proquest, and Google Scholar. In numerous cases, I identified additional related articles through the given links after locating initial, applicable literature. I used various search terms to acquire relevant literature, and the terms that provided the most useful content included: *novice designers*, *professional identity*, *self-concept*, *metacognition*, *self-reflection*, and *self-awareness*. Results also showed a particular abundance of literature applying identity development and reflection to the medical, education, and business fields.

Alternatively, the search terms that provided little relevant information were *novice identity*, *instructional designer identity*, and *instructional designer reflection*. This confirmed the importance of this study, since its primary purpose is to investigate professional identity development and reflection among instructional designers. And since identity development studies from other fields were widely available, I reviewed these for possible application to instructional design. Applying cross-disciplinary methods to diverse disciplines is not new. For example, Schön (1984), a researcher known for his work related to reflection in action, has

addressed reflection as it pertains to a variety of fields including two seemingly dissimilar ones: science and design.

Nature of Instructional Design

Design, in general, has a long history, so the term and practice have taken on many connotations depending on the discipline in which it has been applied (Ernhoff & Marshall, 2008). While the field of design is rich with history and evolving meanings, Taura and Nagai (2011) provide a definition that encompasses the various design areas, stating it is “developing a figure to the future” (p. 6). In this view, the act of design includes (a.) making something abstract concrete, (b.) solving a problem or reaching an unmet goal, and (c.) pursuing an ideal or something better than already exists (Taura & Nagai, 2011). The general practice of design carries relevance in the discussion of instructional design, particularly because scholars and practitioners have begun to align instructional design with creativity more so than with a stringent process (Dorst, 2011). Upon review of many definitions set forth by various scholars, Richey et al. (2011) define instructional design as the “science and art of creating detailed specifications for the development, evaluation, and maintenance of situations which facilitate learning and performance” (p. 3). Before discussing the nature of instructional design *today*, it’s valuable to outline how the nature of instructional design *today* came to be.

While instructional design was first popularized during World War I in efforts to develop job instruction for industry, it continued to develop as a more complex activity. After World War II, as clinical psychologists became interested in behaviorism, the instructional design approach turned toward a more behaviorist approach (Gibbons, 2011). The behaviorist approach was effective in that it provided for a cycle of stimulus, response, and feedback; this soon developed into programmed instruction. Unfortunately, while the cycle was effective when fully designed

and implemented, programmed instruction was costly to develop. The behaviorist approach to instructional design soon fell out of favor.

Cognitivism began gaining popularity as behaviorism was falling by the wayside. In instructional design, cognitivism was focused on mental processing aimed at organizing messages in the learner's mind (Grabowski, 2009). It was clear that learners' mental processes were complex. Robinson (1979, as cited in Cooper, 1983) theorized that as a result of recognizing these cognitive complexities, instructors needed to match their actions to the level of that of the learners. Over time, however, this approach garnered skepticism by theorists who believed that the process by which learning took place was mischaracterized.

While theorists continued to recognize the changing roles of learning and teaching, a newer philosophy was showing promise: social constructivism. Under social constructivism, instructional design places attention on the actual learner, as a whole. Instruction is then designed with the understanding that the learner creates meaning and is an active participant in the process (Grabowski, 2009).

The approach to and nature of instructional design continue to evolve. In addition to the philosophical underpinnings, other developments such as cultural changes and technological advances impact the way in which instructional design is viewed. It has become a more complex and richer discipline with far more peer-client interaction; varied and increased decisions related to media use; ongoing growth of ill-structured problems; and more complex goals to meet (Spector, 2010). It's expected that revolutionary changes are underway given technological developments, workplace learning needs, and learning organization emphases (Spector, 2010).

Instructional design, while being part of a variety of epistemologies throughout its history, has also been led by a variety of guiding theories including general systems theory,

communication theory, learning theory, conditions-based theory, constructivist design theory, and performance improvement theory (Richey et al. 2011). A number of models and frameworks have been developed as a result, two of which are described below.

Many instructional design curricula rely on the ADDIE process as a starting point (Peterson, 2003). As seen in Figure 2.1, its steps consist of analyze, design, develop, implement, and evaluate. Somewhat linear in nature, it guides designers through the steps with the intention of resulting in a successfully designed project.

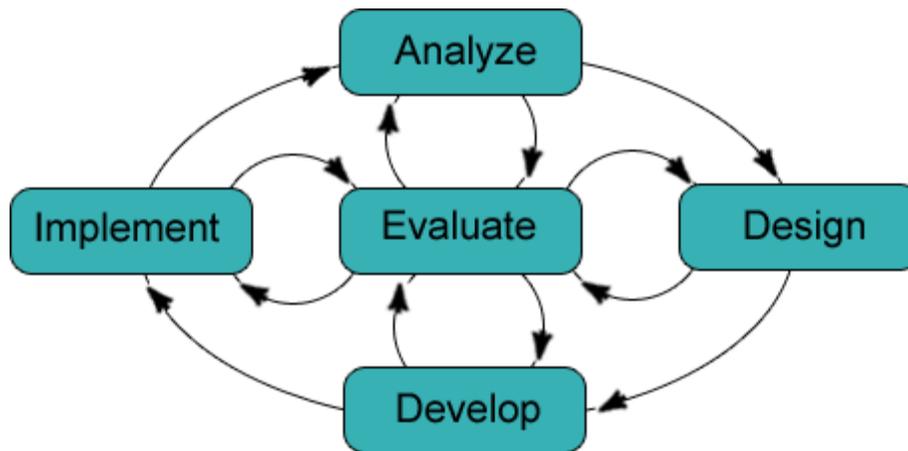


Figure 2.1: ADDIE Process
(from Cennamo & Kalk, 2005)

A general instructional design model that has remained prominent in instructional designer instruction is the Dick, Carey, & Carey Design Model (2001), as seen in Figure 2.2. This model defines instructional design as somewhat of a systematic process (Gustafson & Branch, 2002). It consists of a series of steps, some conducted in parallel, some conducted consecutively, but all in a concerted effort to develop comprehensive instruction solutions.

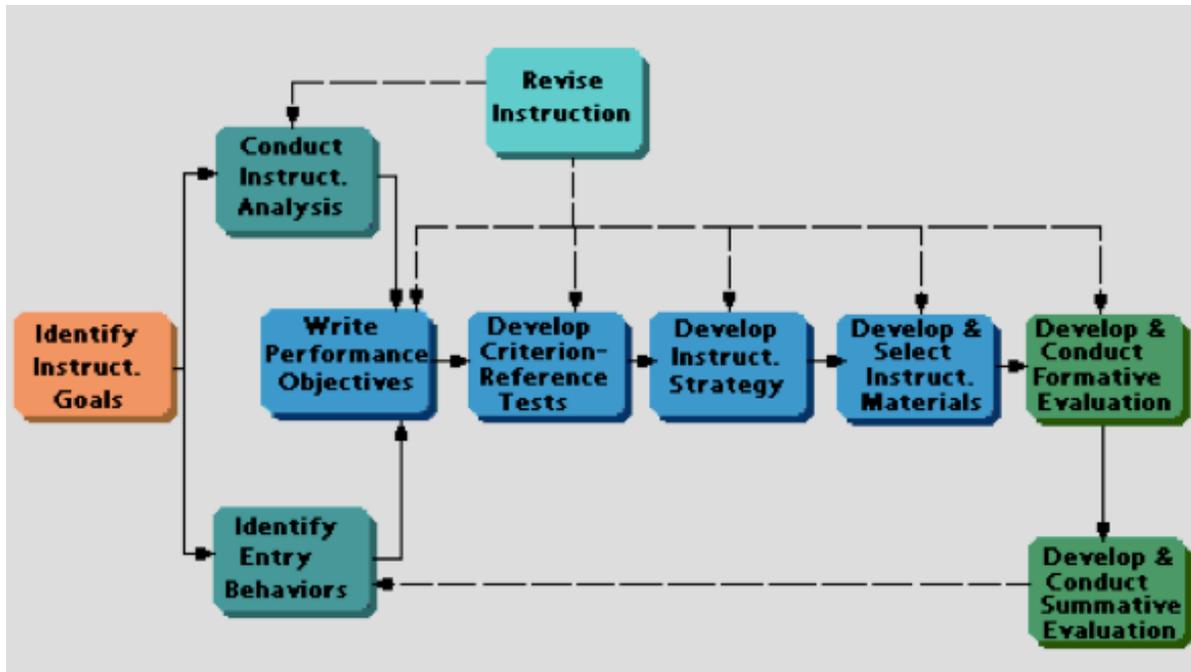


Figure 2.2: Dick, Carey, & Carey Model

The nature of instructional design has evolved as a result of changing philosophies, cultures, and technological advances. Theories, models, and frameworks that create the base for instructional design are those subjects that continue to be taught to instructional designers, while some disagree whether what is taught and what is practiced are aligned (Larson, 2005; Leigh & Tracey, 2010). However, as we will discover in the next section, understanding what designers actually do continues to be examined.

Instructional Designers & Design

Since the field of instructional design continues to evolve along with cultural, societal, and technological changes, it is not surprising that there isn't consensus about its key characteristics or functional requirements among instructional designers. On the other hand, with the complexities and ambiguous nature of the field, it *is* surprising that there aren't more abundant and recent studies about designing by instructional designers (York & Ertmer, 2011).

Existing studies of instructional designers range widely in terms of when the studies were conducted as well as the reasons for the studies.

Instructional designers work in a variety of cultures and must be prepared to be change agents in an effort to improve learners' knowledge and skills (Spector, 2008; Tracey & Boling, 2013). The literature indicates that although various instructional design models might provide inspiration to these designers, their activities don't often reflect the approach defined by such traditional instructional design models (Kirschner et al., 2002). In fact, though instructional designers seem to use instructional design models, they tend to engage in a greater number of tasks *not* reflected in or related to instructional design models (Kenny, 2005). Some experienced instructional designers even fall into a routine of design that results in oversimplification that ultimately prevents them from reaching higher-quality instructional design outcomes (MacDonald, 2011; McDonald & Gibbons, 2009).

Recent studies of instructional designers have primarily focused on instructional designer collaborative experiences, design competencies, and work activities from various perspectives. Some of those that informed this study are described below.

The collaborative experiences of designers and faculty experts was addressed by Stevens (2012) through a case study that examined five instructional designers and their five faculty partners during paired design projects. Through a qualitative approach, interviews were conducted among the pairs to reveal how their experiences collaborating affected the design process. Results of the study indicated the experiences did impact the process. Most notable were those experiences related to communication, commitment to quality, commitment to nurturing their relationship, respect for each other, and joint satisfaction in the work in which they are engaged. Of these, communication ranked highest as positively impacting the overall process.

The researcher also noted that the culture of the organization heavily influenced the ability of the pairs to engage in effective design. This study provided further guidance on how instructional designers might more effectively work with subject-matter experts to create successful design products. However, because this study's primary focus was on the collaborative effects of instructional designers and their subject-matter experts during a design project, it did not provide findings related to the actual designers, their fit in the design space, or their design activities.

Unlike the limited studies of how instructional designers collaborate, studies on competencies are slightly more common. Moskal's dissertation (2012), for example, used a collective case study method to look for common qualifications, academic experiences, and employment experiences among instructional designers in a higher education environment. By studying designers and supervisors, the researcher showed that instructional designers perform the formal roles of instructional design, which generally included (a.) working with faculty to develop effective courses and (b.) implementing proper technologies to impact learning. Moskal recognized that since the formal roles required a wide variety of functions, successful designers tended to remain flexible. In addition, common among the designers' qualities was moral purpose; successful designers naturally went *above and beyond* to help others achieve success. Relationship building became another emergent theme required of successful instructional designers, followed by effective time and project management. Further analysis of the common characteristics showed that leadership and the constant pursuit of self-improvement and learning were apparent among the group of designers in this study.

Moskal's study effectively identified areas that might help prepare future higher education instructional designers. It also demonstrated that the roles of instructional designers remain varied and require designers and supervisors to be open to change and different

responsibilities. While this study provides valuable findings, its methodology lacks a data collection during an actual designer project and instead relies on instructional designer and supervisor interviews conducted at a convenient time.

Schwier and Wilson (2010) conducted a study specific to instructional designers' competencies. Like Moskal (2012), this study didn't focus on specific design processes; rather, they focused on those competencies *outside* the traditional requirements of instructional design. Researchers conducted focus groups and email discussions with higher education instructional designers to identify the *outliers* of instructional designer roles. Findings from 22 participants showed that instructional designer roles included (a.) developing and maintaining professional relationships, (b.) taking various roles when part of a project, (c.) diplomatically working with those who do not understand instructional design, and (d.) teaching and learning throughout the process.

This study of instructional designers further informs the field about how we might better prepare instructional designers to succeed. It implies, as Moskal (2012) and Stevens (2012) discovered, that there is much more to the instructional designer role than the act of designing. On the other hand, the study still doesn't address the integral role of designers in the design space, nor does it collect the data while instructional designers are actively working on a design project.

Wakefield et al. (2012) also looked at competencies, this time more specific to the traditional instructor design role, but from the perspective of the *hiring organization*. To accomplish this, they analyzed current job postings for instructional designers to identify the skills and competencies organizations deemed important. Using the 59 job postings, the researchers defined a variety of areas as necessary for an applicant to be able to succeed. In

addition to attaining an educational foundation, such as a bachelor's degree, it was clear that designers also needed to have a depth and breadth of skills in technology. The five other key competencies included the ability to (1.) effectively communicate; (2.) design and develop; (3.) manage and lead; (4.) plan and problem solve; (5.) and remain attuned to the environment and trends as a professional. This study also suggested these topics should be covered in an instructional design curriculum. Certainly this study provides interesting and valuable information that might further inform instructional design training programs. On the other hand, it did not address the actual design activities of instructional designers.

In a targeted dissertation study, Chen (2012), aimed to identify the primary existing competencies of experts specifically in web-based instructional design. Fifteen experts were interviewed to create a sufficient list of competencies. This resulted in 20 competencies. These fell across five domains defined and confirmed by IBSTPI domain study by the author. Another 30 experts were then surveyed to determine the importance of each competency item in relation to the other items. The competencies that ranked highest included designers' abilities to (a.) communicate effectively in all formats; (b.) manage relationships with others such as customers and subject-matter experts; (c.) identify viable instructional techniques and strategies; (d.) evaluate and assess their products; and (e.) apply research and theories to their practice. Additional findings of the qualitative study indicated that the competencies required of web-based instruction did not differ much from those of traditional instructor-led instruction. This study was effective in targeting experts in instructional design to attain competency rankings—most notably for this study, the ability to identify appropriate instructional techniques and strategies. Unfortunately, it went no further in defining designers in the design space.

These studies on characteristics and competencies bring to light some elements that today's instructional designer might incorporate to better achieve success. Unfortunately, there is still a lack of consensus in terms of what actually takes place in the design space of a professional instructional designer. There are few recent studies that follow what instructional designers *actually do* (Tracey & Boling, 2013; Visscher-Voerman & Gustafson, 2004). The following studies are exceptions to this and focus on such instructional designer activities.

While not recent, a study by Visscher-Voerman and Gustafson (2004) began to extensively reveal the activities of instructional designers. In this study, researchers looked for differences in and similarities of designer strategies. Interviews were conducted with instructional designers about their strategies during the design process. The researchers' data collection methods consisted of interviews to reconstruct the designers' experiences. From the data collection and analysis, researchers defined four overarching paradigms of instructional design. From there, they further studied the participants to illustrate how the designers fit into each paradigm.

This study created a useful framework for future studies to better identify what designers *actually do*. Furthermore, a similar study that focuses on collecting data *during* the design project (instead of after project completion) may provide additional value. The researchers did, in fact, recommend that the framework be further developed so that we might gain a better understanding of designers' activities (Visscher-Voerman & Gustafson, 2004). To see whether this had been done, I conducted a search among the literature that cited this study and found no further applicable studies.

The Visscher-Voerman and Gustafson study certainly provides a foundation for future studies; its resulting framework gives structure to different designer approaches and provides

further evidence that the way in which each practitioner designs is unique—similar to what researchers have suggested (Wedman & Tessmer, 1993).

Another look into designer process resulted in Rowley's study (2005), which sought to identify whether there were common processes among expert designers of courseware. If there were, the goal was then to develop guidelines for courseware designers who were *not* experts. The researcher used an intense literature review to create a generalized model for context. Nineteen expert instructional designers across corporate, military, and university environments were then interviewed. From the data collected, the researcher found that eight general common success factors emerged that indicated the processes followed by experts were both linear and non-linear. The researcher modified the model using the findings from the interviews and then asked subject-matter experts with no courseware design experience to design a prototype using guidance from an expert designer who was following the model. The model was revised again with additional expert process guidelines and then was provided to a team including, once again, a subject-matter expert with no design experience and an expert designer who would guide using the model. The results of this activity provided information on expert design, as well as how to support non-experts during design. The model was revised once more using the inputs from previous activities and additional guidance from expert instructional designers.

The study's results indicate that a method derived from expert process can help improve the outcomes of non-expert courseware developers. It also showed that the developed model to do so was effective as such a support tool but that additional testing should be conducted to confirm validity (Rowley, 2005).

This study has future implications in terms of developing models for novices by studying both novices and experts. Its impacts could have been greater had the researcher collected data

about the designers as instruments in the design space. Further, it would have been informative to find commonalities among the successful subject-matter experts with no design experience and the expert designers.

In addition to analyzing the general activities of instructional designers, some recent studies have focused more specifically on problem solving, application of theory, and use of specific tools and principles during design. These studies continue to clarify instructional designers in terms of activities and process. In 2010, Thofson conducted a mixed-methods study of 29 expert instructional designers to determine how they approached and solved wicked problems. Similar to ill-structured problems, wicked problems were those that “have no clear definition, multiple possible but arguably correct solutions, numerous stakeholders, and no clear point of completion” (Thofson, 2010, p. 4). Using both open and closed questions in an online survey, the researcher found that these experts used models and frameworks when solving problems but that they often relied on their own experiences as well as their education and peers.

While the results of this study aligned with those of similar research on experts, its primary limitation was its depth of data collection. It relied on a Likert scale of 14 total questions; fewer than 30 participants were considered in the whole of the study. Further, while it was considered a mixed-methods study, it seemed the data set was not large enough; it may have been more informative to address the quantitative portion further by drawing further comparisons between these results and the qualitative results. Nevertheless, the study does have implications for future research. Not only does it confirm previous evidence about what expert designers do, it digs into the ways in which designers describe and characterize ill-structured problems. Categorization of such descriptions across additional expert designers might expose even better ways to prepare designers to approach such problems.

Fortney and Yamagata-Lynch extended the literature about instructional design practice in their recent study (2013). Participants included eight designers, managers, and all others who were responsible for problem-solving activities related to instructional design. Using methods including direct observation, interviews, document analysis, and a questionnaire, Fortney and Yamagata-Lynch discovered several differences between experts and novices. Most notably were the differences in the ways in which novices and experts (a.) dealt with ambiguity, (b.) understood their roles, (c.) managed their time, (d.) dealt with stress, and (e.) applied prior work experience. Fortney and Yamagata-Lynch's study also was effective in confirming other studies' findings that regardless of experience, designers can eventually complete a satisfactory product.

Their study uncovered key differences in strengths between expert and novice designers; these findings further validated those of previous studies. Similar to this current study, there was also some focus on designer activities during design. However, their study emphasized community and relationships during design, not the actual designers as instruments in the design space. This meant that self-reflection among designers was ignored.

Rather than focus on problem solving, South conducted a qualitative study to explore the extent to which *theory* was being used in instructional design practice (2008). The researcher extensively interviewed seven professional instructional designers. As a result of this inquiry, it was determined that instructional design theory and learning theory were but a small part of the many influences on decision-making among designers. The results showed that instructional designers rely on theory and design practice from a variety of other disciplines. The study also indicated that they often use intuition when designing.

One interesting point was the researcher's warning to future researchers to be skeptical of self-reporting about use of theory unless one can view artifacts corroborating its use. This was

one of the concerns of this study, in that it relied almost solely on self-report. That admission, however, provides implications for future research. In this study I implemented the researcher's recommendation to use documentation of design activities and observation of actual design products during the design process.

Another examination of instructional designs and theory was a Delphi study by Zeedick (2010). The researcher worked with experienced practitioners to determine if there was agreement about whether design theory should be applied when creating courses for graduates in an online environment. After identifying nine experienced practitioners, the researcher obtained 102 declarative statements related to the application of theory in online instructional design. A Likert scale was developed and sent to the practitioners that sought to achieve consensus on a variety of statement themes that arose from the declarative statements. Out of all of them, they agreed only that course design templates should be used as structural guides to establish a consistent approach. Even among three subgroups (administrators, designers, and instructors), there was no consensus. The results from this round were provided once again to the panel, so they had the opportunity to re-rank the statement themes after they saw the mean determined in round two. The results remained the same.

The results of this study showed that there is a lack of consensus in the field of instructional design theory as it pertains to expert practitioners in the graduate online instructional realm. This confirmed what Reigeluth (1983) first posited three decades ago. This lack of consensus, however, should help instructional designers recognize that it is acceptable to feel uncertain, to not have a clear path, and/or to not fully agree with peers in the design space. That said, this study relied heavily on Likert scales and on quantitative measures. In-depth reflection among participants and subsequent qualitative measures of the data might have

produced more useful results in terms of consensus, at a minimum, in terms of subthemes, which were not derived in the study.

In a more general approach to instructional designer activity, Thomson-Sellers (2012) conducted a mixed-methods study to determine what factors impacted instructional design practice and how the factors were viewed among instructional technology managers and non-managers. In phase one of the study, 124 managers and non-managers at for-profit organizations were surveyed. Phase two of the study included interviews of four participants from phase one who expressed interest in continuing to participate. The purpose was to validate the survey findings from phase one. Research results from the surveys and interviews indicated that managers and non-managers believed practical instructional design templates and strategies were useful during design. Conversely, while the initial survey also showed that both groups found formal theory effective in design, there was not agreement on this during the interviews.

Among the findings by the researcher, one significant suggestion was that more studies be conducted that query instructional designers about what actually occurs during design. This was addressed in this study through research question one: *How do instructional designers define their design activities in light of reflection?*

Aligned with the idea that designers rely on experience and intuition was a study on heuristics by York and Ertmer (2011). In this study, researchers designed a Delphi study to better understand what heuristics 31 experienced designers use when instructional designing. The results confirmed that 61 heuristics were considered important by practitioners to design successful instructional design products. However, as the researchers pointed out, there was no evidence that identified whether or not a heuristic was actually used. Rather, it pointed to the designers' beliefs about what heuristics were important (York & Ertmer, 2011).

The York and Ertmer study (2011) furthered the literature suggesting that experienced instructional designers do not rely on models. It also recommends that the preparation of instructional designers should include specific skills including problem solving and communication. These findings stand to impact the way educators design future programs. This study is very valuable in that it introduced heuristics as important to instructional design success among experts. However, the researchers did not work with instructional designers *during* design, nor were designer reflections used to define who they were as designers.

In addition to studying specific activities like problem solving and application of theory, two recent studies also focused on designers' use of Merrill's First Principles of Instruction. Rauchfuss (2010) and Mendenhall (2013) both explored how these principles have been used recently in the field.

The dissertation by Rauchfuss (2010) studied 19 instructional designers by analyzing their design products. The purpose was to identify the particular design principles used among instructional designers, particularly Merrill's First Principles of Instruction (Merrill, 2009). Initial analysis by Rauchfuss using a course evaluation rubric designed by Merrill showed that no significant relationship existed between the use of first principles and instructional design *training* or the use of first principles and instructional design *experience*. After separating novice designers from experts, Rauchfuss still found no statistical difference.

This study did, however, suggest implications around research design for future researchers. Rauchfuss noted that although he didn't find statistical differences, his findings were limited by sample size. Further, he recognized that the original research design specified that participants had to be primary designers on a project. The fact that many worked on teams seemed to influence the use of the principles, as well as the *actual* amount of experience brought

to the design project. A significant difference between his study and this proposed research study is the fact that he did not explore designers during the design process. Rather, he collected demographic information about them and evaluated one of their completed design projects.

In 2012, a study by Mendenhall examined how instructional designers utilized Merrill's First Principles of Instruction by focusing on K–12 teacher development programs created by designers, team leads, and project leads. Mendenhall provided an overview of the First Principles of Instruction for the designers and then called on participants to use them. The results showed that principles were used far less often than the researcher expected. Mendenhall concluded this was due to a gap in instructional designer experience, where some newer designers couldn't synthesize the principles. An aggressive timeline required of the design projects was also blamed for the lack of implementation of the principles. Designers seemed to fall back on comfortable and quick ways of designing rather than using the principles. Lack of effective training on the principles was also considered a limitation. Interestingly, it appeared that the structure of the researcher's training on First Principles of Instruction bore no resemblance to the design that incorporated the First Principles of Instruction.

The above study did expand the literature on instructional designers and provided recommendations for additional studies. However, it looked at data *after* the design projects were completed. It also focused on one element of instructional design, the use of one framework. This impedes the ability to *define* designers as they are in the design space.

As noted in many of the studies already discussed, it has become common to study instructional designers based on their level of experience. This may be a result of a research focus on expert and novice designers' differences that became popular at the beginning of the twenty-first century (Kavakli & Gero, 2002). Some studies completed more recently, however,

have used those previous studies as a foundation for moving inexperienced designers toward a higher level of expertise.

In a 2008 study, Kim looked to model-centered instruction as a way of building expertise among novice instructional designers. The participants included 126 undergraduate students from two universities. This quasi-experimental design focused on factors including a non-model-centered instruction group versus a model-centered instruction group as well as an individual learning group versus a collaborative learning group. Participants actively created lesson plans—some with the help of an expert lesson plan as a guide, some without. Those with the expert plans were asked to compare their mental models to the experts' plans throughout the process. The resulting lesson plans were then provided to collaborative or individual learning groups for revision. Each collaborative learning group was able to articulate their mental models when presenting their lesson plan revisions to their peers. These activities were analyzed, and the results showed that instructional design skills were improved among novices when model-centered instruction was used. They also showed that collaborative learning helped improve instructional design skills and the general knowledge of novices.

This study was very comprehensive from a quantitative perspective. The lack of qualitative data, however, prevented the researcher from gaining additional understanding about how novice designers gained a sense of self through this process. The lack of qualitative data collection also meant that designer reflection could not be explored. That said, the study did add to the literature in that it showed that individuals working alone and without an expert model do not perform as well as individuals who work collaboratively *or* have an expert model to follow.

Novice designers were also the center of a dissertation study by Yusop (2010). The ethnography intended to identify how student designers designed when instructed within a

framework of civic-mindedness. The study included three ID graduate students who worked with four representatives from community organizations to design instruction. The researcher observed participants during design, conducted interviews, wrote memos, maintained a reflection journal, and conducted document analysis of design products. The results showed that when instructed within the CMID framework, students did, in fact, enact their civic-minded agency. They focused on the needs of the community, gave voice to the community members, viewed design through the eyes of community representatives and design partners, and acknowledged the partners' perspectives during the design process. According to the author, these results align closely with those of Inouye, Merrill, and Swan (2005), who believe that helping learners learn is the ultimate purpose of the instructional design field. This study began exploring the idea of *who* instructional designers are in that participants did start to look at themselves as helping professionals. Also, because service learning is considered more effective when reflection is incorporated, this study did, in fact, ask designers to reflect. However, these reflections were done verbally, as part of peer interactions. The reflections also did not attempt to capture who designers are or what they do in the design space.

While this study explored designers during the design process, it specifically looked at designers in terms of civic-mindedness. It certainly has expanded the literature that looks into civic-minded agency and is potentially a powerful foundation for future related research. However, because the participants were completing projects for a grade, their civic-mindedness may not carry over into their future activities.

Most recently, and most notably as it relates to this study, were two studies that looked at reflection as it pertained to the development of instructional design students. The first was a preliminary study by Tracey and Hutchinson (2013) that examined graduate students. Numerous

reflection responses were captured from students via an online journal to determine if students began constructing their own professional identity throughout an advanced instructional design course. The results of this preliminary study indicated that students did, in fact, increase their ability to reflect more productively, and the process supported the development of designer identity (Tracey & Hutchinson, 2013). The second study, by Tracey et al. (2014), extended the research by continuing to explore how capable students are of engaging in reflection. Although it did not uncover specific patterns of improvement in the semester, it did provide direction related to how reflection prompts should be delivered (Tracey et al., 2014).

The research discussed in this current study continued on the path of reflection by asking research question one: *How does structured reflection during design contribute to the reflection abilities of instructional designers?* Also, rather than simply focusing on the designer's reflections, this study incorporated their design products by seeking to answer question two: *In what ways does reflection impact the design products of instructional designers?*

This resulting review of recent literature shows that numerous studies exist related to instructional designers. Rather than focusing on designers and their activities in the design space, most researchers have focused primarily on designer competencies, skills, and roles. In addition, more specific to designer activities have been their use of theories, models, and tools. The question still remains: *Who are instructional designers and what do they do in the design space?* Through the lens of reflection, this study addressed this question.

Reflection

Reflection is a concept and process with various definitions, numerous practical applications, and varied approaches. The significant literature on reflection is discussed below and includes works about its history and multiple definitions/identities. It also reviews models,

frameworks, and instruments used in specific disciplines. Finally, it addresses problems with reflection and the ways reflection is integrated in this proposed study.

Reflection's History

Reflection is a not a new notion. In 500 BC Confucius described reflection as the process of criticizing the inner self with the goal of self-improvement (Ames, 2010). Contemporary scholars have continued to revise and expand this definition. John Dewey described reflection as a process where one first faces a problem or challenge, then defines it, identifies a possible solution, creates a hypothesis, and continues to observe and experiment to determine whether the initial findings were correct (Dewey, 1933).

This interest in reflection, which for Dewey dated back to earlier in the last century (1904), remained strong among scholars until the 1960s when “competency-based teacher education (CBTE) and Process-Product Research began to drive most teacher preparation programs” (Richardson, 1990).

It wasn't until the latter part of the twentieth century that the concept of reflection began to gain greater attention as a critical action for practitioners. Donald Schön (1983), who studied reflection extensively, introduced it as means by which deeper understanding could be reached, compared to technical knowledge or scientific competence, alone. Schön (1983) described the essence of reflection as an “epistemology of practice implicit in the artistic, intuitive processes that some practitioners do bring to situations of uncertainty, instability, uniqueness, and value conflict” (p. 49).

Boud et al. (1985) described reflection as “a generic term for those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to

new understandings and appreciations” (p. 3). They also outline a reflection process that includes three steps that practitioners take. People (a.) return to the experience to recall and recount what occurred, then (b.) attend to how they feel about what happened, and (c.) reevaluate the experience by associating and integrating the new knowledge for future use (Boud et al., 1985).

Reflection’s Multiple Identities

In addition to the generic term “reflection,” a variety of other terms have emerged including “reflective practice,” “reflective thinking,” and, most notably, “critical reflection.” While some of these terms are used interchangeably throughout the literature, there may be distinct differences. Critical reflection is an example. Mezirow (1990) believes that “While all reflection implies an element of critique, the term *critical reflection* will here be reserved to refer to challenging the validity of *presuppositions* in prior learning. Critical reflection addresses the question of the justification for the very premises on which problems are posed or defined in the first place” (p. 4). Brookfield (1995) states that all reflection is not critical. Instead, critical reflection requires intense and deeper probing of experiences and beliefs. Reynolds (1999) further notes that critical reflection requires “a commitment to questioning assumptions and taken-for-granted embodied in both theory and professional practice” (p. 538).

Reflection Models and Frameworks

In addition to his identification of reflection as an “epistemology of practice,” Schön (1983, p. 49) expanded the concept of reflection by defining two separate categories derived from what he called *knowing-in-action*, or the knowledge put forth during an action (see Figure 2.3). The two categories, *reflection-in-action* and *reflection-on-action*, are differentiated by the point in time in which they occur. During the process of knowing-in-action, if we begin to non-

intuitively think about what we are doing, or if something unexpected happens, the *surprise* (conflict with our tacit knowledge) leads us to a state of reflection-in-action, or reflecting *during* the action. This reflection-in-action allows us to formatively experiment with thoughts and ideas to potentially modify or at least reconsider the action. Once the action is complete, we can then engage in reflection-on-action, which occurs after the action is finished. Summative in nature, the reflection-on-action process extends our own knowledge based on reconsidering the experience (Schön, 1983).

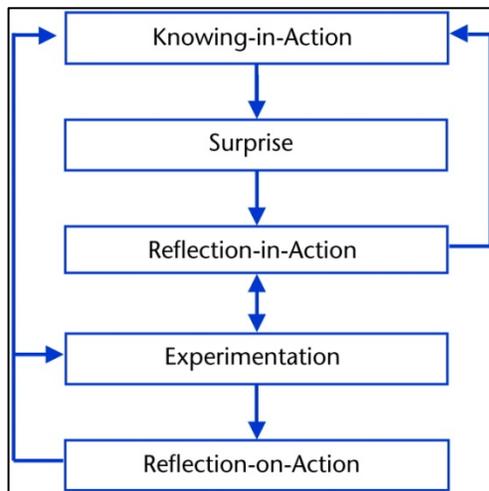


Figure 2.3: Schön's Reflective Practice Model

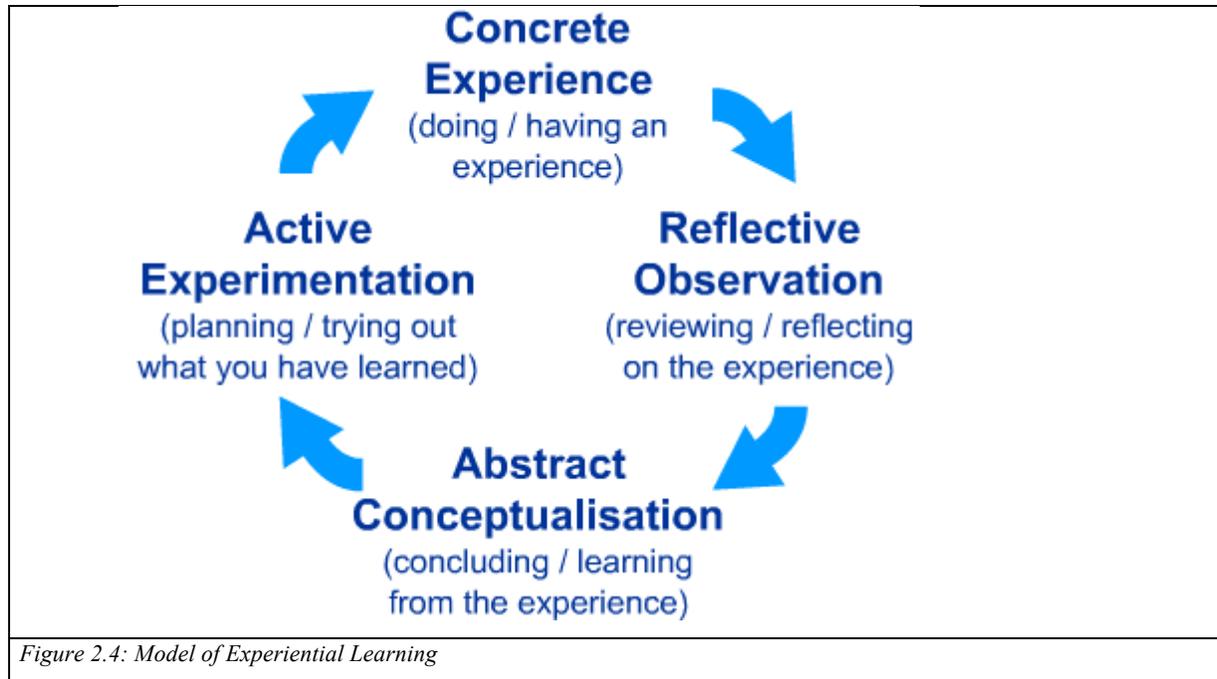
Aligned with reflection-on-action is informed reflection, which Quayle and Paterson (1989) define as “conscious reconsideration of a thought, idea or experience with expressed objectives” (p. 30). Although this takes place after decisions have been made and actions have occurred, the process allows one to revisit the new connections made during the design project to further strengthen what was learned (Quayle & Paterson, 1989).

Rather than focusing on when the reflection occurs, Hatton and Smith (1995) identified different types of *written* reflection. Their three forms of true reflection consist of (a.) descriptive

reflection, which attempts to provide reasons, based on personal judgment or interpretation of literature, (b.) dialogic reflection, which explores possible reasons by talking with one's self, and (c.) critical reflection, which involves giving reasons for decisions or events that take into account the broader historical, social, and/or political contexts (p. 53).

Hong and Choi (2011), from an instructional design discipline, focused on reflection in terms of the number of times and how deeply an individual reflects. Iterative in nature, these levels are described as *single-loop*, *double-loop*, and *triple-loop reflection*. Single loop is the type of reflection designers engage in when trying to solve a problem toward a predefined goal. During double-loop reflection, designers question the predefined goals and other assumptions. Focusing less on process and strategies, designers question their own understanding of the problem. Triple-loop reflection, which is not often reached, occurs when designers question morals and values. They begin to examine their own beliefs that have led them to view the world in a certain way. This concept of triple-loop reflection is consistent with the description given by other scholars of critical reflection (Hong & Choi, 2011). In addition to these frameworks, there are other models that have led to the deepening of our understanding and application of reflection. Most often used are those by Kolb and Fry (1975), Boud et al. (1985), Gibbs (1988), and Johns (1994, 2000).

Kolb's Model of Experiential Learning (Figure 2.4) is a process by which learners have an experience, review and reflect on that experience, learn something from the experience, and implement what they've learned in some way (Kolb & Fry, 1975).



The model of reflection created by Boud et al. (1985) (Figure 2.5) asks individuals to think back to an experience and use their feelings, ideas, and behavior to reevaluate in an effort to develop new ways of thinking and behaving.

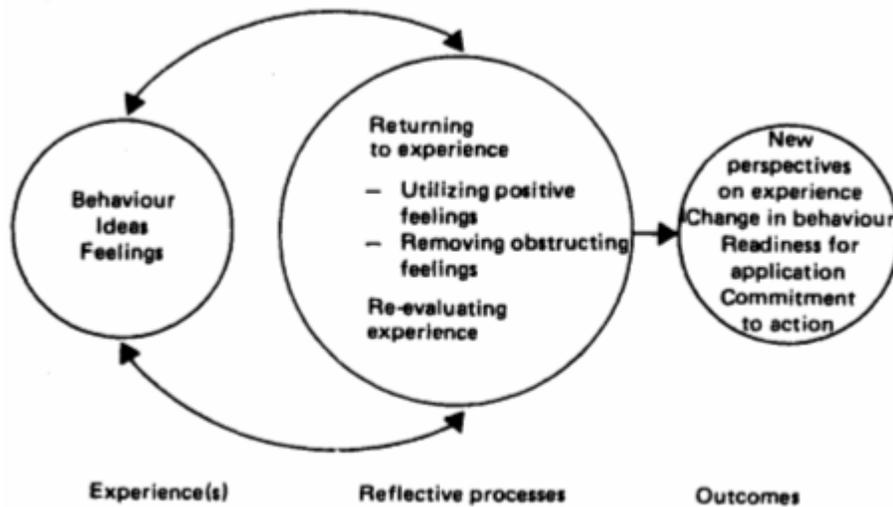


Figure 2.5: Model of Reflection

The Gibbs' Reflective Cycle (1988) (Figure 2.6) is a process that has been utilized in

healthcare and education. Its repetitive nature allows individuals to constantly revisit experiences to deepen understanding.

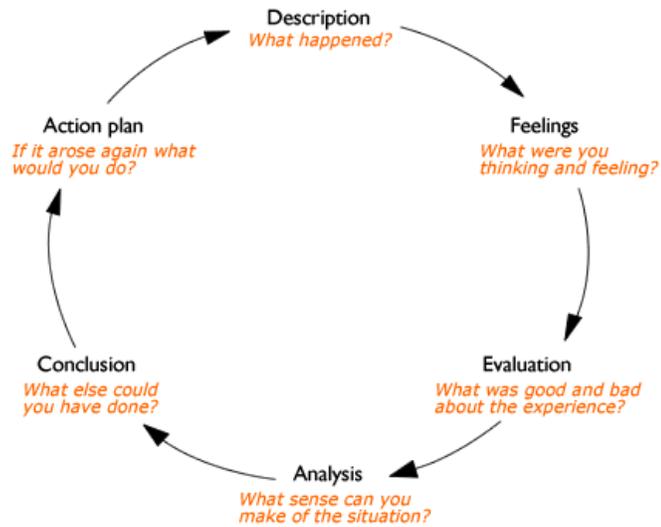


Figure 2.6: Gibbs' Reflective Cycle

Johns' Model of Structured Reflection (1994, 2000) functions as more of a checklist (Figure 2.7), asking questions of the individual in terms of looking inward and outward. More than a model, it helps guide reflection (Johns, 2000). One inherent challenge with this model, however, is that it may inhibit individuals from using their own approach and intuition to reflect. This model is most often used in healthcare among nurses.

JOHNS' MODEL OF STRUCTURED REFLECTION

Looking in

- Find a space to focus on self
- Pay attention to your thoughts and emotions
- Write down those thoughts and emotions that seem significant in realizing desirable work

Looking out

- Write a description of the situation surrounding your thoughts and feelings
- What issues seemed significant?
Aesthetics
- What was I trying to achieve?
- Why did I respond as I did?
- What were the consequences of that for the patient/others?
- How were others feeling?
- How did I know this?
Personal
- Why did I feel the way I did in this situation?
Ethics
- Did I act for the best? (ethical mapping)
- What factors (either embodied within me or embedded in the environment) were influencing me?
Empirics
- What knowledge did or could have informed me?
Reflexivity
- Does this situation connect with previous experience?
- How could I handle this situation better?
- What would be the consequences of alternative actions for the patient/others/myself?
- How do I feel now about this experience?
- Can I support myself and others better as a consequence?
- How 'available' am I to work with patients/families and staff to help them meet their needs?

Figure 2.7: Johns' Model of Structured Reflection

These models are all commonly applied in healthcare education. Johns' model, for example, is regularly used nursing education that formally utilizes reflection to nurture nursing students. Decades ago, reflection became a method that was used to help nurses justify their actions when they had little explanation for the steps they took (Andrews, 1996).

While nursing education has actively used reflection, it was not until the last decade that

much literature surfaced related to reflection among medical students. Now reflection is viewed as a necessary characteristic among proficient professionals in healthcare as a way to develop and maintain competence across the duration of their medical practice (Mann, Gordon, & MacLeod, 2009). In the medical field, reflection is viewed as the process of probing and appraising one's own experiences, then forming meaning from the experiences that can be applied in the future (Aukes, Geertsma, Cohen-Schotanus, Zwierstra, & Slaets, 2007).

Reflection-Measuring Instruments

One outgrowth of this more recent view of professional medical practice has been the development of standardized instruments that measure reflection. Three of the most prominent are detailed below, along with their benefits and shortcomings: the Groningen Reflection Ability Scale (GRAS), the Self-Reflection Insight Scale (SRIS), and the Reflection Evaluation for Learners' Enhanced Competencies Tool (REFLECT).

Researchers in The Netherlands developed a scale that could be administered to medical students periodically in an effort to measure personal reflection abilities. This tool, the Groningen Reflection Ability Scale (GRAS), was designed to measure a participant's reflection on personal experiences related to unstructured problems (Aukes et al., 2007). The development of the GRAS resulted from an extensive item selection procedure. The researcher first screened reflection descriptions from various literary, theoretical, and experiential sources. The 81 resulting items were capable of being ranked using a Likert scale. The list was discussed, then confirmed or reformulated among professionals in medical teaching and curriculum development, which left the list with 61 items. The list was then judged by another group of social scientists and medical doctors to discriminate between characteristics of a good and poor doctor. This list was administered to 350 medical students and 38 medical teachers. Item

discrimination was determined during psychometric analysis, and the items with a standard deviation of less than 0.75 were removed. The resulting list of 50 items was again administered to the 38 medical teachers. After 19 medical teachers conducted a criterion analysis and another three external experts reviewed the results, there were 23 items remaining on the list.

The resulting list was used in two measurements and was found to have a satisfactory internal consistency. Psychometric item analysis was completed after 583 medical students and 38 medical teachers completed the Likert scale. The result was a Cronbach's alpha of 0.83. Psychometric structure analysis was completed after 1,029 medical students completed the Likert scale, which resulted in a Cronbach's alpha of 0.74. These results indicate that the 23-item list, the GRAS, is considered a *good* measurement tool for testing that is considered low risk. That said, based on a variety of factorial validity problems, the author admitted the GRAS requires additional development (Roberts & Stark, 2008).

A superior instrument to the GRAS was developed to measure self-reflection and insight over time, specifically in clinical practice (Grant, 2002). The Self-Reflection Insight Scale (SRIS) consists of a number of statements provided on a Likert scale, which asks participants to reflect on their thoughts and behaviors. To develop this scale, Grant engaged three psychologists to develop statements that they considered appropriate to measure the areas of self-reflection and insight. The initial result was a two-factor, 30-item scale. As part of a credit course, 260 undergraduate students completed the scale. Items with minimal factor loading or cross-factor loading were eliminated, resulting in a two-factor, 20-item scale. Analysis indicated that the self-reflection factor showed a Cronbach's alpha of 0.71 and insight showed a Cronbach's alpha of 0.82. Sample statements from the self-reflection component ask participants to measure the frequency with which they examine their own feelings and their interest in analyzing their own

behaviors. Sample statements from the insight component measure participants' perceptions of their own sense making and recognition of feelings (Grant, 2002). A complete list of statements can be found in Appendix F.

The SRIS was later modified to measure students' self-regulation (Roberts & Stark, 2008). Based on their study, the developers divided Grant's self-reflection component into two distinct components (the need for reflection and engagement in reflection). This resulted in a three-factor, 20-item scale, which they administered to more than 1,000 students. Again, validity of the scale was achieved, with a Cronbach's alpha of 0.83 (engagement in reflection); 0.87 (need for reflection); and 0.85 (insight) (Roberts & Stark, 2008).

These two scales were designed specifically to measure reflection in a clinical education setting; however, their structure and statements can elicit feedback on reflection from any professional. Their ease of administration and scoring makes them attractive instruments. On the other hand, they rely on self-reporting, which may limit the accuracy of the data. This current study employed the SRIS as one of two methods for measuring reflection abilities among the designers. Delivered twice to designers during the study (pre- and post-study), the scale provided details as to designer growth over time.

The popularity of reflective writing in medical education has increased in recent years, and this has left educators and mentors with the task of measuring reflective capacity. As a result, a team of medical educators developed an instrument to assess the written reflection responses of students. This tool, the Reflection Evaluation for Learners' Enhanced Competencies Tool (REFLECT), was designed as a rubric that educators could use to measure the growth of student reflection breadth and depth over time (Wald, Borkan, Taylor, Anthony, & Reis, 2012).

REFLECT was developed through a number of iterations that resulted in a rubric consisting of the following categories: (a.) writing spectrum; (b.) presence; (c.) description of conflict or disorienting dilemma; (d.) attending to emotions; (e.) analysis and meaning making; and, when relevant, (f.) attention to assignment. The writing prompts that are assessed within these categories may fall into one of four levels: (1.) habitual action that is non-reflective; (2.) thoughtful action or introspection; (3.) reflection; or (4.) critical reflection. Each of these levels is described within the categories, so the assessor can accurately rate the reflective writing (Appendix I).

The authors of REFLECT took special care to not only create the rubric but provide guidance as to how to prepare to use it. They recommend first reading a complete reflection response. Then the evaluator should return to the narrative, take a microview of specific statements or phrases, and determine which level the reflective writing achieves in each category. The next step is to take a macroview of the entire narrative and identify its overall rating. Finally, the evaluator should note examples that helped determine the ratings across the reflective writing (Wald et al., 2012). REFLECT is a useful tool to measure reflection levels across a variety of categories, though it does contain a few gaps. For example, while it provides useful descriptions of what constitutes a fit into specific categories, a couple of the descriptions are the same, making it difficult to identify how to rate some statements. In addition, although there are six different categories to measure reflective writing as described above, these categories are not clearly defined, making it difficult to determine meaning. Even with these few noted problems, REFLECT is a validated tool, with a Cronbach's alpha of 0.77 reached after numerous iterations (Wald et al., 2012), and may be useful in situations where reflective writing must be evaluated to help reflectors make progress and improve in their profession.

Reflection in the medical education community has garnered a lot of attention, and in my effort to expand the search to other disciplines, I found one study that the researcher described as domain independent. It covered a variety of designers including engineers, architects, and software developers. It attempted to create a domain-independent model that could help designers reflect during the design process with the goal of impacting design process efficiencies and effectiveness (Reymen et al., 2006). While the model that was developed and piloted was based on sound methods, it failed to focus on reflection as a personal practice, and instead incorporated designer communication and collaboration. It also did not identify ways in which reflection could be incorporated with design processes.

Although studies and instrument development related to reflection seem relatively abundant throughout the healthcare discipline, there are few studies that address reflection's role in instructional design. Two significant exceptions are the studies mentioned previously, which address instructional designers and reflection (Tracey & Hutchinson, 2013; Tracey et al., 2014). This current study applied some of the suggestions from the above-mentioned studies to its research methodology.

The three instruments discussed above, combined with the other studies mentioned earlier in this chapter, indicated there was an opportunity to apply findings and tools from one discipline to another as far as the findings relate to reflection. That said, there are still gaps in the literature with regard to how reflection is studied and how its process is understood.

Problems with Reflection

To properly reflect, a person needs to have an appropriate amount of time and the ability to do so (Jarvis, 1992). In the education field and in professional practice, an appropriate amount

of time to reflect may not be available. In addition, a person might not yet have developed the ability to be introspective and think deeply. After all, the ability to reflect is related to one's ability to learn from his/her own experiences (Boud et al., 1985). Another challenge with the study of reflection is that there are numerous definitions for the term "reflection." In addition, there are various subsets of terms (i.e., reflective thinking, critical reflection, reflective practice, etc.) that are used interchangeably throughout the literature (Black & Plowright, 2010). However, Finlay (2008) believes scholars incorrectly assume that they are interchangeable.

Another concern with reflection is that since it is difficult to observe, it is also difficult to measure. While Hong and Choi (2011) note that empirical studies have shown that reflective activities are important in the design processes of designers, Harvey (2010) argues that while there is a plethora of literature on reflection, qualitative studies and action research demonstrating that reflection is effective in nurturing growth, empirical evidence is scarce. On the other hand, in two separate studies of instructional design students, there was notable improvement in their reflection capabilities and identity construction over the course of the study (Tracey & Hutchinson, 2013; Tracey et al., 2014).

Reflection in This Study

Reflection has been defined a number of ways. It has also been segmented into categories and dissected into sub-processes by a variety of researchers. However, there is no consensus as to reflection's definitions, categories, or sub-processes. For the purposes of this study, reflection was used in its simplest term following Johns' (2007) description; reflection is a process for development that requires us to pay attention to and learn from our experiences, with a goal of making our visions into reality. The view in this study took into account various levels of reflection, consistent with Hong's *single-loop*, *double-loop*, and *triple-loop reflection* approach.

This study also followed the teachings of Schön in terms of process (Figure 2.3): knowing-in-action, surprise, reflection-in-action, experimentation, and reflection-on-action.

Reflection has been applied to a variety of disciplines and is used extensively in the educational development of healthcare workers. While the difficulty in observing reflection also makes it challenging to study it empirically, the very nature of its focus on constructing meaning and future actions made it a useful tool in this qualitative study, which is grounded in constructivism.

Summary

This literature review explored the nature of instructional design; the competencies, characteristics, roles, and activities of instructional designers; and the activity of reflection as a means to further develop practitioners' competencies and abilities. Instructional design is ever evolving and continues to gain complexity with far more peer-client interaction; varied and increased decisions related to media use; going growth of ill-structured problems; and more complex goals to meet (Spector, 2010). Instructional designers have been led by a cadre of theories, models, and frameworks that continue to serve as guidelines for many designers. Recent studies of instructional designers as human instruments in design, on the other hand, are more elusive. They have primarily focused on instructional designer collaborative experiences, design competencies, and work activities from various perspectives. They also focus more on competencies than on who designers are. Lastly, reflection was reviewed and was shown as a method to explore designers' experiences in order to lead to new understandings and appreciations (Boud et al., 1985, p. 3). Reflection is widely used in healthcare disciplines, and a variety of models guide the use of reflection; however its use among designers is only beginning.

SRIS and the REFLECT rubric were two instruments reviewed that are often used to measure reflection ability among healthcare professionals.

CHAPTER 3: METHODOLOGY

This study was conducted to examine instructional designers' behaviors and processes and to determine what role reflection plays in both of these. Using a multiple case study approach, qualitative data collection methods were employed over the course of six weeks, all of which took place while designers were actively engaged in design projects. Collection methods included interviews, surveys, and weekly reflection activities to address the following research questions:

- *How do instructional designers define their design activities in light of reflection?*
- *How does structured reflection during design contribute to the reflection abilities of instructional designers?*
- *In what ways does reflection impact the design products of instructional designers?*

This chapter describes the study's research methodology and addresses the following elements: (a.) rationale for a qualitative multiple case study, (b.) population and sampling procedures, (c.) research setting, (d.) data collection tools and procedures, (e.) project timelines and processes, (f.) data analysis methods, and (g.) rigor.

Rationale for Qualitative Multiple Case Study

A multiple case study approach was chosen because it allowed for deepening the understanding of designers as a group, as well as the designers as individuals (Stake, 2005). In addition, rather than intending to generate generalizations, this study was designed to explore instructional designers as integral to design and the design space, in the hope that further insight about designers would be discovered. Lastly, it presented the opportunity to more easily connect the group's everyday practice to the concerns of this study (Stake, 2005).

A qualitative approach was ideal for this study because it was designed to better understand how instructional designers view themselves and their design processes, which in turn might potentially build theory (Merriam, 1995). This research design also aligned well with the characteristics of a qualitative study since it took an inductive logical approach. This study follows Creswell (2009), who says that “an inductive approach is used in qualitative studies in which theory (or some other broad explanation) becomes an end point” (Creswell, 2009, p. 63), instead of theory being presented at the beginning. Figure 3.1 provides a visual depiction of such an approach. This became the ultimate goal of this study.

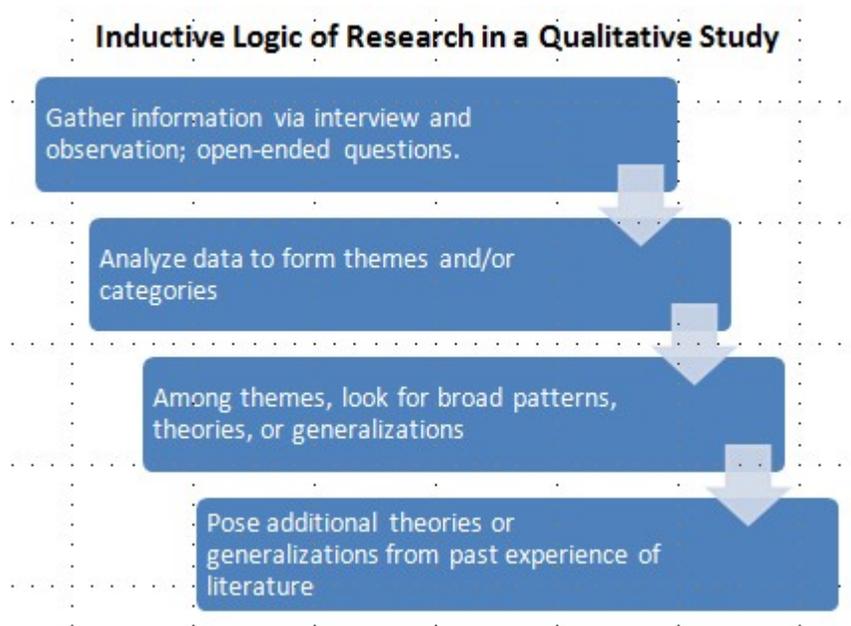


Figure 3.1: Inductive Logic of Research
(Creswell, 2009, p. 63)

Population and Sampling Procedures

The population of this study was sourced using purposive sampling. Purposive sampling is especially useful when a researcher seeks data from individuals willing to openly share their experiences (Tongco, 2007). This was a critical component, given the nature of the data I was seeking. This study also was best served by employing the criterion form of purposive sampling,

since the research design relied on data sources that met specific participation requirements (Patton, 1990).

Through a quasi-experimental procedure I secured a sampling of 34 instructional designers. To attain this sampling, I sent a request for participation to my peers and to the following organizations:

- Wayne State University's (WSU) Instructional Technology department
- Wayne State University's (WSU) Office of Teaching and Learning department
- Walsh College's Office of Academic Technology
- LinkedIn's Instructional Technology and Instructional Design professional groups

After I made contact with the interested designers, I provided a brief list of requirements to ensure each would be an appropriate participant in the project. Each designer was expected to be (a.) performing the functions of a full-time instructional designer, (b.) working on an active project throughout the duration of the proposed study, and (c.) the primary designer responsible for the design work related to the project. In addition, as opposed to addressing procedural concerns, the intent of the design project in which they were engaged had to be to solve an ill-structured problem.

Since my call for participation was sent to many social media outlets and to a variety of my peers, many of the interested participants were from countries other than the United States. Represented countries included Canada, New Zealand, Peru, Fiji, and Lebanon. Since my research protocol was written to include instructional designers only in the United States, 16 participants were informed that they could not participate in the study; however, I indicated I would share the study's results with them once they became available.

I intended to select designers by also allowing for diversity among the group. By limiting the requirements to those described above, this kind of collection and analysis provided rich details about their uniqueness, while also revealing shared patterns that existed across the various samples (Patton, 1990). I sought to include designers with a variety of professional experience and education.

I launched the study with each designer on a day based on his/her preference. My first participant began in May 2014 and my last designer began in June 2014. Each designer met with me at the beginning of the project; completed a brief survey at the beginning and end of participation; maintained an online, weekly written reflection journal; and provided project artifacts and documents if available. It was expected that the time commitment from each designer would be fifteen to thirty minutes each week for approximately six weeks.

Research Setting

Actual work locations and cultures varied, depending on each designer's typical work environment. While some designers worked from their home offices, others reported daily to an academic or corporate setting. My work was conducted from my home office, and designers conducted their design work at their typical locations. All items that designers provided to me were submitted online; therefore they were able to complete this work at the location of their choosing. Some, in fact, completed their work from vacation spots, as some weeks crossed over holiday weekends. All live meetings with the designers took place via the telephone at times pre-agreed upon by us. These ranged anywhere between 3:00 a.m. and 11:00 p.m. to accommodate varied schedules.

In all cases necessary, I attained approval from each designer's supervisor. Two of these were independent workers and were not required to get such approval. For all others, the request

was addressed during an initial letter (Appendix B) to employers requesting their employees' participation in the study. This letter described the significance of the study as well as its timeline. The letter further described what activities would be requested from the employee, identified any risks, defined how I would protect the collected information, and offered methods for withdrawal should the designer choose to do so. Lastly, it defined what would occur during live meetings and in the weekly journaling process, so these activities were fully understood by sponsoring organizations.

In addition to gaining approval from the sponsoring organizations, I also sought formal approval from each designer via an information sheet (Appendix C). Before my initial meeting, I sent this document to each designer. It included (a.) my complete contact information, (b.) a complete description of the study, (c.) the perceived significance of the study, (d.) the methods I planned to use to protect the collected data, (e.) the ways in which individual data would be held anonymously, (f.) how the data would be reflected using aggregate forms, as well as direct quotes, (g.) a statement about the voluntary nature of participation, and (h.) the ways in which a designer could withdraw from the study. The form was later posted to a shared location accessible to both each designer and me. During each initial meeting, the designer and I reviewed the information sheet before proceeding to subsequent study steps.

Data Collection Tools and Procedures

This study employed qualitative collection methods. For each participant, I collected data using online applications. Survey Monkey (www.surveymonkey.com), an online survey application, was used at the beginning of the project to collect demographic and background information. It was also used at the beginning and end to administer a reflection and insight scale (SRIS described in the literature review and below). I received approval from the Internal

Review Board at Wayne State University and began my study in May 2014. I began my data collection as new volunteers were available. My first participant, Michelle, began on May 1, 2014, while my last participant, Brian, finished the study in July 17, 2014.

On a weekly basis, I collected journal entries from designers (total of six entries per designer) using online Google Docs. These responses were triggered by guided questions and/or statements from me, which are further outlined in Appendix H. During this six-week time frame, some designers also periodically provided their current design products via email. The procedures and timelines described in Table 3.1 reflect the research questions as well as the data collection and analysis methods.

Research Question	Data Collection Method	Analysis Method
<i>How do instructional designers define their design activities in light of reflection?</i>	Designer Journals Researcher Journal Project Artifacts/ Documents	Constant Comparison
<i>In what ways does reflection impact the design products of instructional designers?</i>	Designer Journals Researcher Journal Project Artifacts/ Documents Project Timeline	Constant Comparison
<i>How does structured reflection during design contribute to the reflection abilities of instructional designers?</i>	Designer Journals Researcher Journal SRIS	Constant Comparison

Table 3.1: Research Questions, Data Collection, and Data Analysis

I conducted an initial meeting with each designer by telephone. I took notes throughout the entire meeting to capture key information. During this meeting, I (a.) reviewed the

information sheet, (b.) discussed the overall process and timeline of the study (see Table 3.2 below; Appendix D), (c.) confirmed the designer’s specific design project timelines, (d.) discussed communication methods, (e.) provided instruction on how to create and share reflection journal entries via a Google Doc when needed, (f.) discussed ways to share design products, and (g.) described the background questionnaire and reflection and insight scale administered through Survey Monkey (both described further below). Also, using a semi-structured interview approach, I gained a deeper understanding about the project in which the designer was engaged (Appendix G). Lastly, I asked that they create a pseudonym that we would use for all future identification and correspondence. In most cases, they selected initials or nicknames. For the sake of clarity in this study, I later created a new pseudonym for each, represented by a first name. This is how they are referred to in this research study.

Project Timelines and Processes

Since each designer was at a different point in their design project and in my study, I used the timeline to keep track of where designers were (Table 3.2). This ensured I knew when to follow up with them to encourage them to complete their journal entries. I also planned to use these timelines to make comparisons between design products, the timeline, and reflection responses.

Event	Day of Study
Initial meeting; Researcher provides and designer completes initial questionnaire	1
Researcher provides agreed-upon timeline to designer	2
Researcher delivers Reflection Journal Week 1	6
Designer completes and sends Reflection Journal Response Week 1; Designer sends project artifacts and current design product	8
Researcher provides feedback and clarifying questions for Week 1	9
Researcher delivers Reflection Journal Week 2	13
Designer completes and sends Reflection Journal Response Week 2; Designer sends current design product	15

Researcher provides feedback and clarifying questions for Week 2	16
Researcher delivers Reflection Journal Week 3	20
Designer completes and sends Reflection Journal Response Week 3; Designer sends current design product	22
Researcher provides feedback and clarifying questions for Week 3	23
Researcher delivers Reflection Journal Week 4	27
Designer completes and sends Reflection Journal Response Week 4; Designer sends current design product	29
Researcher provides feedback and clarifying questions for Week 4	30
Researcher delivers Reflection Journal Week 5	34
Designer completes and sends Reflection Journal Response Week 5; Designer sends current design product	36
Researcher provides feedback and clarifying questions for Week 5	37
Researcher delivers Reflection Journal Week 6	43
Designer completes and sends Reflection Journal Response Week 6; Designer sends current design product	45
Researcher provides feedback and clarifying questions for Week 6	46
Researcher conducts interview with designer	48–52
Researcher sends final questionnaire	49–53
Designer completes and submits final questionnaire	50–54
<i>Table 3.2: Sample Study Timeline and Process</i>	

Background Questionnaire. Built using the online application Survey Monkey, a questionnaire was sent via email directly following our initial meeting. The background questionnaire was used to collect demographic, background, and experience information. It was used to gain a richer understanding of each case; it also identified commonalities across individual cases. It was expected that while themes might not emerge from the mere comparison of the data in these questionnaires, the data might reveal consistencies when combined with the patterns from other collected data. For example, if a few specific designers showed signs of similar reflection capabilities, this background information might assist in determining whether they also shared other common traits or experiences. A sample of this background data sheet can be found in Appendix E.

Self-Reflection and Insight Scale (SRIS). As described in the literature review, the SRIS was designed to measure someone’s ability to reflect on experiences in relation to unstructured problems. This instrument offered a way to measure the designers’ ability to reflect. When combined with guided reflection questions and administered before and after the study, the scale directly addressed Research Question 3: *How does structured reflection during design contribute to the reflection abilities of instructional designers?*

Although other scales exist, including the GRAS described in the literature review, the SRIS was selected specifically for its existing validity as well as because of the questions it was designed to answer. It addressed a designer’s need for reflection, a designer’s engagement in reflection, and a designer’s insight.

The SRIS was administered using Survey Monkey. It was given to designers directly following the initial meeting, along with the demographic questionnaire. These data were used to establish a baseline for reflection and insight ability. The SRIS was administered again at the end of the project to compare results and better understand any impacts reflection had on designers changes in designers through reflection. A sample of this scale can be found in Appendix F.

Designer Reflection Journals. Each designer kept an online reflection journal via a Google Doc. During the initial meeting, I created a Google Doc and shared it with each designer to ensure we had established appropriate contact using the tool. On a weekly basis beginning on the day of the week preferred by each designer, I posted three specific reflection questions/prompts via this shared Google Document. These guiding questions/statements are listed in Table 3.3. Designers were asked to complete their responses within 48 hours of delivery.

Guiding Question/Statement
Discuss your previous experiences that are guiding you during this project.
Discuss how you framed the design problem.

Discuss your own internal beliefs that are guiding you during this project.
Discuss your ongoing interaction with the client.
Discuss how your design solution compares to other solutions you've implemented.
Discuss how you are dealing with ambiguity or uncertainty in the project.
Discuss your interaction with specific models or images.
Discuss unexpected challenges that have arisen during this project.
Discuss your personal design strengths that emerged during this project.
Discuss specific design areas you might continue nurturing as a result of this project.
How are models manifesting themselves in the design project? What models or frameworks are you using?
What tangible results do you have this week?
How would you explain your process to the client this week?
Discuss how this project is progressing.
How did themes emerge?
Discuss your design process.
Do you think you altered any processes as a result of SSR? Explain. Alternatively, did you find yourself holding more strictly to your typical design process?

Table 3.3: Reflection Prompts

Within two days of each reflection response deadline, and only when necessary, I replied to designer responses within the document. This allowed me time for a cursory review of the response. While I did not intend to intervene in their reflection process, I clarified questions when necessary during the study, based on the direction and focus of their initial responses. I also developed questions based on any emerging themes or unclear statements from journal entries.

In addition to prompts related to designer activities, I attended to their perceptions about external factors. This aligned with the constructivist approach that suggests understanding context helps make better sense of the ways in which designers view their world (Creswell, 2001). These questions were developed based on (a.) the research questions of the study, (b.) findings from the literature review, (c.) common themes used to elicit reflection in other studies, and (d.) my own experiences. It is important to note that during the reflection process, I purposely limited my intervention beyond my initial reflection prompts, since I wanted to see how designers reflected without significant interface with someone. I provided significant

intervention only when I needed to provide or request clarification.

Researcher Reflection Journal. Throughout the data collection, analysis, and interpretation process, I maintained a researcher journal. I took notes on decisions I made and on steps I took during the study. While using it to track procedures, I also recorded any thoughts, ideas, frustrations, questions, or recognized biases. From a constructivist standpoint, this is an appropriate methodological process (Ortlipp, 2008; Denzin 1994; Lather, 1991).

Project Artifacts and Documents. I collected copies or images of artifacts that the designers used during their projects. I asked that designers post their current design products on the same day they completed their weekly journals. These were to be used to compare their projects to their reflection journal responses and their individual design project timelines.

Data Analysis Procedures

This multiple case study's foundational underpinning was constructivist. It relied on a grounded theory analysis strategy incorporating constant comparison. Analysis was initiated early and was strengthened by investigator triangulation.

Employing a grounded theory strategy was intended to provide an effective and rigorous analysis of the resulting data. Grounded theory is focused on discovery and the development of theory (Charmaz, 1983). It also provides a way of conceptualizing the collected data (Strauss & Corbin, 1990). Grounded theory also seeks to “uncover relevant conditions, but also to determine how the actors respond to changing conditions and to the consequences of their actions” (Corbin & Strauss, 1990, p. 5). For these reasons, grounded theory was an appropriate analysis strategy.

In the spirit of grounded theory, I began analysis of each case as soon as I collected initial data from the kickoff meeting. I analyzed data within each single case, as well as across cases. I continued this process with background questionnaires and initial SRIS surveys.

According to when designers completed their journal entries, I downloaded each reflection response and began immediate analysis. To begin reviewing the journals and interviews, I followed the process below as the data became available:

1. Reviewed designer's week 1 journal; took notes.
2. Reviewed the designer's week 1 journal; reviewed my notes.
3. Reviewed reflection feedback/follow-up content; took notes.
4. Reviewed the designer's week 2 journal. Reread notes and data from week 1.
5. Repeated process through all six weeks for all 10 participants.

Since each designer started the study on a different day, based on my recruitment process and the designer's preference, new data arrived regularly over the course of the study. I reviewed all responses contiguously from each individual, based on the order in which they completed the study. As each person completed the study, I read and reread their results. After the second read-through, themes began to emerge.

After designers completed their final SRIS surveys and reviewed their completed journals, I began analysis of the complete set of data. For example, I compared the initial and final SRIS results within each case, continued by analyzing SRIS results across cases, and then looked at SRIS results as they related to other collected and analyzed data from reflection responses, background data, and design products. SRIS results were not quantitatively analyzed because the purpose of this instrument was to help provide a deeper understanding of each case and across cases by supporting themes among the data set. That said, to confirm themes from the

qualitative findings, simple quantitative measures were developed and depicted using graphs and charts.

Initiating analysis as soon as the first data were collected was critical for two reasons. It followed the standard procedure among grounded theorists that data must be studied often and from many vantage points (Charmaz, 1983). It also directed the development of future reflection questions and feedback with each designer when necessary (Corbin & Strauss, 1990).

When conducting this analysis, I followed a structured approach. After adding the data to MAXQDA qualitative data analysis software, I began looking for repeated concepts, which I then identified as units (Corbin & Strauss, 1990). As themes or patterns emerged among the units, I further categorized them using the coding system provided by the software application. From there, I began the process of constant comparison, comparing all units, patterns, and categories. This constant analysis helped me develop solid categories (Lincoln & Guba, 1985). Along the way, I made many notes about my data observations that allowed other themes to emerge over time that weren't immediately obvious. I again reviewed each person's individual case record, looking for themes within the single cases. I then drafted a case narrative for each person, reread each case record, and then revised each case narrative.

To further strengthen the study, I utilized the REFLECT rubric, which was described in the literature review and is depicted in Appendix I. This validated instrument was used to measure strengths in reflection in each case and across cases. I looked at it from a grounded theory perspective but also used simple quantitative measures to depict results in graphs and figures as well. These results from REFLECT were used to validate other findings and themes. They were also used to add to the thick description of each case and the multiple case.

Finally, I looked at each reflection response in light of individual research questions across the multiple case. I explored each question alongside all designers' responses pertaining to that question. There I looked for themes within each individual research question, aiming for cross-case synthesis (Yin, 2003). All results of the study are further discussed in Chapter 4.

Rigor

While discussion continues among qualitative researchers about how they should ensure high-quality studies, there remains disagreement on the terms to be used to guide that evaluation (Freeman, deMarrais, Preissle, Roulston, & St. Pierre, 2007). To successfully engage in a reliable and valid qualitative study, I followed the terminology proposed by Lincoln and Guba (1985) and took steps to reach satisfactory *credibility*, *dependability*, *reliability/transferability*, and *confirmability*.

Credibility. Given the fact that this qualitative study assumed reality was ever-changing and interpreted differently by everyone (Merriam, 1995), I triangulated the data, conducted numerous member checks, and developed a subjectivities statement to strengthen the credibility. I used multiple sources of evidence in my data collection process, all in an effort to triangulate (Yin, 2009). The combination of designer journals, interviews, questionnaires, design products, and my field journal helped confirm that what I conveyed here was *truthful* (Merriam, 1995).

Member checks took place continuously throughout the data collection process. This process ensured that my draft writings were based on the inputs of the designers (Stake, 1995). I first encouraged each designer to review our data inputs at the end of each week. Because I occasionally asked clarifying questions, this further ensured accuracy. At the end of the study I asked each participant to review our final document, which consisted of our entire dialogue from the full study. Member checks aided in showing credibility and they confirmed I interpreted the

data accurately (Creswell, 2011).

I regularly considered my biases and limitations throughout the study and documented these in my researcher journal. I periodically reviewed these notes, reflected, and further documented additional areas where I believed might negatively impact the trustworthiness of my work (Ruona, 2005). This continuous review kept me aware of these biases and allowed me to reflect on ways to avoid them.

Lastly, I utilized two data reviewers to ensure my analysis was sound. Because a rubric was used to analyze some data, one individual applied the rubric to the data in the same manner I had. This was done to ensure consistency. I used another reviewer when developing themes across the data. This, too, was to confirm that the themes I generated were consistent with the data.

Dependability. Dependability in a qualitative study revolves around the question of whether or not the study's results are consistent with the collected data (Merriam, 1995). In addition to triangulation as was already described, I maintained an audit trail in my field journal to confirm dependability. There I described all methods of data collection, how I reached decisions on coding, and how I derived patterns during analysis. My goal was to be detailed enough that another researcher could replicate my study (Goetz & LeCompte, 1984). I provided these processes to the data reviewers so they could follow a similar process. This helped confirm that my process was detailed, repeatable, and dependable.

Reliability/Transferability. Reliability/Transferability was addressed through *thick description*, the interpretation of an observed behavior or act within its context (Ponterotto, 2006). Having selected seven instructional designers with varied experiences and backgrounds, I

was able to provide thick interpretation as a result of the detailed data collection from these sources.

Confirmability. Trustworthiness in this study was achieved by addressing credibility, dependability, reliability/transferability, and confirmability. I regularly updated a field journal with a variety of entry types including general reflections, concerns, processes, decisions, and observations. Subjectivity notes, triangulation, and member checks also aided in establishing trustworthiness. In addition to my own analysis, I used data reviewers to confirm the accuracy of my analysis. If there were any disagreements between another analyst and me regarding the accuracy of my findings, the data would be reviewed by the other reviewer to assist in making a final judgment. Incorporating investigator triangulation in this way was intended to strengthen the study's design (Patton, 1990).

My qualitative research study examined designers and the corresponding reflections and products and used purposive convenience sampling of seven instructional designers. I conducted my study between May and July 2014. The data collection methods I used included: questionnaires, surveys, reflection journals with occasional feedback/follow-up content, my researcher journal, project artifacts, and design products. I took a variety of steps to ensure rigor. Data analysis was conducted using a grounded theory strategy. I also utilized the REFLECT rubric as an instrument to measure the reflection of designers throughout the study.

The intent of this multiple case research study, grounded in constructivism, was to explore how reflection contributed to the reflection abilities of instructional designers; how reflection was manifested in the design activities of instructional designers; and how instructional designers defined their design activities in light of reflection. Given the limited current research, I intended to add to the scholarship on the topics of designer behavior and

reflection among instructional designers.

CHAPTER 4: RESULTS

Introduction

This qualitative multiple case study used various data collection methods to examine instructional designers' behaviors and processes and to determine the role of reflection in the design space. The study addressed the following questions:

1. *How do instructional designers define their design activities in light of reflection?*
2. *In what ways does reflection impact the design products of instructional designers?*
3. *How does structured reflection during design contribute to the reflection abilities of instructional designers?*

Using purposive sampling, seven participants from the United States were selected from a pool of 34 interested volunteers from around the globe. All were actively involved in an ill-structured instructional design project throughout the entire six-week study and responsible for the majority of the design work. All seven study participants designed instruction as their primary role. Although this study was open to a designer with any level of experience, the designers in this study were all experienced professionals, having between 12 and 26 years of work experience, with an average of 19 years. Their instructional design ranged from eight to 20 years, with an average of 14 years. Overall they had spent the majority of their careers designing instruction. Their primary roles were as instructional designers. Five spent the majority of their time designing for internal clients, while two focused on external clients. Five designed primarily alone, while the other two designed as part of a team.

Participant	Employer Type	Instructional Design Experience	Length of Design Project	Design Project Description

Michelle	Higher education institution	18 years	8 weeks	Instruction to prepare external mid-level leads in a financial services company for an IT change
Matthew	Instructional design firm	8 years	4 months	Instruction to prepare internal account and customer service manager to administer a performance dashboard sold to external clients
Brenda	Insurance	20 years	3 months	Instruction to prepare wholesalers and agents to sell a new product
Catherine	Higher education institution	14 years	6-week pilot	Instruction to prepare internal faculty on a new process
Lisa	Life insurance	14 years	2 months	Instruction to prepare internal underwriters for a new product
William	Instructional design contractor	17 years	7 months	Instruction to prepare internal agents at nationwide health insurance company on the Affordable Care Act
Brian	Commercial insurance	10 years	5 months	Instruction to prepare external agents to sell a new product

Table 4.1: Designer Project and Experience

This chapter first provides individual case vignettes of the participants, focusing on the research aim of better understanding instructional designers in the design space so as to be able to develop methods for instructional designers to improve their designs. I then provide the results, across the multiple case for the three research questions listed above. As I continuously analyzed the data using a constant comparative method, a number of themes emerged. After identifying the prominent elements across the multiple case, I limited each question's themes, which allowed me to reach deeper for meaning within each question.

The first designer, Michelle, began participation on May 1, 2014, beginning with the initial interview. The final day of data collection was July 27, 2014, when the final participant completed the final step in the study. See Table 4.2.

Name	Began Study	Ended Study
Michelle	May 1, 2014	June 23, 2014
Matthew	May 21, 2014	June 27, 2014
Brenda	May 23, 2014	July 11, 2014
Catherine	May 27, 2014	July 10, 2014
Lisa	May 28, 2014	July 16, 2014
William	May 30, 2014	July 12, 2014
Brian	June 10, 2014	July 27, 2014

Table 4.2: Summary of Participation

Case Narratives

This section introduces the seven individual cases through a series of narratives (Stake, 1995). The purpose is to provide a deeper understanding of each designer prior to introducing the multiple case. Each narrative addresses the key elements of this study as they pertain to the individual. The process used to prepare this section was to assemble the raw data, create a case record (Appendices K–Q), and then develop a narrative (Patton, 1990). These single-case results may reflect the individuality of participants in the form of outliers—where one or only a few of the participants respond in a similar manner (Sproull, 2004). The concept of outliers among the data may show additional patterns across the multiple case (Yin, 1993).

The designers are presented in the order in which they began and completed their participation in the study. While the designers are depicted in a narrative format, the content is based on responses to a variety of questions. First, they responded to initial interview questions as well as a series of demographic questions (Table 4.3).

What is your age range?
What is your gender?
Total years of active, professional work experience in a corporate vs. academic environment
Total years actively designing instruction in a corporate vs. academic environment
What percentage of your current role typically involves instructional design?
What percentage of your time do you put toward designing for internal clients (compared to external clients)?
What percentage of your time do you spend designing individually (compared to as part of a team)?
How many people are working on this project?
What is your role in the project?
What percentage of the design work will you provide vs. someone from your team?
Describe the deadlines for this project.
Describe the client for this project.
What might happen if you miss any milestones or deadlines for this project?
When we begin our study, how far into the project's timeline will you be?
When we begin our study, how far into the project's work will you be?
How long is the project you are working on during this study?
On average, what percentage of your workweek do you expect to be dedicated to this project

during the six weeks of this study?
Describe the project. What differences or similarities can you draw compared to other projects?
What questions can I answer for you about this study or the process?
Since you remain anonymous in this study, I typically assign a pseudonym for my participants. Would you like to choose your own?

Table 4.3: Interview and Demographic Questions

The bulk of designer responses were collected during the six-week study via the reflection prompts (Table 4.4). Three new questions were posted each week.

Guiding Question/Prompt
Discuss your previous experiences that are guiding you during this project.
Discuss how you framed the design problem.
Discuss your own internal beliefs that are guiding you during this project.
Discuss your ongoing interaction with the client.
Discuss how your design solution compares to other solutions you've implemented.
Discuss how you are dealing with ambiguity or uncertainty in the project.
Discuss your interaction with specific models or images.
Discuss unexpected challenges that have arisen during this project.
Discuss your personal design strengths that emerged during this project.
Discuss specific design areas you might continue nurturing as a result of this project.
How are models manifesting themselves in the design project? What models or frameworks are you using?
What tangible results do you have this week?
How would you explain your process to the client this week?
Discuss how this project is progressing.
How did themes emerge?
Discuss your design process.
Do you think you altered any processes as a result of SSR? Explain. Alternatively, did you find yourself holding more strictly to your typical design process?

Table 4.4: Weekly Reflection Prompts

Michelle's Narrative

Michelle was employed as an instructional designer for a university, and she came to participate in this study after learning of it through word of mouth. When she joined the study,

she was just beginning a new project for an external client focused on preparing mid-level departmental leads for a change initiative related to the company's information technology.

Having designed a number of other sessions for this client, Michelle understood the client and her team's work process very well. She was the sole designer responsible for designing 100% of the product. Her team consisted of three people, who met regularly with the client—and who were also responsible for implementing the training design. This team met every two weeks (and as needed) via phone and email.

She knew her deadlines for every phase of the design project and had a precise plan to achieve each milestone. In the initial interview, she indicated she would have an outline by May 20 and a draft by June 12 so that her colleagues could deliver the instructional session on June 26 (Appendix K, Kickoff Interview).

Michelle actively used her 18 years of professional experience to design instruction. She brought as much experience from time spent in a corporate environment as she did from time spent in an academic environment (about nine years of each). While she was working in an academic institution, more than 75% of her design projects were dedicated to external corporate clients. The project in which she was engaged during this study was no different.

Michelle relied on her past experiences to design this project. The instructor guide was the product that she focused on most to ensure she was meeting the needs of the learners:

Completing the Instructor Guide with directions for the instructor helps me process through each activity and ensure that we are meeting the objectives of the session. I then go back at the end of completing the draft of the guide and adjust the outline in case any of the objectives or activities changed during development. This time one or two of them changed slightly after discussions about the goals of certain parts of the program. (Appendix K, Reflection Journal, lines 229–34)

Michelle used ADDIE as a framework, simply because it takes her from beginning to end. Beyond that, she relied on her own rules to design a project, noting that she has internalized models and frameworks: “Although, since I have been doing this a long time, I’m so sorry that I don’t actually think about models or frameworks when I work through something. They may be in the back of my mind, but I don’t consciously decide on using a model or framework” (Appendix K, Reflection Journal, lines 162–64).

Even though design for ill-structured problems can be complex, Michelle committed to only a few rules as she described in the following:

- 1) I usually have a short explanation of a concept or presentation of an idea followed by some kind of exercise.
- 2) I don’t do the same type of exercise/activity twice. It could be similar, but I will change it up in some way so it doesn’t feel rote.
- 3) I always have a mixture of individual, pair/trio and small group exercises to break it up.
- 4) If something needs to be explained, it shouldn’t take any longer than 10/15 minutes.
- 5) I like to make sure participants are getting up and out of their chairs—even if just writing on a flip chart—so that they aren’t sitting for long periods and maintain their interest.
- 6) I always have an action planning section at the end of a session—it may be formal or it may be informal, but there is always time for them to think about how they are going to apply what they learned back on the job. This usually happens throughout the session, but always included in a wrap-up at the end. (Appendix K, Reflection Journal, lines 172–85)

While Michelle considered herself structured and methodical, she was flexible when challenges arose:

I normally move in pretty sequential order when I create a session, but because I lost some time due to illness, I jumped ahead and got some of the easier sections done at the end so that I can focus on the big “culture” section of the workshop. This will help me focus on that section if I know that

everything else is at least drafted. (Appendix K, Reflection Journal, lines 200–204)

Ultimately, when she designed, she believed she considered all elements—activities, students, visuals, and the overall layout:

As I pulled together content for the workshop, I looked at how the content can be easily explained or what type of exercise would work best for it. I also look at how it should be set up on the workbook page in order to explain information the best—like using a table to complete or listing discussion questions. I also wanted to make sure each activity was different enough from each other, added interest to the session and will meet the objectives we are trying to accomplish. My goals are really to limit words on a page and have participants come up with their own ideas and solutions to thought-provoking questions and activities. I try to keep everything as simple as possible so as not to confuse the instructor or the participants. (Appendix K, Reflection Journal, lines 211–19)

As mentioned, while Michelle worked on a team to ensure clients received high-end design products, she was the only person actually designing the instruction. Her peers maintained relationships with the client, and they were responsible for delivering instruction to the learners. In fact, throughout the entire design process, Michelle did not meet or communicate directly with the client. She indicated the “valuable feedback” she received from the client came directly through her colleagues (Appendix K, Reflection Journal, line 16).

Michelle indicated there was trust among her peers. Not only were they required to rely heavily on each other’s output, they also each worked in different locations, so trust that peers would stay on schedule was imperative. Communication and trust, then, were seen as critical to their success (Appendix K).

Michelle noted:

We have a unique environment where most of us work at home and have flexible schedules. So, we need to rely on others to complete their tasks in a timely manner and offer appropriate insight so that work is done correctly for the client. (Appendix K, Reflection Journal, lines 58–60)

This team environment made it easier for Michelle to deal with uncertainty and ambiguity because they were considered shared problems. She knew she could get answers through her peers because they met regularly with the client and could get clarification if necessary (Appendix K, Reflection Journal). That said, she followed a similar process in this study, asking clarifying questions before responding to reflection prompts.

Although Michelle's team worked well together, she did note that in initial planning meetings, her peers liked to provide ideas for possible design solutions, but she didn't want possible activities from anyone until she had had a chance to organize, reflect, and begin designing (Appendix K, Reflection Journal).

Michelle viewed her design through the eyes of the learners: "I am constantly striving to ensure they remain engaged, so I review and critique every activity extensively" (Appendix K, Reflection Journal, lines 110–12). She had an in-depth understanding of her learners, as this was the seventh session she had developed for them. She noted, "With this client, we have done both types of training—reflective, working sessions and more traditional training. I feel for this one, they want it more open. Sometimes we struggle with them because they don't always know what they want the outcome to be" (Appendix K, Reflection Journal, lines 60–63).

That said, what she had come to know about her learners kept her seeking new and engaging ways to meet their needs:

I have found that they enjoy a little bit of competition so have been adding a competitive element into the last couple sessions—but I try to do it in a different way each time. I also know (now) that this group is not great at having large group discussions, but learn a lot when they do pair, trio or small group work. (Appendix K, Reflection Journal, lines 73–76)

Her intense structure was intended to keep things simple for the learners. One way she did this was through visual layouts:

In general, I do tend to organize information in tables frequently because it organizes it nicely for the participant and the instructor. I've used them to explain information easily and I also use them in exercises with blank "cells" where participants can fill in ideas, discussion results, etc. (Appendix K, Reflection Journal, lines 101–4)

Michelle indicated she sought ways to make programs effective and interesting: "I'm working to include a variety of exercises that I believe the participants will enjoy as well as meet the goals that they would like to see as a result of the session" (Appendix K, Reflection Journal, lines, lines 96–98).

Michelle provided a number of design artifacts or documents throughout the process; however, none reflected the game ideas or other brainstorms she mentioned. Rather, they were drafts nearing their finished stages, and the purposes of all documents were clear. She indicated these versions had also been provided to her stakeholders (Appendix K).

The SRIS and the REFLECT rubric, described in Chapter 3, were instrumented to identify any changes in reflection abilities, addressing Research Question 3: *How does structured reflection during design contribute to the reflection abilities of instructional designers?* This SRIS showed growth in Michelle's reflection abilities. While there was no significant change regarding her *insight* or *engagement in reflection*, Michelle increased her *need for reflection* as indicated in her SRIS reflection response. She noted her increased need by indicating that it became more important for her to evaluate what she did and to understand her feelings (Table 4.5).

Area	Statement	Baseline	Post-Study
Need	It is important for me to evaluate the things that I do.	4 - sometimes true	5 - always true
Need	It is important to me to try to understand what my feelings mean.	4 - sometimes true	5 - always true
Need	It is important to me to be able to understand how my thoughts arise.	4 - sometimes true	3 - 50/50
Insight	I usually have a very clear idea about why I've behaved in a certain way.	3 - 50/50	4 - sometimes true

Insight	I'm often aware that I'm having a feeling, but I often don't quite know what it is.	3 - 50/50	2 - rarely true
Insight	I usually know why I feel the way I do.	3 - 50/50	2 - rarely true

Table 4.5: Michelle's SRIS Reflection – Changes Only

Similar to her overall SRIS results, Michelle's overall REFLECT didn't show significant growth across the entire study (Figure 4.1). In fact, overall it showed a decline during the study then an improvement near the end. It appeared that she had moments of reflection but that those moments were not tied to certain time frames or events.

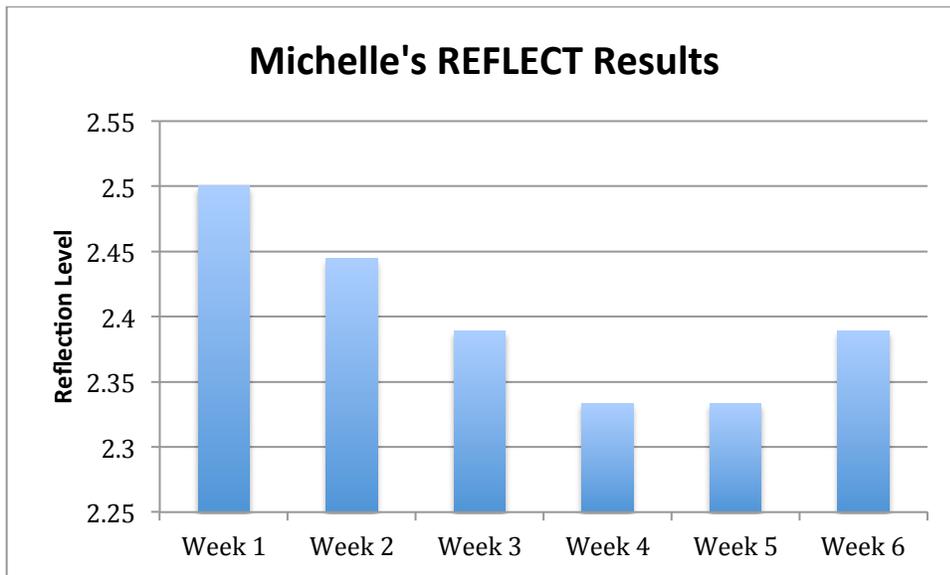


Figure 4.1: Michelle's REFLECT Results

Matthew's Narrative

Matthew was an instructional designer who brought in-depth previous experience as a software developer. At the time of this study, his position in a corporate environment focused on designing instruction and instructional tools for a variety of industries, most notably banking and insurance. Matthew had been designing instruction for eight years, two of which were in

academia and the other six in a corporate environment. He designed as part of a team at least 90% of the time, working with content developers, media developers, and project managers.

While instructional designers in some companies perform activities outside the instructional design role, Matthew noted that he only designed instruction. Each project team consisted of an instructional designer (Matthew), a media developer, and a content developer. They all performed only those activities that were part of their roles. The only other role Matthew would take during a project was that of a project manager, but only if one was not assigned to the project.

At the beginning of this study, Matthew was working on at least 11 different design projects. Four of these were coming to an end, while the others took the majority of the time during the study. Five of his 11 current projects were internally focused, though historically, he spent most of his time on external projects.

Because of the number of projects and the confidential nature of them, they were not all addressed in this study. Rather, he related his responses to a new project, which was consuming most of his time. This project was focused on developing instruction to help internal account managers and customer service professionals use a product that was also being used by their clients.

Having so many active projects, Matthew was quick to point out that “managing the timeline is a really big deal” and that having a project manager is very helpful (Appendix L, Reflection Journal, lines 57–58). He also noted that his group didn’t miss deadlines, indicating that when they expect a timeline to shift, they will work with the client to renegotiate what the deadline is and rework the contract plan (Appendix L, Reflection Journal).

When designing specific instruction during the study, he described it as a straightforward process, noting, however, that the process only applied to this single project:

... there it's mostly following a fairly standard sorting algorithm what do they need to know to understand this—OK, let's put that before it. Then you ask yourself: which bits can they reasonably practice in this format and then you place those items close to the related content, but with enough of a gap to give it a chance to soak in. After that, I will move things around if the content dictates a change. (Appendix L, Reflection Journal, lines 194–99)

Regarding instructional design in general, Matthew added, “I don't think there is a strict step-by-step process to follow—strictly or otherwise” (Appendix L, Reflection Journal, lines 227–28).

On the other hand, he viewed much of his work as “not unique.” Those projects that were unique piqued his interest most and aligned with his previous role. He noted:

It's fun to think through, design and engage with an interactive tool such as this one might turn out to be. It reminds me of some of the enterprise software development projects I used to work on as a software developer. (Appendix L, Reflection Journal, lines 13–16)

It seemed his previous experience as a software developer helped him in his ID projects, particularly with an instructional dashboard:

I don't think I'm showing any particular design strengths on either of these projects. For the dashboard, maybe you could say that my software development and HCI background are shining through because I'm familiar with what can and cannot be done in such a tool as well as how it would be done, so my design is grounded in reality. I guess that could be a strength. ... Is this what you mean? (Appendix L, Reflection Journal, lines 105–13)

I guess it's possible that some others might be intimidated by some of the projects I find fun. This past weekend I mentioned on a social network that I was excited about a new data analysis project I got and one of my colleagues responded that she was happy for me and happy it wasn't her. Neither of us have done a project like this before, but obviously we have different views towards it. Still, I'm not sure that I'm answering your question. (Appendix L, Reflection Journal, lines 117–23)

Rather than forcing his internal beliefs on his projects, he used a current project to, as he stated, “explore a number of my own beliefs.” In his assessment, “I don’t believe that I can build an accurate model and I also believe that the more accurate it is, the more unwieldy it will become.” This ambiguity led him to seek a solution that would simply be “sufficient” (Appendix L, Reflection Journal, lines 28–29).

He struggled to answer questions about his design process over the course of a few days. Initially he noted, “It all just pretty much feels like common sense in general, I think, but maybe I’ve just internalized all of it...?” (Appendix L, Reflection Journal, lines 149–50).

Later he added:

I’m not really sure which it is. I just went into one of my colleagues’ offices and found notes on their walls with reminders that seem to refer back to models and techniques and whatnot. She is much newer to the field than I am and maybe that accounts for it. I know that I never did that sort of thing (either as an ID or as a software developer). Maybe it’s just different approaches/styles? Maybe it’s level of confidence in my own skills? I don’t know. (Appendix L, Reflection Journal, lines 150–55)

Matthew didn’t rely on instructional design models, theories, or frameworks. According to him, “ADDIE can be useful in offering a simple vocabulary for understanding what is (and will be) happening” (Appendix L, Reflection Journal, lines 86–87).

In discussing ADDIE further, though, Matthew stated:

No phase is truly distinct from any of the others and it’s not really possible to say “oh, for that hour and a half, I was designing and not doing anything that could be seen as analysis or development, etc.” They are abstractions from reality. (Appendix L, Reflection Journal, lines 77–80)

In addition to basic frameworks like ADDIE, Matthew also found little need for any theories or advanced models.

Other models offer me no value because they are impositions of deviation on reality. If they are “complicated,” it usually means they ask me to remember to make certain changes to the natural way I do things. I don’t see any that pretend to offer nearly enough value to make that worthwhile. (Appendix L, Reflection Journal, lines 88–91)

While he didn’t believe he applied frameworks or theories to his designs, he did recognize that one might see evidence of them:

You’d probably see elements of Merrill’s and ARCS and Gagne in my work, but that would be because they emerged from that particular setting and not because I was imposing them. Occasionally I might go back to them if I feel like the client has a lack of confidence and wants something that is research-backed, but most often they just want something that works—I don’t remember the last time I ran into that. (Appendix L, Reflection Journal, lines 143–48)

Matthew believed that the process of framing a design problem worked to minimize uncertainty in design. He stated:

That’s what framing is all about, isn’t it? You frame the problem around what you believe you can legitimately approach and then the client comes back and tells you which crucial elements you’ve missed and you begin to dig into those. On the bank project, there’s still uncertainty around budget and timeline, but we’re asking those questions and they’ll be resolved. (Appendix L, Reflection Journal, lines 52–56)

Additional ambiguities that Matthew faced, he believed, indicated trust:

I guess I take the ambiguity as their indication of trust in my abilities. The fact that I haven’t been given a timeline means that I get to determine it myself. I think my managers and colleagues know me well enough to realize that if they give me a problem, I’ll get it done in relatively short order and not waste their time or money, so I’m not concerned there. (Appendix L, Reflection Journal, lines 57–61)

Similarly, Matthew was rarely fazed by the unknown or unforeseen challenges: “I think it would take a lot for something to feel unexpected to me,” though, he said, “They aren’t all alike, but something would have to be very unusual and develop very quickly for me to feel it was unexpected” (Appendix L, Reflection Journal, lines 94–98).

When considering why he felt that way, he added:

Probably because I don't expect things to go smoothly and therefore I'm not surprised when they never do. This probably goes back to the models question a bit in that I don't expect them to follow some imposed model. They all always have hiccups that have you redo some work you thought you were finished with. (Appendix L, Reflection Journal, lines 100–103)

Matthew worked on various projects during this study. He considered his most significant project was also the project that most interested him—an educational tool that acted as a performance dashboard. Of these many projects, Matthew did not provide any design products throughout the study, but he also pointed out that in his workplace, he didn't think having tangible output was all that important.

Matthew's reflection abilities did show some change by the end of the study. Matthew had a strong and consistent need for reflection at the beginning and the end of the study; however, his engagement in reflection and his overall insight showed the most noticeable change (Table 4.6). He indicated he increased the time he spent thinking about his thoughts and decreased his time examining his feelings. Further, Matthew felt he always had an understanding about his feelings and thoughts.

Area	Statement	Baseline	Post-Study
Engagement	I don't often think about my thoughts.	2 - rarely true	1 - never true
Engagement	I frequently examine my feelings.	5 - always true	4 - sometimes true
Engagement	I often think about the way I feel about things.	5 - always true	4 - sometimes true
Insight	I am usually aware of my thoughts.	5 - always true	4 - sometimes true
Insight	I'm often confused about the way that I really feel about things.	3 - 50/50	2 - rarely true
Insight	I usually have a very clear idea about why I've behaved in a certain way.	4 - sometimes true	5 - always true
Insight	Often I find it difficult to make sense of the way I feel about things.	2 - rarely true	1 - never true

Table 4.6: Matthew's SRIS Reflection – Changes Only

Matthew's reflection ability via the REFLECT rubric showed change across the six weeks. As the weeks went on, his reflection waned, but as the study came to a close, it began to, once again, increase (Figure 4.2).

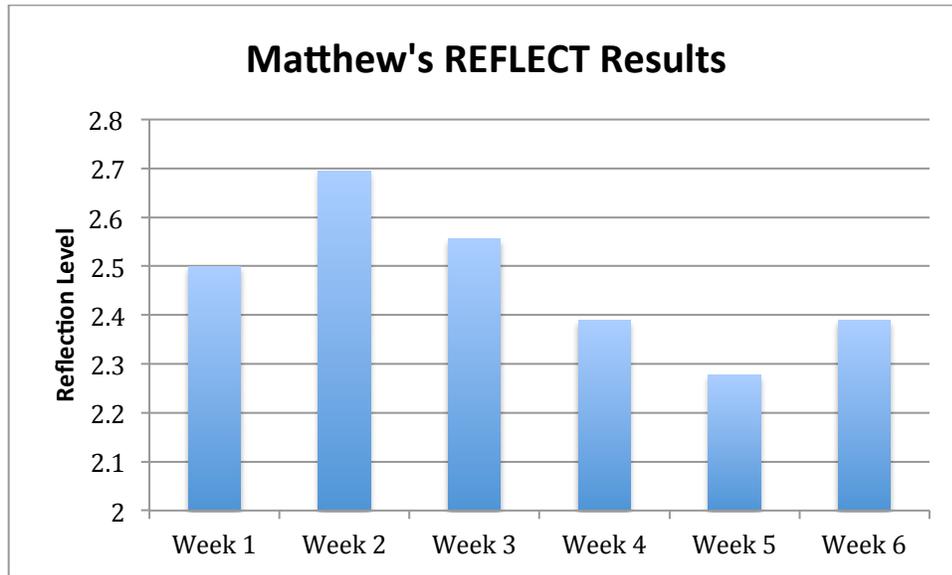


Figure 4.2: Matthew's REFLECT Results

Matthew often asked clarifying questions. For example, when asked what experiences were guiding him during design, he wanted to know which project he should address. He also asked, "Are you looking for specific things here? I'm not sure I can answer this question as is because I've too many diverse projects for this to be meaningful to me. Also, what sort of previous experiences do you want here?"

The concept of meaningfulness arose throughout the study, and he admitted he preferred two-way conversations to the prompt-and-response approach used in this study. He also indicated at the end of the study that while he reflected throughout in this manner, he would have still conversed with others (which he did) if he had not been reflecting in this study.

Brenda's Narrative

Brenda came to this study by way of a LinkedIn group invitation. When she joined the study, she was 10% into a current project that would take her several months to complete. She was the sole designer on the project, which was insurance product training meant for internal agents and wholesalers. Once finished, she would turn the design over to a subject matter expert (SME) who would deliver the content. She would also provide necessary content to another peer, who would post to their organization's learning management system.

When designing, Brenda constantly considered best practices from previous programs. She described her preparation as a series of self-imposed questions for reflection. For example, she noted in question-and-answer format:

Review previous product launch successes and failures and determine if any of the tactics previously used are applicable for the new product. *Did anything used before have great success? If yes, why was it successful for that product? And now, would it be a successful tactic to use for this product launch? Anything have great success? Yes, Q&A and pre-recorded webinar with product details. Why? Q&A one place to ask questions and get to see questions other people had; pre-recorded—got the product details in easy-to-digest format and length. Didn't take time away from selling, but gave information that was useful to start discussing product. Useful for new product? Yes, will do Q&A and will do a series of pre-recorded webinars because there are a lot of details that need to be digested in small chunks and then discussed live in person later after it has been digested. What ideas/tactics were good but failed in the past? Why did they fail? Would they be successful for this new product launch? How could they be successful? What are the similarities and differences of the new product to the existing products being sold? What is necessary to know?* (Appendix M, Reflection Journal, lines 7–28)

Brenda noted that she follows a specific structure: “[I] use templates for design plan to help design the training plan and consider everything that needs to be addressed—audience, methods, dates, timing, communication, etc.” (Appendix M, Reflection Journal, lines 40–41).

Brenda organized her content, then reflected on how visuals might increase learning. She often sensed the visual possibilities:

I organize my content and look for places where a diagram, flowchart, map, etc., would be useful and then start creating it. Frequently when I hear the content, visuals start developing in my head. I usually have success getting these visuals down on paper (virtual or real), but occasionally I can't get what's in my head on paper correctly. We are fortunate that in our organization, we have a dedicated design team so I can consult with them for help when I get stuck. Sometimes I consult with them even when I can get it on paper correctly, but ask them to polish it for me. (Appendix M, Reflection Journal, lines 142–50)

During her design, she considered the various methods of delivery and looked for ways she could nurture necessary skills: “I’m building the web-based training portion of the course with mobile tablets in mind—Future design skill[s] I want to develop are instructional designing for mobile because I know this has some differences from instructional design for web-based training” (Appendix M, Reflection Journal, lines 192–95).

Brenda recognized that she incorporated a number of tools and models into her designs. In fact she mentioned 11 different tools that she regularly turned to during design (Table 4.7).

Merrill's First Principles
ADDIE
Harless' 13 Smart Questions
Gilbert's BEM
Chevalier's Updated BEM
Bloom's Taxonomy—both the Krathwohl version and the Digital version
Merrill's First Principles
Keller's ARCS model
Ausubel's Advanced Organizer
Kirkpatrick's four levels of evaluation
Brinkerhoff's Success Case Method

Table 4.7: Brenda's Tool Box

Brenda used these instructional design tools and other organizational tools to address ambiguity. She defined ambiguity and uncertainty as part of the design process and defined how she addressed it:

I tend to try to put structure around everything I do to remove the uncertainty and ambiguity. I use a lot of templates and timelines to organize the chaos so I can plan. Otherwise I wouldn't get anything done as I waited for certainty to be determined. (Appendix M, Reflection Journal, lines 130–33)

She also maintained connections with the various stakeholders to minimize uncertainties.

I have meetings weekly with the marketing/training/communications core team which includes the project manager, product developers, marketing product manager (in charge of developing the go-to-market strategy, sales ideas, etc.), the marketing communications manager, the product sales system manager, the website people, the marketing video manager, and myself. The meeting keeps us informed about product status, timelines, helps us drive toward due dates and deliverables. (Appendix M, Reflection Journal, lines 71–76)

In order to determine the order of content delivery, Brenda relied on discussions with other colleagues to gain a deeper understanding of the product: “I need to have more conversations with the marketing product manager and the product developers before I can determine, based on my audience, what makes logical sense for the order of delivery” (Appendix M, Reflection Journal, lines 111–14).

Making logical sense was a key focus in Brenda's design. She stated:

Give the learners what they need to know to perform successfully in an easy-to-understand way, with as much repetition as possible to give them a safe environment to practice before they meet with clients. Give them what is nice to know in reference materials when they successfully complete various sections of the course. Provide space between sections of training to give them time to reflect and build. (Appendix M, Reflection Journal, lines 51–55)

She also described the challenge of working with others who don't fully understand adult learning:

Subject matter experts and compliance generally like for every minute detail to be stated on the screen, in the participant guide, and by the presenter. However, this is not useful for training employees. They [learners] need to know what they need to know to sell the product, to select suitable clients, and where to get more information when they need it. It doesn't make instructional sense to overload the learners. (Appendix M, Reflection Journal, lines 58–62)

Brenda's strong advocacy for her learners was reflected in many of her responses. She noted the struggles of convincing other stakeholders of the best learner solution:

It was decided in May by the sales leaders that the new product would be on the agenda and the sales team would help craft the marketing and sales ideas for the new product. This goes against the marketing leader's recommendations. This goes against my recommendations as the training consultant since the product won't launch until November. However, since the product will be on the agenda, I have agreed to develop the product introduction (I've lobbied hard for it not to be called product training). We don't normally train the product four months in advance of a product launch, so this added a few wrinkles to the plan I was developing and forced me to speed up some of the training deliverables as well as completion of the training plan. (Appendix M, Reflection Journal, lines 87–95)

Later in the project she continued:

I've added in a lot of events between July and November, to kind of "drip" train the wholesaler audience rather than have the training event in July and then not again until October. This plan should give them time to absorb a lot of the product information and incorporate how to sell it within their selling repertoire without providing them with useless or "scrap" training events. I'm trying to make it almost a training campaign rather than a training event. (Appendix M, Reflection Journal, lines 167–72)

While this project brought her design struggles, she also recognized that sometimes a client wants something that instructional design cannot solve. She wrote:

Start with the goal, then all other steps fall into place easily. The goal is what the client expects as a result of the training. Sometimes the goal can't be accomplished by training and be prepared to tell the client this. If you help the client articulate what they expect to see because of the training, then you will be ahead of many other instructional designers in meeting the client's

expectations and being able to prove that the training worked. (Appendix M, Reflection Journal, lines 296–301)

Across all her reflections, she didn't believe the study caused her to change her designs.

She did note, however, that:

by reflecting on what I did, I was able to see why I have the design process designed as I have it. It works. If I follow the plan, it will work. It reminded me that adhering to the process/plan helps me be more creative because I'm not having to try to remember a lot of little things; they are in the design plan somewhere, so they will be in the plan when I need to do them. (Appendix M, Reflection Journal, lines 308–13)

Brenda's reflection abilities changed in many areas across the study's time frame.

Regarding her level of engagement in reflection, it decreased in terms of how much she evaluated her feelings but increased in terms of how often she thought about those feelings. She became more interested in analyzing her own behavior but noted that it wasn't quite as important to actually evaluate her own behaviors. Lastly, regarding her level of insight after the study, she believed she was no longer confused by her own thoughts.

Area	Statement	Baseline	Post-Study
Engagement	I rarely spend time in self-reflection.	1 - never true	2 - rarely true
Engagement	I frequently take time to reflect on my thoughts.	5 - always true	4 - sometimes true
Engagement	I often think about the way I feel about things.	5 - always true	4 - sometimes true
Need	It is important to me to try to understand what my feelings mean.	4 - sometimes true	5 - always true
Insight	I'm often aware that I'm having a feeling, but I often don't quite know what it is.	5 - always true	3 - 50/50
Insight	My behavior often puzzles me.	4 - sometimes true	2 - rarely true
Insight	Thinking about my thoughts makes me more confused.	4 - sometimes true	2 - rarely true
Insight	Often I find it difficult to make sense of the way I feel about things.	4 - sometimes true	2 - rarely true

Table 4.8: Brenda's SRIS Reflection – Changes Only

Brenda's reflection abilities, according to REFLECT (Appendix I), remained constant throughout the study, ranging from 2.0 to 2.8 on any given week (Figure 4.3).

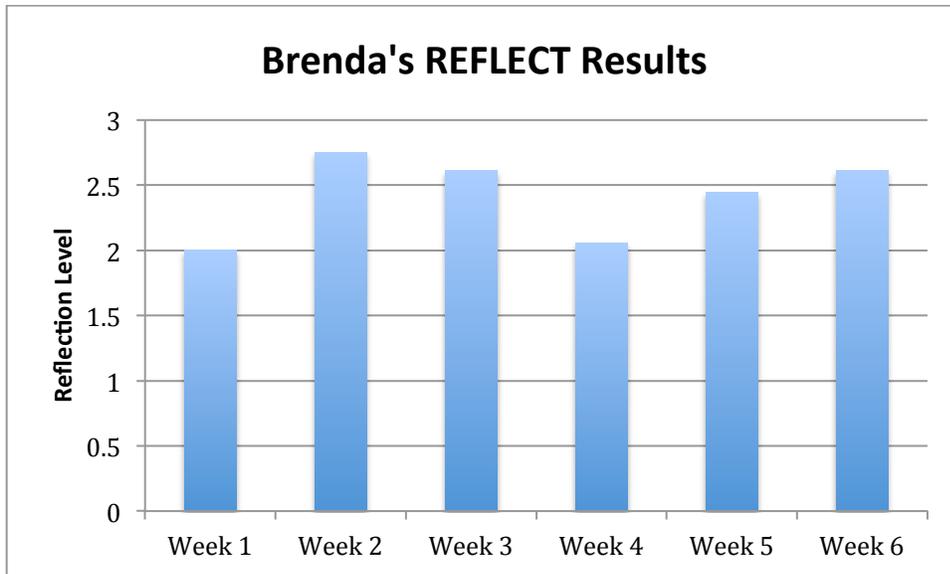


Figure 4.3: Brenda's REFLECT Results

Catherine's Narrative

Catherine joined the study after seeing an invitation on an instructional design group's LinkedIn page. She brought extensive experience, having worked in academia for 12 of the 14 years of her total instructional design experience. The majority of her design work during the study participation was for internal clients within an academic institution. While she was working on a variety of activities, her primary instructional design project was focused on an online program for students on digital and information literacy.

Like Brenda, Catherine worked alone and contacted SMEs as necessary. She wrote often about how she relied on her own student, faculty member, and online course evaluator experiences to design instruction. She stated:

I always begin with what have I experienced as a student and/or teacher to guide my first design suggestions. I then ask myself why? This takes me back to either research or core readings I've completed—thus the explanations are

already crafted for those who think differently when reviewing my work. (Appendix N, Reflection Journal, lines 49–53)

You have to draw on every experience related or not related to the present one. I've had many jobs in many countries and I draw from all to guide, how I behave, what I say and do and most certainly when I use all of the guides. (Appendix N, Reflection Journal, lines 11–13)

For her current projects, she used a variety of models:

The main model being used is Kirkpatrick's model ... although I believe there are elements of ADDIE, Blooms (Taxonomy), Kemp [Instructional Design Model], Dick and Carey [ISD Model], and most importantly, Gagne [Nine Events of Instruction]. (Appendix N, Reflection Journal, lines 70–71)

I think I used a rapid/agile approach of Kemp for the infograph. It was messy yet quickly done—drawing from other solutions I had and it just pulled lots of techniques and designs together to create the solution. (Appendix N, Reflection Journal, lines 110–12)

While these tools helped her design instruction, she understood that ambiguity is also part of design:

I do not think that there is a time that the design problem (at least for me) has been totally clear. The client always knows what they would like but, being clear and explaining is always a challenge. So to answer the question, the unnerving ambiguity has become part of the design process for me ... so yup ... I'm comfortable with it. (Appendix N, Reflection Journal, lines 29–33)

Rather than being negatively impacted by the uncertainties of design projects, she stayed focused on what she thought was most important:

I am attempting to let the characteristics of the audience, the needs of the sponsors, the available technology, and the appropriate research guide my design process. I do believe if I follow the trail I'm supposed to follow it will eventually turn out the way that makes the most meaning for the student. But time is not on my side so I'm struggling back and forth. (Appendix N, Reflection Journal, lines 22–26)

As mentioned, Catherine primarily worked alone on design projects. In fact, in many cases, she was required to act as the SME as well as the designer. She noted that most people did

not have the skill set or knowledge to contribute to her projects. This made for high accountability on her part: “I can say that if [learners] do not like or understand the course, heads will roll—most likely mine” (Appendix N, Reflection Journal, lines 41-42).

Catherine was the only designer on her projects and felt comfortable posting three design products throughout the study. They were semi-finished drafts, and while she posted three over six weeks, she noted that for her supervisor, “I feel I must have a draft or completed artifact for show at the end of each week” (Appendix N, Reflection Journal, lines 117–18).

Catherine showed a lot of movement regarding reflection ability, particularly in engagement and insight. Though her changes in engagement didn’t reveal anything significant, her insight had improved by the end of the study.

Area	Statement	Baseline	Post-Study
Engagement	I rarely spend time in self-reflection.	1 - never true	2 - rarely true
Engagement	I frequently take time to reflect on my thoughts.	5 - always true	4 - sometimes true
Engagement	I often think about the way I feel about things.	5 - always true	4 - sometimes true
Need	It is important to me to try to understand what my feelings mean.	4 - sometimes true	5 - always true
Insight	I'm often aware that I'm having a feeling, but I often don't quite know what it is.	5 - always true	3 - 50/50
Insight	My behavior often puzzles me.	4 - sometimes true	2 - rarely true
Insight	Thinking about my thoughts makes me more confused.	4 - sometimes true	2 - rarely true
Insight	Often I find it difficult to make sense of the way I feel about things.	4 - sometimes true	2 - rarely true

Table 4.9: Catherine’s SRIS Reflection – Changes Only

Catherine’s REFLECT results indicate she slightly improved in her depth of reflection across the six weeks (Figure 4.4). Most notable among her responses was the fact that she critically reflected seven times, primarily in the areas of conflict description and analysis and meaning making.

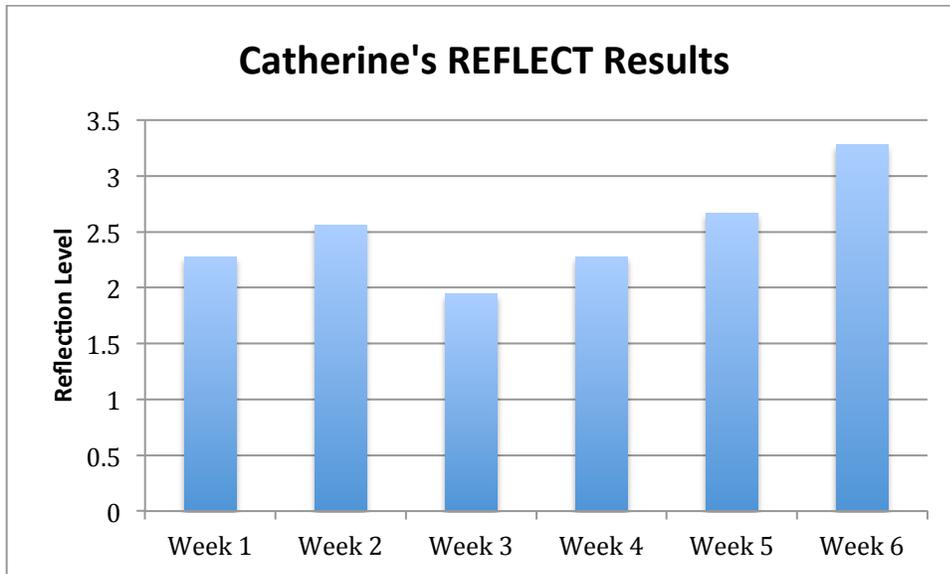


Figure 4.4: Catherine's REFLECT Results

Lisa's Narrative

Lisa volunteered for the study after finding an invitation posted through a LinkedIn professional instructional design group. She had been designing e-learning instruction for four years and brought ten years of previous experience from art education and graphic design. While she was the only instructional designer in her life insurance company, she was supported by subject matter experts and other colleagues who tested her designs and provided input. On the other hand, Lisa believed her work environment made it difficult to be creative, because she worked in an area with a lot of other employees across many cubicles and disciplines (Appendix O).

Lisa's primary project was to create a 30-minute online instructional module to prepare underwriters to understand a new product being released later that year. She was supported by a subject matter expert and six others who would test the product. Other people in her department included an instructional designer who created the face-to-face programs and four training

specialists who delivered that instruction. Given that she was the only e-learning specialist, she usually worked alone.

Regarding her design activities, Lisa framed design problems by looking at all her assets, then began organizing from there. She wrote:

Using a Powerpoint presentation with information, a few underwriter's tools, and notes from two informational interviews, I found the large topics that needed to be discussed in the course, added concepts and skills that needed to be learned. I created an outline with "chunked" information so learners would have an easier time digesting the concepts in this course. (Appendix O, Reflection Journal, lines 12–16)

Lisa's design approach was to provide small pieces of the design to people for review:

I prefer to write and storyboard small sections of the course then present them to my SME. I think it's easier to react to material vs. come up with material so I give the SME the chance to react to what I've written and to simple screen design and interface design elements that describe the idea but are not polished products. Smaller sections of the course are more easily digestible and faster to change. (Appendix O, Reflection Journal, lines 99–103)

Lisa was a strong proponent of Gagne but regularly used the ADDIE framework as a point of reference, identifying her overall process through that lens. She indicated she designed and developed simultaneously but still used ADDIE as a general guide.

Having a background in art education and graphic design, she believed that graphic design was one of the most critical components to instruction:

Our brains can process visual information more quickly and more clearly than text information. Good visuals are more motivating for learners and can help us remember information for a longer period of time. (Appendix O, Reflection Journal, lines 133–35)

[I've been] taking all the elements and making them work along with developing the images. I shared a "sloppy copy" of the course but now, I will take the images and make them sparkle through graphic design. (Appendix O, Reflection Journal, lines 340–43)

To address ambiguity directly, Lisa simply asked lots of questions and tried new approaches. She added:

At this point in the process, I resist the urge to take strong ownership in my work because it's important to be open to change. I also resist the urge to develop visuals or interactions until I know the information is solid. (Appendix O, Reflection Journal, lines 96–98)

Lisa worked closely with SMEs and knew that working with others was important to her success: “Many people are involved so the project twists and turns.” She added, “My way may not be the best way. Stay open to suggestions” (Appendix O, Reflection Journal, lines 9, 19).

In a current project she noted the difference an effective and committed SME can make:

My SME is on board and has time to work on the project. He thinks it's so important for his department. I get to have an hour of his time most days of the week. It's set on the calendar. (Appendix O, Reflection Journal, lines 67–69)

Lisa found she regularly trained SMEs in the design process. After she created a draft, which she often referred to as a “sloppy copy,” the following happened:

With the sloppy copy, most SMEs want to react to what they see and how something works. They often comment, “that picture should be larger” or “shouldn't those buttons be placed on the other side of the screen” or “this button doesn't work.” I always remind them, “the finished course will look different. I'm sharing this version just to give you an idea of how the course will work.” (Appendix O, Reflection Journal, lines 118–23)

Lisa believed that short narration with effective visuals was most effective for her audience but recognized that SMEs had difficulty understanding the direction of design prior to the visuals being complete. She mentioned the challenge of working with SMEs in creating valuable instruction:

I prefer short, concise text. She prefers long-winded explanations. I believe information can be explained with visuals—but the full visual has not been developed. She can't “see” what the finished visual will say so she wants to

add volumes of text to explain a concept. (Appendix O, Reflection Journal, lines 214–17)

In terms of managing time, Lisa learned to fill her schedule appropriately. After she provided something to be reviewed, she stated she released control. She realized that she could not make changes while it was being reviewed. She noted, “I become prepared to accept changes shared by others or defend the design choices I’ve already made” (Appendix O, Reflection Journal, lines 205–6).

Lisa reflected on her current situation and forecasted what might happen. She compared what she called her “perfect process” to what outcome was more likely. She believed forecasting better prepared her for unforeseen challenges and helped her plan for any additional time that would be required as a result of the change:

I can see things coming. I’ve had enough experience in life and my profession to know when things can change. First I feel it in my gut then explore the calendar to figure out what may need to happen to keep the project on schedule. (Appendix O, Reflection Journal, lines 180–82)

Lisa discussed in great depth how being fully present day to day might better provide for the design needs:

This week, I decided I wanted to learn more about infographics. At the same time I was thinking about infographics, I was reading a post on an Instructional Design blog. It mentioned the work of Edward Tufte. I purchased a few of his books and I’m planning to look at them this weekend.

Within the same few days, a coworker asked me if I was interested in having a “coloring book” that would help me practice visual note-taking characters and symbols.

I think it’s fascinating how the world helps nurture your interests if you stop and say, “hey, what a coincidence that I want to learn more about putting complex information into pictures and I stumbled across 2 great resources to help me do that!” (Appendix O, Reflection Journal, lines 234–44)

Lisa showed a significant amount of change in her reflection abilities by the end of the study. Although her need for reflection didn't change (it had already been high), her engagement in reflection and her insight changed. By the end of her study, she had increased the amount of time she spent thinking about her thoughts, in self-reflection, and examining her feelings.

While her engagement areas improved, her insight levels declined. She became less aware of her thoughts and more puzzled by her own behavior. She also felt she didn't understand her own feelings and found it difficult to know why she felt the way she did.

Area	Statement	Baseline	Post-Study
Engagement	I don't often think about my thoughts.	2 - rarely true	1 - never true
Engagement	I rarely spend time in self-reflection.	3 - 50/50	1 - never true
Engagement	I frequently examine my feelings.	4 - sometimes true	5 - always true
Engagement	I don't really think about why I behave in the way that I do.	2 - rarely true	1 - never true
Engagement	I frequently take time to reflect on my thoughts.	3 - 50/50	4 - sometimes true
Engagement	I often think about the way I feel about things.	3 - 50/50	5 - always true
Insight	I am usually aware of my thoughts.	3 - 50/50	4 - sometimes true
Insight	I'm often aware that I'm having a feeling, but I often don't quite know what it is.	2 - rarely true	4 - sometimes true
Insight	My behavior often puzzles me.	2 - rarely true	4 - sometimes true
Insight	Often I find it difficult to make sense of the way I feel about things.	3 - 50/50	4 - sometimes true
Insight	I usually know why I feel the way I do.	3 - 50/50	4 - sometimes true

Table 4.10: Lisa's SRIS Reflection – Changes Only

According to the REFLECT results (Figure 4.5), Lisa had moments of great reflection, but these did not steadily increase across the six weeks; rather they increased, declined, and then increased again. Most notable among the results was that she critically reflected in 21 different elements across REFLECT, which was three times higher than the number of elements of the next highest critical reflector.

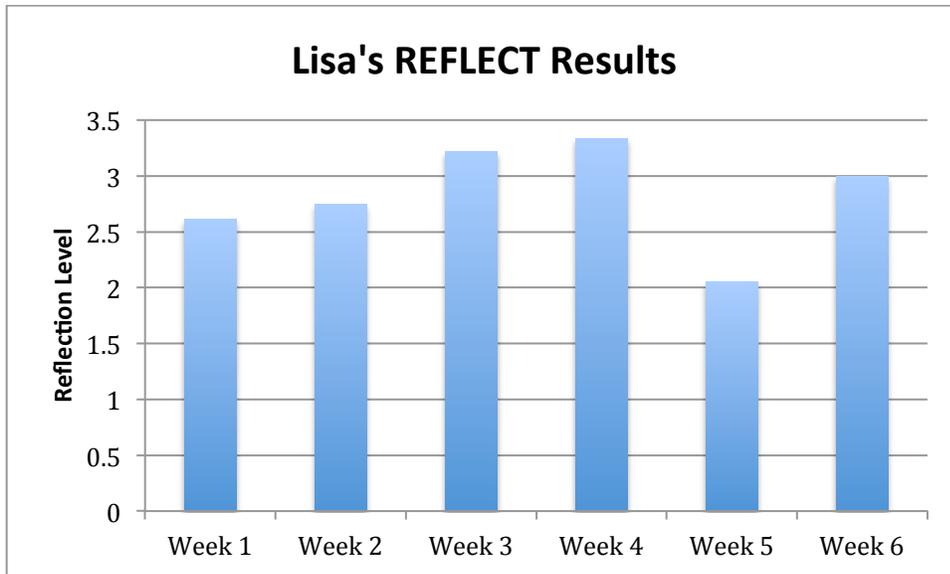


Figure 4.5: Lisa's REFLECT Results

William's Narrative

William was an independent contractor who had been designing large-scale instructional solutions most of his career. He came to the study after reading a post in a LinkedIn group for instructional design professionals. He brought 24 years of professional experience, 17 in instructional design. Most of William's work was on his own, with input from subject matter experts. The client provided whatever resources they could, and he organized and analyzed to make sense of the information.

His current project was to create training for a national health insurance company that would prepare agents on the intricacies of the Affordable Care Act (ACA). Because of the different state policies, he divided his project geographically and looked for ways to modularize the training. Also, given that the rollout of the ACA was imminent, his project deadline was firm.

William used ADDIE as a starting point in his design but noted he moved to other methods based on his own needs and the preferences of his client: "My client encourages use of

Rapid Instructional Design [RID]. While I am not in favor of rushing a project, the [tenets] of RID are sound, and I would use them as a sort of quality checklist in future instructional design projects” (Appendix P, Reflection Journal, lines 112–14).

William followed a specific process during design:

I review any existing documentation on the topic at hand, for example, a particular state’s implementation of managed care, second, I meet with the client SME to go over any questions I may have as well as any new developments that may post-date the documentation, I then draft the necessary course materials and submit them to the SME for content review and a client-side instructional designer for peer review. (Appendix P, Reflection Journal, lines 130–35)

In a large-scale project that will be implemented differently across several states, William looked for the common patterns and then created the core training. After that, he added the modules that would be appropriate for individual states.

Because we are dealing with specific state implementations of a national plan, the common pattern is first, the national information that is common to all states, then, we deal with the nuances that apply to each state for a given topic. The pattern emerges as Topic A, National, Topic A, State, Topic B, National, Topic B, State, etc. The order of the topics has been established from years of delivering similar content. (Appendix P, Reflection Journal, lines 148–52)

With so many unknowns as he designed, William simply stated that in order to deal with ambiguity, “When in doubt, ask. This holds true for most issues” (Appendix P, Reflection Journal, line 59). He continued, noting from his experience, “I have found that with doubt comes disagreement, if everyone’s point of view is taken into consideration, whatever solution is devised gets more support and is therefore more likely to succeed” (Appendix P, Reflection Journal, lines 63–65).

Because his project would be implemented across numerous states with different laws and requirements, he worked by taking as much knowledge from SMEs, along with other

information assets, so he could create a knowledge base from which to draw for the actual instructional design: “I will be designing a knowledge management system to minimize effort when presenting common concepts as well as creating development standards so all content adheres to sound instructional design practices” (Appendix P, Reflection Journal, lines 15–18).

Given the complexity of the project along with the amount of content with which he was working, he struggled to find ways to include visuals because “it is not a visual body of knowledge” (Appendix P, Reflection Journal, line 82). He also noted that in order to address this challenge he would focus on “arranging text, use of whitespace, and animation” (Appendix P, Reflection Journal, lines 78–79).

In all his work, William’s goal was to ensure that the packages he delivered to his clients employed the “use of simple phrases, color, white space, animation, and repetition in ways that help the learner retain and apply the information” (Appendix P, Reflection Journal, lines 87–88). These design products were not posted during the study for review.

William’s reflection ability showed change throughout all three subscales, particularly on his perceived engagement in reflection and his need for reflection (Table 4.11). His engagement in reflection improved, while his need for reflection declined.

Area	Statement	Baseline	Post-Study
Engagement	I don't often think about my thoughts.	1 - never true	2 - rarely true
Engagement	I rarely spend time in self-reflection.	1 - never true	2 - rarely true
Engagement	I don't really think about why I behave in the way that I do.	1 - never true	4 - sometimes true
Engagement	I frequently take time to reflect on my thoughts.	2 - rarely true	4 - sometimes true
Need	I am very interested in examining what I think about.	5 - always true	4 - sometimes true
Need	It is important to me to try to understand what my feelings mean.	5 - always true	4 - sometimes true
Need	I have a definite need to understand the way that my mind works.	5 - always true	4 - sometimes true
Need	It is important to me to be able to understand how my thoughts arise.	5 - always true	4 - sometimes true
Insight	I'm often aware that I'm having a feeling, but I often don't	4 - sometimes	2 - rarely true

	quite know what it is.	true	
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Table 4.11: William's SRIS Reflection – Changes Only

William's ability to reflect according to the REFLECT rubric largely indicated consistency throughout the study. His deepest reflection occurred during week two (Figure 4.6), but there were no significant findings across specific criterion or question domains (Appendix P, Reflection Journal).

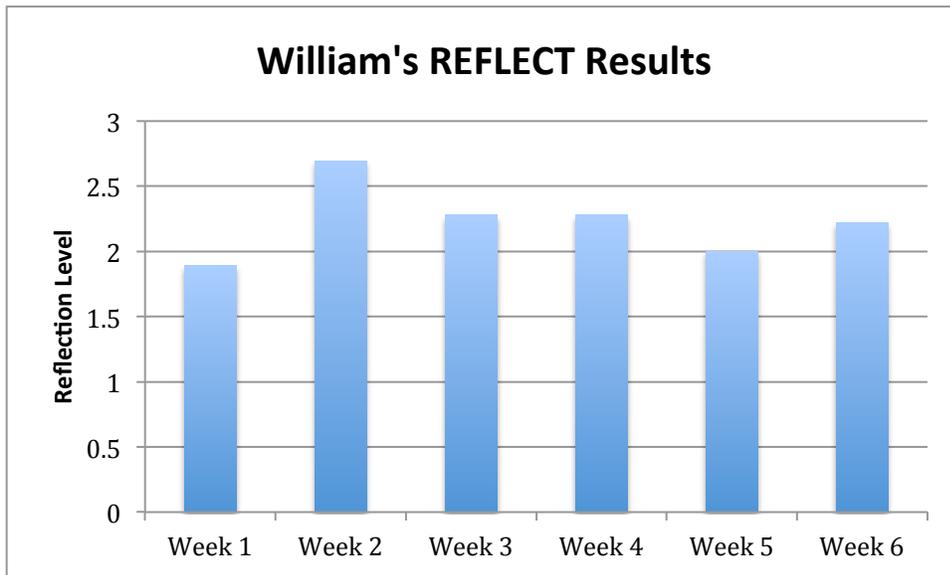


Figure 4.6: William's REFLECT Results

Brian's Narrative

Like most of the other designers, Brian came to participate in this study through a LinkedIn invitation posted to a professional instructional design group. At the time of the study, he worked for an insurance company designing instruction for external corporate audiences. His role was as an instructional designer, while a content developer provided the necessary resources to him.

Brian spent 10 of his 16 years of corporate experience designing instruction. Prior to that, he was responsible for project management, a skill set that he utilized during the design project in which he was engaged during the study (Appendix Q). This is also regularly mentioned in the literature as an important skill set (Schwier & Wilson, 2010).

Brian's current project was to turn content into a Powerpoint-led instructional program for other external agents to sell more of his company's insurance products. The majority of his design work was done individually. His design products were then provided to an internal team who, in turn, would deliver them to an external audience: the customer (Appendix Q). As Brian got deeper into his design project during this study, he admitted that it was more of an informational presentation than creatively designed instruction, even though the project team referred to it that way. He believed this presentation approach was primarily a result of the audience's low tolerance level for group work, as well as the limited availability of the audience for the instruction (Appendix Q).

Still, he brought instructional design expertise to ensure the content would be delivered consistently and effectively (Appendix Q).

The biggest challenge from a design perspective is to make sure the speaker notes are as clear and comprehensive as possible so that whoever ends up delivering these presentations in the future will all send the same (or at least similar) messages. (Appendix Q, Reflection Journal, lines 142–45)

He continued:

I did my best to insure that principles of adult learning theory and brain science were taken into account during the content-development phase: starting from broad concepts, then getting into more specific information, not providing too much detailed information that would be categorized as "nice to know" versus "need to know," making sure that the audience understands why we're telling them the things we are (how what the information we're providing will help them be more successful in their job), and so on. (Appendix Q, Reflection Journal, lines 262–68).

Throughout his project he focused on the following beliefs:

Relevance of the content to the specific characteristics and learning needs of the audience. If there's a "golden rule" in instructional design, this would be it in my opinion.

Less is more. Only provide learners with the information they need to improve their performance in the areas identified during the analysis phase of the project. Keeping it simple and to the point also helps to avoid cognitive overload. And tends to reduce learning transfer.

Practice (when applicable)! Most people learn best by doing. When the training outcomes involve behavior change, give learners an appropriate amount of opportunity to practice performing the way they are expected to when they get back to their desk. (Appendix Q, Reflection Journal, lines 167–77)

Brian's company actively used ADDIE as its training and development framework, and he adhered to similar processes for his design: "Because we follow the same process for all of the projects we work on, the tasks involved in designing and developing training are fairly similar regardless of the type of training program it is" (Appendix Q, Reflection Journal, lines 11–13).

This similarity in products helped Brian with dealing with uncertainty; he stated he was not deterred by the few uncertainties he faced during design. He generally relied on his previous experiences, even if they were not fully applicable to the situation. He wrote, "The tasks involved in designing training for adult learners in a corporate setting are fairly similar regardless of the topics and audience, so the little bit of uncertainty isn't much of an issue" (Appendix Q, Reflection Journal, lines 81–83).

He viewed uncertain timelines as a gift, recognizing that having a delivery date in place, at worst, would be pushed back, allowing him more time to work with the design. He also was realistic about uncertainties, noting that the session he was developing was a pilot and might not

be at its best: “We’re expecting to make changes and improvements; I’m sure we won’t get everything perfect the first time” (Appendix Q, Reflection Journal, lines 84–85).

Brian’s primary focus during the study was his audience.

My beliefs center around the learner and their experience. I believe that in order for learners to apply the training we provide, we need to understand their expectations, goals, existing knowledge and how they would benefit from the information we provide and the skills we help them to develop. I believe in providing training that is highly relevant to the learner in the context of their job. I believe that every design decision made needs to support the learner in their goal to improve (i.e., not including exercises or content for the sake of entertainment or just to “mix it up,” not including “nice-to-know” information unless I’m forced to, etc.). (Appendix Q, Reflection Journal, lines 23–32)

Brian didn’t typically interface with the client but he lobbied to meet with potential audience members so he could gauge what they might benefit from in a training program. He believed he was better able to create engaging, effective instruction when he could meet with them:

I asked them to describe what the training workshop would need to consist of in order for audience members to walk out of the half-day class feeling like this was a fantastic use of their time and wanting more from us. (Appendix Q, Reflection Journal, lines 46–48)

It was unclear how many drafts his clients (or peers) reviewed prior to the final project submission, and he did not provide any drafts for this study. In his overall view of this study, on the other hand, he indicated his contributions and participation were only meant for the study. It was not meant to benefit him in any way.

I don’t think I altered any processes as a result of the reflection process. This, to me, was more about explaining to someone else the steps I go through and the thought processes I use when designing and developing training like this. (Appendix Q, Reflection Journal, lines 310–12)

Brian's reflection abilities did change during the study in all three subscales. Results in the areas of engagement and need, however, were largely inconsistent. His reflection abilities improved in some areas and declined in others. His insight, on the other hand, improved.

Sub-scale	Statement	Baseline	Post-Study
Engagement	I rarely spend time in self-reflection.	2 - rarely true	3 - 50/50
Engagement	I don't really think about why I behave in the way that I do.	3 - 50/50	4 - sometimes true
Need	I am not really interested in analyzing my behavior.	3 - 50/50	4 - sometimes true
Need	I have a definite need to understand the way that my mind works.	3 - 50/50	2 - rarely true
Insight	My behavior often puzzles me.	2 - rarely true	1 - never true
Insight	Thinking about my thoughts makes me more confused.	2 - rarely true	1 - never true

Table 4.12: Brian's SRIS Reflection – Changes Only

Like those of William, Brian's REFLECT results indicated relative consistency across all six weeks (Figure 4.7). In fact, within each question, criterion, and domain, he also remained consistent, with the majority of his responses falling into the *reflection* level (Appendix Q).

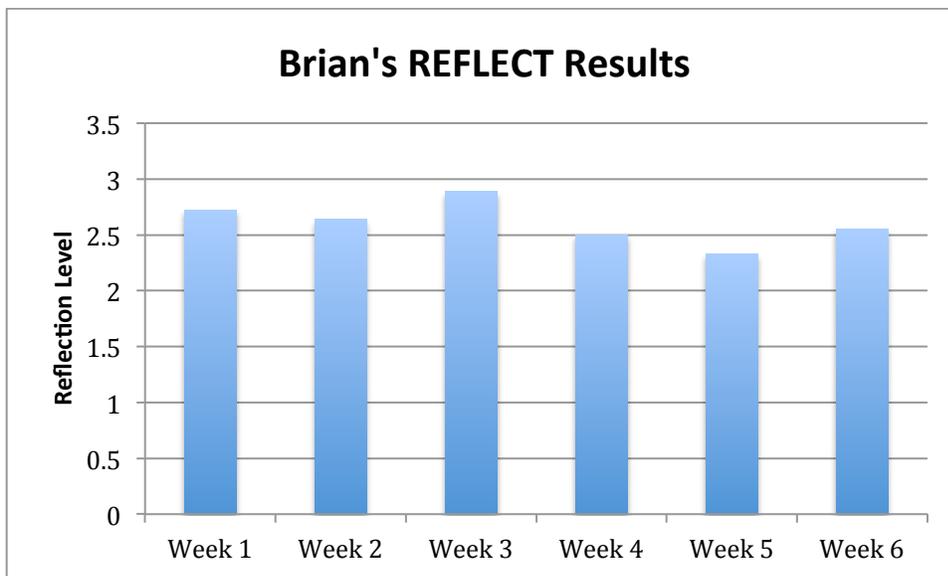


Figure 4.7: Brian's REFLECT Results

Multiple Case

The purpose of this study was to better understand instructional designers as an integral part of design. This section addresses the multiple case, which consists of the individuals previously described in this chapter.

Three research questions guided the findings in the multiple case. They were:

1. *How do instructional designers define their design activities in light of reflection?*
2. *In what ways does reflection impact the design products of instructional designers?*
3. *How does structured reflection during design contribute to the reflection abilities of instructional designers?*

Research Questions 1 and 2 were addressed using a constant comparative method to analyze the reflection responses and design products of designers. Research Question 3 used a constant comparative method to analyze the results of the SRIS (Appendix F) and designers' reflection responses as measured by the REFLECT rubric (Appendix I).

As a result of this analysis, a variety of themes surfaced through the analysis of the data, shown below in Table 4.13.

Research Question	Multi-case Themes for Discussion
Question 1: <i>How do instructional designers define their design activities in light of reflection?</i>	Designers: <ul style="list-style-type: none"> • Tolerate uncertainty and ambiguity. • Communicate continuously. • Rely on their identities comprising a collection of precedents. • Advocate for learners and instructional design.
Question 2: <i>In what ways does reflection impact the design products of instructional</i>	<ul style="list-style-type: none"> • Designers perceive design products to be richer with reflection.

<i>designers?</i>	
Question 3: <i>How does structured reflection during design contribute to the reflection abilities of instructional designers?</i>	<ul style="list-style-type: none"> • Deep reflection waxes and wanes. • Reflection deepens with feedback. • Designers reflect at their lowest levels in the area of emotion.

Table 4.13: Summary of Themes

Research Question 1: How do instructional designers define their design activities in light of reflection?

This section addresses the results of the first research question across the multiple case: *How do instructional designers define their design activities in light of reflection?* Weekly reflection prompts were provided to participants, and their written responses were collected over the course of six consecutive weeks in which they were actively engaged in design projects. This information was analyzed using a constant comparative method in an effort to identify emerging themes that could provide insight into the ways in which designers define their activities.

After reading through all reflection responses numerous times, I prepared to succinctly analyze the data by first uploading the content into MAXQDA, a software application that assists researchers in analyzing qualitative data. MAXQDA offers tools for researchers to tag or code words or phrases with categories devised by the researcher. After coding/tagging, the researcher can search the data using each of the defined categories, offering a variety of methods for sorting, reviewing, and further identifying themes.

Moving chronologically through the content, I looked at each person's responses in the interview, as well as responses to each guided reflection question. Line by line, I identified any statement that addressed Research Question 1. For those statements that did so, I placed a code in the MAXQDA project that briefly described the idea expressed in the response (Figure 4.8).

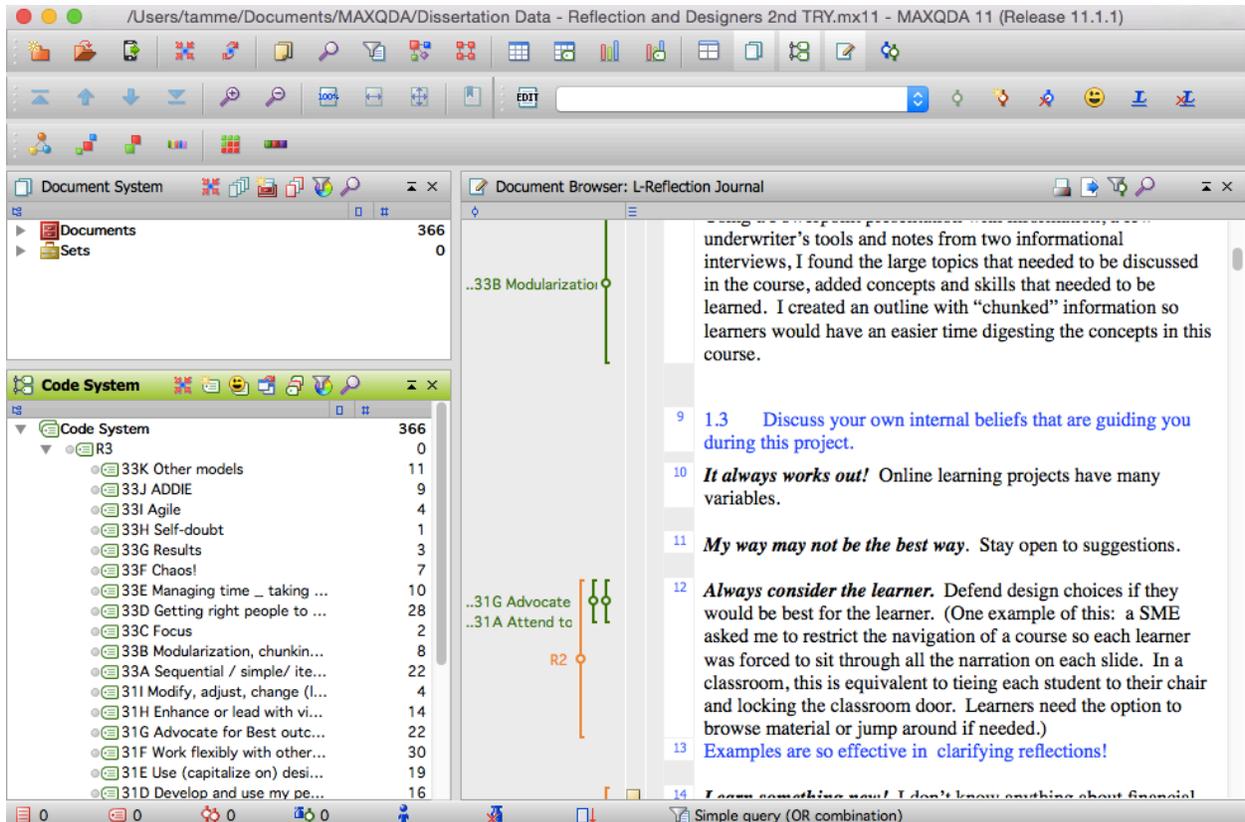


Figure 4.8: Screenshot of MAXQDA Project Codes

While there were various themes that resided only within an individual case, 17 initial shared areas emerged across the multiple case that addressed Research Question 1 (Table 4.14). After inputting these initial codes into the MAXQDA project, I connected the text that belonged to the appropriate code by simply highlighting the text and dragging it to meet its appropriate code. I then printed all responses that (a.) addressed Research Question 1 and (b.) belonged to one of the 17 codes. I then began funneling the codes into primary themes.

Initial Codes

Models/frameworks

ADDIE

Results/focus

Chaos/frustration/unknown
Managing time, taking on only so much
Getting right people to participate/gathering info
Modularization, chunking, organizing
Sequential/simple/iterative/structured/unstructured
Modify, Adjust, change
Enhance or lead with visuals
Advocate for Best outcome
Work flexibly with others? Consensus
Use (capitalize on) design precedents and experience
Develop and use my personal system
Turn content into learning outcomes
Work in ambiguity
Attend to learner

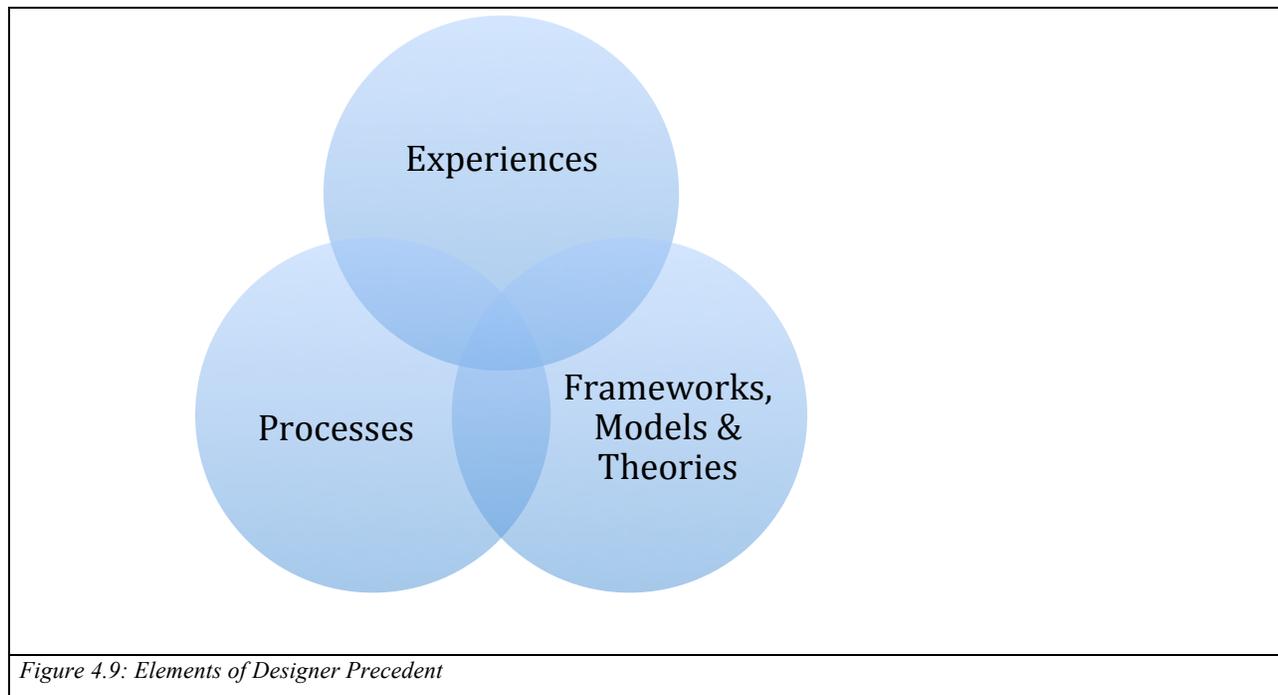
Table 4.14: Codes Used during Initial Analysis

After deeper analysis, four prominent themes, or domains, of designer activity surfaced. As a multiple case, designers described their design activities in the areas of a personal identity defined by designer precedent; uncertainty and ambiguity; continuous communication; and learner and instructional design advocacy. Each of these domains is discussed in greater detail below.

Domain 1: Designers rely on their identities defined by design precedents

In this study, a designer identity defined by designer precedents surfaced as the most extensive domain among the four. Professional identity is essentially a person's professional view of themselves. Identity is clarified through past experiences, values, beliefs, and motives (Ibarra, 1999; Gecas, 1982). Identity scholars have continued to argue that more attention should be paid to the process of identity (Sven, 2003).

Designer precedents are those events, experiences, designs, or other artifacts that designers rely on and refer to during design (Boling & Smith, 2012). The designers' precedents foci in this study included reliance on experience; reference to process; and deliberation regarding the use of frameworks, models, and theories (Figure 4.9). Through these common foci, each designer expressed a uniquely developed personal design identity.



Experience. During their reflection about their projects, designers considered how their previous experiences were used in their current design space. It was not unusual for them to mention previous experiences that were guiding them during their projects. These experiences ranged from specific instructional design experiences to seemingly unrelated professional experiences.

Some spoke of their experiences with specific previous design products that had commonalities with their current projects. Brenda, for example, made comparisons to her

previous products, noting that while her current project had greater complexity, it resembled previous work she'd done (Appendix M, Reflection Journal).

Matthew, who designed instruction for a variety of clients, wrote of a specific interactive tool he was designing, describing it as one that “reminds me of some of the enterprise software development projects I used to work on as a software developer” (Appendix L, Reflection Journal, lines 15–16). He also mentioned two of his other current projects, noting that “*Both* are shaped by projects that have gone before with the respective clients” (Appendix L, Reflection Journal, lines 43–44).

This experience with clients was reiterated by Michelle while designing instruction to prepare department leads for an IT change initiative. She stated, “The structure and activities have a similar feel to them because we have been working with this client for so long and hopefully understand what they want (most of the time!)” (Appendix K, Reflection Journal, lines 64–66).

While these specific experiences were brought into the design space to be used as reference, general overall experiences were also integrated in the design activities. Given their immediate responsibilities for their current projects, Brian and William reflected on their applicable experiences. Brian, who was designing instruction to help external partners sell his company's insurance products, stated, “I've had lots of exposure to the business of selling commercial insurance including many of the key roles involved” (Appendix Q, Reflection Journal, lines 22–24), while William simply noted that during his current design project he must “draw on my time as an ID (instructional design) contractor for large companies” (Appendix P, Reflection Journal, lines 3–4).

Catherine, who was designing a continuing education program for faculty, also reflected on her past experiences, stating, “This design solution draws from previous design, teaching and learning experiences as well as research in the field” (Appendix N, Reflection Journal, lines 48–49). She also reiterated the importance of experience in design: “You have to draw on every experience related or not related to the present one. I’ve had many jobs in many countries and I draw from all to guide how I behave, what I say and do” (Appendix N, Reflection Journal, lines 11–13).

Michelle said something similar, recognizing that in the design space as a whole, “I usually rely on my education and experience with a wide variety of clients in different industries and organizations to guide how I work with a client” (Appendix K, Reflection Journal, lines 11–12).

Lisa also reflected on her overall experiences, stating:

I learned long ago not to go to crazy with the design until the script is feeling completed. So many changes can happen with the script and I hate wasting time designing a course only to completely change the design when the script is final. (Appendix O, Reflection Journal, lines 303–5)

Past experiences also helped designers identify what new learning experiences they might need additional exposure to in order to create a better project. Brenda noted that she regularly sought new knowledge to stay abreast of trends: “I read blogs, magazines, attend webinars, training events, national conferences when I can, discuss topics on LinkedIn, etc. I look for materials on training, brain science, business, marketing, human resources, science, and technology” (Appendix M, Reflection Journal, lines 183–86). She continued, “I’m building the web-based training portion of the course with mobile tablets in mind—Future design skill I want

to develop is instructional designing for mobile” (Appendix M, Reflection Journal, lines 192–95).

Michelle also described how her current experience with the learners was leading her to seek additional knowledge:

I’m interested in using more games. The first part that I’ve developed is not a very exciting game, but it will work for its purpose and for this group, I think. But, like I said, I’m always thinking about it and might adjust it later!! :) (Appendix K, Reflection Journal, lines 147–51)

Matthew simply believed he’d “get to explore some things that I haven’t [had] much experience with” (Appendix L, Reflection Journal, lines 130–31), while Lisa noted specifically for her current project, “I don’t know anything about financial underwriting. Soon, I will know lots about this subject! Knowledge is such a gift!” (Appendix O, Reflection Journal, lines 26–27). William also looked at his future learning needs as a way to prepare for both the current project with the ACA and his long-term success: “As I have been observing the activity around healthcare recently, it occurred to me that getting some experience in the healthcare field would be good for my résumé” (Appendix P, Reflection Journal, lines 10–12). It was apparent that both process and experience (past and potential) were important facets of designer precedent in the design space. Weaved within these two components was the prevalence of models, frameworks, and theories, some industry-based and some self-developed.

Process. The second of the three designers’ precedents foci was process. While some identified a unique step-by-step approach, others described their processes as starting with the big picture or ultimate goal, then moving to smaller elements. Most notable among their process and structure descriptions was how they viewed the project holistically and then targeted smaller

design sections as information became available. Brenda, who was working on an insurance product training project, stated:

I start with the goal, then all other steps fall into place easily. ... I try to build the shell of what I can as we go along leaving placeholders for places I know we don't have the content now, but will soon. (Appendix M, Reflection Journal, lines 125–27)

Similar to Brenda, Michelle, the designer focused on training department leads on an IT change initiative, wrote, “I started developing this session with a draft of learning objectives and a detailed outline to help flush out my ideas with activities/exercises and to visually see the flow of the session” (Appendix K, Reflection Journal, lines 225–27).

William, the contract instructional designer designing a program focused on the ACA, followed a similar process; however, he considered his larger concepts from a geographical perspective:

Because we are dealing with specific state implementations of a national plan. The common pattern is, first, the national information that is common to all states, then, we deal with the nuances that apply to each state for a given topic. (Appendix P, Reflection Journal, lines 148–50)

Brian, who was designing a turnkey program to help insurance agents sell more product, noted that he began with the broader concepts, taking all information, “then getting into more specific information, not providing too much detailed information that would be categorized as ‘nice to know’ versus ‘need to know’” (Appendix Q, Reflection Journal, lines 264–65).

Lisa, too, started from the main idea when designing her online underwriter training project. She wrote of her specific view of instructional design, “Design is a process that takes an idea (the concept for the course or the business need) then uses a larger structure (like a course outline) and drills down to smaller pieces (like concepts, skills, etc.)” (Appendix O, Reflection Journal, lines 6–9). In the case of her specific project, Lisa added,

Using a Powerpoint presentation with information, a few underwriter's tools and notes from two informational interviews, I found the large topics that needed to be discussed in the course, added concepts and skills that needed to be learned. I created an outline with *chunked* information so learners would have an easier time digesting the concepts in this course. (Appendix O Reflection Journal, lines 12–16)

This approach of chunking the instruction was a standard approach for Brenda, who wrote, “During my task analysis discussion with them (internal client), the themes began to emerge. I started grouping concepts that would define sections of the training for my most in-depth audience” (Appendix M, Reflection Journal, lines 259–61). She added that what's important is “organizing content into learning chunks based on the learner's needs, not primarily the business needs” (Appendix M, Reflection Journal, lines 180–81).

Brenda viewed the process of chunking as important not only for the learners but also for herself:

Just like what I do for the audience, I need to chunk the tasks for myself. Don't look at all of the materials needed, just look at one at a time. I need to keep in mind how all of these pieces fit with each other and the overall goal and message. (Appendix M, Reflection Journal, lines 250–53)

William summed up the importance of chunking in his project: “Modularization of content is becoming a major influencer on how we will develop the large body of knowledge into a cohesive training initiative” (Appendix P, Reflection Journal, lines 94–95).

While some of the designers voluntarily described their process from a step-by-step perspective, others remained a bit more vague; however, they still believed design was a *process*. Michelle simply summarized, “I moved (for the most part) sequentially through the outline developing the Instructor Guide and each section of the workshop” (Appendix K, Reflection Journal, lines 227–29). Catherine described her design process this way: “I designed a bit, stepped back—tested and reflected, rethought the process, then repeated steps 1–3 until done”

(Appendix N, Reflection Journal, lines 185–88). Similarly, Lisa wrote, “My process looks like this: I collect information, I write script and create simple visuals or interactions, I share small portions of what I did with the SME, I make revisions, I share the course with a larger audience” (Appendix O, Reflection Journal, lines 110–15).

Matthew disagreed with the concept of process at one point, stating, “I don’t think there is a strict step-by-step process to follow—strictly or otherwise” (Appendix L, Reflection Journal, lines 227–28). That said, he later described that for his project, he was:

Mostly following a fairly standard sorting algorithm what do they need to know to understand this—OK, let’s put that before it. Then you ask yourself: which bits can they reasonably practice in this format and then you place those items close to the related content, but with enough of a gap to give it a chance to soak in. (Appendix L, Reflection Journal, lines 194–98)

A trained software developer, Matthew also went further, recognizing his general instructional design activities as being “just as standard as any other design process. You gather and assimilate as much information as you can into the evolving design” (Appendix L, Reflection Journal, lines 220–21).

Just as the process of chunking the instruction was apparent along the designers’ journeys, so too were unique processes among the designers. One of the most commonly discussed processes, however, was the drill-down approach where the designer began with the big picture and then began to work on smaller elements along the way. The remainder of their activities and processes remained elusive.

Frameworks, models, and theories. While the personal design identities relating to the use of models, frameworks, and theories varied, all recognized these aspects and considered the ways in which they manifest in the design product. This manifestation in some cases was a result

of the designer's purposeful application and in other cases was the organic emergence of its application during design.

While both Brian and Linda candidly considered themselves ADDIE users, Brenda recognized the need for multiple tools. She stated:

I use ADDIE, Harless' 13 Smart Questions, Gilbert's BEM, Chevalier's Updated BEM, Bloom's Taxonomy—both the Krathwohl version and the Digital version, Merrill's First Principles, Keller's ARCS model, Ausubel's Advanced Organizer, Kirkpatrick's four levels of evaluation, and possibly Brinkerhoff's Success Case Method. This is my normal go to process for designing a training project. I actually use all of these throughout the process. (Appendix M, Reflection Journal, lines 202–7)

Catherine also used the multi-approach: “This, like most of my designs never really uses one method” (Appendix N, Reflection Journal, lines 150–51). Reflecting on a brief design project that arose during the bigger design project, Catherine added, “I think I used a rapid/agile approach of Kemp for the Infograph. It was messy yet quickly done—drawing from other solutions I had and it just pulled lots of techniques and designs together to create the solution” (Appendix N, Reflection Journal, lines 110–12). That said, speaking in general about her long-term design project, Catherine reflected on the reality of theoretical usage: “Using Kirkpatrick's model with other elements of design models along with the infusion of constructivist theories only work well in an ideal world” (Appendix N, Reflection Journal, lines 146–47).

William also described his flexible approach to models and frameworks, stating, “I always use ADDIE as a starting point, but I am always willing to shift to a different [approach] if the analysis indicates a better suited methodology” (Appendix P, Reflection Journal, lines 118–19). In his long-term project, he noted, “The process here is a sort of Agile Rapid Instructional Design as there is a new iteration for each state as it comes up on the timeline” (Appendix P, Reflection Journal, lines 158–59).

Michelle extended the notion of recognizing her use of instructional design tools by noting that she uses ADDIE to move through a design project (Appendix K, Reflection Journal).

However, delving deeper, she stated:

Since I have been doing this a long time, I'm so sorry that I don't actually think about models or frameworks when I work through something. They may be in the back of my mind, but I don't consciously decide on using a model or framework. (Appendix K, Reflection Journal, lines 162–64)

Finally, Matthew's use of models and frameworks took a different approach. He initially described ADDIE as a basic tool for others:

I mostly find ADDIE to be useful in communicating with the client (and a little bit with my team). It allows us to set general expectations or remind them of when we performed certain actions (and to dissuade them from returning to them). (Appendix L, Reflection Journal, lines 139–42)

He also recognized that other elements of frameworks are integrated: "We're calling some of our projects Agile and that's sort of fun—similar to the software development model by the same name" (Appendix L, Reflection Journal, lines 142–43).

Matthew stated that the manifestation of models naturally occurs during design:

You'd probably see elements of Merrill's and ARCS and Gagne in my work, but that would be because they emerged from that particular setting and not because I was imposing them. Occasionally I might go back to them if I feel like the client has a lack of confidence and wants something that is research-backed, but most often they just want something that works—I don't remember the last time I ran into that (Appendix L, Reflection Journal, lines 143–48)

He later added:

[Models] offer me no value because they are impositions of deviation on reality. If they are "complicated," it usually means they ask me to remember to make certain changes to the natural way I do things. I don't see any that pretend to offer nearly enough value to make that worthwhile. (Appendix L, Reflection Journal, lines 88–91)

Designer precedent was prevalent among these experienced professionals; however, the individual findings within this theme are largely distinctive. While they all maintain a process and structure, for example, the individual processes and structures differ greatly. In the design space, all designers relied on experiences with previous design projects, as well as experiences across their career; but each of these experiences, of course, was exclusive to the designer. Lastly, while they all recognize the importance of models, frameworks, and theories, their uses of them varied.

Domain 2: Designers tolerate uncertainty and ambiguity

Just as designer precedent played a significant role for the designers in the design space, so did uncertainty and ambiguity. Designers spent many reflections recognizing their lack of control and their need to put structure around the unknowns through continuous inquiry and other more formal pursuits of knowledge. While they all tolerated uncertainty and ambiguity, their feelings and approaches toward them varied.

Catherine expected unknowns: “the unnerving ambiguity has become part of the design process for me” (Appendix N, Reflection Journal, lines 32–33). On the other hand, she also expected them to be worked out over time as they had in the past: “I do believe if I follow the trail I’m supposed to follow it will eventually turn out the way that makes the most meaning for the student” (Appendix N, Reflection Journal, lines 24–25). Brenda’s uncertainty in the current design project was evident in her scheduling concerns. In an effort to prepare a long-term training campaign, she stated, “I’m trying to manage the training plan around [third and fourth corporate fiscal quarters] events when we actually don’t have a solid product launch date still” (Appendix M, Reflection Journal, lines 212–14).

Brian took a more passive approach to uncertainty and ambiguity within the project:

I don't have much control over that aspect of the project, so I just keep doing what I'm doing, driving toward a mid-August deliverable. If that date gets pushed out because of a lack of responsiveness on the client's part, then that's just more time for the project team to refine the content. (Appendix Q, Reflection Journal, lines 86–90)

Matthew, when responding to why he thought he was able to easily deal with uncertainty and ambiguity in a project, stated, “probably because I don't expect things to go smoothly and therefore I'm not surprised when they never do” (Appendix L, Reflection Journal, lines 100–101).

In an effort to address uncertainty and ambiguity within a project, designers often create structure around the gaps. Brenda stated,

I tend to try to put structure around everything I do to remove the uncertainty and ambiguity. I use a lot of templates and timelines to organize the chaos so I can plan. Otherwise I wouldn't get anything done as I waited for certainty to be determined. (Appendix M, Reflection Journal, lines 130–33).

Matthew succinctly described how he closes the gaps: “You frame the problem around what you believe you can legitimately approach and then the client comes back and tells you which crucial elements you've missed and you begin to dig into those” (Appendix L, Reflection Journal, lines 52–54). Matthew added, “Each project is unique and follows its own path, but they all start at some point and end at some point. In between we feel them out, find the gaps and fill them in” (Appendix L, Reflection Journal, lines 94–96).

To fill in the gaps across a design project, designers continuously sought answers from whomever they thought would be helpful. Lisa noted, “I deal with [ambiguity] through asking questions” (Appendix O, Reflection Journal, lines 95–96), while Brenda addressed as many unknowns as possible in the initial task analysis:

I ask a lot of questions and then when the SME or sales leader answers I probe further and ask how do they do that, how do they know to do that, what are all of the steps involved in that. (Appendix M, Reflection Journal, lines 263–66)

Michelle, who had no direct contact with the client, noted, “If there is something I don’t know, I can easily get it answered by my internal partners” (Appendix K, Reflection Journal, lines 80–81). William summed up the ideal method for addressing uncertainties and ambiguities with an old adage: “*When in doubt, ask*. This holds true for most issues” (Appendix P, Reflection Journal, line 59).

Uncertainty and ambiguity were tolerated and usually expected during design by the designers. They continuously put structure around the unknowns and regularly met with others to fill any gaps. Though they all tolerated these uncomfortable situations, their approaches toward them differed.

Domain 3: Designers communicate continuously

Uncertainties and ambiguities were addressed a number of ways, and in many cases the approaches included asking questions of others. As a natural progression, the designers showed that their connections and correspondence with the appropriate stakeholders also were significantly integrated into the design space. Continuous communication is interaction with others necessary to move the project forward; this activity is also aligned with the activities of project management. Designers tended to move a product forward by utilizing their understanding of the stakeholders—primarily their peers and the SMEs—and their relationships with them.

Brenda viewed her work with her peers as integral:

I have meetings weekly with the marketing/training/communications core team which includes the project manager, product developers, marketing

product manager (in charge of developing the go-to-market strategy, sales ideas, etc.), the marketing communications manager, the product sales system manager, the website people, the marketing video manager, and myself. The meeting keeps us informed about product status, timelines, helps us drive toward due dates and deliverables. It also helps us all know what each other is working on and how we can leverage each other's materials or tie into each other's plans and communications. (Appendix M, Reflection Journal, lines 71–76)

Lisa noted the downside of relying on peers across the organization, noting during the project that “Many people on my project team are out for vacation throughout the project. This is problematic because focus on the project is short” (Appendix O, Reflection Journal, lines 317–19).

Michelle's reflection on working with her peers also indicated some frustration but followed with an effective method for addressing it:

Some of my internal partners like to give me a whole exercise right off the bat to put into a session without thinking it through. I have learned to take their ideas and put them into the session or modify them slightly and explain my reasoning just so I can make sure everyone's desires are covered. (Appendix K, Reflection Journal, lines 48–51)

Catherine discovered that moving a project along with her peers can be difficult: “The bulk of the work is being left to me with the remaining members of the team not being able to contribute due to inabilities in knowledge and/or skill sets” (Appendix N, Reflection Journal, lines 138–39).

Lisa expanded the discussion of working with SMEs when she wrote of the negative impacts of working with different skill sets: “I believe information can be explained with visuals—but the full visual has not been developed. [The SME] can't ‘see’ what the finished visual will say so she wants to add volumes of text to explain a concept” (Appendix O, Reflection Journal, lines 215–17).

Lisa still worked to maintain progress with the SMEs' help by maintaining consistent communication:

I took the time to check-in with my SMEs during a meeting last week. I thought it would be valuable to check in with them while they were “in the process” vs. after the course was done. I asked them, “is there anything you would change about this process to make it easier for you?” Both SMEs remarked they thought the process worked great and they wouldn't change a thing. They appreciated the flexibility I had when they needed it. They liked how I kept the project moving. One SME really liked how I followed-up with a list of to-do's via email to help keep him on track. When he received the email, he completed the to do's when he had a minute. (Appendix O, Reflection Journal, lines 387–94)

Brenda struggled to connect with her SMEs to move the project along:

I did have a conversation with the product development manager. ... Everyone in that department is very hard to pin down because they are moving so fast and have so much on their plates. I have what I need from her to develop the materials for the product introduction now. (Appendix M, Reflection Journal, lines 228–32)

Finally, as in other reflections, William succinctly stated his approach to working with SMEs, stating he must “respect the SMEs' expertise and concentrate on packaging their knowledge for the given audience” (Appendix P, Reflection Journal, lines 6–7).

Continuous communication was apparent among all designers. While some worked on collaborative teams and others worked alone, they all maintained open channels of communication with those they thought might assist them in completing a project. This communication rarely involved their peers, but consistently included subject matter experts or customers.

Domain 4: Designers advocate for learners and instructional design

While this ongoing and external relationship with others helped instructional designers move projects along, designers also focused on their relationships with the learner and the

product. As a result, they regularly advocated for the learners and defended their design decisions if those decisions best supported the learners.

Designers advocated for their learners by showing empathy, which can be described as vicariously knowing or experiencing the feelings or thoughts of another (Greenson, 1960).

Of all the designers, Brian wrote most extensively about the learners:

My beliefs center around the learners and their experiences. I believe that in order for learners to apply the training we provide, we need to understand their expectations, goals, existing knowledge, and how they would benefit from the information we provide and the skills we help them to develop. I believe in providing training that is highly relevant to the learner in the context of their job. I believe that every design decision made needs to support the learner in their goal to improve. (Appendix Q, Reflection Journal, lines 23–30)

Brian also worked to ensure instruction was simple and straightforward: “I believe in providing *only* the information that will help them (learner) be more successful in their work—no more and no less” (Appendix Q, Reflection Journal, lines 27–29).

Brenda echoed Brian’s sentiment, discussing the need for simplicity:

Give the learners what they need to know to perform successfully in an easy-to-understand way, with as much repetition as possible to give them a safe environment to practice before they meet with clients. Give them what is nice to know in reference materials when they successfully complete various sections of the course. Provide space between sections of training to give them time to reflect and build. (Appendix M, Reflection Journal, lines 51–55)

Her attention to her audience was further evidenced by the following:

They need to know what they need to know to sell the product, to select suitable clients, and where to get more information when they need it. It doesn’t make instructional sense to overload the learners. Adult learners like to know what they need to know in order to be successful and where to get more help and information when they need it. (Appendix M, Reflection Journal, lines 60–64)

In addressing the long-term project in which she was engaged, Brenda described how she would handle a situation where learners were required to attend training many months before the related product was available:

I've added in a lot of events between July and November, to kind of "drip" train the wholesaler audience rather than have the training event in July and then not again until October. This plan should give them time to absorb a lot of the product information and incorporate how to sell it within their selling repertoire without providing them with useless or "scrap" training events. I'm trying to make it almost a training campaign rather than a training event. (Appendix M, Reflection Journal, lines 167–72)

It doesn't make sense to have wholesalers discuss and start selling the new product more than two weeks before the new product is available. If they do, it sets up a few problems. 1) The information could be forgotten by the advisors by the time they can actually sell the product and the wholesaler has to train again; 2) The advisors could potentially hold business until the product is available which would be unethical and could put the client at great risk (the risk would be that the client either was injured/developed a medical condition that would prevent them from being qualified for the life insurance product or if they died without the coverage). (Appendix M, Reflection Journal, lines 220–27)

Matthew also mentioned the importance of simplicity and of not overwhelming learners with information: "I'm leaning towards a design that would incorporate performance support over a period of time rather than expecting content to be internalized and locked in immediately" (Appendix L, Reflection Journal, lines 109–11). He later described two approaches in his design projects as "[giving] learners the opportunity to digest and apply the content provided" (Appendix L, Reflection Journal, line 50).

Michelle also focused on simplicity:

I try to keep everything as simple as possible so as not to confuse the instructor or the participants. (Appendix K, Reflection Journal, lines 218–19)

I also wanted to make sure each activity was different enough from each other, added interest to the session and will meet the objectives we are trying to accomplish. (Appendix K, Reflection Journal, lines 214–16)

But she also recognized that the course should still be interesting and engaging, noting the importance of empathy during design:

When I go back and review my activities, I think about my audience and whether or not the activity will resonate with them—will really get the point across. I try to think about how they would respond and complete an activity—really think it through from their standpoint—in order to make any needed changes. (Appendix K, Reflection Journal, lines 119–22)

It was clear that while designers expected change resulting from uncertainty and ambiguity, they would still defend against changes that do not support the learners. Simply stated, Lisa wrote, “Always consider the learner. Defend design choices if they would be best for the learner” (Appendix O, Reflection Journal, lines 20–21). Brenda discussed the need to occasionally negotiate across departments to provide the learners with the appropriate resources. For example, regarding her need for visuals, she reflected:

Other times, I have created something that really helps tell the story—usually a visual process—but our compliance people have problems with some of the images included. For instance, they don’t like it when money is part of the visual. However, money is important in the financial services world for training, so sometimes it is extremely important to include it in a visual. I work with them to maybe “tone down” a visual depicting money, try to go more abstract, or work with my leader to override their objection. (Appendix M, Reflection Journal, lines 151–57)

Matthew, like the other designers, worked diligently to ensure the design choices he made considered the learners first and foremost. However, he also recognized that sometimes what he thought was an appropriate design decision would not be accepted by the client. When discussing changes requested by a client, Matthew stated, “if the client requests it, I see if any argument can be made in favor or against. If the client stands firm in the face of my experience/logic, I do whatever they ask” (Appendix L, Reflection Journal, lines 199–201).

Matthew's experience with external clients was further reflected when he described how he would approach a client who requested something that was contrary to his recommendations:

If they [Matthew's recommendations] have been conveyed and the client still wants it, I'm fine with making the change—it's their dime and I've done what they've paid me for. There are lots of projects I'm engaged in and, while some of these changes which go against my recommendations might make the course sub-optimal from certain perspectives, they are the ones that have to use them and not me. It would be more sub-optimal if they felt they were forced into a decision they didn't like. ... However, the specific decision won't kill anyone and it's still a good course. I'll get over it quick. (Appendix L, Reflection Journal, lines 206–13)

Designers regularly viewed their instruction through the eyes of their learner; they were empathic. They were advocates for the learners, and that advocacy led their design activities. Even when pushed toward other directions by subject matter experts, clients, or other peers, they regularly defended their designs from the learners' perspectives.

This section focused on the results of the first research question across the multiple case: *How do instructional designers define their design activities in light of reflection?* **Four domains emerged from the** analysis of weekly reflection prompts from designers: designers defined their activities in the design space as relating to a personal identity defined by designer precedent; designers tolerate uncertainty and ambiguity; designers use continuous communication; designers advocate for learner and instructional design.

Research Question 2: In what ways does reflection impact the design products of instructional designers?

This section addresses the results of the second research question across the multiple case: *In what ways does reflection impact the design products of instructional designers?* In addition to reflection prompts, I provided a weekly reminder to designers to post sketches, designs, and other artifacts and products into a shared folder. It was my intent to analyze the

current state of each designer's design products each week, alongside his/her current reflection responses. For the few who were concerned about confidentiality, we discussed my process for keeping products confidential prior to the study. I also encouraged all participants to remove any identifying data if they deemed it necessary. Lastly, I indicated that I would not publish any of their design products.

Even with weekly reminders and requests, I did not receive weekly documents that could be analyzed over time. The few designers who did share their products shared only a clean, semicompleted product rather than any designs or sketches in progress. Table 4.15 lists the design products and their owner, along with the date on which they were posted. While comparisons couldn't be made across the multiple case, the lack of content provides for rich discussion related to designer behavior. This is expanded upon in Chapter 5.

Name	Artifacts	Date Provided
Michelle	Session Outline Instructor Guide v 1 Content Review Activity Action Plan Activity v 1 Instructor Guide v 2 Instructor Guide v 3 Session Outline Action Plan Activity v 2 Culture Case Activity	5/17/14 5/31/14 5/31/14 6/10/14 6/10/14 6/15/14 6/15/14 6/15/14 6/15/14
Matthew	None	None
Brenda	None	None
Catherine	Learning Module Goals Process Map	6/11/14 6/23/14 6/23/14
Lisa	Project Plan and Schedule Session Outline Script v 1 Case Study Brainstorms Before and After Screen Design	5/30/14 5/30/14 5/30/14 6/7/14 6/21/14 6/30/14

William	None	None
Brian	None	None

Table 4.15: Summary of Participant Artifacts for Each Milestone

Theme 1: Designers perceive design products to be richer with reflection

To determine whether I would be able to address this research question without weekly design products, I began to read and reread my complete reflection prompt data set line by line in the MAXQDA project. I searched for evidence indicating that the designers' reflections impacted their designs. I simply noted these line items with an R2. I then printed out all R2 responses to identify specific themes or categories that were shared across the group. According to designers' perceptions, the reflection process impacted all except two designers.

It was most evident that Lisa believed reflection impacted her designs—if not the current products then future ones. She noted, “The reflection process gave me the opportunity to evaluate each step in my process. I rarely take the time to look back upon the week and consider what went right and what could be revised for the next course” (Appendix O, Reflection Journal, lines 396–98).

Catherine also believed that reflection had an impact:

It really gave me an opportunity to really think about why I do what I do. It also made me think if I'm happy only doing what I do and if I should be doing more. More in terms of how I approach my designs, the process and the tools used, etc. (Appendix N, Reflection Journal, lines 207–10)

She went on to describe additional impacts, both positive and negative:

I did use this reflection process to test my product more so it was quite helpful from that aspect. It was time consuming to physically and mentally take the time to record the reflection but, it definitely helped how I approached some of the activities, by having me think through the “hows, whys, and whats” of the design.

Actually, it made me choose more alternative paths than before. I've realized in my environment and mindset, when I'm designing I want to do it and get over with it—so I only reflect summatively (at the end). Whereas with this research journal, periodic reflections produced a much better product as the formative reflections helped re-align purpose, abilities and affordances. (Appendix N, Reflection Journal, lines 196–204)

William briefly noted, “it was a new way of thinking of the process. The new perspective led to additional useful discoveries” (Appendix P, Reflection Journal, lines 168–69). He added, “This process resulted in me exploring the system more than I normally would have, therefore resulting in increased risk awareness and helpful efficiencies being discovered sooner” (Appendix P, Reflection Journal, lines 164–66).

While these designers believed that their products were improved as a result of reflecting, Brenda believed there was an impact to her designer identity. She stated:

I was able to see why I have the design process designed as I have it. It works. If I follow the plan, it will work. It reminded me that adhering to the process/plan helps me be more creative because I'm not having to try to remember a lot of little things; they are in the design plan somewhere, so they will be in the plan when I need to do them. (Appendix M, Reflection Journal, lines 308–13)

Alternatively, Brian believed there was no impact. He stated:

I don't think I altered any processes as a result of the reflection process. This, to me, was more about explaining to someone else the steps I go through and the thought processes I use when designing and developing training like this. ... To me, the reflection process was all about helping you to learn about how I think and work as an instructional designer. It was kind of like being interviewed slowly over a period of weeks. (Appendix Q, Reflection Journal, lines 310–16)

There was some evidence that designers' products can be altered and improved as a result of reflection. In this study it was noted by the designers' perceptions. While the intent was to analyze design document changes throughout the study, the appropriate documents were not available. That said, the designers indicated their products were improved as a result of the

reflection. Implications and recommendations for future research using this approach are discussed in Chapter 5.

Research Question 3: How does structured reflection during design contribute to the reflection abilities of instructional designers?

This section addresses the results of the third research question across the multiple case: *How does structured reflection during design contribute to the reflection abilities of instructional designers?* This question used two distinct tools, the SRIS and REFLECT rubric, to reveal rich data that could be analyzed using a grounded theory approach. Both the SRIS and REFLECT rubric were discussed in greater detail in Chapter 3. Regarding analyzing with the SRIS, I used a constant comparative method to compare the baseline results to the post-study results. The second process first employed the REFLECT rubric to rate all designers' reflection responses to the weekly prompts. Then, using constant comparison, the results were analyzed.

SRIS. As discussed in Chapter 3, the SRIS (Self-Reflection and Insight Scale) comprised three subscales: engagement in reflection, need for reflection, and insight (see excerpt in Table 4.16 below). The first two subscales each include six ; designers were asked to rate themselves on all six. The third subscale, insight, consisted of eight statements; designers were again asked to rate themselves on all of them. Ratings ranged from one to five, with one being *never true* and five being *always true*.

	Never true 1	2	3	4	Always true 5
I don't often think about my thoughts.					
I rarely spend time in self-reflection.					

I frequently examine my feelings.					
I don't really think about why I behave in the way that I do.					
I frequently take time to reflect on my thoughts.					
I often think about the way I feel about things.					

Table 4.16: Excerpt of SRIS

Using a grounded theory approach to analyze the data, I first reviewed each person's baseline results to see if any themes emerged at the individual level. I then reviewed the post-study results in the same manner. Finally, I compared each individual's baseline and post-study results. This information was used in the case narratives earlier in this chapter.

To continue analysis of the multiple case, I looked at all designers' baseline responses for each individual question/statement. For example, one statement is "I rarely spend time in self-reflection." I looked at all responses to this statement from the baseline survey to uncover patterns. I then repeated the process with the post-study SRIS results. Finally, I combined the results and compared designers' responses in the baseline survey to the responses in the post-study survey. Upon the first complete review, there appeared to be no definitive change across designers. Twenty questions were asked in both the baseline and post-study surveys, for a total of 140 responses for each survey. I compared each baseline response to each post-study response, highlighting in yellow any response that showed change. Of the 140 response comparisons, 66 changed, while 74 remained the same.

I further reviewed the 66 highlighted responses that indicated change. I selected those areas that moved in a direction by more than one in the post-survey as compared to the baseline survey. For example, if someone rated a response as a 3 in the baseline survey, then rated it as a 5 in the post survey, it was noted by highlighting the data in another color, blue (see Figure

4.10). I labeled these as multilevel jumps. Next I looked at those responses where an absolute value was involved. If someone's response was *never* (1) or *always* (5), then changed the response to that question in the post-study SRIS away from the absolute value, it was noted and highlighted in green. Furthermore, if the response began at a 2, 3, or 4 and then changed to an absolute value response (1 or 5), this was also noted in green. In cases where a response fit into both the multilevel jump category *and* the absolute response category, the response was highlighted in orange. This analysis resulted in a clear depiction of change, and this complete record can be found in Appendix U.

	Lisa	Lisa	William	William	Brian	Brian
Statement	Baseline	Post-Study	Baseline	Post-Study	Baseline	Post-Study
I don't often think about my thoughts.	2	1	1	2	2	2
I rarely spend time in self-reflection.	3	1	1	2	2	3
I frequently examine my feelings.	4	5	2	2	2	2
I don't really think about why I behave in the way that I do.	2	1	1	4	3	4
I frequently take time to reflect on my thoughts.	3	4	2	4	2	2
I often think about the way I feel about things.	3	5	2	2	2	2
I am not really interested in analyzing my behavior.	1	1	1	1	3	4

Any change baseline survey to post survey: Yellow

Multilevel jump: Blue

Absolute value move: Green

Multilevel jump *and* absolute value move: Orange

Figure 4.10 Excerpt of SRIS Color Codes

This analysis approach showed that of the twenty prompts, the before and after comparisons indicated change among some of the designers across most prompts; however, there was no pattern. The prompt that saw the greatest change from the baseline survey to the post-study survey was: "Thinking about my thoughts makes me more confused." Three designers felt less confused by their thoughts at the end of the study compared to the beginning. Brenda and

Brian moved from a level 3 (neutral) and 2 (rarely true), respectively, to a 1 (never true), while Catherine changed from a 4 (often) to a 2 (rarely). The other four remained the same or moved up or down by only one level.

REFLECT Rubric. The REFLECT rubric was also employed to explore Research Question 3: *How does structured reflection during design contribute to the reflection abilities of instructional designers?* As discussed in Chapter 2, the REFLECT rubric (Appendix I) was selected for its ability to measure reflection levels based on designers' writing spectrum, presence, conflict description, emotion, analysis and meaning making, and attention to the questions (see excerpt of the writing spectrum rubric in Table 4.17).

Criterion	Levels			
	Habitual action (non-reflective)	Thoughtful action or introspection	Reflection	Critical reflection
Writing spectrum	Superficial descriptive writing approach (fact reporting, vague impressions) without reflection or introspection	Elaborated descriptive writing approach and impressions without reflection	Movement beyond reporting or descriptive writing to reflecting (i.e., attempting to understand, question, or analyze the event)	Exploration and critique of assumptions, values, beliefs, and/or biases, and the consequences of action (present and future)

Table 4.17: Excerpt of REFLECT Rubric

In order to prepare the data for analysis, I read each person's responses to the weekly reflection prompts. There were three prompts per week across six weeks, thus a total of 18 responses per person (see Appendix I for the Prompts; see Appendices K–Q for designer reflection journal responses).

After an initial content review, I reread each response alongside the rubric. For each response, I determined what level of reflection the designer had delivered. On the lowest end was habitual action (1), followed by thoughtful action (2). Greater depth in a response would increase the level to reflection (3) and, at the highest level, critical reflection (4). By the end of this process, each person had 108 ratings. See Table 4.18 for an excerpt of REFLECT rubric scoring.

Question #	Criterion Measured	Response Reflection Level
1.1	Writing spectrum	TA (Thoughtful Action)
1.1	Presence	TA (Thoughtful Action)
1.1	Conflict description	R (Reflection)
1.1	Emotion	HA (Habitual Action)
1.1	Analysis/meaning making	TA (Thoughtful Action)
1.1	Attention to assignment	HA (Habitual Action)

Table 4.18: Excerpt of REFLECT Rubric Scoring

In addition to the initial prompts and designer responses, I occasionally intervened with a follow-up prompt, and the designer, again, responded. As discussed in Chapter 3, I limited my intervention beyond my initial reflection prompts whenever possible. These periodic follow-ups were meant to clarify a statement based on the initial designer responses (Table 4.19); there were a total of 11 unique follow-ups with responses (66 additional ratings).

Design	Questions with follow-up
Michelle	1.1, 4.1, 4.2
Matthew	3.1, 3.3
Brenda	1.2, 1.3, 2.3
Catherine	Two follow-ups were provided; designer did not respond.
Lisa	3.2
William	5.2
Brian	5.3

Table 4.19: Response Follow-up

After all designers' responses were rated using the rubric, I enlisted a data analyst to use the rubric to analyze the designers' responses in the same manner as I employed. As described in Chapter 3, this process was to assist me in ensuring my ratings were accurate. Of the 756 initial ratings and 66 follow-up ratings (108 ratings for each of the seven designers, and ad hoc follow-ups), the data analyst identified 40 discrepancies. I reviewed these discrepancies, and in cases where I agreed with her assessment, I changed the rating. In cases where I did not agree, the data analyst and I discussed these situations further and made appropriate changes.

Once all ratings were securely in place, I followed a grounded theory approach to review each person's ratings individually. I used these findings to develop the case narratives discussed earlier in this chapter. I also made notes about individual changes throughout the process to see if any themes emerged as I moved through the multiple case.

Because of the extensive number of ratings across all designers and questions, I sought an easy and visual way to denote the differences between reflective and non-reflective ratings. I divided the levels in half, where the lower levels, habitual action and thoughtful action, were highlighted in one color. The higher levels, reflection and critical reflection, were highlighted in another color.

In order to view the data from multiple perspectives, I sorted the data three different ways, then analyzed each structure for themes. The data sorts I used included:

1. Chronologically by week.
2. By question/reflection prompt
3. Based on criterion (writing spectrum, presence, conflict description, emotion, analysis and meaning making, and attention to the questions)

Upon this analysis, three themes emerged relating to the ways structured reflection during design contributed to reflection abilities. These revolved around (a.) the ebb and flow of reflection ability, (b.) the impact of feedback, and (c.) the consistent strength across most REFLECT criteria.

Theme 1: Deep reflection waxes and wanes

From a chronological perspective, the REFLECT rubric indicated individual designers showed an increase in reflection in some weeks and a decline in other weeks. While the multiple

case didn't show consistency across designers, the designers did have two behaviors in common: times of deeper reflection and times of superficial reflection. These moments were not aligned to a specific time frame in the study, nor did they occur within a common reflection prompt.

A review of the data indicated that the group exhibited the strongest reflection ability in week 5 and the weakest in week 3. However, while in week 5 the average was its highest for reflection ability, Lisa scored at her lowest, and William scored at his second lowest for the study. In addition, during week 3 where the group's average was the lowest, Brian and Lisa showed very strong reflection ability compared to their other weeks of reflection. This analysis of reflection ability showed that designers did not demonstrate growth in their reflection ability throughout the study; instead, their depth of reflection waxed and waned.

Theme 2: Feedback encourages deeper reflection

In reviewing the responses based on the reflection prompt, a theme related to feedback emerged. As described earlier in this study, when providing reflection prompts to designers, I purposely limited additional discussion on my part. When reviewing a response, if the designer asked me an actual question, I would answer. These were usually related to clarifications of the questions. Although they would usually answer the question based on their immediate interpretation, they would sometimes still ask for clarification. I provided additional details only when I was asked for clarification or when it seemed their responses didn't address the question. It became clear during the review of prompts that in the instances where I provided additional feedback or clarification, designers reflected more deeply in their responses.

Across the majority of moments where I provided feedback, designers followed up with deeper reflective capability than in previous responses. Of the six people involved in moments

with feedback, all except one showed improvement in reflection from their initial responses to their responses after intervention (Table 4.18). Matthew demonstrated an increase in reflective capability in all 12 follow-ups. Of 18 ratings, Brenda increased her capability in 10 and remained static in 8. Of six, William increased in one, declined in one, and remained static in four. Lisa remained static in all, and three of these were at the critical reflection level. Brian increased in three and remained static in three.

Q#	Criterion	Brenda Initial Response	Brenda Follow-up Response	Change
1.2	Writing spectrum	TA	R	+
1.2	Presence	TA	TA	=
1.2	Conflict description	TA	R	+
1.2	Emotion	HA	HA	=
1.2	Analysis/meaning-making	TA	R	+
1.2	Attention to assignment	TA	R	+
1.3	Writing spectrum	TA	R	+
1.3	Presence	R	R	=
1.3	Conflict description	R	R	=
1.3	Emotion	HA	TA	+
1.3	Analysis/meaning-making	R	R	=
1.3	Attention to assignment	R	R	=

Table 4.20: Example of Initial and Follow-up Comparison

Theme 3: Designers reflect at their lowest levels in the area of emotion

By re-sorting the data in order of criterion (writing spectrum, presence, conflict description, emotion, analysis/meaning-making, and attention to questions), another theme emerged, demonstrating that of the six criteria, designers consistently reflected at higher levels (reflection and critical reflection) in all areas except emotion.

This theme of emotion, or lack thereof, was the most significant to emerge across the multiple case with regard to the results. The results of the rubric data showed that designers

struggled in the area of emotion. Only 13 of the 108 responses were at the level of reflection or critical reflection; five of those 13 were from one designer. The other eight reflective ratings were spread among four other designers, as two exhibited no reflective ability in the emotion category.

Across the six weeks of study, designers showed varying levels of reflection ability, according to both the SRIS and the REFLECT rubric. During *some* weeks, the abilities of *some* designers were strong, while those of other designers were not. There weren't clear patterns within the results of each instrument's measurements; in fact, the clear pattern they shared was that of inconsistency across the multiple case.

Summary

This qualitative multiple case study used various data collection methods to examine instructional designers' behaviors and processes and to determine the role of reflection in the design space. After providing a brief narrative of each participant, the results from the multiple case was provided, organized by research question and the themes that emerged among the reflection journals, interviews, and surveys.

Research Question 1 asked how designers define their activities. The results showed that designers use their own unique personal design identities that are established by designer precedents. These consisted of experiences, processes, frameworks, models, and theories. Designers also engage in tolerance of uncertainty and ambiguity. They constantly communicate in an effort to complete a successful project and to advocate for their learners and their design.

Research Question 2 sought ways in which reflection impacted the design products of instructional designers. Because designers provided few design products throughout the study,

there were few products to analyze. Nevertheless, based on the reflection journal responses, a single theme emerged indicating that designers perceived that reflection during design resulted in richer results.

Three themes emerged under Research Question 3, which asked how reflection during a design project might contribute to the designer's reflection abilities. Designers' depth of reflection waxed and waned throughout their design projects. Reflection deepened when designers were provided with feedback. Finally, designers were consistent across most REFLECT rubric criteria.

CHAPTER 5: DISCUSSION AND CONCLUSION

Introduction

The purpose of this qualitative multiple case study was to examine instructional designers' behaviors and activities through the lens of reflection. This study used a number of data collection methods to explore how instructional designers engage in reflection and determine what kinds of impacts reflection has in the design space. This study addressed the following questions:

1. *How do instructional designers define their design activities in light of reflection?*
2. *In what ways does reflection impact the design products of instructional designers?*
3. *How does structured reflection during design contribute to the reflection abilities of instructional designers?*

Using purposive sampling, seven participants from the United States were selected from a pool of interested volunteers. Each participant's primary job function was instructional design. During the six-week study, each was actively involved in an ill-structured instructional design project and responsible for the majority of the design work. While the study was open to a designer with any level of experience, the participants in this study had many years of work experience.

In Chapter 4, I provided the results for the three research questions listed above through the lens of reflection. The first question elicited the most extensive results, exposing four primary themes that address the activities of designers. The second question, which sought to reveal the impact of reflection on design products, revealed designers' perceptions of these effects, as well

as the barrier to analysis resulting from the lack of designer-provided products. Results from the third question, regarding how designers' reflections changed over time, were provided via analysis of the SRIS and REFLECT rubric.

The purpose of this chapter is to discuss the results of the three research questions, along with the themes that emerged as part of the analysis. I follow this discussion with implications for students, professional designers, professors, and designer managers. I then describe some limitations of this research and conclude by offering recommendations for future research.

Discussion of Results

Many research studies have begun to focus on preparing instructional designers and improving instructional design activities. Studies of *instructional designers* themselves, however, have been elusive. This study, on the other hand, focused extensively on instructional designers as an integral part of instructional design and design products. Their reflections addressed a wide variety of design activities relating to projects ranging from online internal product training to extensive multistate educational programs for new healthcare laws. Because designers were engaged in reflection while also actively involved in a long-term design project, their reflections brought to light how real design happens and how real reflection *during design* happens. This discussion further explores these elements, looking at designer activities and the role of reflection in the design space.

Research Question 1: How do instructional designers define their design activities in light of reflection?

Just as the designers designed projects ranging across various disciplines, their approaches to design also varied. However, they all defined their activities across four domains.

These were related to: tolerance of uncertainty and ambiguity; constant communication; personal identities and unique designer precedents; and advocacy for learners and instructional design. Further discussion here will delve deeper into these key areas.

Domain 1: Designers' personal identities are defined by precedents

Professional identity, as previously defined, is regarded as people's professional view of themselves. Identities are clarified through past experiences, as well as by values, beliefs, and motives (Ibarra, 1999; Gecas, 1982). Designer precedents are the elements that designers rely on and refer to while designing (Boling & Smith, 2012). Precedents help designers give form to something that was once abstract (Cross, 2011; Dorst, 2008).

A dominant theme in this study was that designers viewed their activities according to their personal identities defined by designer precedents. Designer precedents are unique to each individual (Baaki & Tracey, 2014) and are formed based on a designer's previous experiences, both vicarious and direct (Howard, Boling, Rowland, & Smith, 2012; Lawson & Dorst, 2009). The results here comprised unique collections of precedents that revolved around processes, models, frameworks, and theories—all essential to their identities.

Boling and Tracey (2014) have noted that designers make decisions based on solutions from their past. The culmination of these designers' experiences is instrumental in the development of their personal design identities. After all, the designers' personal identities were developed based almost entirely on experience—whether that experience came via the classroom, literature, related design events, personal memories, or even a vicarious situation. Those many experiences become part of these identities.

In this study, *experience* comprised the more specific, individual events that the designers considered during design—both events as part of their past as well as events planned for the future. All of the designers in this study relied on previous experiences and looked for ways to gain additional skills to help them solve the design problems at hand; however, the experiences on which they relied were unique to each designer. While some relied on their actual previous design experiences, others relied on other professional experiences, knowledge about a similar client, or information about the specific learners. Responses about these experiences, however, remained vague.

As designers looked to their collection of precedents for the appropriate tool, they made note of anything missing (knowledge, experience) and sought ways to acquire it. Literature describes this pursuit of additional expertise as common among instructional designers since it allows them to learn new content and gain expertise in something unfamiliar in a very short period of time (Schwier & Wilson, 2010).

Designers' precedents also involved processes. Across the multiple case, and even if unapparent to outsiders, designers viewed their projects through a lens of process. This process was unique to each designer; there were seven individual processes. This was evident in their approaches. Some attended to the bigger design opportunities and then delved down into the intricacies as they gained further information. Others worked through what they knew or what they could progress with, given the information and precedents available to them. As they moved forward any way possible, additional clarity emerged for them among the unknowns. Little by little, they would chip away in a recursive way through the unknowns, making the abstract a reality.

Each designer approached his/her design problem in a distinct way, which makes sense considering they did not share the same personal identity, the same collection of precedents, or the same design problem. One designer, for example, discussed how her process was chronological, working through the development of an instructor manual along the way (Appendix K). Another, on the other hand, would not create a manual and instead worked on small segments of storyboards that she regularly provided to SMEs for feedback (Appendix O).

What did appear on the surface as common among the designers' processes was the breaking apart of a design project into pieces. In some cases they divided their projects, starting with the larger topics and then finding the related subtopics. In other cases, they chunked content in ways that they thought would be sensible to the learner—a common activity in instructional design (Cennamo & Kalk, 2004). While these designers chunked their content for the learners, they also chunked their in-progress design project information into *knowns* and *unknowns* for themselves. They targeted the *knowns* throughout their design activities and revisited *unknowns* as clarity was gained. This process helped them have confidence in their decisions throughout a complex process that required continuous exploration of possibilities as they moved to and fro between problems and potential solutions (Stefaniak & Tracey, 2014; Baaki & Tracey, 2014).

When defining the activities, designers referred to the manifestation of frameworks, models, and theories in their products. This manifestation, in some cases, was a result of the designer's purposeful application; in other cases it was the organic emergence of its application during design. Interestingly, however, only through a direct and structured question did the designers discuss frameworks, models, or theories. They all recognized the need to some degree for a generic framework such as ADDIE. But while one designer exclusively used it for all design projects (Appendix Q), another believed it was only useful in communicating general

guidelines to a client (Appendix L). And just as one designer applied any of 11 different models and frameworks to her designs (Appendix M), another identified a different collection for use during instructional design (Appendix N). Literature supports these findings. As Kirschner and colleagues (2002, p. 91) wrote, “[Designers’] activities typically don’t reflect the systematic, step-by-step approach as prescribed in traditional ID models” (cited in Boling and Tracey, 2014). This holds true for most of the instructional designers in this study as well.

Their unique approach to design was eclectic in nature. Rather than relying on one model or theory, these designers drew upon their designer precedents, which likely included their knowledge related to these models and theories. Honebein and Sink (2012) have described eclecticism as a method that allows for a stronger product by being influenced by multiple theoretical constructs. And while it seemed as though they confidently chose a theoretical approach, the details on which they based their decisions remained largely elusive. One study about instructional designers’ uses of theory notes that although designers use a variety of principles eclectically throughout their design activities, they cannot clearly state in what manner they use them or how they decide which ones to use (Yanchar, South, Williams, Allen, & Wilson, 2010).

In everyday practice, designers were not required to know the names of models or recall the actual reasons why they would employ specific theoretical principles. Rather, they relied on their designer precedent, which allows them to simply *know* how to apply the necessary principles to enrich the design outcome. On the other hand, According to Lawson (2004), this experience of previous designs is stored in a serialized way. This should allow designers to refer to influential designs by name (Howard et al., 2012), and it might be argued that if they ever knew of the models and theories, they could refer to them. Even if they do remember the models

and theories, however, in a written reflection that requires additional time, designers might resort to more nebulous or simplistic responses, much like they do when designing under time constraints or stress (Stefaniak & Tracey, 2014).

Domain 2: Designers tolerate uncertainty and ambiguity

Designers wrote about the need to work through unknowns and to be confident in the fact that eventually the design decisions would reveal themselves. This is consistent with literature that suggests uncertainty and ambiguity are also integral parts of the design process and are both expected and tolerated by designers (Cross, 2007). The designers in this study, while tolerant of uncertainty and ambiguity, did not embrace it. Instead, they attempted to quickly change it. They continuously sought information from a variety of sources to complete their design projects and fill in any gaps. They extended that pursuit of clarity to this study, asking additional questions about reflection prompts to better respond.

The literature indicates that designers should accept uncertainty and ambiguity before attempting to change it (Adams, 2011). Rather than defining a quick and single solution, designers should preserve ambiguity (Plattner, Meinel, & Leifer, 2010). Uncertainty and ambiguity can be used as design tools to explore multiple perspectives that would not have been apparent without the time spent in the uncertain and ambiguous space (Cross, 2011; Gaver, Beaver, & Benford, 2003). Unfortunately for these experienced designers, the reliance on precedent (quickly looking for solutions) likely could not be overcome by the benefits of embracing the unknown.

Domain 3: Designers continuously communicate

In an effort to close the gaps of uncertainty and ambiguity, designers worked diligently to communicate with others. In many cases, they behaved much like project managers, attending to the schedule and remaining in regular contact with other stakeholders. Some designers explicitly portrayed their role as including project management responsibilities; all described their need to communicate regularly about the project. This project management approach to communication was used primarily to move the project forward; most companies employing instructional designers want to see this type of competency in their designers (Wakefield et al., 2012).

Interestingly, designers sought all of their information from those *outside* the design discipline. No designers mentioned working with or seeking information from other designers, even when they had direct access to them.

Domain 4: Designers advocate for their learners and their designs

In describing their design activities, designers in this study tended to advocate for their learners and, indirectly, their designs. Designers regularly referred to their learners based on what the learners needed—how to make learning easy for them, how to *not* waste their time, and how to make the learning “stick.” As experienced designers, it was evident that they believed that focusing on their learners would result in a positive outcome. Years of practice likely showed designers the importance of learner advocacy, and empathy was the chosen method designers used to advocate.

In a study of students learning to design instruction, researchers noted that advocating for learners was necessary to improve their outcomes and aid in developing designer precedents (Baaki & Tracey, 2014). Another study described the importance of the “who” and the “why”

coming before the “what,” in that the individuals (learners) should feel that the instruction was made just for them. This empathic approach, the authors stated, provides insight into the learner’s experiences to help create a more effective product (Thomas & McDonagh, 2013).

All of the designers in this study advocated for their learners. While they were not prompted about their learners, they reflected on them more regularly than any other topic; making it easy for learners to learn was a common notion. The extent to which designers advocated, on the other hand, varied. Designers who worked with internal audiences were more defensive of them than those who designed for external audiences. Perhaps this can be attributed to the differences in relationship depth (i.e., those who knew their audiences believed they better understood these learners’ needs).

Regardless of the extent of their advocacy, the designers in this study were realistic about what instructional design could do and what it could not. One designer noted that sometimes an instructional design solution is expected though it can’t address the problem (Appendix M, Reflection Journal). Another recognized that while the client contracted for the purpose of instructional design, instructional design products were not needed to solve the problem (Appendix P, Reflection Journal). That said, if they committed to an instructional design product, they rigorously defended their design decisions. Considering the fact that designers are an integral part of design, it is understandable that defense would be their natural response.

In this study, defining design activities through reflection offered the most extensive findings. Designers described their activities around four specific and interrelated domains: tolerance of uncertainty and ambiguity; constant communication; a personal identity comprised of designer precedents; and advocacy for learners and instructional designs. Unfortunately,

across the descriptions related to their design activities, designers' reflections of design activities and themselves as individuals were largely simple and imprecise.

Research Question 2: In what ways does reflection impact the design products of instructional designers?

It was the intent of this study to analyze the current state of the designer's design products, sketches, documents, and artifacts alongside his/her current reflection responses each week. Confidentiality safeguards, weekly reminders, and ongoing requests did not encourage designers to provide the items that could be analyzed over time. The *non-sharing of design products* was a theme that developed as a result of outlier analysis, since the majority of designers did not provide design products as was requested (Yin, 1993). Those who did provide products did not send content that would be considered under significant development. In fact, most of the documents were complete enough to be provided to SMEs and/or clients for review.

While there were no clear reasons as to why designers did not provide consistent design documents, they likely had these in their possession at any given time. Literature indicates that drafting and sketching allow designers to better frame their ideas and explore alternative paths, which, in turn, can result in improved designs (Self & Pei, 2014). In one outlier case, however, a designer who provided two documents during the six-week study noted that she regularly provided her SMEs with drafts that she called sloppy copies. This term, which implied an unfinished, draft quality, was likely meant to establish lower expectations among the SMEs (Appendix O). This designer's actions were more aligned with those of designers who use their *sloppy copies* as low-fidelity prototypes or sketches to obtain feedback from their SMEs or clients prior to creating extensive, time-consuming designs. This behavior is typical among experienced designers in the engineering and industrial design fields (Macomber & Yang, 2011).

According to a study by Gerber and Carroll (2012), this act of prototyping is a way to take small progressive steps in the face of uncertainty.

It is likely that the designers did not provide their sketches and other design products for one of two reasons. One, as mentioned in the example above, they may have not wanted to show an unfinished product. This could be because they would have felt compelled to have to describe it so that I could understand their vision. The other possible reason for not providing design products was that they didn't have the time to "scrub" a copy that they would have felt confident sharing with an external audience—even given all the safeguards. Taken in context, the former reason is more likely, given the confidence and experiences these designers conveyed during the project.

Although the designers did not provide the relevant design products, they did refer to them during their reflections. They explicitly described their products as being richer as a result of the reflection process. The ability to "talk things out" may have helped the designers feel as though they had done better work, especially those who worked as lone designers in a corporate setting—versus those who worked in an instructional design firm/setting with peers who understand design.

These perceptions are in alignment with recent studies of reflection. According to a study of nurses, "reflection was connected with a professional motivation to 'move on' and 'do better' within practice in order to learn from experience and critically examine 'self'" (Bulman, Lathlean, & Gobbi, 2012, p. e12). Another study that measured the impact of reflection triggers in an online class showed similar results regarding perception. However, it also revealed that while perception was positive, there was no indication of improvement related to actual performance (Verpoorten, Westera, & Specht, 2012).

Research Question 3: How does structured reflection during design contribute to the reflection abilities of instructional designers?

The third research question used two distinct tools, the SRIS and REFLECT rubric. A constant comparison analysis method resulted in emergent themes related to the ebb and flow of reflection ability; the impact of feedback; and the consistent strength across most REFLECT criteria.

Theme 1: Deep reflection waxes and wanes

As discussed earlier, designers shared in common four domains of designer activities, but within those, designers were unique. The same can be said for their reflection abilities. All designers experienced times of deep reflection and times of superficial responses. Deep reflection, however, was not tied to a specific question or week. For any given question or time frame, one designer might reflect deeply, while another delivered his/her weakest response.

Reflecting on previous actions is a personal and intimate activity (Hendrix, O'Malley, Sullivan, & Carmon, 2012). Someone who shows reflection ability will have moments of greater reflection when he/she feels motivated or capable based on the specific questions or the situation at hand (Tracey et al., 2014). For example, if a designer was in the midst of working through complex problems, design related or not, he/she would not be compelled to take the time to reflect on action (Tan, Cashell, & Bolderston, 2012). Further, if a designer had the time to dedicate to reflection, but the resulting reflection was personal or intimate in nature, he/she would not be willing to share if there were not an established level of trust with the reader (Hendrix et al., 2012).

Theme 2: Reflection deepens with feedback

While it was apparent that designers had moments of greater and lesser reflection abilities from week to week, their reflection depth increased consistently when feedback was integrated in the reflective process. While feedback was not an expected activity, it was necessary in some cases to provide clarity for designers regarding guiding statements. When this clarification was given, the resulting responses became more reflective as the designers became more engaged and confident in their responses. Feedback, then, is an important facet of reflection. It helps improve the level of engagement and increases one's ability to reflect more deeply (Tracey et al., 2014). Feedback is also a necessary element in creativity. In all likelihood, the designers who sought feedback were attempting to overcome the uncertainty but also, and more important, to think differently about the topic—more deeply, more creatively. De Stobbeleir, Ashford, and Buyen (2011) suggest that this preemptive request for feedback plays a significant role in creativity.

Theme 3: Designers reflect at their lowest levels in the area of emotion

As mentioned, designers' levels of reflection ebbed and flowed throughout the study. While this behavior is aligned with the idea that designers will have moments of deeper reflection and other moments where they are incapable of reflection (Tracey et al., 2014), the designers consistently rated low in one of the six areas measured by the REFLECT rubric, emotion. On the other hand, they regularly ranked high in writing spectrum, presence, description of conflict or disorienting dilemma, attending to emotions, analysis and meaning making, and attention to assignment.

Feelings and emotion are important to reflection in that they aid in, rather than deter from, rational thinking (Bulman et al., 2012). Unfortunately, the designers in this study did not

reveal their vulnerabilities, according to the rubric. In this light, it is possible they didn't feel a trusting relationship had been developed (Hendrix et al., 2012). These results are in line with those of similar studies that indicated that designers didn't reflect with emotion. Tracey et al. (2014) used the REFLECT rubric in a study of student instructional designers who reflected across the course of a semester. They found that emotion rated lowest in terms of reflection and highest in terms of non-reflection (Tracey et al., 2014). In the REFLECT study by Tracey et al., the participants were graduate instructional design students. This current study, on the other hand, consisted of professional designers who all had more than 10 years of professional work experience. In a discipline where novices and experts show few similarities, it is noteworthy that the emotion levels of these two very different groups were similar (Tracey et al., 2014).

Though this current study and those mentioned previously have indicated that emotions were largely ignored by designers, Sas and Zhang (2010) argue that expert designers are well-versed with their emotions—not only with how to manage them but also with how to apply them to design more creative outcomes. Literature shows that emotion in design is important to the design outcome and quality. Employing emotions helps people make suitable decisions (Norman, 2004). Positive emotions, specifically, lead to improved information processing, which can lead to better decision-making. Since design involves ongoing decision-making, emotion is considered an important element to the design process (Kaufmann, 2003). Reflecting with emotion was not a particular strength of the designers in the current study, and those who received additional interaction/intervention from the researcher during the weekly reflections deepened their reflection abilities during those weeks. Across the entire study, however, all designers had moments of deep reflection and moments of superficial responses.

Implications for Instructional Design

The findings of this study provide various implications for specific areas and roles in the instructional design field, as well as outside the field. The most noteworthy implications address reflection and feedback, transparency, and manager involvement. Also interesting is the potential application across numerous disciplines.

Reflection and feedback. Reflection helped designers improve their designs, and when feedback was incorporated, these reflections further deepened. As scholars and instructional design professors aim to prepare future designers for practice, these novices should be provided with methods and opportunities to practice reflection. A rubric similar to REFLECT would help novices understand what effective reflection *looks like*, and this reflective practice will help them improve their designs. Novice designers would benefit from accompanying feedback regarding their reflections on their designs. This feedback, provided by peers and/or instructors, would help deepen designers' reflection capabilities and would allow them to further develop their designer identity.

Reflection and feedback should not be limited to novices; professional designers stand to gain from the activities as well. Often time is limited when professional designers are faced with design projects. That said, managers should still encourage designers to spend time reflecting and seeking feedback related to their thoughts during design. Feedback may come from another designer, a peer, or anyone with whom the designer has a trusting relationship. This will further deepen their reflection and lead to stronger design products and more developed identities.

Transparency. Learning how to reflect early in their careers (or to practice reflecting as a professional) will aid in transparency, which stands to provide positive impacts to the designer and the design field. During designer preparation, it's important to provide students with a means

for sharing sketches and drafts with one another and with non-designers. It may help them develop a comfort level in terms of sharing their products and discussing their vision with subject matter experts, clients, and peers. Ultimately design is abstract; it is not a process. By creating transparency among designers, scholars and professionals can document *who* these designers are in the design space. This sharing of patterns, activities, thoughts, and behaviors during design can then inform the field and allow others to expand their own personal collection of precedents (Boling & Smith, 2012).

Manager involvement. As mentioned, reflection, feedback, and transparency will likely help both novice and experienced designers cultivate their identities. Managers of professional designers should play an active role in designer development. For example, while professors teach design thinking in an effort to show the value of uncertainty and ambiguity, managers should provide professional designers with the space to embrace ambiguity. By being afforded this freedom, designers can work through ambiguity and more effectively create meaning during design (Cross, 2011). Instead of rushing to address uncertainty and ambiguity, designers should be able to take time to feel “both the *frustration* and *joy* that designers get from their activity” (Cross, 2011, p. 12). This may elicit richer and more creative designs, since the presence of emotions like frustration and joy result in heightened creativity (Sas & Zhang, 2010).

Managers should also expect and encourage designers to continuously seek knowledge and contribute to the field. While the very nature of instructional design requires designers to quickly become well-versed in a new topic for which their design is based, they should also increase their knowledge of the latest trends and cases related to the design field. Because designers are active professionals, managers also should support them in the development of cases that can further inform the field (Boling & Smith, 2012). This not only provides vicarious

experiences for novice and professional designers but also showcases a level of expertise on the part of the designer and the designer's organization.

Multidisciplinary application. Designer identity is dynamic; it continues to change as designers grow in experience. The rate at which their identity develops is dependent on their exposure to new tools and techniques. Using these tools to develop designers does not need to be limited to the instructional design field. While this study provided implications for instructional design, it's important to note the multidisciplinary research approach and how it might impact other disciplines. Expanding the focus to include other disciplines allows researchers to view results from other perspectives (McDonald, 2011). Further, design is a broad category that spans multiple disciplines. The findings here can have an impact on professions well beyond instructional design. The healthcare discipline, for example, encourages all clinicians to use reflection as a means to improve their practice (Moffett, 2009; Taylor-Haslip, 2010). This study showed that instructional designers, too, can look to related or unrelated fields for tools and techniques that will inform their practice. By reviewing specific reflection activities from healthcare and applying them to the instructional design discipline, this study illuminated the benefits of utilizing tools in one discipline to understand and improve another.

Limitations

Lack of designer products. A significant limitation in this study was the number of design products shared by designers. This study relied on the reflections and design products of designers, and while their reflections provide very valuable findings, designers struggled with providing design artifacts. Because there was a lack of sketches and other design products, it was difficult to fully analyze the ways in which those products were impacted by reflection.

Study's design. Sometimes the reflection prompts may not have been meaningful to designers at the particular time that they were provided. For example, during week two of the study, I asked about interaction with a client. There was not a guarantee that the designers had any recent interaction with a client. In addition, the length of the study was short—just six weeks.. Although that time frame was sufficient for this study, engaging with the designers for the full length of their projects would have garnered additional findings. Providing additional reflection prompts based on the project's status might have yield more extensive data.

Number of participants. The participants were limited to seven, and while the study provided thick descriptions of the single and multiple cases, any quantitative data results could not show significance. An increase in the number of participants, however, would have likely resulted in additional patterns, especially across the SRIS and REFLECT rubric. Ultimately this study was not intended to signify patterns across an entire group; it was meant to elucidate findings for future studies and practice. An increase in the number of participants, however, would strengthen these findings.

Significance of the Study

The significance of this study is evident because after years of studying what instructional designers do, we still do not know who instructional designers are. This study adds to the scholarly literature about designers during design, showing that designers are integral to the design. By learning how *who they are* affects their design, the results provide insight into ways we might better prepare new designers and inform experienced designers. While this study did not intend to provide generalizations about instructional designers, it did display the individual nature of the designers who were randomly selected for this research.

This study provides information to academic institutions about the ways in which future designers can be better prepared for the field, namely, (a.) incorporating reflection and feedback into the design student's coursework and (b.) teaching them about the importance of transparency and the ways in which they can promote it. The study also offers similar viewpoints to professional designers; however, the study extends its reach by including methods by which managers of designers can support the growth of professional designers in ways that might also further inform the field.

Recommendations for Future Research

Instructional designers, as human instruments, have been largely ignored in the literature. This study has provided insight into these professionals and the ways in which they behave in the design space. That said, this study has only begun to contribute to the existing literature. Additional studies of designers stand to make an impact on what we know about designers, how we prepare novice designers, and how we help professionals continue to develop their identities in ways that can improve their *designerly* ways.

To contribute to our body of knowledge about design and designers, this study recommends further research be undertaken that explores professional designers in the design space; the relationship between reflection and learning outcomes; the impacts of feedback on reflection and design; and the role of emotion in design.

Based on the findings from this study, future research should continue to focus on instructional designers in the design space. While this study begins to illuminate *who* instructional designers are and how they behave and design, we must continue this exploration. While it may be easier to study students as novices, it is imperative to study professional

instructional designers. This would better inform our field and provide findings that novice and expert designers alike could use to enhance their designer identity and collection of designer precedents.

It is also worth noting that we may be more capable of learning about designers by looking at them as individuals than across a multiple case. This may allow other professional designers and/or students relate to a type of designer whom they seem to emulate. By following the lead of those to whom they can relate, they will be more likely to learn best practices that fit their style and identity.

Another potential research area relates to learning outcomes and design. Since the designer is integral to the design, reflection ability may be revealed in audience learning outcomes. It would be interesting to compare reflection levels to learning outcomes; this may reveal that reflection impacts these outcomes.

A third potential area for additional research would be a replication of this study, with a few modifications. Findings showed that feedback improved the depth of reflection across the designers. Studying designers using structured reflection and feedback may result in valuable findings, particularly in relation to design output (De Stobbeleir et al., 2011). In addition, the depth of reflection might be increased if designers are able to be anonymous and receive anonymous feedback from peers. Alternatively, reflection may also improve if, instead, the designers reflect with feedback from those with whom they've developed trust (Hendrix et al., 2012).

The fourth area for future research is emotion. While the REFLECT rubric indicated there was minimal emotion in designers' responses, a study focused solely on eliciting emotional responses might yield interesting findings. Emotion during reflection is important to the

development of professionals in other fields, and considering emotions are critical to creativity, this would be worth investigating (Sas & Zhang, 2010).

This study's intent was to explore who designers are in the design space. As such, a final area of investigation would be study how designers who align with the premise of design thinking differ from designers who do not. We may discover further benefits resulting from those who embrace ambiguity and are comfortable in showing their drafts. We may discover new ways to make the design field richer and better.

Summary and Conclusion

According to Tracey and Boling (2014), and as described in Chapter 2, the instructional design discipline lacks scholarship that investigates what designers actually do and who they are in the design space. Most related literature addresses the instructional design practice. This study begins to explore designers by examining them through their reflections while engaged in long-term design projects.

This multiple case examined instructional designers and elucidated what role reflection played in that space. The research consisted of qualitative data collection methods over the course of six weeks, all of which took place while designers were actively engaged in a long-term design project. This study, though dedicated to exploring who designers are and what they do in the design space, shows their uniqueness is an important facet of *how* they are integral to the products they create. For these designers, the differences in their behaviors and approaches were their common connection. These designers made their own paths, guided by their own learned conceptions and priorities. The outcome of their work ultimately was dependent on the paths they chose and differed according to the priorities they set (Daly, Adams, & Bodnar,

2012). Ultimately what they all have in common is their uniqueness in how they approach design and the uniqueness of their identities.

APPENDIX A – HIC APPROVAL

Located in separate document

APPENDIX B – COPY OF LETTER DESCRIBING STUDY

January 15, 2014

Organization X

Address

Address

To whom it concerns:

My name is Tamme Quinn Grzebyk. I am currently a Ph.D. candidate at Wayne State University. I have recently received approval to begin my dissertation entitled *Reflection and Instructional Designers in the Design Space*. I am writing to you to request your permission to allow Jamie Hunter to participate in my research study.

The purpose my study is to examine instructional designers during design. This study suggests engaging participants in structured reflection as (a.) a way to better understand instructional designers in the design space and (b.) a technique for instructional designers to improve their design. My study is led by the following questions:

1. *How do instructional designers define their design activities in light of reflection?*
2. *In what ways does reflection impact the design products of instructional designers?*
3. *How does structured reflection during design contribute to the reflection abilities of instructional designers?*

I would like to study [Name] as she works on a project across the course of six weeks. I would begin my research relationship with a January 2014 kickoff meeting at her work location or off-site, per her preference. During this meeting, I will (a) validate that she meets the study requirements, (b) ask her to sign a consent, (c) gain an understanding of the design project and timeline, (d) identify milestone events, (e) and describe her responsibility to maintain a reflective journal led by my guided questions. I will also ask her to describe the design project, and I will answer any remaining questions.

The consent document that I will ask her to sign will include: (a) my contact information, (b) a description of the study, (c) my intent to preserve her confidentiality and anonymity, (d) my process to ensure raw and developed data are not linked to her, (e) her right to withdraw from the study at anytime, and (f) notice that her participation is entirely voluntary. She will sign and date the consent form that also includes a specific consent to use direct quotes. I will provide her a copy of the signed consent form. I have attached a sample for your review.

Within two business days of the meeting, I will provide her a summary of the schedule that we defined during the meeting. This schedule will include weekly reflective journal due dates, and an overall timeline she defined for the design project. I will also provide instructions on how to share access to a Google Drive document for the reflective journal.

Thank you for considering my request. I plan to follow up with you by January 10, 2014 to discuss your support of this request.

Best,

Tamme Quinn Grzebyk

APPENDIX C – WRITTEN CONSENT SHEET**Reflection and Instructional Designers in the Design Space**

Principal Investigator (PI): Tamme Quinn Grzebyk
Wayne State University
College of Education
Instructional Technology
734-320-0000
tammequinn@gmail.com

Purpose

You are being asked to participate in a research study that will explore the role of reflection of instructional designers during design. The study will address the following questions:

1. *How do instructional designers define their design activities in light of reflection?*
2. *In what ways does reflection impact the design products of instructional designers?*
3. *How does structured reflection during design contribute to the reflection abilities of instructional designers?*

Study Procedures

If you agree to participate in this study, you will be asked to (a.) meet with me once via telephone or in person for 30 minutes to launch the study; (b.) complete an online questionnaire at the beginning and end of the study, which will take approximately 10 minutes each time, and (c.) respond to six weekly reflection questions that should take about 15 minutes each.

During the initial meeting, I will (a) validate that you meet the study requirements, (b) ask you to sign a consent, (c) discuss overall process and timeline of the study, (d.) confirm your specific design project timelines, (e.) discuss communication methods, (f.) provide instruction on how to create and share reflection journal entries via a Google Doc, (g.) discuss how to share design products, (h.) describe the online background questionnaire and survey that will follow, and (i.) answer any questions.

The consent document that I will ask you to sign will include: (a) my contact information, (b) a description of the study, (c) my intent to preserve your confidentiality and anonymity, (d) my process to ensure raw and developed data are not linked to you, (e) your right to withdraw from the study at anytime, and (f) notice that your participation is entirely voluntary. The form you sign will also include a specific consent to use direct quotes. I will provide you a copy of the signed consent form. I have attached a sample for your review.

Within two business days of our initial meeting, I will provide you a summary of the schedule

that we defined during the meeting. This schedule will include: (a.) weekly reflective journal due dates, (b.) my feedback due dates, and an overall timeline for the study.

Benefits

As a participant in this research study, there may be no direct benefit for you as a participant in this study. Information from this study may benefit other people now or in the future.

Risks

There are no known risks at this time to participation in this study.

Costs

There will be no costs to you for participation in this research study.

Compensation

You will not be paid for taking part in this study.

Confidentiality

All information collected from you and about you during this study will be held confidentially by me. I will keep raw and developed data secured. I will also take necessary steps to ensure only my advisor and I have access to the raw data.

Voluntary Participation /Withdrawal

Taking part in this study is voluntary. You are free to not answer any questions or withdraw at any time. Your decision will not change any present or future relationships with Wayne State University, and its affiliates.

Questions

If you have any questions about this study now or in the future, you may contact me at the following phone number 734-320-0000. If you have questions or concerns about your rights as a research participant, you may contact the Chair of the Human Investigation Committee at (313) 577-1628.

Participation

By signing this form, you recognize and agree to this written consent form.

Participant Signature

Date

Use of Direct Quotes

In this study, I may use direct quotes from participants. By signing below, you recognize and allow me to use direct quotes, while keeping your identity confidential.

Participant Signature

Date

APPENDIX D – DATA COLLECTION TIMELINE EXAMPLE

Event	Day of Study
Initial Meeting; Researcher provides and designer completes initial Questionnaire	1
Researcher provides agreed-upon timeline to designer	2
Researcher delivers Reflection Journal Week 1	6
Designer completes & sends Reflection Journal Response Week 1; Designer sends project artifacts and current design product	8
Researcher provides feedback and clarifying questions for Week 1	9
Researcher delivers Reflection Journal Week 2	13
Designer completes & sends Reflection Journal Response Week 2; Designer sends current design product	15
Researcher provides feedback and clarifying questions for Week 2	16
Researcher delivers Reflection Journal Week 3	20
Designer completes & sends Reflection Journal Response Week 3; Designer sends current design product	22
Researcher provides feedback and clarifying questions for Week 3	23
Researcher delivers Reflection Journal Week 4	27
Designer completes & sends Reflection Journal Response Week 4; Designer sends current design product	29
Researcher provides feedback and clarifying questions for Week 4	30
Researcher delivers Reflection Journal Week 5	34
Designer completes & sends Reflection Journal Response Week 5; Designer sends current design product	36
Researcher provides feedback and clarifying questions for Week 5	37
Researcher delivers Reflection Journal Week 6	43
Designer completes & sends Reflection Journal Response Week 6; Designer sends current design product	45
Researcher provides feedback and clarifying questions for Week 6	46
Researcher conducts interview with designer	48–52
Researcher sends final questionnaire	49–53
Designer completes and submits final questionnaire	50–54

APPENDIX E – DEMOGRAPHIC QUESTIONNAIRE

1. What is your age range?

< 23 ... 23–30 ... 31–35 ... 36–40 ... 41–45 ... 46–50 ... 51–55 ... 56–60 ... >61

2. What is your gender?

Male / Female

3. Total years of active, professional work experience in a

corporate environment _____ academic environment _____

4. Total years actively designing instruction in a

corporate environment _____ academic environment _____

5. What percentage of your current role typically involves instructional design?

<10% ... 10–25% ... 26–50% ... 51–75% ... 76–100%

6. What percentage of your time do you put toward designing for internal clients (compared to external clients)?

<10% ... 10–25% ... 26–50% ... 51–75% ... 76–100%

7. What percentage of your time do you spend designing individually (compared to as part of a team)

<10% ... 10–25% ... 26–50% ... 51–75% ... 76–100%

APPENDIX F – SELF-REFLECTION AND INSIGHT SCALE (SRIS)**SELF REFLECTION****Engagement in self-reflection**

- I don't often think about my thoughts
- I rarely spend time in self-reflection
- I frequently examine my feelings
- I don't really think about why I behave in the way that I do
- I frequently take time to reflect on my thoughts
- I often think about the way I feel about things

Need for self-reflection

- I am not really interested in analyzing my behavior
- It is important for me to evaluate the things that I do
- I am very interested in examining what I think about
- It is important to me to try to understand what my feelings mean
- I have a definite need to understand the way that my mind works
- It is important to me to be able to understand how my thoughts arise

INSIGHT**Insight**

- I am usually aware of my thoughts
- I'm often confused about the way that I really feel about things
- I usually have a very clear idea about why I've behaved in a certain way
- I'm often aware that I'm having a feeling, but I often don't quite know what it is
- My behavior often puzzles me
- Thinking about my thoughts makes me more confused
- Often I find it difficult to make sense of the way I feel about things
- I usually know why I feel the way I do

APPENDIX G – INITIAL INTERVIEW GUIDE

1. How many people are working on this project?
2. What is your role in the project?
3. What percentage of the design work will you provide vs. someone from your team?
4. Describe the deadlines for this project.
5. Describe the client for this project.
6. What might happen if you miss any milestones or deadlines for this project?
7. When we begin our study, how far into the project's timeline will you be?
8. When we begin our study, how far into the project's work will you be?
9. How long is the project you are working on during this study?
10. On average, what percentage of your workweek do you expect to be dedicated to this project during the six weeks of this study?
11. Describe the project. What differences or similarities can you draw compared to other projects?
12. What questions can I answer for you about this study or the process?
13. Since you remain anonymous in this study, I typically assign a pseudonym for my participants. Would you like to choose your own?

APPENDIX H – DESIGNER REFLECTION GUIDING QUESTIONS/PROMPTS**Guiding Question/Prompt**

Discuss your previous experiences that are guiding you during this project.

Discuss how you framed the design problem.

Discuss your own internal beliefs that are guiding you during this project.

Discuss your ongoing interaction with the client.

Discuss how your design solution compares to other solutions you've implemented.

Discuss how you are dealing with ambiguity or uncertainty in the project.

Discuss your interaction with specific models or images.

Discuss unexpected challenges that have arisen during this project.

Discuss your personal design strengths that emerged during this project.

Discuss specific design areas you might continue nurturing as a result of this project.

How are models manifesting themselves in the design project? What models or frameworks are you using?

What tangible results do you have this week?

How would you explain your process to the client this week?

Discuss how this project is progressing.

How did themes emerge?

Discuss your design process.

Do you think you altered any processes as a result of SSR? Explain... Alternatively, did you find yourself holding more strictly to your typical design process?

How did you come up with these? Reference if needed or explain how you came up with these in the methodology section

APPENDIX I – REFLECT RUBRIC

Reflection Evaluation For Learners' Enhanced Competencies Tool

Criterion	Levels			
	Habitual action (non-reflective)	Thoughtful action or introspection	Reflection	Critical reflection
Writing spectrum	Superficial descriptive writing approach (fact reporting, vague impressions) without reflection or introspection	Elaborated descriptive writing approach and impressions without reflection	Movement beyond reporting or descriptive writing to reflecting (i.e., attempting to understand, question, or analyze the event)	Exploration and critique of assumptions, values, beliefs, and/or biases, and the consequences of action (present and future)
Presence	Sense of writer being partially present	Sense of writer being partially present ²	Sense of writer being largely or fully present	Sense of writer being fully present
Description of conflict or disorienting dilemma	No description of the disorienting dilemma, conflict, challenge, or issue of concern	Absent or weak description of the disorienting dilemma, conflict, challenge, or issue of concern	Description of the disorienting dilemma, conflict, challenge, or issue of concern	Full description of the disorienting dilemma, conflict, challenge, or issue of concern that includes multiple perspectives, exploring alternative explanations, and challenging assumptions
Attending to emotions	Little or no recognition or attention to emotions	Recognition but no exploration or attention to emotions	Recognition, exploration, and attention to emotions	Recognition, exploration, attention to emotions, and gain of emotional insight
Analysis and meaning making	No analysis or meaning making	Little or unclear analysis or meaning making	Some analysis and meaning making	Comprehensive analysis and meaning making
Optional minor criterion: Attention to assignment (when relevant)	Poorly addresses the assignment question and does not provide a compelling rationale for choosing an alternative	Partial or unclear addressing of assignment question; does not provide a compelling rationale for choosing an alternative	Clearly answers the assignment question or, if relevant, provides a compelling rationale for choosing an alternative ⁴	Clearly answers the assignment question or, if relevant provides a compelling rationale for choosing an alternative ⁴

APPENDIX J – DESIGNER PROJECT & EXPERIENCE

Participant	Employer Type	Instructional Design Experience	Length of Design Project	Design Project Description
Michelle	Higher education institution	18 years	8 weeks	Instruction to prepare external mid-level leads in a financial services company for an IT change
Matthew	Instructional design firm	8 years	4 months	Instruction to prepare internal account and customer service manager to administer a performance dashboard sold to external clients
Brenda	Insurance	20 years	3 months	Instruction to prepare wholesalers and agents to sell a new product
Catherine	Higher education institution	14 years	6 week pilot	Instruction to prepare internal faculty on a new process
Lisa	Life insurance	14 years	2 months	Instruction to prepare internal underwriters for a new product
William	Instructional design contractor	17 years	7 months	Instruction to prepare internal agents at nationwide health insurance company on the Affordable Care Act
Brian	Commercial insurance	10 years	5 months	Instruction to prepare external agents to sell a new product

APPENDIX K – MICHELLE CASE RECORD

Michelle Kickoff Interview Notes

1 5/1/14 2:00 p.m.

- 2 • Confirmed M's Google docs account access
- 3 • Shared Google Doc with Michelle: Designer Reflection Study. She confirmed it was
- 4 received, as were the documents and subfolder.
- 5 • I told her I would provide a summary of the schedule that we defined via the appropriate
- 6 Google Doc.
- 7 • I also told her I would provide instructions (via the Resources subfolder) for how to
- 8 access Google Drive and the Docs from the file manager (Windows Explore).
- 9 • We then proceeded with the discussion below.

10

11 **Interviewer:** How many people are working on this project?

12 **Responder:** There are 3 people that meet with the client from her office; they meet about the
 13 entire project, so other things in addition to the training she designs; they meet with 2–3 people
 14 at the client site. She is the only IDer on this project. Her colleagues who attend the client
 15 meetings are familiar with the participants (for whom the instruction is being designed) because
 16 they facilitate these training events. They are able to provide M with valuable feedback about
 17 them.

18 **Interviewer:** What is your role in the project?

19 **Responder:** Primary Ider

20 **Interviewer:** What percentage of the design work will you provide vs. someone from your
 21 team?

22 **Responder:** 100%

23 **Interviewer:** Describe the deadlines for this project.

24 **Responder:** She will have the outline by May 20th (Tuesday); that is when colleagues are
 25 meeting with the client next. They usually meet every other week.

26 She will get a draft to her colleagues June 12th. Shouldn't be too many changes

27 The session is June 26th.

28 Since the facilitators are involved in the project they know what she's working on, so she'll get
 29 the final to them one week before.

30 **Interviewer:** Describe the client for this project.

31 **Responder:** Automotive financial services company. They handle the financial side of
 32 automotive. Dealers are their customers. A group of people are spearheading a change initiative;
 33 upgrading an IT system. It is impacting several areas (from accounting to dealer service).

34 Participants all are considered “work stream” leads; in other words, they are experts of certain or
 35 various areas being impacted by upgrade. For example, some departments represented include:
 36 business requirements, data migrations, operations infrastructure, training, finance, procurement,
 37 IT security, change management.

38 **Interviewer:** What might happen if you miss any milestones or deadlines for this project?

39 **Responder:** I really wouldn’t miss them. We have it in good working order because I’ve been
 40 doing this for a long time. I put together a timeline and build time in for me. They are also
 41 requesting outline a lot earlier, which is not a problem.

42 **Interviewer:** When we begin our study, how far into the project’s timeline will you be?

43 **Responder:** Just in beginning stages of research. They meet again this coming Tuesday. We
 44 know some elements. I’m probably just 10% in. I can look at what we’ve already provided, etc.
 45 We’ve worked with this group for several sessions.

46 **Interviewer:** When we begin our study, how far into the project’s work will you be?

47 **Responder:** About 10%

48 **Interviewer:** How long is the project you are working on during this study?

49 Responder, when did this project kick off?

50 **Responder:** The project in which this session is an element of kicked off in January of 2013. For
 51 this particular session, I began brainstorming about it during the previous session on April 17,
 52 2014. – June 26, 2014 (this is the date of the session)

53 **Interviewer:** On average, what percentage of your workweek do you expect to be dedicated to
 54 this project during the six weeks of this study?

55 **Responder:** About 50%

56 **Interviewer:** Describe the project. What differences or similarities can you draw compared to
 57 other projects?

58 **Responder:** Same client as often used; group of professional supervisory individuals. She has
 59 done a lot for that level. Difference: more of an open session, they want to generate discussion
 60 and planning for future. It’s not so much learn, practice, reinforce ... it’s more reflective. We’ve
 61 done some of that; This is not that traditional. With this client, we have done both types of
 62 training—reflective, working sessions and more traditional training. I feel for this one, they want
 63 it more open. Sometimes we struggle with them because they don’t always know what they want
 64 the outcome to be.

65 **Interviewer:** What questions can I answer for you about this study or the process?

66 Responder: Has none

- 67
- We discussed surveys
 - 68 • We discussed the survey links provided via email. I will send, and Michelle will complete
 - 69 before she begins reflection.
 - 70 • We discussed the weekly reflective journal led by my guided questions.

71 • I will post the first week's reflection next Thursday, May 8th. Michelle will complete by
72 end of day, Saturday, May 10th. I will review and may respond by Monday May 12th.
73 Subsequent sets of reflection questions will be provided by me each Thursday and will
74 follow the same weekly schedule.

75 • We discussed design products.

76 **Interviewer:** As part of the study, I would like to review the design products developed during
77 the week. Please place whatever you can into the appropriate week's folder. If you cannot
78 provide something, please describe the product in depth in your reflection journal

Michelle Timeline and Schedule

Event	Planned Complete Date	Responsible Party
Design Project Kickoff	4/1/14	Participant
Onboard Meeting	5/1/14	Both Researcher and Participant
Demographic Survey Delivered	5/7/14	Researcher
Demographic Survey Completed	5/8/14	Participant
Reflection Survey Delivered	5/7/14	Researcher
Reflection Survey Completed	5/8/14	Participant
Reflection 1 Delivered	5/8/14	Researcher
Reflection 1 Completed	5/10/14	Participant
Reflection 1 Comments provided	5/12/14	Researcher
Reflection 1 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 2 Delivered	5/15/14	Researcher
Reflection 2 Completed	5/17/14	Participant
Reflection 2 Comments provided	5/19/14	Researcher
Reflection 2 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 3 Delivered	5/22/14	Researcher
Reflection 3 Completed	5/24/14	Participant
Reflection 3 Comments provided	5/26/14	Researcher
Reflection 3 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 4 Delivered	5/29/14	Researcher
Reflection 4 Completed	5/31/14	Participant
Reflection 4 Comments provided	6/2/14	Researcher
Reflection 4 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 5 Delivered	6/5/14	Researcher
Reflection 5 Completed	6/7/14	Participant
Reflection 5 Comments provided	6/9/14	Researcher
Reflection 5 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 6 Delivered	6/12/14	Researcher
Reflection 6 Completed	6/14/14	Participant
Final Survey Delivered	6/15/14	Researcher
Reflection 6 Comments provided	6/16/14	Researcher
Final Survey Completed	6/19/14	Participant
Reflection 6 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant

Michelle Demographic Survey

Age	36 – 40
Gender	Female
Total years of active, professional work experience do you have in a corporate environment:	19
Total years of active, professional work experience do you have in an academic environment:	9
Total years have you been actively designing instruction in a corporate environment?	9
How many years, in total, have you been actively designing instruction in an academic environment	9
Percentage of current role that typically involves designing instruction?	76– 100%
Ratio of design time typically dedicated to designing for internal clients vs external clients	10/90
Percentage of design time typically spent on designing individually (compared to as part of a team)?	76– 100%

Michelle SRIS Scale Baseline

Part 1	
I don't often think about my thoughts.	2 - rarely true
I rarely spend time in self-reflection.	2 - rarely true
I frequently examine my feelings.	4 - sometimes true
I don't really think about why I behave in the way that I do.	2 - rarely true
I frequently take time to reflect on my thoughts.	4 - sometimes true
I often think about the way I feel about things.	4 - sometimes true
Part 2	
I am not really interested in analyzing my behavior.	2 - rarely true
It is important for me to evaluate the things that I do.	4 - sometimes true
I am very interested in examining what I think about.	4 - sometimes true
It is important to me to try to understand what my feelings mean.	4 - sometimes true
I have a definite need to understand the way that my mind works.	4 - sometimes true
It is important to me to be able to understand how my thoughts arise.	4 - sometimes true
Part 3	
I am usually aware of my thoughts.	4 - sometimes true
I'm often confused about the way that I really feel about things.	3 - 50/50
I usually have a very clear idea about why I've behaved in a certain way.	3 - 50/50
I'm often aware that I'm having a feeling, but I often don't quite know what it is.	3 - 50/50
My behavior often puzzles me.	2 - rarely true
Thinking about my thoughts makes me more confused.	2 - rarely true
Often I find it difficult to make sense of the way I feel about things.	2 - rarely true
I usually know why I feel the way I do.	3 - 50/50

Michelle Reflection Journal**1 Week 1: May 8–10**

2 Interviewer: Discuss your previous experiences that are guiding you during this project.

3 Responder: This is the seventh session in this particular series. The structure of the
4 sessions have evolved over time, but we have developed a system with the client to
5 hopefully provide them with their needed product and outcomes.

6 Interviewer: Thanks. To add to that, are you relying solely on the previous sessions, or
7 can you think of any other experiences (of your own), design or not, that are guiding
8 your design? Based on your response in the last question, I see you have a “vocal
9 client.” Are there certain experiences you’re relying on or have learned from in order to
10 design with this person in mind?

11 Responder: Well, I usually rely on my education and experience with a wide variety of
12 clients in different industries and organizations to guide how I work with a client.
13 Something that may work with this client may not be appropriate or desired by another. I
14 also learned about the environment at the client site—open “innovation” meeting rooms
15 with bean bags and white boards—I knew that they would be open to a more “training”
16 feel and a less “academic” feel to their sessions. Working at Wayne, I sometimes work
17 with faculty and am required to take a more academic approach to sessions (e.g., case
18 study and article work). For this client, that would not work.

19 Interviewer: This is great insight. It seems your professional experiences guide the
20 way. Have you found you ever rely on personal experiences, or is it primarily
21 professional?

22 Responder: Primarily professional.

23 Interviewer: Discuss how you framed the design problem.

24 Responder: The organizational culture and traditions of this group have caused issues
25 in actually applying what they have learned from these sessions. Because of this, we
26 are culminating the series (this is the last session) by focusing on a few different
27 elements. We will review the topics we have covered throughout, look at how the
28 participants have changed and developed since the beginning of the project and
29 examine how the organization has changed. We will delve into organizational culture a
30 bit more and examine their own organizational culture, review how other organizations
31 have changed their cultures so that moving forward they can possibly apply some of the
32 same tools within their organization.

33 Interviewer: Discuss your own internal beliefs that are guiding you during this project.

34 Responder: I believe that this group is capable of taking the learnings from their
35 sessions and applying them so that is not a strain on them. So, I will try to provide them

36 with an easy way to do this. Also, we have a very strong and vocal client for this
37 particular project, who is not necessarily knowledgeable in instructional design
38 principles. I may have to give up some of my wants for theirs, but this has gotten better
39 as the project has progressed.

40 **Week 2: May 15–17**

41 **Interviewer:** Discuss your ongoing interaction with those who interface with the client.

42 **Responder:** I usually meet with them via phone once a week and then via email during
43 the rest of the week. They do provide an abundance of information about the client. I
44 prefer to get basic information about the participants, perceived needs and client wants
45 and then come up with ideas for a session on my own. I'm not one to talk at length
46 about what I'm thinking about including in a session until I can present it in a some kind
47 of refined format—I'm open to changing anything after a critique, but I do appreciate
48 some time to process the information. Some of my internal partners like to give me a
49 whole exercise right off the bat to put into a session without thinking it through. I have
50 learned to take their ideas and put them into the session or modify them slightly and
51 explain my reasoning just so I can make sure everyone's desires are covered. If I don't
52 put a suggestion in, I have learned to specifically address why I did not put it in to avoid
53 questions about it. I definitely appreciate their input because they have direct contact
54 with the client in this case, however, I would prefer some time on my own to think about
55 specifics for the session without getting specific ideas.

56 **Interviewer:** It sounds like the relationship you have with your peers requires a lot of
57 trust from both sides. Do you agree?

58 **Responder:** Yes. We have a unique environment where most of us work at home and
59 have flexible schedules. So, we need to rely on others to complete their tasks in a timely
60 manner and offer appropriate insight so that work is done correctly for the client.

61 **Interviewer:** Discuss how your design solution compares to other solutions you've
62 implemented.

63 **Responder:** Since this is seventh session at the end of a series - it is very similar to the
64 other sessions we've implemented in the series. The structure and activities have a
65 similar feel to them b/c we have been working with this client for so long and hopefully
66 understand what they want (most of the time!).

67 **Interviewer:** Given that it is the seventh in a series, what do you do or rely on to ensure
68 each subsequent program stays fresh, gains the students' attention, keeps them
69 engaged, etc.

70 **Responder:** I try to put in active, experiential exercises during each session that are
71 different from other activities that they have done. For example, in this last session, they
72 are going to do some kind of review game or activity. This hasn't been done at all. I

73 have found that they enjoy a little bit of competition so have been adding a competitive
74 element into the last couple sessions - but I try to do it in a different way each time. I
75 also know (now) that this group is not great at having large group discussions, but learn
76 a lot when they do pair, trio or small group work. So, I tend to design more exercises
77 with those group in mind. I try to keep it fast-paced with new and different types of
78 exercises in each session.

79 **Interviewer:** Discuss how you are dealing with ambiguity or uncertainty in the project.

80 **Responder:** If there is something I don't know, I can easily get it answered by my
81 internal partners. They meet with the client every other week and discuss the upcoming
82 session. They will review a brief outline for the session this week and if they have any
83 questions at that point I will hear about them after the meeting. I uploaded a detailed
84 outline for you (they would receive a shorter version with just the highlights). One small
85 item is the date will be changed to possibly a week or two later due to conflicts on the
86 client end. I'm still waiting on the date, but am moving forward with my schedule as
87 planned.

88 **Interviewer:** Thanks!

89 **Responder:** New date is now July 9.

90 **Interviewer:** Please post any design products, brainstorming or notes to the folder.

91 THANKS!

92 **Week 3: May 22–24**

93 **Interviewer:** Discuss your interaction with specific models or images throughout this
94 project.

95 **Responder:** I might need some more clarification here. I'm not sure what you mean by
96 models or images. The models or images I use during design? Or, the models I might
97 use in the content? Can you give me examples of some specific models and images?

98 **Interviewer:** Mainly models and images in the content. I'm wondering what your
99 thoughts are when you're working with visuals, graphics and such.

100 **Responder:** OK. Since this course is basically discussion driven, I haven't come across
101 any visuals or graphics that I yet want to include. In general, I do tend to organize
102 information in tables frequently because it organizes it nicely for the participant and the
103 instructor. I've used them to explain information easily and I also use them in exercises
104 with blank "cells" where participants can fill in ideas, discussion results, etc.

105 **Interviewer:** I understand that this has been a straightforward project. Discuss any
106 unexpected challenges that have arisen during this project. Think in terms of how other
107 designers might see them as a challenge, even if you don't.

108 **Responder:** I believe that others may see the audience as a challenge. They come
109 from many different areas and are generally an analytical bunch of people. It can be
110 challenging to provide them with a session where they don't seem bored. I am
111 constantly striving to ensure they remain engaged so I review and critique every activity
112 extensively. It is also challenging making sure that the client's needs have been met
113 without giving away the entire contents of the session before it has started, since they
114 are also participants. My internal partners have done a good job of handling this part of
115 it.

116 **Interviewer:** What in your repertoire or past do you think helps you (1.) effectively
117 critique your activities and (2.) deal with this challenging audience and meet their
118 expectations?

119 **Responder:** 1. When I go back and review my activities, I think about my audience and
120 whether or not the activity will resonate with them - will really get the point across. I try
121 to think about how they would respond and complete an activity - really think it through
122 from their standpoint - in order to make any needed changes. In the past, I've had
123 activities in session that maybe did not go as smoothly as I would have thought - so I
124 have tried to make both the instructions for the facilitator and the participants as easy as
125 possible so the maximum benefit can be gained.

126 2. I think the fact that I spent many years working as a trainer helps me to understand
127 the capabilities and desires of different audiences. Experience doing stand-up training
128 can be very valuable to an instructional designer. You can better understand when and
129 how long something is going to take, if a certain group will respond to a particular
130 exercise, when there needs to be a different type of activity, etc. I've also worked with
131 many different levels, from plant workers who could not read, to MDs with many years
132 of schooling. I put myself in the shoes of the audience and try to think how they would
133 feel about a particular exercise or activity and what their needs are - how will they be
134 using this information back on the job?

135 **Interviewer:** Discuss your personal design strengths that emerged during this project.

136 **Responder:** The ability to take ideas that my internal partners provide and turn them
137 into an outline that can be easily explained and "sold" to our client so that I can move
138 forward with the creation of the materials. Creating measurable learning objectives for
139 our client.

140 **Interviewer:** Please post any design products, brainstorming or notes to the Resources
141 folder. THANKS!

142 **Responder:** I had a few days off this week so I do not have anything new to add.
143 Hopefully something next week. Thanks!

144 **Week 4: May 29–31**

145 **Interviewer:** Discuss specific design areas you might continue nurturing as a result of
146 this project.

147 **Responder:** I'm interested in using more games for this group - I think they would
148 respond to them b/c they really have liked having an element of competition in some
149 previous sessions. The first part that I've developed is not a very exciting game, but it
150 will work for it's purpose and for this group, I think. But, like I said, I'm always thinking
151 about it and might adjust it later!! :)

152 **Interviewer:** Do you ever find yourself looking for game-type solutions in your non-work
153 life? If so, explain.

154 **Responder:** My kids and I play a lot of games - structured board games but also games
155 in every day life where you don't need any materials. We usually play these types of
156 games when they need to practice patience, stop arguing or be entertained without
157 using electronics.

158 **Interviewer:** How are models manifesting themselves in the design project? What
159 models or frameworks are you using?

160 **Responder:** Could you give me an example of this? Are you referring to something like
161 the ADDIE model? If so, that is basically how I proceed through each project. Although,
162 since I have been doing this a long time, I'm so sorry that I don't actually think about
163 models or frameworks when I work through something. They may be in the back of my
164 mind, but I don't consciously decide on using a model or framework. Could you give me
165 some examples?

166 **Interviewer:** You're completely on the right track here in that ADDIE is "there" but not
167 consciously applied. Are there any others like ADDIE that you unconsciously use that
168 you could actually name? Merrill's first principles, ARCS model, etc. If not, are there
169 some advanced "rules" that you are following - based on your own experience of what
170 works?

171 **Responder:** Rules I follow:

172 1) I usually have a short explanation of a concept or presentation of an idea followed by
173 some kind of exercise.

174 2) I don't do the same type of exercise/activity twice. It could be similar, but I will change
175 it up in some way so it doesn't feel rote.

176 3) I always have a mixture of individual, pair/trio and small group exercises t o break it
177 up.

178 4) If something needs to be explained, it shouldn't take any longer than 10/15 minutes.

179 5) I like to make sure participants are getting up and out of their chairs - even if just
180 writing on a flip chart - so that they aren't sitting for long periods and maintain their
181 interest.

182 6) I always have an action planning section at the end of a session - it may be formal or
183 it may be informal, but there is always time for them to think about how they are going to
184 apply what they learned back on the job. This usually happens throughout the session,
185 but always included in a wrap-up at the end.

186 **Interviewer:** Describe your tangible results from this week.

187 **Responder:** Completed the Check-in part of the session. See the outline for detailed
188 info on that part. I've attached the documents related to it.

189 **Interviewer:** GREAT!

190 **Interviewer:** Please post any design products, brainstorms or notes to the Resources
191 folder. THANKS!

192 **Week 5: June 5-7**

193 **Interviewer:** How would you explain your process to the client this week?

194 **Responder:** If I did talk to the client, I would tell them that it is going well and that I'm
195 working on making sure that we include all the important parts we talked about in the
196 outline. I'm working to include a variety of exercises that I believe the participants will
197 enjoy as well as meet the goals that they would like to see as a result of the session. I
198 would say that I'm pleased with the progress of the session.

199 **Interviewer:** Discuss how this project is progressing.

200 **Responder:** It's going well. I just have one last section I'm working on. I normally move
201 in pretty sequential order when I create a session, but because I lost some time due to
202 illness, I jumped ahead and got some of the easier sections done at the end so that I
203 can focus on the big "culture" section of the workshop. This will help me focus on that
204 section if I know that everything else is at least drafted.

205 **Interviewer:** How did content themes emerge during design?

206 **Responder:** Could you clarify this question? Give me an example of what you mean?

207 **Interviewer:** When you are pulling all your content together and determining what to do
208 with it, how to organize it etc., ideas emerge that lead you to "know" how to categorize
209 and organize that information. I want you to discuss that process. Does that make
210 sense?

211 **Responder:** As I pulled together content for the workshop, I looked at how the content
212 can be easily explained or what type of exercise would work best for it. I also look at
213 how it should be set up on the workbook page in order to explain information the best -

214 like using a table to complete or listing discussion questions. I also wanted to make sure
215 each activity was different enough from each other, added interest to the session and
216 will meet the objectives we are trying to accomplish. My goals are really to limit words
217 on a page and have participants come up with their own ideas and solutions to thought-
218 provoking questions and activities. I try to keep everything as simple as possible so as
219 not to confuse the instructor or the participants.

220 **Interviewer:** Please post any design products, brainstorm or notes to the Resources
221 folder. THANKS!

222 ***Week 6: June 12–14***

223 **Interviewer:** As this reflection process comes to an end, how would you describe your
224 design process for this project to another designer?

225 **Responder:** I would tell them that I started developing this session with a draft of
226 learning objectives and a detailed outline to help flush out my ideas with
227 activities/exercises and to visually see the flow of the session. I then moved (for the
228 most part) sequentially through the outline developing the Instructor Guide and each
229 section of the workshop. Completing the Instructor Guide with directions for the
230 instructor helps me process through each activity and ensure that we are meeting the
231 objectives of the session. I then go back at the end of completing the draft of the guide
232 and adjust the outline in case any of the objectives or activities changed during
233 development. This time one or two of them changed slightly after discussions about the
234 goals of certain parts of the program.

235 **Interviewer:** Do you think you altered any processes as a result of the reflection
236 process? Did you think differently while designing? Explain. ... Alternatively, did you
237 instead find yourself holding more strictly to your typical design process?

238 **Responder:** Yes, I did adhere to my regular design process, but this has given me
239 insight into thinking about why I do what I do.

240 **Interviewer:** What did this reflection process mean to you?

241 **Responder:** It's been interesting to describe why I do certain processes in particular
242 ways. I do have to describe the ideas behind various activities at times during my
243 regular meetings with my co-workers, but doing this helped to flush my thoughts out
244 more fully.

245 **Responder:** I hope that I provided you with some good information!

246 **Interviewer:** Please post any design products, brainstorm or notes to the Design
247 Products folder. THANKS!

248 **Interviewer:** After you complete this and we discuss any follow ups, I will be sending
249 you a final survey. Thank you, thank you, thank you for your help!

Michelle SRIS Scale Final

Part 1	
I don't often think about my thoughts.	2 - rarely true
I rarely spend time in self-reflection.	2 - rarely true
I frequently examine my feelings.	4 - sometimes true
I don't really think about why I behave in the way that I do.	2 - rarely true
I frequently take time to reflect on my thoughts.	4 - sometimes true
I often think about the way I feel about things.	4 - sometimes true
Part 2	
I am not really interested in analyzing my behavior.	2 - rarely true
It is important for me to evaluate the things that I do.	5 - always true
I am very interested in examining what I think about.	4 - sometimes true
It is important to me to try to understand what my feelings mean.	5 - always true
I have a definite need to understand the way that my mind works.	4 - sometimes true
It is important to me to be able to understand how my thoughts arise.	3 - 50/50
Part 3	
I am usually aware of my thoughts.	4 - sometimes true
I'm often confused about the way that I really feel about things.	3 - 50/50
I usually have a very clear idea about why I've behaved in a certain way.	4 - sometimes true
I'm often aware that I'm having a feeling, but I often don't quite know what it is.	2 - rarely true
My behavior often puzzles me.	2 - rarely true
Thinking about my thoughts makes me more confused.	2 - rarely true
Often I find it difficult to make sense of the way I feel about things.	2 - rarely true
I usually know why I feel the way I do.	2 - rarely true

REFLECT Results

Q#	Criterion	Michelle
1.1	Writing spectrum	HA
1.1	Presence	TA
1.1	Conflict description	TA
1.1	Emotion	HA
1.1	Analysis/meaning-making	R
1.1	Attention to assignment	HA
1.2	Writing spectrum	CR-CL
1.2	Presence	R
1.2	Conflict description	R
1.2	Emotion	TA
1.2	Analysis/meaning-making	R
1.2	Attention to assignment	R
1.3	Writing spectrum	R
1.3	Presence	R
1.3	Conflict description	R
1.3	Emotion	TA
1.3	Analysis/meaning-making	R
1.3	Attention to assignment	R
2.1	Writing spectrum	CR-CL
2.1	Presence	R
2.1	Conflict description	CR-CL
2.1	Emotion	R
2.1	Analysis/meaning-making	CR-CL
2.1	Attention to assignment	R
2.2	Writing spectrum	HA
2.2	Presence	TA
2.2	Conflict description	TA
2.2	Emotion	HA
2.2	Analysis/meaning-making	TA
2.2	Attention to assignment	TA
2.3	Writing spectrum	R
2.3	Presence	TA
2.3	Conflict description	TA
2.3	Emotion	HA
2.3	Analysis/meaning-making	R
2.3	Attention to assignment	TA
3.1	Writing spectrum	HA
3.1	Presence	R

Q#	Criterion	Michelle
3.1	Conflict description	R
3.1	Emotion	HA
3.1	Analysis/meaning-making	R
3.1	Attention to assignment	R
3.2	Writing spectrum	R
3.2	Presence	R
3.2	Conflict description	CR-CL
3.2	Emotion	TA
3.2	Analysis/meaning-making	CR
3.2	Attention to assignment	R
4.1	Writing spectrum	CR-CL
4.1	Presence	R
4.1	Conflict description	CR-CL
4.1	Emotion	TA
4.1	Analysis/meaning-making	R
4.1	Attention to assignment	R
4.2	Writing spectrum	R
4.2	Presence	R
4.2	Conflict description	R
4.2	Emotion	HA
4.2	Analysis/meaning-making	R
4.2	Attention to assignment	TA
4.3	Writing spectrum	HA
4.3	Presence	TA
4.3	Conflict description	HA
4.3	Emotion	HA
4.3	Analysis/meaning-making	HA
4.3	Attention to assignment	TA
5.1	Writing spectrum	TA
5.1	Presence	TA
5.1	Conflict description	TA
5.1	Emotion	HA
5.1	Analysis/meaning-making	TA
5.1	Attention to assignment	TA
5.2	Writing spectrum	R
5.2	Presence	R
5.2	Conflict description	R
5.2	Emotion	HA
5.2	Analysis/meaning-making	TA
5.2	Attention to assignment	R

Q#	Criterion	Michelle
5.3	Writing spectrum	R
5.3	Presence	R
5.3	Conflict description	R
5.3	Emotion	HA
5.3	Analysis/meaning-making	R
5.3	Attention to assignment	R
6.1	Writing spectrum	R
6.1	Presence	R
6.1	Conflict description	R
6.1	Emotion	HA
6.1	Analysis/meaning-making	R
6.1	Attention to assignment	R
6.2	Writing spectrum	HA
6.2	Presence	TA
6.2	Conflict description	TA
6.2	Emotion	HA
6.2	Analysis/meaning-making	R
6.2	Attention to assignment	TA
6.3	Writing spectrum	R
6.3	Presence	R
6.3	Conflict description	R
6.3	Emotion	HA
6.3	Analysis/meaning-making	R
6.3	Attention to assignment	R

APPENDIX L – MATTHEW CASE RECORD

Matthew Kickoff Interview Notes

- 1 **Interviewer:** How many people are working on this project?
 2 If there are more or less than 3 (ID, CD and MD), please list next to each below in the
 3 table. Also, how many primary client contacts or client SMEs for each?
- 4 **Responder:** Sr instructional designer. Recent as of January. Seems to mean they hold
 5 me back. I have a lot of weird little projects. I have HCI background and software
 6 development background.
- 7 1. Bank 1 - I was on a project where I was working anti-money laundering, sanctions
 8 content for a major bank in London. Delicate and I was brought in to develop content
 9 around money laundering - it's wrapped up. -mm(2IDs, 2CDs, no media - I began as
 10 lead but transitioned to the other ID as I rolled off)
- 11 2 - Bank 2a - Small business leader essentials - for managers of small business
 12 bankers - It's a sales-focused positions, but they work very hard to get more toward
 13 focusing on being an advisor. We are working on updating their small business banker
 14 manager training. I'm reviewing the content. Design work is done, but I'm reviewing. 4-
 15 day instructor-led course. They want to modify day 1, which integrates coaching
 16 throughout course. (2CDs - 1 in training)
- 17 3 - Bank 2b - A group want to optimize their people's times. New versions of a lot of
 18 their courses. Stripping out interactivity, but still web-based. Micah sees it as an
 19 improvement.
- 20 4 - Bank 2c - how money laundering affects global trade. in end of design
- 21 5 - Software 1 - voice of the customer sessions, recording their people, going out,
 22 talking to customer advisor boards. Putting them online. MM is doing information
 23 design. moving into mostly hands off (no CD)
- 24 6 - Insurance Company 1 - Information design project; designed a dashboard to present
 25 status to executives (Jan-Mar). It's handed off. Now, MM is creating a tool for account
 26 and customer relationship management (info design). (no CD)
- 27 7 - Internal 1a quality initiative (fluid - driven by me and pulling in others as necessary)
- 28 8 - Internal 1b internal presentation (content: teams at Option Six - no CD yet)
- 29 9 - Internal 1c consistency (I believe this is likely the same as 7 - otherwise, I don't
 30 recall)
- 31 10 - Internal 1d mentoring tasks (just myself and mento)
- 32 11 - Internal 1e internal boot camp. (myself and HR SME)

33 **Interviewer:** What is your role in the project?

34 **Responder:** Instructional designer - we do ID. That's it. IDers don't do MD; don't do
35 content. sometimes PM if there isn't one. Later phases, less involved. When building it,
36 job is just to ensure reality meets ID vision.

37 Content developer - ID defines what it look slike; started putting together pointers to
38 where everything sits, where content is pulled from. They actualize my content. They
39 apply style guidelines, makes one voice, make it into an actual product, send request to
40 media to be built.

41 Media developer - most straight-forward, build flash, process, scrub images, web
42 development, captivate - most transactional in project (but still definitely not
43 transactional). sometime they farm stuff out to other MDs

44 All based on who has availability, who has capacity, who has skillset.

45 **Interviewer:** What percentage of the design work will you provide vs. someone from
46 your team?

47 **Responder:** 85–90% of time is ID work. 5–10 is content development.

48 **Interviewer:** Describe the deadlines for this project. Please enter general or specific
49 deadlines next to each below.

50 **Responder:**

Client	# of Internal People	# of Clients/ SMEs	Approximate project start date	General or specific deadlines for completion or milestones	% of your work completed for this project
1	3	?	3/15?	?	100%
2	3	2	4/15	6/10	90%
3	3	2?	5/5	6/15?	95%
4	3	2	4/1	8?	95%
5	3	2	5/5	6/10?	100%
6	3	2	5/9	undefined	20%

7 initiative	3	7–10	2/20	year end	60%
8	3			undefined	
9	1	0		ongoing	
10	3	2	5/9	undefined	20%
11	3	?	5/29	8/1	5%

51

52 **Interviewer:** Describe the client for these projects.53 **Responder:** All internal, banks, and insurance.54 **Interviewer:** What might happen if you miss any milestones or deadlines for this
55 project?56 **Responder:** We don't miss deadlines! We anticipate missing a deadline, and
57 renegotiate what the deadline is; rework contract plan. Managing the timeline is a really
58 big deal. Having a PM is very nice.59 **Interviewer:** When we begin our study, how far into the project's timeline will you be?60 **Responder:** Addressed in table above.61 **Interviewer:** When we begin our study, how far into the project's work will you be?62 **Responder:** Addressed in table above.63 **Interviewer:** How long is the project you are working on during this study?64 **Responder:** Addressed in table above.65 **Interviewer:** On average, what percentage of your work week do you expect to be
66 dedicated to these projects during the six weeks of this study?67 **Responder:** 85–90%68 **Interviewer:** What differences or similarities can you draw compared to other projects?69 **Responder:** I don't see any of them as standouts. None of them have struck me as
70 "I've never done this before." The dashboard is the biggest question mark. The person
71 requesting it is not 100% sure of what they want.72 **Interviewer:** What questions can I answer for you about this study or the process?

73 **Responder:** would like TQG to post reflection questions on Friday to complete by
74 Sunday. He would also like reminders each week to complete the reflection questions.

75 **Interviewer:** Since you remain anonymous in this study, I typically assign a pseudonym
76 for my participants. Would you like to choose your own?

77 **Responder:** MM

Matthew Timeline and Schedule

Event	Planned Complete Date	Responsible Party
Onboard Meeting	5/21/14	Both Researcher and Participant
Demographic Survey Delivered	5/22/14	Researcher
Demographic Survey Completed	before beginning reflection	Participant
Reflection Survey Delivered	5/22/14	Researcher
Reflection Survey Completed	before beginning reflection	Participant
Reflection 1 Delivered	5/23/14	Researcher
Reflection 1 Completed	5/25/14	Participant
Reflection 1 Comments provided, if applicable	5/27/14	Researcher
Reflection 1 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 2 Delivered	5/30/14	Researcher
Reflection 2 Completed	6/1/14	Participant
Reflection 2 Comments provided, if applicable	6/3/14	Researcher
Reflection 2 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 3 Delivered	6/6/14	Researcher
Reflection 3 Completed	6/8/14	Participant
Reflection 3 Comments provided, if applicable	6/10/14	Researcher
Reflection 3 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 4 Delivered	6/13/14	Researcher
Reflection 4 Completed	6/15/14	Participant
Reflection 4 Comments provided, if applicable	6/17/14	Researcher

Reflection 4 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 5 Delivered	6/20/14	Researcher
Reflection 5 Completed	6/22/14	Participant
Reflection 5 Comments provided, if applicable	6/24/14	Researcher
Reflection 5 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 6 Delivered	6/27/14	Researcher
Reflection 6 Completed	6/29/14	Participant
Final Survey Delivered	7/1/14	Researcher
Reflection 6 Comments provided, if applicable	7/1/14	Researcher
Final Survey Completed	7/3/14	Participant
Reflection 6 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant

Matthew Demographic Survey

Age	36–40
Gender	Male
Total years of active, professional work experience do you have in a corporate environment:	10-ish
Total years of active, professional work experience do you have in an academic environment:	2
Total years have you been actively designing instruction in a corporate environment?	6
How many years, in total, have you been actively designing instruction in an academic environment	2
Percentage of current role that typically involves designing instruction?	51–75%
Ratio of design time typically dedicated to designing for internal clients vs external clients	10–25%
Percentage of design time typically spent on designing individually (compared to as part of a team)?	Less than 10%

Matthew SRIS Scale Baseline

Part 1	
I don't often think about my thoughts.	2 - rarely true
I rarely spend time in self-reflection.	1 - never true
I frequently examine my feelings.	5 - always true
I don't really think about why I behave in the way that I do.	1 - never true
I frequently take time to reflect on my thoughts.	4 - sometimes true
I often think about the way I feel about things.	5 - always true
Part 2	
I am not really interested in analyzing my behavior.	1 - never true
It is important for me to evaluate the things that I do.	5 - always true
I am very interested in examining what I think about.	5 - always true
It is important to me to try to understand what my feelings mean.	5 - always true
I have a definite need to understand the way that my mind works.	5 - always true
It is important to me to be able to understand how my thoughts arise.	5 - always true
Part 3	
I am usually aware of my thoughts.	5 - always true
I'm often confused about the way that I really feel about things.	3 - 50/50
I usually have a very clear idea about why I've behaved in a certain way.	4 - sometimes true
I'm often aware that I'm having a feeling, but I often don't quite know what it is.	2 - rarely true
My behavior often puzzles me.	1 - never true
Thinking about my thoughts makes me more confused.	1 - never true
Often I find it difficult to make sense of the way I feel about things.	2 - rarely true
I usually know why I feel the way I do.	5 - always true

Matthew Reflection Journal1 **Week 1: 5/23–5/25**2 **Interviewer:** Discuss your previous experiences that are guiding you during this project.3 **Responder:** Which project? Are you looking for specific things here? I'm not sure I can
4 answer this question as is because I've too many diverse projects for this to be
5 meaningful to me. Also, what sort of previous experiences do you want here? Some of
6 the content is similar to things I've done before. Most of the courses I'm working on are
7 not particularly unique - mostly redesigns/rewrites.8 **Interviewer:** In the interview transcript, I mentioned that you may want to identify
9 enough of the projects that would equal a majority of your design time over the next 6
10 weeks. It will help us to focus on and discuss a specific project or projects11 **Responder:** Project 6 is the most interesting to me at the moment as it is a hybrid
12 instructional/performance support tool and it builds in some ways upon the dashboard
13 project also mentioned in the description. It's fun to think through, design and engage
14 with an interactive tool such as this one might turn out to be and it reminds me of some
15 of the enterprise software development projects I used to work on as a software
16 developer.17 **Interviewer:** I like this focus. Maybe this and another one can be our focus - when one
18 gets little play during the week, the other one may? Thoughts?19 **Responder:** Also, I'm kicking off a new project tomorrow morning.20 **Interviewer:** Let's go ahead and add in the new project and have it be the focus with p621 **Interviewer:** Discuss how you framed the design problem.22 **Responder:** (Assuming 6) The relationships between people and the viewer's
23 perception seemed to be the most interesting (and therefore most important) parts of
24 the problem. I've focused in on how to provide an interactive simulation tool that might
25 model and represent client relationships from the POV of an account manager.26 **Interviewer:** Discuss your own internal beliefs that are guiding you during this project.27 **Responder:** I'm not sure, really. It's more like I'm using the project to explore a number
28 of my own beliefs. I don't believe that I can build an accurate model and I also believe
29 that the more accurate it is, the more unwieldy it will become. I'm working towards
30 satisficing, I guess.31 **Interviewer:** Let's keep this in mind as we progress.32 **Week 2: 5/30–6/1**33 **Interviewer:** Discuss your ongoing interaction with the client(s).

34 **Responder:** This week I was largely out of the office for travel, so little progress was
35 made on the dashboard and the new bank project just kicked off on Thursday afternoon.
36 I have limited knowledge at this point, but proposed a possible approach and they
37 seemed receptive if a bit apprehensive. Their framing of their apprehension leads me to
38 think they like the idea but are not sure that they will be able to implement it logistically.
39 However, they did not shut it down in any way.

40 **Interviewer:** Discuss how your design solution (or solutions) compares to other
41 solutions you've implemented.

42 **Responder:** We're not really at the solution stage yet, but really just in early phases of
43 analysis still for both projects. However, both are shaped by projects that have gone
44 before with the respective clients. Both are leaning away from didactic or traditional
45 approaches and more towards simulations of authentic experiences as both clients
46 seem to have the appetite. In the dashboard, the client is internal and the value of the
47 product would be in the ripple-effect of changes helping learners to build their own
48 internal models of stakeholder relationships. In the second, I am pushing for a brief up-
49 front course followed by one or more face-to-face simulations. Both approaches should
50 give learners the opportunity to digest and apply the content being provided.

51 **Interviewer:** Discuss how you are dealing with ambiguity or uncertainty in the projects.

52 **Responder:** That's what framing is all about, isn't it? You frame the problem around
53 what you believe you can legitimately approach and then the client comes back and
54 tells you which crucial elements you've missed and you begin to dig into those. On the
55 bank project, there's still uncertainty around budget and timeline, but we're asking those
56 questions and they'll be resolved (they are financial and therefore they WILL be
57 resolved). On the dashboard, the fact that I haven't been given a timeline means that I
58 get to determine it myself. I think my managers and colleagues know me well enough to
59 realise that if they give me a problem, I'll get it done in relatively short order and not
60 waste their time or money, so I'm not concerned there. I guess I take the ambiguity as
61 their indication of trust in my abilities.

62 **Interviewer:** Please post any design products, brainstorming or notes to the Resources
63 folder. THANKS!

64 **Responder:** n/a

65 **Interviewer:** Great reflection!

66 **Responder:** If you wouldn't mind, I'd appreciate it if you'd use <MY NAME> instead of
67 <pseudonym> when communicating with me. The initials are a bit off-putting.

68 **Week 3: June 6–8**

69 **Interviewer:** Discuss your interaction with specific models or images.

70 **Responder:** Not sure what you mean by this. Are you talking about specific ID models?
71 If so, there was no such interaction. We throw around 'ADDIE' and 'Agile,' but I wouldn't
72 say either of them really guides me. There are a couple of slides about ADDIE that we
73 usually skip over or breeze through during our kickoff presentation - there might be an
74 image on those.

75 **Interviewer:** Why don't they guide you? What in your repertoire renders these useless?

76 **Responder:** I suppose they might help to guide people who are new and we do talk
77 generally with clients about which phase we happen to be in, but no phase is truly
78 distinct from any of the others and it's not really possible to say "oh, for that hour and a
79 half, I was designing and not doing anything that could be seen as analysis or
80 development, etc." They are abstractions from reality. Additionally, having been a
81 software developer for many years, it is easy to recognize a similar set of phases which
82 are sort of enforced by the reality of that situation (probably any custom product
83 development cycle, really) and yet no one I knew ever felt a need to discuss such a
84 model (either in class as an IT professional or on the job) - it's just how projects worked
85 out. But also, since (as I mentioned earlier) I'm pretty sure it's the way all custom
86 development projects work out, I don't see any value in it. ADDIE can be useful in
87 offering a simple vocabulary for understanding what is (and will be) happening.

88 Other models offer me no value because they are impositions of deviation on reality. If
89 they are 'complicated,' it usually means they ask me to remember to make certain
90 changes to the natural way I do things. I don't see any that pretend to offer nearly
91 enough value to make that worthwhile.

92 **Interviewer:** Discuss unexpected challenges that have arisen during this project.

93 **Responder:** Nothing particularly unexpected has come up on either of these projects. I
94 think it would take a lot for something to feel unexpected to me, though. Each project is
95 unique and follows its own path, but they all start at some point and end at some point.
96 In between we feel them out, find the gaps and fill them in. They aren't all alike, but
97 something would have to be very unusual and develop very quickly for me to feel it was
98 unexpected.

99 **Interviewer:** Why do you think things don't feel unexpected to you?

100 **Responder:** Probably because I don't expect things to go smoothly and therefore I'm
101 not surprised when they never do. This probably goes back to the models question a bit
102 in that I don't expect them to follow some imposed model. They all always have hiccups
103 that have you redo some work you thought you were finished with.

104 **Interviewer:** Discuss your personal design strengths that emerged during this project.

105 **Responder:** Not sure. I don't think I'm showing any particular design strengths on either
106 of these projects. For the dashboard, maybe you could say that my software

107 development and HCI background are shining through because I'm familiar with what
108 can and cannot be done in such a tool as well as how it would be done, so my design is
109 grounded in reality. I guess that could be a strength. Also, on the Bank project, I'm
110 leaning towards a design which would incorporate performance support over a period of
111 time rather than expecting content to be internalized and locked in immediately. That's
112 not the norm either, I think, but it's something I like to do when I can. Is this what you
113 mean?

114 **Interviewer:** Yes, this is great. Do you think these projects are pretty standard, where
115 you do not feel you're providing any specific strengths? Also, if you feel this is so, would
116 another designer agree with this, or might they identify specific strengths?

117 **Responder:** Not sure how others would feel, but since you ask, I guess it's possible
118 that some others might be intimidated by some of the projects I find fun. This past
119 weekend I mentioned on a social network that I was excited about a new data analysis
120 project I got and one of my colleagues responded that she was happy for me and happy
121 it wasn't her. Neither of us have done a project like this before, but obviously we have
122 different views towards it.

123 Still, I'm not sure that I'm answering your question.

124 **Interviewer:** Please post any design products, brainstorming or notes to the Design
125 Products folder. THANKS!

126 ***Week 4: June 13–15***

127 **Interviewer:** Discuss specific design areas you might continue nurturing as a result of
128 this project.

129 **Responder:** HCI Design? Data visualization? Not really sure what you want me to
130 discuss here. Not much to say. I think they'll be fun. I think I'll get to explore some things
131 that I haven't much experience with, but beyond that, I'm not sure what you're asking.

132 **Interviewer:** This is good.

133 **Interviewer:** How are models manifesting themselves in the design project? What
134 models or frameworks are you using? (Note that others might find these evident, but
135 you may not be consciously applying them. ADDIE, Agile, Merrill's First Principles,
136 ARCS model, Gagne's 9 Events only name a few... If none of these are evident, are
137 there some advanced "rules" that you are following - based on your own experience of
138 what works?)

139 **Responder:** As I said, I mostly find ADDIE to be useful in communicating with the client
140 (and a little bit with my team). It allows us to set general expectations or remind them of
141 when we performed certain actions (and to dissuade them from returning to them).
142 We're calling some of our projects Agile and that's sort of fun - similar to the software
143 dev. model by the same name. You'd probably see elements of Merrill's and ARCS and

144 Gagne in my work, but that would be because they emerged from that particular setting
145 and not because I was imposing them. Occasionally I might go back to them if I feel like
146 the client has a lack of confidence and wants something that is research-backed, but
147 most often they just want something that works - I don't remember the last time I ran
148 into that.

149 UPDATE (9.17am): It all just pretty much feels like common sense in general, I think,
150 but maybe I've just internalized all of it? I'm not really sure which it is. I just went into
151 one of my colleagues' offices and found notes on their walls with reminders that seem to
152 refer back to models and techniques and whatnot. She is much newer to the field than I
153 am and maybe that accounts for it. I know that I never did that sort of thing (either as an
154 ID or as a software developer). Maybe it's just different approaches/styles? Maybe it's
155 level of confidence in my own skills? I don't know.

156 **Interviewer:** Interesting

157 **Interviewer:** What tangible results do you have this week? Do you feel this is normal for
158 a typical week, or do you feel you are under or over your typical output? Discuss.

159 **Responder:** Tangible results? I think I generated an Analysis Agreement and a few
160 design sketches this past week. Maybe there was some other stuff as well. Lots of
161 notes from phone calls, too. Also, lots of revisions. I imagine that's about par for the
162 course, but I've never really tried to measure my outcomes in that way before and I'm
163 really not sure that it's particularly meaningful. Also, things have been a bit on the slow
164 side.

165 Oh! I also revised a job aid for a project I'm taking over from a colleague.

166 **Interviewer:** Please post any design products, brainstorming or notes to the Design
167 Products folder. THANKS!

168 **Week 5: June 20–22**

169 **Interviewer:** How would you explain your process to the client this week?

170 **Responder:** This week my clients have been providing me with the information and
171 feedback that constitutes the flesh I am applying to the skeleton of which represents my
172 vision for the final products. Not sure they'd want to hear it that way (it's quite
173 pretentious), but that's pretty much what I've been doing.

174 **Interviewer:** Discuss how this project is progressing. (Is it pretty consistent with other
175 weeks, are there obstacles, etc...)

176 **Responder:** The major obstacle on the Bank project is the compressed timeline
177 (although reigning in their attempts at scope creep is also a fun challenge). I'd say the
178 biggest obstacle to the other project I'm discussing with you is the fact that it is so non-
179 standard and therefore assembling the proper talent to work on it is not straightforward.

180 This is especially interesting because I have the skills to take it end-to-end, but that
181 would tax my ability to multi-task in ways that would be anti-synergistic.

182 **Interviewer:** Is this frustrating for you? Or is it just part of the process? I could see how
183 areas you might want to get involved can't happen because of your other
184 accountabilities and expertise.

185 **Responder:** Nominally, I guess, but mostly I'm just happy to be a part of it and to see it
186 done as well as we are capable of doing it. I'm only one person and can't do everything
187 - sometimes because of skill and sometimes because of bandwidth.

188 On another note, we ran into a bit of an obstacle [this content has been deleted as
189 requested by the designer]

190 **Interviewer:** How did themes emerge? (When you are pulling all your content together
191 and determining what to do with it, how to organize it etc., ideas emerge that lead you to
192 "know" how to categorize and organize that information. I want you to discuss that
193 process. I hope that makes sense)

194 **Responder:** This only applies to the Bank project and there it's mostly following a fairly
195 standard sorting algorithm what do they need to know to understand this - OK, let's put
196 that before it. Then you ask yourself: which bits can they reasonably practice in this
197 format and then you place those items close to the related content, but with enough of a
198 gap to give it a chance to soak in. After that, I will move things around if the content
199 dictates a change or, if the client requests it, I see if any argument can be made in favor
200 or against. If the client stands firm in the face of my experience/logic, I do whatever they
201 ask.

202 **Interviewer:** How often do their suggested changes (that you don't agree with)
203 negatively impact the product? How do you cope?

204 **Responder:** This is what appears to be happening in my add-on above and it's
205 frustrating in this case primarily because I don't know that my instructional concerns
206 have actually been conveyed. If they have been conveyed and the client still wants it,
207 I'm fine with making the change - it's their dime and I've done what they've paid me for.
208 There are lots of projects I'm engaged in and, while some of these changes which go
209 against my recommendations might make the course sub-optimal from certain
210 perspectives, they are the ones that have to use them and not me. It would be more
211 sub-optimal if they felt they were forced into a decision they didn't like. [this content has
212 been deleted as requested by the designer]. However, the specific decision won't kill
213 anyone and it's still a good course. I'll get over it quick.

214 **Interviewer:** Please post any design products, brainstorm or notes to the Design
215 Products folder. THANKS!

216 **Week 6: June 27-29**

217 **Interviewer:** As this reflection process comes to an end, how would you describe your
218 design process for your 2 projects to another designer?

219 **Responder:** I'm not sure what you are asking here. To me, from a process perspective,
220 they are just as standard as any other design process. You gather and assimilate as
221 much information as you can into the evolving design.

222 **Interviewer:** Do you think you altered any processes as a result of the reflection
223 process? Did you think differently while designing? Explain... Alternatively, did you
224 instead find yourself holding more strictly to your typical design process?

225 **Responder:** No. I don't feel anything changed as a result, but it was nice to have the
226 opportunity to talk about what I was doing with someone who explicitly cares. I don't
227 think there's much to explain here because I don't think there is a strict step-by-step
228 process to follow - strictly or otherwise.

229 **Interviewer:** What did this reflection process mean to you?

230 **Responder:** As I explained above, it meant that I had someone asking me a bit about
231 my process. In the beginning, you were offering more interaction in the form of
232 messages and that was nice. As this study has progressed, you've been a bit less
233 talkative outside the prompts and I wish there'd been more of that, but all in all, if I
234 hadn't been writing this here, I'd have been talking about it with someone else (and, in
235 most cases, I have been anyway).

236 **Interviewer:** Please post any design products, brainstorming or notes to the Design
237 Products folder. THANKS

Matthew SRIS Final

Part 1	
I don't often think about my thoughts.	1 - never true
I rarely spend time in self-reflection.	1 - never true
I frequently examine my feelings.	4 - sometimes true
I don't really think about why I behave in the way that I do.	1 - never true
I frequently take time to reflect on my thoughts.	4 - sometimes true
I often think about the way I feel about things.	4 - sometimes true
Part 2	
I am not really interested in analyzing my behavior.	1 - never true
It is important for me to evaluate the things that I do.	5 - always true
I am very interested in examining what I think about.	5 - always true
It is important to me to try to understand what my feelings mean.	5 - always true
I have a definite need to understand the way that my mind works.	5 - always true
It is important to me to be able to understand how my thoughts arise.	5 - always true
Part 3	
I am usually aware of my thoughts.	4 - sometimes true
I'm often confused about the way that I really feel about things.	2 - rarely true
I usually have a very clear idea about why I've behaved in a certain way.	5 – always true
I'm often aware that I'm having a feeling, but I often don't quite know what it is.	2 - rarely true
My behavior often puzzles me.	1 - never true
Thinking about my thoughts makes me more confused.	1 - never true
Often I find it difficult to make sense of the way I feel about things.	1 - never true
I usually know why I feel the way I do.	5 - always true

Matthew REFLECT Results

Q#	Criterion	Matthew
1.1	Writing spectrum	R
1.1	Presence	R
1.1	Conflict description	R
1.1	Emotion	TA
1.1	Analysis/meaning-making	R
1.1	Attention to assignment	R
1.2	Writing spectrum	TA
1.2	Presence	TA
1.2	Conflict description	TA
1.2	Emotion	HA
1.2	Analysis/meaning-making	R
1.2	Attention to assignment	TA
1.3	Writing spectrum	R
1.3	Presence	R
1.3	Conflict description	R
1.3	Emotion	HA
1.3	Analysis/meaning-making	R
1.3	Attention to assignment	R
2.1	Writing spectrum	R
2.1	Presence	R
2.1	Conflict description	R
2.1	Emotion	R
2.1	Analysis/meaning-making	R
2.1	Attention to assignment	R
2.2	Writing spectrum	R
2.2	Presence	R
2.2	Conflict description	R
2.2	Emotion	HA
2.2	Analysis/meaning-making	R
2.2	Attention to assignment	R
2.3	Writing spectrum	R
2.3	Presence	R
2.3	Conflict description	R
2.3	Emotion	R
2.3	Analysis/meaning-making	CR-CL
2.3	Attention to assignment	R
3.1	Writing spectrum	HA
3.1	Presence	TA

Q#	Criterion	Matthew
3.1	Conflict description	R
3.1	Emotion	HA
3.1	Analysis/meaning-making	CR-CL
3.1	Attention to assignment	TA
3.2	Writing spectrum	CR-CL
3.2	Presence	R
3.2	Conflict description	R
3.2	Emotion	R
3.2	Analysis/meaning-making	CR-CL
3.2	Attention to assignment	R
4.1	Writing spectrum	TA
4.1	Presence	TA
4.1	Conflict description	TA
4.1	Emotion	TA
4.1	Analysis/meaning-making	HA
4.1	Attention to assignment	TA
4.2	Writing spectrum	CR
4.2	Presence	R
4.2	Conflict description	CR-CL
4.2	Emotion	HA
4.2	Analysis/meaning-making	CR-CL
4.2	Attention to assignment	R
4.3	Writing spectrum	R
4.3	Presence	TA
4.3	Conflict description	TA
4.3	Emotion	HA
4.3	Analysis/meaning-making	TA
4.3	Attention to assignment	R
5.1	Writing spectrum	HA
5.1	Presence	TA
5.1	Conflict description	HA
5.1	Emotion	HA
5.1	Analysis/meaning-making	HA
5.1	Attention to assignment	TA
5.2	Writing spectrum	R
5.2	Presence	R
5.2	Conflict description	R
5.2	Emotion	TA
5.2	Analysis/meaning-making	R
5.2	Attention to assignment	R

Q#	Criterion	Matthew
5.3	Writing spectrum	R
5.3	Presence	R
5.3	Conflict description	R
5.3	Emotion	HA
5.3	Analysis/meaning-making	R
5.3	Attention to assignment	R
6.1	Writing spectrum	HA
6.1	Presence	TA
6.1	Conflict description	TA
6.1	Emotion	HA
6.1	Analysis/meaning-making	TA
6.1	Attention to assignment	TA
6.2	Writing spectrum	R
6.2	Presence	R
6.2	Conflict description	TA
6.2	Emotion	TA
6.2	Analysis/meaning-making	R
6.2	Attention to assignment	R
6.3	Writing spectrum	R
6.3	Presence	R
6.3	Conflict description	R
6.3	Emotion	TA
6.3	Analysis/meaning-making	R
6.3	Attention to assignment	R

APPENDIX M – BRENDA CASE RECORD**Brenda Kickoff Interview Notes**

1 5/23 10am CT/ 11am EST

2 In this meeting, we will:

- 3 • Discuss current projects and timelines
- 4 • Discuss this research study's process
- 5 • Confirmed B's Google docs account access.
- 6 • Shared Google Doc with: Designer Reflection Study. Confirmed it was received.
- 7 • I told her I would provide a summary of the schedule that we defined via the
- 8 appropriate Google Doc.
- 9 • We then proceeded with the discussion below.

10 **Interviewer:** Since you remain anonymous in this study, I typically assign a pseudonym
11 for my participants.

12 **Interviewer:** How many current design projects are you working on?

13 **Responder:** 7–8 projects. I'm at different phases with each of them.

14 **Interviewer:** How many people are working on this project?

15 **Responder:** I'm the only training designer on it. I will coach an SME to deliver. There's
16 also someone who will host anything necessary on the LMS.

17 **Interviewer:** What is your role in the project?

18 **Responder:** She develops all the product - from beginning to end.

19 **Interviewer:** What percentage of the design work will you provide vs. someone from
20 your team?

21 **Responder:** 100%

22 **Interviewer:** Describe the deadlines for this project.

23 **Responder:** Training plan in place by mid-June

24 Product is launching end of October.

25 I have a variety of audience I need to train.

26 Insurance and insurance wholesalers.

27 Wholesalers must be proficient before product launches.

28 Train them in late September.

29 Train them before product is launched. Then, they train with financial advisors, then
30 receive additional material from me.

31 **Interviewer:** Describe the client for this project.

32 **Responder:** insurance agents and insurance wholesalers. across country.

33 **Interviewer:** What might happen if you miss any milestones or deadlines for this
34 project?

35 **Responder:** It depends on which one I miss. If we don't train the wholesalers before
36 product launch, they'd be at a disadvantage with their customers (advisors)

37 If advisors aren't trained on time, the wholesalers at least have the knowledge to help
38 the advisors.

39 **Interviewer:** When we begin our study, how far into the project's timeline will you be?

40 **Responder:** Core team started meeting in late March/early April to let us know the
41 product is coming. Thought product would launch in September. Wouldn't have started
42 prepping so soon if we knew it was going to launch in Oct. (tech issues). I've done basic
43 data collection. I first plan dates, then build training. This may seem backward. I have a
44 pretty good idea of the type of training that's needed - given my experience with the
45 audience and the products.

46 Last year I did a flipped training. It was received well, so I'm doing it again.

47 **Interviewer:** When we begin our study, how far into the project's work will you be?

48 **Responder:** We won't get approval from states until June, so I can collect my data next
49 month when I know more about the product.

50 10% at most!

51 **Interviewer:** How long is the project you are working on during this study?

52 **Responder:** Effectively June - October for design part

53 **Interviewer:** On average, what percentage of your workweek do you expect to be
54 dedicated to this project during the six weeks of this study?

55 **Responder:** 40–50% on this project. 90% later in the project

56 **Interviewer:** Describe the project. What differences or similarities can you draw
57 compared to other projects?

58 **Responder:** Similarities: Audiences are the same; internal wholesalers and advising
59 staff (Financial advisors)

60 Other projects which are more tech-based, we focus on the support staff.

61 Training in some states is required if they want to be able to sell it. Wholesalers have to
62 be aware of those elements and the content they need for compliance for that state.

63 Difference

64 Last time we did 1 pre-recorded webinar. Also trying to do some social medial (with
65 wholesalers). I can get more creative with them because they need in depth knowledge,
66 that the FAs don't need. Sp, for example, after they launch something, they have to
67 send a note about what they learned. It really helped them learn from each other. The
68 similar things got reinforced! Build a lot of reinforcement. Helps build on community
69 learning. Different than projects in the past but building on that last project.

70 Good response in past: I'm their central point of contact, after training, they send me a
71 note, I get the answer, then send out answer to everyone! Saves the SMEs from getting
72 bombarded.

73 Staggered the training a bit differently than the past

74 Was prework, live training, post assessment over a couple weeks.

75 Now, building it out over a month.

- 76 • We discussed surveys
- 77 • We discussed the survey links provided via email. I will send, and she will
78 complete before she begins reflection.
- 79 • We discussed a manager letter of support
- 80 • She will review and determine how best to send request.
- 81 • We discussed the weekly reflective journal led by my guided questions.
- 82 • I will post the first week's reflection Thursday 5/29. I will send a reminder...
- 83 • she will complete by end of day, Saturday, May 31st.
- 84 • I will review and may respond by Monday May 2nd.
- 85 • Subsequent sets of reflection questions will be provided by me each Thursday
86 and will follow the same weekly schedule.
- 87 • We discussed design products.

88 **Interviewer:** As part of the study, I would like to review the design products developed
89 during the week. Please place whatever you can into the appropriate week's folder. If
90 you cannot provide something, please describe the product in depth in your reflection
91 journal.

92 **Interviewer:** I asked what questions I might answer for you about this study or the
93 process?

- 94
- She has nothing specific right now.

Brenda Timeline and Schedule

Event	Planned Complete Date	Responsible Party
Initial Interview	5/23/14	Both Researcher and Participant
Demographic Survey Delivered	5/28/14	Researcher
Demographic Survey Completed		Participant
Reflection Survey Delivered	5/28/14	Researcher
Reflection Survey Completed		Participant
Reflection 1 Delivered	5/29/14	Researcher
Reflection 1 Completed	5/31/14	Participant
Reflection 1 Comments provided	6/2/14	Researcher
Reflection 1 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 2 Delivered	6/5/14	Researcher
Reflection 2 Completed	6/7/14	Participant
Reflection 2 Comments provided	6/9/14	Researcher
Reflection 2 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 3 Delivered	6/12/14	Researcher
Reflection 3 Completed	6/14/14	Participant
Reflection 3 Comments provided	6/16/14	Researcher
Reflection 3 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 4 Delivered	6/19/14	Researcher
Reflection 4 Completed	6/21/14	Participant
Reflection 4 Comments provided	6/23/14	Researcher
Reflection 4 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 5 Delivered	6/26/14	Researcher
Reflection 5 Completed	6/28/14	Participant
Reflection 5 Comments provided	6/30/14	Researcher
Reflection 5 Additional Joint	ongoing as	Both Researcher and

Discussion	necessary	Participant
Reflection 6 Delivered	7/3/14	Researcher
Reflection 6 Completed	7/5/14	Participant
Final Survey Delivered	7/8/14	Researcher
Reflection 6 Comments provided	7/7/14	Researcher
Final Survey Completed	7/9/14	Participant
Reflection 6 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant

Brenda Demographic Survey

Age	46–50
Gender	Female
Total years of active, professional work experience do you have in a corporate environment:	26
Total years of active, professional work experience do you have in an academic environment:	n/a
Total years have you been actively designing instruction in a corporate environment?	20
How many years, in total, have you been actively designing instruction in an academic environment	n/a
Percentage of current role that typically involves designing instruction?	76–100%
Ratio of design time typically dedicated to designing for internal clients vs external clients	76–100%
Percentage of design time typically spent on designing individually (compared to as part of a team)?	76–100%

Brenda SRIS Scale Baseline

Part 1	
I don't often think about my thoughts.	1 - never true
I rarely spend time in self-reflection.	1 - never true
I frequently examine my feelings.	5 - always true
I don't really think about why I behave in the way that I do.	1 - never true
I frequently take time to reflect on my thoughts.	4 - sometimes true
I often think about the way I feel about things.	4 - sometimes true
Part 2	
I am not really interested in analyzing my behavior.	2 - rarely true
It is important for me to evaluate the things that I do.	5 - always true
I am very interested in examining what I think about.	3 - 50/50
It is important to me to try to understand what my feelings mean.	4 - sometimes true
I have a definite need to understand the way that my mind works.	5 - always true
It is important to me to be able to understand how my thoughts arise.	3 - 50/50
Part 3	
I am usually aware of my thoughts.	5 - always true
I'm often confused about the way that I really feel about things.	2 - rarely true
I usually have a very clear idea about why I've behaved in a certain way.	4 - sometimes true
I'm often aware that I'm having a feeling, but I often don't quite know what it is.	2 - rarely true
My behavior often puzzles me.	2 - rarely true
Thinking about my thoughts makes me more confused.	3 - 50/50
Often I find it difficult to make sense of the way I feel about things.	2 - rarely true
I usually know why I feel the way I do.	4 - sometimes true

Brenda Reflection Journal

Week 1: May 29 - May 31

- 1 **Interviewer:** Discuss your previous experiences that are guiding you during these
2 design projects.
- 3 **Responder:** Knowledge of the various audience types—field agents, wholesalers, field
4 staff – review assumptions about their needs and their role in the sale of the product.
5 Expectations of leaders for training based on past training – either led by me or other
6 people.
- 7 Review previous product launch successes and failures and determine if any of the
8 tactics previously used are applicable for the new product. Did anything used before
9 have great success? If yes, why was it successful for that product? And now, would it
10 be a successful tactic to use for this product launch?
- 11 **Interviewer:** After asking yourself these questions, what were your answers? What was
12 successful? Why was it successful, etc. ...
- 13 **Responder:** Anything have great success? Yes, Q&A and pre-recorded webinar with
14 product details
15 Why? Q&A one place to ask questions and get to see questions other people had; pre-
16 recorded – got the product details in easy-to-digest format and length. Didn't take time
17 away from selling, but gave information that was useful to start discussing product
18 Useful for new product? Yes, will do Q&A and will do a series of pre-recorded webinars
19 because there are a lot of details that need to be digested in small chunks and then
20 discussed live in person later after it has been digested.
- 21 **Interviewer:** Discuss how you framed the design problems.
- 22 **Responder:** Discussions with stakeholders – sales leaders, product developers,
23 marketing, business – review assumptions about the product and how it fits in the
24 market and the needs of the business regarding the new product. What ideas/tactics
25 were good but failed in the past? Why did they fail? Would they be successful for this
26 new product launch? How could they be successful?
- 27 What are the similarities and differences of the new product to the existing products
28 being sold? What is necessary to know?
- 29 **Interviewer:** Same as before. What are your answers to your own questions?

30 **Responder:** Use task analysis to determine all of the steps used to successfully
31 selling/performing with this new product. Determine what absolutely needs to be trained
32 vs. what they already are skilled at.

33 Determine timeframe for product launch, learner ability to step away from their work to
34 attend training, cost of training. Do we bring all of the external and internal wholesalers
35 in for intensive training or do we use technology for training (synchronous webinars,
36 asynchronous online web-based training or pre-recorded webinars, pre-tests through
37 surveymonkey, post-tests through surveymonkey, etc.).

38 Use Merrill's First Principles of Instruction to help frame the design.

39 Use timelines to structure time for design, reviews, implementation.

40 Use templates for design plan to help design the training plan and consider everything
41 that needs to be addressed – audience, methods, dates, timing, communication, etc.

42 Failed in past? Pretraining quizzes – although there was buy-in from the leaders and
43 support, they didn't follow-through with insistence by their employees to take it; users
44 felt like they were being judged and were back in school and didn't like it;

45 Similarities and differences? Will put together grid for the audience to use

46 What is necessary to know? Product features, positioning, client suitability, minimal
47 information on how the product works since underlying it is a product that they already
48 know how it works

49 **Interviewer:** Discuss your own internal beliefs that are guiding you during these
50 projects.

51 **Responder:** Give the learners what they need to know to perform successfully in an
52 easy-to-understand way, with as much repetition as possible to give them a safe
53 environment to practice before they meet with clients. Give them what is nice to know in
54 reference materials when they successfully complete various sections of the course.
55 Provide space between sections of training to give them time to reflect and build.

56 **Interviewer:** Can you tell me anything about your previous experiences (maybe an
57 example) that leads you to these thoughts?

58 **Responder:** Subject matter experts and compliance generally like for every minute
59 detail to be stated on the screen, in the participant guide, and by the presenter.
60 However, this is not useful for training employees. They need to know what they need to
61 know to sell the product, to select suitable clients, and where to get more information
62 when they need it. It doesn't make instructional sense to overload the learners. Adult
63 learners like to know what they need to know in order to be successful and where to get
64 more help and information when they need it.

65 **Interviewer:** Great!

66 **Interviewer:** Please post any design products, brainstorms or notes to the Resources
67 folder. THANKS!

68 **Week 2: June 5–7**

69 **Interviewer:** Discuss your ongoing interaction with the client.

70 **Responder:** We are the client and the requestor, so the question doesn't really apply.
71 However, I have meetings weekly with the marketing/training/communications core
72 team which includes the project manager, product developers, marketing product
73 manager (in charge of developing the go-to-market strategy, sales ideas, etc.), the
74 marketing communications manager, the product sales system manager, the website
75 people, the marketing video manager, and myself. The meeting keeps us informed
76 about product status, timelines, helps us drive toward due dates and deliverables.

77 Additionally, I meet weekly with only the people from my marketing strategy team,
78 mostly to keep our Vice President updated on all of the moving parts on the
79 marketing/communications/training of the new product. It also helps us all know what
80 each other is working on and how we can leverage each other's materials or tie into
81 each other's plans and communications.

82 **Interviewer:** Discuss how your design solution compares to other solutions you've
83 implemented.

84 **Responder:** My design solution for this product launch differs from previous product
85 launches primarily due to some events that were out of my control. There is a
86 wholesaler mid-year meeting in July. The sales leaders determine the content for this
87 meeting. It was decided in May by the sales leaders that the new product would be on
88 the agenda and the sales team would help craft the marketing and sales ideas for the
89 new product. This goes against the marketing leader's recommendations. This goes
90 against my recommendations as the training consultant since the product won't launch
91 until November. However, since the product will be on the agenda, I have agreed to
92 develop the product introduction (I've lobbied hard for it not to be called product
93 training). We don't normally train the product four months in advance of a product
94 launch, so this added a few wrinkles to the plan I was developing and forced me to
95 speed up some of the training deliverables as well as completion of the training plan.

96 Additionally, I planned to deliver the training on this product in a different manner than
97 before due to the nature of the product. The product is similar to another product we
98 have for sale, but is more complex. My plan is to provide a number of short pre-
99 recorded webinars (each 10-minutes or less) for the wholesaler audience to watch in
100 advance of the live training. This will get them grounded in the complexity of the product
101 which will allow more time for discussion in live in-person or live webinar training on
102 product positioning and overcoming objectives.

103 Here is a rough idea of some of the training plan I've been developing. I always develop
104 first for our wholesalers and then repurpose materials for the advisor/field training. I
105 can't upload the training timeline/design document due to the confidential nature of it.
106 As you can see, most of these tactics are for wholesalers. I'm still formulating some of
107 the field/advisor training tactics. Some of that will depend on what the company decides
108 to do about Fall/Winter events with the field and if the product will be included in the
109 agendas.

110 The product feature pre-recorded webinars I have identified topics already, but haven't
111 determined the natural order for their presentation yet. I need to have more
112 conversations with the marketing product manager and the product developers before I
113 can determine, based on my audience, what makes logical sense for the order of
114 delivery.

115 Columns I've removed from this table are:

- 116 · Date Start build
- 117 · Business review dates
- 118 · Compliance review dates
- 119 · Presenter names
- 120 · Prep session dates/locations

121 [table removed to ensure confidentiality]

122 **Interviewer:** Discuss how you are dealing with ambiguity or uncertainty in the project.

123 **Responder:** The product has some ambiguity for the date it will launch. I am working
124 with three possible scenarios on when the product will launch. Fortunately, the basic
125 tactics of the training plan are the same no matter when it launches, just the dates really
126 move around. I try to build the shell of what I can as we go along leaving placeholders
127 for places I know we don't have the content now, but will soon.

128 **Interviewer:** Does this uncertainty lead to any kind of stresses or do you find you
129 embrace it?

130 **Responder:** Yes, I tend to try to put structure around everything I do to remove the
131 uncertainty and ambiguity. I use a lot of templates and timelines to organize the chaos
132 so I can plan otherwise I wouldn't get anything done as I waited for certainty to be
133 determined.

134 **Interviewer:** Please post any design products, brainstorming or notes to the Design
135 Products folder. THANKS!

136 **Week 3: June 12–14**

137 **Interviewer:** Discuss your interaction with specific models or images. (Mainly models
138 and images in the content. I'm wondering what your thoughts are when you're working
139 with visuals, graphics and such.)

140 **Responder:** I'll answer this based on what I think you're asking (the question was
141 unclear).

142 I organize my content and look for places where a diagram, flowchart, map, etc., would
143 be useful and then start creating it. Frequently when I hear the content, visuals start
144 developing in my head.

145 **Interviewer:** This is great! And a perfect interpretation of the question.

146 **Responder:** I usually have success getting these visuals down on "paper" (virtual or
147 real), but occasionally I can't get what's in my head on paper correctly. We are fortunate
148 that in our organization, we have a dedicated design team so I can consult with them for
149 help when I get stuck. Sometimes I consult with them even when I can get it on paper
150 correctly, but ask them to polish it for me.

151 Other times with graphics, I have created something that really helps tell the story –
152 usually a visual process – but our compliance people have problems with some of the
153 images included. For instance, they don't like it when money is part of the visual.
154 However money is important in the financial services world for training, so sometimes it
155 is extremely important to include it in a visual. I work with them to maybe "tone down" a
156 visual depicting money, try to go more abstract, or work with my leader to override their
157 objection. It depends on the business support of the visuals I create.

158 **Interviewer:** Discuss unexpected challenges that have arisen during this project.

159 **Responder:** Ambiguity is always a challenge, but for this project it's really challenging.
160 Our sales leaders want the product trained at a sales mid-year event in July. This would
161 have been fine if the product was launching in early September, like originally planned.
162 However, the product will launch at the earliest in November, so having training in July
163 for something they can't sell until November doesn't make sense. However, the sales
164 leaders are forcing the product training at the mid-year sales event. So my challenge is
165 how to give them training at this point, connect it, and keep it relevant through to
166 November when they can actually start selling it. In my previous post for week 2, I laid
167 out my training plan. As you can see there, I've added in a lot of events between July
168 and November, to kind of "drip" train the wholesaler audience rather than have the
169 training event in July and then not again until October. This plan should give them time
170 to absorb a lot of the product information and incorporate how to sell it within their
171 selling repertoire without providing them with useless or "scrap" training events. I'm
172 trying to make it almost a training campaign rather than a training event.

173 **Interviewer:** Seems like way more than a "workaround" to client demands.

174 **Interviewer:** Discuss your personal design strengths that emerged during this project.

175 **Responder:** Dealing with change

176 Utilizing new and emerging learning trends (flipping classrooms, social learning, etc.)

177 **Interviewer:** How do you stay abreast of these trends?

178 **Responder:** Building a dynamic training plan

179 Understanding product details from SMEs

180 Organizing content into learning chunks based on the learner's needs, not primarily the
181 business needs

182 **Interviewer:** All of these are very apparent in your reflections, too!

183 **Responder:** To stay abreast of the trends, I read blogs, magazines, attend webinars,
184 training events, national conferences when I can, discuss topics on linkedin, etc. I look
185 for materials on training, brain science, business, marketing, human resources, science,
186 and technology.

187 **Interviewer:** Please post any design products, brainstorm or notes to the Design
188 Products folder. THANKS!

189 **Week 4: June 19–21**

190 **Interviewer:** Discuss specific design areas you might continue nurturing in the future as
191 a result of what you're learning in this project.

192 **Responder:** I'm building the web-based training portion of the course with mobile
193 tablets in mind – Future design skill I want to develop are instructional designing for
194 mobile because I know this has some differences from instructional design for web-
195 based training.

196 **Interviewer:** How are models manifesting themselves in the design project? What
197 models or frameworks are you using? (Note that others might find these evident, but
198 you may not be consciously applying them. ADDIE, Agile, Merrill's First Principles,
199 ARCS model, Gagne's 9 Events only name a few... If none of these are evident, are
200 there some advanced "rules" that you are following - based on your own experience of
201 what works?)

202 **Responder:** I use ADDIE, Harless' 13 Smart Questions, Gilbert's BEM, Chevalier's
203 Updated BEM, Bloom's Taxonomy – both the Krathwohl version and the Digital version,
204 Merrill's First Principles, Keller's ARCS model, Ausubel's Advanced Organizer,
205 Kirkpatrick's four levels of evaluation, and possibly Brinkerhoff's Success Case Method.
206 This is my normal go to process for designing a training project. I actually use all of
207 these throughout the process.

208 **Interviewer:** What tangible results do you have this week? Do you feel this is normal for
209 a typical week, or do you feel you are under or over your typical output? Discuss.

210 **Responder:** More chaos, more challenges to pin down what I know. I had been fearing
211 that Q3 and Q4 advisor events would be planned that include the new product before
212 the wholesalers are trained on the new products. And it happened. I'm trying to manage
213 the training plan around Q3/Q4 events when we actually don't have a solid product
214 launch date still. The projected launch date is 11/4/14. Fall advisor events are being
215 scheduled for some time in September, October, and November. I don't have the dates
216 yet. I'm trying to influence the leaders to offer two versions of the Fall advisor events
217 agenda – one without the new product for events happening in September and early
218 October and one with the new product for events happening late October through the
219 end of the year. I'm not having a lot of luck, but I'm still hopeful that "common sense"
220 can prevail. It doesn't make sense to have wholesalers discuss and start selling the new
221 product more than two weeks before the new product is available. If they do, it sets up a
222 few problems. 1) The information could be forgotten by the advisors by the time they
223 can actually sell the product and the wholesaler has to train again; 2) The advisors
224 could potentially hold business until the product is available which would be unethical
225 and could put the client at great risk (the risk would be that the client either was
226 injured/developed a medical condition that would prevent them from being qualified for
227 the life insurance product or if they died without the coverage).

228 I did have a conversation with the product development manager who was able to
229 provide me with materials for the introductory session for our wholesalers that is in mid-
230 July. Everyone in that department is very hard to pin down because they are moving so
231 fast and have so much on their plates. I have what I need from her to develop the
232 materials for the product introduction now. So I have the shell of the session developed
233 and am now able to put in the details I was missing and continue

234 I feel under my normal output for a product launch that is for the Fall at this point, but I
235 think I always feel that way at this point. Things will start to click and fall into place over
236 the next few weeks.

237 **Interviewer:** Please post any design products, brainstorming or notes to the Design
238 Products folder. THANKS!

239 **Week 5: June 26–28**

240 **Interviewer:** How would you explain your process to the client this week?

241 **Responder:** Continuing to design and gain agreement on training plan. Continue to
242 tweak training plan based on events before product launch. Meeting planned to review
243 training plan with SVP next week and then with his sales leaders after that. Some of the
244 sales leaders helped me as I was building the plan.

245 **Interviewer:** Discuss how this project is progressing.

246 **Responder:** The project is progressing well. With about four months until launch, I feel
247 like we are on target. The rush of work is about to begin. I have the training plan pretty
248 much finalized and a lot of the supporting documentation I will need to design and
249 develop the training materials. The amount of work at this point always seems
250 overwhelming. However, just like what I train for the audience, I need to chunk the tasks
251 for myself. Don't look at all of the materials needed, just look at one at a time. I need to
252 keep in mind how all of these pieces fit with each other and the overall goal and
253 message.

254 **Interviewer:** How did themes emerge? (When you are pulling all your content together
255 and determining what to do with it, how to organize it etc., ideas emerge that lead you to
256 "know" how to categorize and organize that information. I want you to discuss that
257 process. Does that make sense?)

258 **Responder:** Themes emerged as I talked with the subject-matter experts and the sales
259 leaders. During my task analysis discussion with them, the themes began to emerge. I
260 started grouping concepts that would define sections of the training for my most in-
261 depth audience. The task analysis showed me what the learners need and helped me
262 set objectives, both supporting and terminal. The task analysis also helps me organize
263 the order of the content as we move forward. During the task analysis, I ask a lot of
264 questions and then when the SME or sales leader answers I probe further and ask and
265 how do they do that, how do they know to do that, what are all of the steps involved in
266 that. It gets pretty granular about the sales process and product knowledge. Then I take
267 that information and determine what is it that everyone already knows how to do and
268 what does not everyone know how to do. From that I determine what is in scope for this
269 project and what is out of scope. I usually indicate this in the training design plan and
270 then get agreement on the training design plan from the leaders so everyone agrees on
271 what will be included and what won't be included. The "what won't be included" is very
272 important. For example, as part of selling a product, a wholesaler and an advisor need
273 to be able to get a quote for the product in our sales illustration program. It's sometimes
274 very complicated. However, often there isn't a need to train the illustration system
275 because every one of our learners should know how to use the illustration system
276 already. But there may be some special additions or techniques for using the illustration
277 system for this specific product. That part is important to include in the training. So in
278 the Training design plan, I would write something like this:

279 In scope = how to illustrate the special interest rate options available, what the
280 wholesaler and advisor need to know for this product.

281 Out of scope = basic illustration system training

282 I have on my desk a note I wrote to myself a couple of years ago. It says “How is my
283 training better than reading a technical document?” If it isn’t better than it, then I need to
284 go back to my project goals and objectives, look at the task analysis, and determine
285 what’s missing. If reading a technical document is all they need, then give them that.
286 But if they really need training to change their performance, then I better improve what
287 I’ve created.

288 Now I don’t think I’ve ever created anything that is about the same as reading a
289 technical document, but I use this to challenge myself to continually improve and use
290 better ideas and tactics for training.

291 **Interviewer:** Please post any design products, brainstorm or notes to the Design
292 Products folder. THANKS!

293 ***Week 6: July 3–5***

294 **Interviewer:** As this reflection process comes to an end, how would you describe your
295 design process for this project to another designer?

296 **Responder:** Start with the goal, then all other steps fall into place easily. The goal is
297 what the client expects as a result of the training. Sometimes the goal can’t be
298 accomplished by training and be prepared to tell the client this. If you help the client
299 articulate what they expect to see because of the training, then you will be ahead of
300 many other instructional designers in meeting the client’s expectations and being able to
301 prove that the training worked.

302 Focus on what performance change is desired and determine what behaviors will
303 change that performance for the better. Train to these. These become your (terminal)
304 learning objectives.

305 **Interviewer:** Do you think you altered any processes as a result of the reflection
306 process? Did you think differently while designing? Explain... Alternatively, did you
307 instead find yourself holding more strictly to your typical design process?

308 **Responder:** No, I didn’t alter anything because of the reflection process, but by
309 reflecting on what I did, I was able to see why I have the design process designed as I
310 have it. It works. If I follow the plan, it will work. It reminded me that adhering to the
311 process/plan helps me be more creative because I’m not having to try to remember a lot
312 of little things; they are in the design plan somewhere, so they will be in the plan when I
313 need to do them.

314 **Interviewer:** What did this reflection process mean to you?

315 **Responder:** It helped me by reminding me that I am a good instructional designer and I
316 have a good process in place.

317 **Interviewer:** Please post any design products, brainstorm or notes to the Design
318 Products folder. THANKS!

319 **Interviewer:** After you have finished your reflections, I will review/comment, and then
320 send you one last survey! Thanks!!!!

Brenda SRIS Final

Part 1	
I don't often think about my thoughts.	1 - never true
I rarely spend time in self-reflection.	1 - never true
I frequently examine my feelings.	4 - sometimes true
I don't really think about why I behave in the way that I do.	1 - never true
I frequently take time to reflect on my thoughts.	3 - 50/50
I often think about the way I feel about things.	5 - always true
Part 2	
I am not really interested in analyzing my behavior.	1 - never true
It is important for me to evaluate the things that I do.	4 - sometimes true
I am very interested in examining what I think about.	4 - sometimes true
It is important to me to try to understand what my feelings mean.	3 - 50/50
I have a definite need to understand the way that my mind works.	5 - always true
It is important to me to be able to understand how my thoughts arise.	4 - sometimes true
Part 3	
I am usually aware of my thoughts.	5 - always true
I'm often confused about the way that I really feel about things.	3 - 50/50
I usually have a very clear idea about why I've behaved in a certain way.	3 - 50/50
I'm often aware that I'm having a feeling, but I often don't quite know what it is.	2 - rarely true
My behavior often puzzles me.	2 - rarely true
Thinking about my thoughts makes me more confused.	1 - never true
Often I find it difficult to make sense of the way I feel about things.	2 - rarely true
I usually know why I feel the way I do.	4 - sometimes true

Brenda REFLECT Results

Q#	Criterion	Brenda
1.1	Writing spectrum	HA
1.1	Presence	R
1.1	Conflict description	TA
1.1	Emotion	HA
1.1	Analysis/meaning-making	HA
1.1	Attention to assignment	TA
1.2	Writing spectrum	TA
1.2	Presence	TA
1.2	Conflict description	TA
1.2	Emotion	HA
1.2	Analysis/meaning-making	TA
1.2	Attention to assignment	TA
1.3	Writing spectrum	TA
1.3	Presence	R
1.3	Conflict description	R
1.3	Emotion	HA
1.3	Analysis/meaning-making	R
1.3	Attention to assignment	R
2.1	Writing spectrum	R
2.1	Presence	R
2.1	Conflict description	R
2.1	Emotion	HA
2.1	Analysis/meaning-making	R
2.1	Attention to assignment	R
2.2	Writing spectrum	R
2.2	Presence	R
2.2	Conflict description	R
2.2	Emotion	TA
2.2	Analysis/meaning-making	R
2.2	Attention to assignment	R
2.3	Writing spectrum	TA
2.3	Presence	R
2.3	Conflict description	TA
2.3	Emotion	HA
2.3	Analysis/meaning-making	TA
2.3	Attention to assignment	R
3.1	Writing spectrum	R
3.1	Presence	R

Q#	Criterion	Brenda
3.1	Conflict description	CR-CL
3.1	Emotion	TA
3.1	Analysis/meaning-making	R
3.1	Attention to assignment	R
3.2	Writing spectrum	CR-CL
3.2	Presence	R
3.2	Conflict description	CR-CL
3.2	Emotion	R
3.2	Analysis/meaning-making	R
3.2	Attention to assignment	R
4.1	Writing spectrum	HA
4.1	Presence	TA
4.1	Conflict description	TA
4.1	Emotion	HA
4.1	Analysis/meaning-making	TA
4.1	Attention to assignment	TA
4.2	Writing spectrum	HA
4.2	Presence	TA
4.2	Conflict description	HA
4.2	Emotion	HA
4.2	Analysis/meaning-making	HA
4.2	Attention to assignment	TA
4.3	Writing spectrum	CR-CL
4.3	Presence	R
4.3	Conflict description	CR-CL
4.3	Emotion	TA
4.3	Analysis/meaning-making	R
4.3	Attention to assignment	R
5.1	Writing spectrum	HA
5.1	Presence	R
5.1	Conflict description	HA
5.1	Emotion	HA
5.1	Analysis/meaning-making	HA
5.1	Attention to assignment	TA
5.2	Writing spectrum	R
5.2	Presence	R
5.2	Conflict description	R
5.2	Emotion	R
5.2	Analysis/meaning-making	TA
5.2	Attention to assignment	R

Q#	Criterion	Brenda
5.3	Writing spectrum	CR-CL
5.3	Presence	R
5.3	Conflict description	CR-CL
5.3	Emotion	HA
5.3	Analysis/meaning-making	R
5.3	Attention to assignment	R
6.1	Writing spectrum	CR-CL
6.1	Presence	R
6.1	Conflict description	TA
6.1	Emotion	HA
6.1	Analysis/meaning-making	R
6.1	Attention to assignment	R
6.2	Writing spectrum	R
6.2	Presence	R
6.2	Conflict description	R
6.2	Emotion	TA
6.2	Analysis/meaning-making	CR-CL
6.2	Attention to assignment	CA
6.3	Writing spectrum	R
6.3	Presence	R
6.3	Conflict description	HA
6.3	Emotion	HA
6.3	Analysis/meaning-making	R
6.3	Attention to assignment	R

APPENDIX N – CATHERINE CASE RECORD**Catherine Kickoff Interview Notes**

- 1 • Introduction of what will happen in meeting.
- 2 • Discuss current projects and timelines
- 3 • Discuss this research study
- 4 • Confirmed Cs Google docs account access.
- 5 • Shared Google Doc with C: Designer Reflection Study. C confirmed it was
- 6 received, as were the documents and subfolder.
- 7 • I told her I would provide a summary of the schedule that we defined via the
- 8 appropriate Google Doc.
- 9 • I also told her I would provide instructions (via the Resources subfolder) for how
- 10 to access Google Drive and the Docs from the file manager (Windows Explore).
- 11 • We then proceeded with the discussion below.

12 **Interviewer:** Since you remain anonymous in this study, I typically assign a pseudonym
13 for my participants. Would you like to choose your own?

14 **Interviewer:** How many are you working on?

15 **Responder:** Just started one this morning.

16 **Interviewer:** How many people are working on this project?

17 **Responder:** I work with people. I'm the only one. Tons of SMEs. Sometimes we are the
18 SME.

19 **Interviewer:** What is your role in the project?

20 **Responder:** ID work beginning to end, management work. The beginning is usually in
21 the middle of the cycle. Sometimes it's improving or updating it based on technology.

22 **Interviewer:** What percentage of the design work will you provide vs. someone from
23 your team?

24 **Responder:** 100%

25 **Interviewer:** Describe the deadlines for this project.

26 This is a pilot and designing over the next six weeks, iterative and proof of concept.

27 **Responder:** There is a large project coming up -

28 Varying number of deadlines.

29 **Interviewer:** Describe the client for this project.

30 **Responder:** Project 1: Faculty members online; sponsored by college, academic
31 affairs.

32 Project 2: academic affairs and college; three-fold project for students - financial, digital
33 literacy,

34 **Interviewer:** What might happen if you miss any milestones or deadlines for this
35 project?

36 **Responder:** I stay awake. I get no life. It's not a rigid environment as of right now. I just
37 need to come up with a workaround.

38 **Interviewer:** When we begin our study, how far into the project's timeline will you be?

39 **Responder:** P1: design began early this year; Jan/Feb

40 P2: August of last year

41 **Interviewer:** When we begin our study, how far into the project's work will you be?

42 **Responder:** P1: Pilot

43 P2: Phase 2

44 **Interviewer:** How long is the project you are working on during this study?

45 **Responder:** P1: Not sure. Do you have a proposed length?

46 P2: Not sure. Do you have a proposed length?

47 **Interviewer:** On average, what percentage of your work week do you expect to be
48 dedicated to this project during the six weeks of this study?

49 **Responder:** 60% of my time.

50 **Interviewer:** Describe the project. What differences or similarities can you draw
51 compared to other projects?

52 **Responder:** Similarities: no one ever knows what they want until they actually see it.

53 Differences: I started in September, The difference of the audience; perception of what
54 they can and can't do. Faculty at Com College is different than university and online
55 university. Culture of expectations.

56 • We discussed surveys

57 • We discussed the survey links provided via email. I will send, and C will complete
58 before she begins reflection.

59 • We discussed a manager letter of support

60 • She is responsible for her own work, and does not require any approval.

- 61 • We discussed the weekly reflective journal led by my guided questions.
- 62 • We discussed design products.
- 63 • As part of the study, I would like to review the design products developed during
64 the week. Please place whatever you can into the appropriate week's folder. If
65 you cannot provide something, please describe the product in depth in your
66 reflection journal.
- 67 • I asked what questions can I answer for you about this study or the process?
- 68 • She offered suggestions to enrich my study, which I will incorporate into future
69 reflection questions/statements.

Catherine Timeline and Schedule

Event	Planned Complete Date	Responsible Party
Initial Interview	5/27/14	Both Researcher and Participant
Demographic Survey Delivered	5/28/14	Researcher
Demographic Survey Completed		Participant
Reflection Survey Delivered	5/28/14	Researcher
Reflection Survey Completed		Participant
Reflection 1 Delivered	5/29/14	Researcher
Reflection 1 Completed	5/31/14	Participant
Reflection 1 Comments provided	6/2/14	Researcher
Reflection 1 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 2 Delivered	6/5/14	Researcher
Reflection 2 Completed	6/7/14	Participant
Reflection 2 Comments provided	6/9/14	Researcher
Reflection 2 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 3 Delivered	6/12/14	Researcher
Reflection 3 Completed	6/14/14	Participant
Reflection 3 Comments provided	6/16/14	Researcher
Reflection 3 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 4 Delivered	6/19/14	Researcher
Reflection 4 Completed	6/21/14	Participant
Reflection 4 Comments provided	6/23/14	Researcher
Reflection 4 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 5 Delivered	6/26/14	Researcher
Reflection 5 Completed	6/28/14	Participant
Reflection 5 Comments provided	6/30/14	Researcher
Reflection 5 Additional Joint	ongoing as	Both Researcher and

Discussion	necessary	Participant
Reflection 6 Delivered	7/3/14	Researcher
Reflection 6 Completed	7/5/14	Participant
Final Survey Delivered	7/8/14	Researcher
Reflection 6 Comments provided	7/7/14	Researcher
Final Survey Completed	7/9/14	Participant
Reflection 6 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant

Catherine Demographic Survey

Age	41-45
Gender	Female
Total years of active, professional work experience do you have in a corporate environment:	12
Total years of active, professional work experience do you have in an academic environment:	14
Total years have you been actively designing instruction in a corporate environment?	2
How many years, in total, have you been actively designing instruction in an academic environment	12
Percentage of current role that typically involves designing instruction?	51-75%
Ratio of design time typically dedicated to designing for internal clients vs external clients	51-75%
Percentage of design time typically spent on designing individually (compared to as part of a team)?	51-75%

Catherine SRIS Scale Baseline

Part 1	
I don't often think about my thoughts.	2 - rarely true
I rarely spend time in self-reflection.	1 - never true
I frequently examine my feelings.	4 - sometimes true
I don't really think about why I behave in the way that I do.	2 - rarely true
I frequently take time to reflect on my thoughts.	5 - always true
I often think about the way I feel about things.	5 - always true
Part 2	
I am not really interested in analyzing my behavior.	1 - never true
It is important for me to evaluate the things that I do.	5 - always true
I am very interested in examining what I think about.	5 - always true
It is important to me to try to understand what my feelings mean.	4 - sometimes true
I have a definite need to understand the way that my mind works.	5 - always true
It is important to me to be able to understand how my thoughts arise.	5 - always true
Part 3	
I am usually aware of my thoughts.	4 - sometimes true
I'm often confused about the way that I really feel about things.	4 - sometimes true
I usually have a very clear idea about why I've behaved in a certain way.	4 - sometimes true
I'm often aware that I'm having a feeling, but I often don't quite know what it is.	5 - always true
My behavior often puzzles me.	4 - sometimes true
Thinking about my thoughts makes me more confused.	4 - sometimes true
Often I find it difficult to make sense of the way I feel about things.	4 - sometimes true
I usually know why I feel the way I do.	4 - sometimes true

Catherine Reflection Journal

Week 1: May 29 - May 31

1 **Interviewer:** Discuss your previous experiences that are guiding you during these
2 design projects.

3 **Responder:** The experiences that are guiding me are those of a student learner, those
4 of a faculty learner and those of an evaluator of online courses. What is challenging for
5 this specific course is the audience has very special characteristics that have legal
6 implications. This part is very new to me and drawing on experiences but always having to be
7 weary of if this may become a legal request is hindering the design process.

8 **Interviewer:** Interesting. Are there any previous experiences outside of your
9 professional experiences that you may be able to draw on to help you through this new
10 challenge?

11 **Responder:** Most certainly. You have to draw on every experience related or not
12 related to the present one. I've had many jobs in many countries and I draw from all to
13 guide, how I behave, what I say and do and most certainly when I use all of the guides.

14 **Interviewer:** Discuss how you framed the design problems.

15 **Responder:** the design problem was framed based on an existing course offering. This
16 current design problem is actually a redesign of an existing course that has had several
17 owners/sponsors in the last couple of years. It has not been adjusted in at least 7 years
18 and still has policies/rules and/or regulations that were made for different technologies.

19 **Interviewer:** Discuss your own internal beliefs that are guiding you during these
20 projects.

21 **Responder:** Don't get caught up in the drama...:-) That's the main internal voice I'm
22 following - I am attempting to let the characteristics of the audience, the needs of the
23 sponsors, the available technology and the appropriate research guide my design
24 process. I do believe if I follow the trail I'm supposed to follow it will eventually turn out
25 the way that makes the most meaning for the student. But time is not on my side so I'm
26 struggling back and forth.

27 **Interviewer:** Is it fair to say you are comfortable with the ambiguity of the design
28 problem?

29 **Responder:** I do not think that there is a time that the design problem (at least for me)
30 has been totally clear. The client always knows what they would like but, being clear and
31 explaining so a design can action it, is always a challenge. So to answer the question,
32 the unnerving ambiguity has become part of the design process for me ... so yup ... I'm
33 comfortable with it.

34 **Interviewer:** Please post any design products, brainstorms or notes to the Resources
35 folder. THANKS!

36 **Week 2: June 5–7**

37 **Interviewer:** Discuss your ongoing interaction with the client.

38 **Responder:** The client for this project is internal—faculty. Well, actually it is Academic
39 Affairs. I'm revamping the course which onboards faculty into the online teaching
40 environment. I have actually little or no interaction with them due to the level of politics
41 in which I acquired this project ... but I can say that if faculty do not like or even
42 understand the course..heads will roll—most likely mine ... :D

43 **Interviewer:** It seems you are pretty confident that this won't happen ...?

44 **Responder:** Well I'm not confident but hopeful and I realize that if I get support from my
45 department heads then I'll be fine. At this point its all about buy-in

46 **Interviewer:** Discuss how your design solution compares to other solutions you've
47 implemented.

48 **Responder:** This design solution draws from previous design, teaching and learning
49 experiences as well as research in the field. I always begin with what have I
50 experienced as a student and/or teacher to guide my first design suggestions. I then ask
51 myself why? This takes me back to either research or core readings I've completed -
52 thus the explanations are already crafted for those who think differently when reviewing
53 my work.

54 **Interviewer:** Nice.

55 **Interviewer:** Discuss how you are dealing with ambiguity or uncertainty in the project.

56 **Responder:** Lots of self-consoling and discussions with friends in other positions
57 external to the College help. Of course a recreational beverage night and the occasional
58 ranting and venting but otherwise ... its a norm and I always remember "... and this too
59 shall pass" ... :-)

60 **Interviewer:** Have you always been this way? Or do you think this has been a learned
61 behavior as a result of designing?

62 **Interviewer:** Please post any design products, brainstorms or notes to the Design
63 Products folder. THANKS!

64 **Week 3: June 12–14**

65 **Interviewer:** Discuss your interaction with specific models or images. (Mainly models
66 and images in the content. I'm wondering what your thoughts are when you're working
67 with visuals, graphics and such.)

68 **Responder:** During this week I had some major feedback suggesting that the design
69 and/or model used was not sufficient or even appropriate for the audience (i.e. Faculty).
70 The main model being used are Kirkpatrick's model ... although I believe there are
71 elements of ADDIE, Blooms, Kemp, Dick and Carey and most importantly Gagne.

72 Normally I do a thought map instead of a storyboard because the LMS constrains the
73 design and most of the courses I'm creating, I'm the SME 80–90% of the time. So
74 combining instructional and course design together into a mishmash of work is
75 overwhelming.

76 **Interviewer:** Discuss unexpected challenges that have arisen during this project.

77 **Responder:** Resources have been reassigned. New tasks have popped up. Mandatory
78 meeting attendances have pulled resource time. Hiccups/bugs in the LMS due to a
79 system upgrade.

80 **Interviewer:** What's your approach as a result? Is this normal? Unusual? How are you
81 dealing with it?

82 **Responder:** The approach is still the same, just the design was adjusted. This is
83 normal for any development phase especially for new products. So modifying it was not
84 a challenge—I do think that the modifying process for the Unit was new though—I and
85 instructional design are new resources to the Unit and department.

86 **Interviewer:** Discuss your personal design strengths that emerged during this project.

87 **Responder:** Ability to manage risks and not let the risks for the design of the project
88 govern the success of the project has been key. Some of the risks are mentioned in 3.2.
89 There is also challenges with support from the team/faculty level which act as the
90 review process for the work.

91 **Interviewer:** Please post any design products, brainstorming or notes to the Design
92 Products folder. THANKS!

93 ***Week 4: June 19–21***

94 **Interviewer:** Discuss specific design areas you might continue nurturing in the future as
95 a result of what you're learning in this project.

96 **Responder:** So this week, I had to change my focus on designing, teaching and
97 overseeing the delivery of this course to creating infographs to support internal data for
98 the College. Surprisingly the design process I have been using worked the best for the
99 short redirection of skills for the infograph. I spend 2–3 hours working with color
100 schemes and realised I was out of time. Then scrapped all of the design ideas after
101 receiving some feedback—I then quickly pulled together a couple of draft documents
102 and surprisingly enough it worked for the client.

103 Funny how that happens!

104 **Interviewer:** How are models manifesting themselves in the design project? What
105 models or frameworks are you using? (Note that others might find these evident, but
106 you may not be consciously applying them. ADDIE, Agile, Merrill's First Principles,
107 ARCS model, Gagne's 9 Events only name a few. ... If none of these are evident, are
108 there some advanced "rules" that you are following - based on your own experience of
109 what works?)

110 **Responder:** I think I used a rapid/agile approach of Kemp for the Infograph. It was
111 messy yet quickly done - drawing from other solutions I had and it just pulled lots of
112 techniques and designs together to create the solution.

113 **Interviewer:** What tangible results do you have this week? Do you feel this is normal for
114 a typical week, or do you feel you are under or over your typical output? Discuss.

115 **Responder:** This week, my result was an infographic approved by the Assessment
116 committee and the access to the Week 3 for the course. This is normal for a typical
117 week in that I feel I must have a draft or completed artifact for show at the end of each
118 week.x

119 **Interviewer:** Please post any design products, brainstorm or notes to the Design
120 Products folder. THANKS!

121 **Week 5: June 26 - 28**

122 **Interviewer:** How would you explain your process to the client this week?

123 **Responder:** This week we began collecting feedback on the process from the client.
124 Initially the feedback that was considered was that from the audience and they were
125 quite hostile. As this is the third week in the design/development/implementation of the
126 project, I expected the feedback to become worse - instead the feedback was filled with
127 realizations:

- 128 ● Realization of the knowledge that is required to complete the designed module
- 129 ● Realization as to the process of actually designing the module
- 130 ● Realization of the pre-requisite knowledge to complete the entire task

131 As a result approx. half of the reviewers/audience/client failed to complete the first half
132 of the designed module and with the struggles deemed that they may not have the
133 required skills and/or abilities to complete such.

134 **Interviewer:** Uh oh! Is this typical or unusual? How are they reacting? How are you
135 feeling about this?

136 **Interviewer:** Discuss how this project is progressing.

137 **Responder:** The project is progressing as it should - but is dealing with team
138 challenges. The bulk of the work is being left to me with the remaining members of the
139 team not being able to contribute due to inabilities in knowledge and/or skill sets.

140 **Interviewer:** Do you feel you can meet the requirements with little assistance? How will
141 you handle this?

142 Interviewer: How did themes emerge? (When you are pulling all your content together
143 and determining what to do with it, how to organize it etc., ideas emerge that lead you to
144 “know” how to categorize and organize that information. I want you to discuss that
145 process. Does that make sense?)

146 **Responder:** Using Kirkpatrick’s model with other elements of design models along with
147 the infusion of constructivist theories only work well in an ideal world. I’m using a bit of
148 cognitive dissonance simply because I believe that the audience’s belief system is that
149 they already know when their actions show that they do not. This is tempered with
150 social cognition and communities of practice activities. This, like most of my designs
151 never really uses one method and my theoretical applications sometimes conflict with
152 the audience and sponsor for the projects. For this specific case, the only conflict was
153 with the audience as the sponsor of the project has allowed me to use the best solutions
154 required for the project. I believe this method evolved simply because I was the sole
155 person with the knowledge to design the solution - this is good in some instances (quick
156 to deliver solutions) but mostly bad (no support for designed solutions through the
157 understanding of the process). This is the general principles that guide the theoretical
158 design.

159 The procedural design takes another form - taking the theory and implementing does
160 provide a different form of thematic emergence. The themes that emerged were formed
161 based on the challenges with the team members contribution as well as the feedback
162 process. The procedural design now looks much different than the theoretical/model
163 design. Its much more iterative and produced categories such as

- 164 1. knowledge artefacts and actions,
- 165 2. graphics
- 166 3. Feedback processes and display
- 167 4. Timeline for delivery
- 168 5. Resources attached to producing and managing each of the above

169 I hope this makes sense...:-)

170 **Interviewer:** Thanks!

171 **Interviewer:** Please post any design products, brainstorm or notes to the Design
172 Products folder. THANKS!

173 **Week 6: July 7 - 13**

174 **Interviewer:** As this reflection process comes to an end, how would you describe your
175 design process for this project to another designer?

176 **Responder:** Based on the experience of the designer I would say

- 177 • to a novice designer - it was mind-blowing
- 178 • to a designer with intermediate skills – yeah ... lots of late nights and times you
- 179 would want to crawl under your desk and just hide moments
- 180 • to a designer with lots of expertise – yeah ... you know right ... ;-)

181 It was just a messy situation. The project was initiated based on poor quality and an
 182 effort to control such and it maintained that persona because of the lack of resources to
 183 increase the quality outcome. So it was definitely agile and iterative.

184 Agile from the term used in project management principles (agile pm) to being

- 185 1. I designed a bit,
- 186 2. stepped back - tested and reflected,
- 187 3. rethought the process,
- 188 4. then repeat steps 1 - 3 until done

189 Iterative because the usual steps of needs assessment, information gathering, working
 190 with an SME, looking at media, etc. ... all happened at the same time and in no specific
 191 order.

192 So it was extremely messy

193 **Interviewer:** Do you think you altered any processes as a result of the reflection
 194 process? Did you think differently while designing? Explain. ... Alternatively, did you
 195 instead find yourself holding more strictly to your typical design process?

196 **Responder:** I did use this reflection process to test my product more so it was quite
 197 helpful from that aspect. It was time consuming to physically and mentally take the time
 198 to record the reflection but, it definitely helped how I approached some of the activities,
 199 by having me think through the hows, whys and whats of the design.

200 Actually, it made me choose more alternative paths than before. I've realized in my
 201 environment and mindset, when I'm designing I want to do it and get over with it - so I
 202 only reflect summatively (at the end). Where as with this research journal, periodic
 203 reflections produced a much better product as the formative reflections helped re-align
 204 purpose, abilities and affordances.

205 **Interviewer:** What did this reflection process mean to you?

206 **Responder:** It definitely reminded me to update my design portfolio...:-) Some of the
 207 work I could send you and some that I was working on I could not...:/ It really gave me
 208 an opportunity to really think about why I do what I do. It also made me think if I'm
 209 happy only doing what I do and if I should be doing more. More in terms of how I
 210 approach my designs, the process and the tools used, etc.

211 **Interviewer:** Please post any design products, brainstorm or notes to the Design
 212 Products folder. THANKS!

213 **Interviewer:** Once you finish with these prompts, I will send a very quick final survey.
214 Thanks!!!!

Catherine SRIS Final

Part 1	
I don't often think about my thoughts.	2 - rarely true
I rarely spend time in self-reflection.	2 - rarely true
I frequently examine my feelings.	4 - sometimes true
I don't really think about why I behave in the way that I do.	2 - rarely true
I frequently take time to reflect on my thoughts.	4 - sometimes true
I often think about the way I feel about things.	4 - sometimes true
Part 2	
I am not really interested in analyzing my behavior.	1 - never true
It is important for me to evaluate the things that I do.	5 - always true
I am very interested in examining what I think about.	5 - always true
It is important to me to try to understand what my feelings mean.	5 - always true
I have a definite need to understand the way that my mind works.	5 - always true
It is important to me to be able to understand how my thoughts arise.	5 - always true
Part 3	
I am usually aware of my thoughts.	4 - sometimes true
I'm often confused about the way that I really feel about things.	3 - 50/50
I usually have a very clear idea about why I've behaved in a certain way.	3 - 50/50
I'm often aware that I'm having a feeling, but I often don't quite know what it is.	3 - 50/50
My behavior often puzzles me.	2 - rarely true
Thinking about my thoughts makes me more confused.	2 - rarely true
Often I find it difficult to make sense of the way I feel about things.	2 - rarely true
I usually know why I feel the way I do.	4 - sometimes true

Catherine REFLECT Results

Q#	Criterion	Catherine
1.1	Writing spectrum	R
1.1	Presence	R
1.1	Conflict description	R
1.1	Emotion	TA
1.1	Analysis/meaning-making	TA
1.1	Attention to assignment	R
1.2	Writing spectrum	HA
1.2	Presence	TA
1.2	Conflict description	HA
1.2	Emotion	HA
1.2	Analysis/meaning-making	HA
1.2	Attention to assignment	TA
1.3	Writing spectrum	R
1.3	Presence	R
1.3	Conflict description	R
1.3	Emotion	TA
1.3	Analysis/meaning-making	R
1.3	Attention to assignment	R
2.1	Writing spectrum	R
2.1	Presence	R
2.1	Conflict description	R
2.1	Emotion	TA
2.1	Analysis/meaning-making	R
2.1	Attention to assignment	R
2.2	Writing spectrum	TA
2.2	Presence	R
2.2	Conflict description	R
2.2	Emotion	HA
2.2	Analysis/meaning-making	R
2.2	Attention to assignment	R
2.3	Writing spectrum	TA
2.3	Presence	TA
2.3	Conflict description	TA
2.3	Emotion	TA
2.3	Analysis/meaning-making	R
2.3	Attention to assignment	R
3.1	Writing spectrum	TA
3.1	Presence	TA

Q#	Criterion	Catherine
3.1	Conflict description	R
3.1	Emotion	TA
3.1	Analysis/meaning-making	R
3.1	Attention to assignment	R
3.2	Writing spectrum	HA
3.2	Presence	TA
3.2	Conflict description	TA
3.2	Emotion	HA
3.2	Analysis/meaning-making	TA
3.2	Attention to assignment	TA
4.1	Writing spectrum	R
4.1	Presence	R
4.1	Conflict description	R
4.1	Emotion	TA
4.1	Analysis/meaning-making	R
4.1	Attention to assignment	R
4.2	Writing spectrum	HA
4.2	Presence	TA
4.2	Conflict description	TA
4.2	Emotion	HA
4.2	Analysis/meaning-making	TA
4.2	Attention to assignment	TA
4.3	Writing spectrum	HA
4.3	Presence	R
4.3	Conflict description	TA
4.3	Emotion	TA
4.3	Analysis/meaning-making	R
4.3	Attention to assignment	R
5.1	Writing spectrum	TA
5.1	Presence	R
5.1	Conflict description	R
5.1	Emotion	TA
5.1	Analysis/meaning-making	R
5.1	Attention to assignment	R
5.2	Writing spectrum	TA
5.2	Presence	R
5.2	Conflict description	R
5.2	Emotion	HA
5.2	Analysis/meaning-making	TA
5.2	Attention to assignment	R

Q#	Criterion	Catherine
5.3	Writing spectrum	CR-CL
5.3	Presence	R
5.3	Conflict description	R
5.3	Emotion	HA
5.3	Analysis/meaning-making	CR-CL
5.3	Attention to assignment	R
6.1	Writing spectrum	CR-CL
6.1	Presence	R
6.1	Conflict description	R
6.1	Emotion	TA
6.1	Analysis/meaning-making	CR-CL
6.1	Attention to assignment	R
6.2	Writing spectrum	CR-TR
6.2	Presence	R
6.2	Conflict description	R
6.2	Emotion	R
6.2	Analysis/meaning-making	CR-TR
6.2	Attention to assignment	R
6.3	Writing spectrum	R
6.3	Presence	R
6.3	Conflict description	R
6.3	Emotion	CR-TR
6.3	Analysis/meaning-making	CR-TR
6.3	Attention to assignment	R

APPENDIX O – LISA CASE RECORD**Lisa Kickoff Interview Notes**

1 5/28/2014 5:30 p.m. EST

- 2 • Introduction of what will happen in meeting.
- 3 • Discuss current projects and timelines
- 4 • Discuss this research study
- 5 • I mentioned I would provide a summary of the schedule that we defined via the
- 6 appropriate Google Doc.
- 7 • We then proceeded with the discussion below.

8 **Interviewer:** How many ID projects.

9 **Responder:** Project 1: currently creating 1 from scratch.

10 Project 2, 3, 4, 5: revisions of elearning programs.

11 **Interviewer:** How many people are working on this project?

12 **Responder:** 1 Learning ID

13 1 SME

14 6 others who are giving input into the project. They will review the script, alpha and beta

15 test

16 There are 2 who don't know anything about the content; 4 who know something (little or

17 a lot)

18 **Interviewer:** What is your role in the project?

19 **Responder:** e-learning instructional designer, eLearning developer

20 **Interviewer:** What percentage of the design work will you provide vs. someone from

21 your team?

22 **Responder:** 100% on this

23 There are others on the team: 1 in-person instructional designer and 4 training

24 specialists who are working on other projects.

25 **Interviewer:** Describe the deadlines for this project.

26 **Responder:** Started on 5/19

27 Script 6/11: because once this is created, everything falls into place

28 Script review meeting W 6/18, F 6/20: After giving it to reviewers, we have a meeting
29 when I sit down, look at it, provide changes suggestions

30 Record audio: 6/25 - 6/27

31 Alpha-test to all testers. It's complete, but needs to be tested 7/9

32 I receive feedback, fix it, then

33 Beta Test: 7/17

34 Due on 7/21 Original due date was 7/15 but with this project, I received approval to
35 extend the due date 1 week due to vacations already scheduled with project
36 participants.

37 **Interviewer:** Describe the client for this project.

38 **Responder:** For another work area of life insurance industry. Life product
39 manufacturing. This is for the underwriting department.

40 **Interviewer:** What might happen if you miss any milestones or deadlines for this
41 project?

42 **Responder:** The whole project will shift and I will be very frustrated. I have rooms
43 reserved. I have people on my calendar. There are always frowns from higher up if I
44 don't meet the deadlines.

45 The SME is flexible, which is nice.

46 It's very important that I meet this deadline.

47 **Interviewer:** When we begin our study, how far into the project's timeline will you be?

48 **Responder:** answered above

49 **Interviewer:** When we begin our study, how far into the project's work will you be?

50 **Responder:** Some analysis, figured the objectives, the structure and outline.

51 I'm currently writing script for the course.

52 One of the huge focuses is to build confidence.

53 Went through the A in ADDIE.

54 Collected a lot of documents. Just starting to get creative.

55 I write script in my software. It's really important for me to see what's on the screen!

56 Uses Articulate Storyline and Studio 13 and Captivate

57 **Interviewer:** How long is the project you are working on during this study?

58

59 **Responder:** See above. The final course should be @20 minutes but it may be up to 30
 60 minutes because of additional informaiton that has been collected. The timespan from
 61 beginning to end of project is 9 weeks.

62 **Interviewer:** On average, what percentage of your workweek do you expect to be
 63 dedicated to this project during the six weeks of this study?

64 **Responder:** About 60 %

65 **Interviewer:** Describe the project. What differences or similarities can you draw
 66 compared to other projects?

67 **Responder:** Big difference. My SME is on board and has time to work on the project.
 68 He thinks it's so important for his department. I get to have an hour of his time most
 69 days of the week. It's set on the calendar. He's quick about getting back to me very
 70 quickly. He'll say "change this word." I've not had access to this in the past. The
 71 scheduling piece has really helped.

72 The structure is very different - we're doing a lot of decision-making. It's getting a little
 73 deeper.

74 Another significant difference is I'm working without a direct supervisor. My current
 75 supervisor moved to a new job in another part of the company. Her leadership style
 76 sometimes felt like micromanaging. I have a sense of freedom while I work. Regular,
 77 daily instant messages to see what I'm working on have stopped.

78 **Interviewer:** It will be interesting to see if/how this change is reflected in your work. ...

79 **Responder:** Similarities: Process I go through. It's similar. I worked hard to create a
 80 process with calendar and getting people on board.

81 Another similarity is the work environment. I work in a cubicle in a very large open office
 82 space with 100 other people. Most people in the environment are customer service
 83 professionals or work on their computer to process life insurance changes and other
 84 administrative work associated to policies. There is always a conversation going on
 85 around me which makes it hard to concentrate when completing work like writing scripts
 86 or other more creative processes which work better in silence.

87 **Interviewer:** Consider this when you answer your reflection prompts. I imagine there
 88 something to be said for the relationship between your environment and your design
 89 challenges.

- 90 • We discussed surveys
- 91 • We discussed the survey links provided via email. I will send, and Responder will
 92 complete before she begins reflection.
- 93 • We discussed the weekly reflective journal led by my guided questions.

- 94 • I will post the first week's reflection this Friday 5/29
- 95 • will complete by end of day, Sunday, .
- 96 • I will review and may respond by Tuesday.
- 97 • Subsequent sets of reflection questions will be provided by me each Friday and
- 98 will follow the same weekly schedule.

99 **Interviewer:** We discussed a manager letter of support

100 **Responder:** I don't see a manager letter in the folder. Am I missing it?

101 **Interviewer:** No. We simply discussed it. I also sent an email with attachment on 5/30.

- 102 • We discussed design products.

103 **Interviewer:** As part of the study, I would like to review the design products developed
104 during the week. Please place whatever you can into the appropriate week's folder. If
105 you cannot provide something, please describe the product in depth in your reflection
106 journal.

107 **Responder:** My company has a number of rules regarding privacy and sharing
108 information outside the company. I'll see which project items I can share and provide
109 them. Though I can't share my online courses outside the company, I can take a few
110 screen shots of the slides and share those.

111 **Interviewer:** That will suffice. Scrubbed documents and descriptions of documents are
112 just fine. There is no need to provide anything private. Also, anything you do provide will
113 be used for my analysis, NOT used in the final product

114 THANKS!

Lisa Timeline and Schedule

Event	Planned Complete Date	Responsible Party
Initial Interview	5/28/14	Both Researcher and Participant
Demographic Survey Delivered	5/28/14	Researcher
Demographic Survey Completed	5/28/14	Participant
Reflection Survey Delivered	5/28/14	Researcher
Reflection Survey Completed	5/28/14	Participant
Reflection 1 Delivered	5/30/14	Researcher
Reflection 1 Completed	6/1/14	Participant
Reflection 1 Comments provided	6/3/14	Researcher
Reflection 1 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 2 Delivered	6/6/14	Researcher
Reflection 2 Completed	6/8/14	Participant
Reflection 2 Comments provided	6/10/14	Researcher
Reflection 2 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 3 Delivered	6/13/14	Researcher
Reflection 3 Completed	6/15/14	Participant
Reflection 3 Comments provided	6/17/14	Researcher
Reflection 3 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 4 Delivered	6/20/14	Researcher
Reflection 4 Completed	6/22/14	Participant
Reflection 4 Comments provided	6/24/14	Researcher
Reflection 4 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 5 Delivered	6/27/14	Researcher
Reflection 5 Completed	6/29/14	Participant
Reflection 5 Comments provided	7/1/14	Researcher
Reflection 5 Additional Joint	ongoing as	Both Researcher and

Discussion	necessary	Participant
Reflection 6 Delivered	7/4/14	Researcher
Reflection 6 Completed	7/6/14	Participant
Final Survey Delivered	7/8/14	Researcher
Reflection 6 Comments provided	7/8/14	Researcher
Final Survey Completed	7/10/14	Participant
Reflection 6 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant

Lisa Demographic Survey

Age	46-50
Gender	Lisa
Total years of active, professional work experience do you have in a corporate environment:	4
Total years of active, professional work experience do you have in an academic environment:	10
Total years have you been actively designing instruction in a corporate environment?	4
How many years, in total, have you been actively designing instruction in an academic environment	10
Percentage of current role that typically involves designing instruction?	76-100%
Ratio of design time typically dedicated to designing for internal clients vs external clients	76-100%
Percentage of design time typically spent on designing individually (compared to as part of a team)?	76-100%
Notes	"academic" environment was teaching preschoolers or elementary school aged students in an arts & education environment.

Lisa SRIS Scale Baseline

Part 1	
I don't often think about my thoughts.	2 - rarely true
I rarely spend time in self-reflection.	3 - 50/50
I frequently examine my feelings.	4 - sometimes true
I don't really think about why I behave in the way that I do.	2 - rarely true
I frequently take time to reflect on my thoughts.	3 - 50/50
I often think about the way I feel about things.	3 - 50/50
Part 2	
I am not really interested in analyzing my behavior.	1 - never true
It is important for me to evaluate the things that I do.	5 - always true
I am very interested in examining what I think about.	5 - always true
It is important to me to try to understand what my feelings mean.	5 - always true
I have a definite need to understand the way that my mind works.	5 - always true
It is important to me to be able to understand how my thoughts arise.	5 - always true
Part 3	
I am usually aware of my thoughts.	3 - 50/50
I'm often confused about the way that I really feel about things.	4 - sometimes true
I usually have a very clear idea about why I've behaved in a certain way.	4 - sometimes true
I'm often aware that I'm having a feeling, but I often don't quite know what it is.	2 - rarely true
My behavior often puzzles me.	2 - rarely true
Thinking about my thoughts makes me more confused.	1 - never true
Often I find it difficult to make sense of the way I feel about things.	3 - 50/50
I usually know why I feel the way I do.	3 - 50/50

Lisa Reflection Journal

1 **Responder:** I'm enjoying a work-at-home day today so I can work on your research
2 project during a weekday. I LOVE work at home days!

3 **Week 1: May 30 - June 1**

4 **Interviewer:** Discuss your previous experiences that are guiding you during this project.

5 **Responder:** I've created online learning professionally for 3+ years and designed
6 curriculum and taught for a number of years. I know that curriculum design is a process
7 that takes an idea (the concept for the course or the business need) then uses a larger
8 structure (like a course outline) and drills down to smaller pieces (like concepts, skills,
9 etc.) Many people are involved so the project twists and turns. I've learned to stay open
10 to changes until I record audio and work on the final graphic design for the course.

11 **Interviewer:** Discuss how you framed the design problem.

12 **Responder:** Using a Powerpoint presentation with information, a few underwriter's tools
13 and notes from two informational interviews, I found the large topics that needed to be
14 discussed in the course, added concepts and skills that needed to be learned. I created
15 an outline with "chunked" information so learners would have an easier time digesting
16 the concepts in this course.

17 **Interviewer:** Discuss your own internal beliefs that are guiding you during this project.

18 **Responder:** It always works out! Online learning projects have many variables.

19 My way may not be the best way. Stay open to suggestions.

20 Always consider the learner. Defend design choices if they would be best for the
21 learner. (One example of this: a SME asked me to restrict the navigation of a course so
22 each learner was forced to sit through all the narration on each slide. In a classroom,
23 this is equivalent to tying each student to their chair and locking the classroom door.
24 Learners need the option to browse material or jump around if needed.)

25 Learn something new! I don't know anything about financial underwriting. Soon, I will
26 know lots about this subject! Knowledge is such a gift!

27 **Interviewer:** Please post any design products, brainstorm or notes to the Resources
28 folder. THANKS!

29 **Responder:** I posted my:

30 1. Project Plan & Schedule

31 I create a doc like this for each online course I create. This doc describes the complete
32 program I'm creating + the specific course I'm creating during this research project. This
33 doc also has my course timeline.

34 2. Course Outline

35 3. First draft of script for sections 1 & 2

36 This is truly a first draft, sloppy copy that includes the elements that may go on the
37 screen (not designed, just "thrown" on the screen) and the initial script for the first 2
38 sections of the online course. This may change drastically but this is my first draft. My
39 SMEs are reading this doc today and we will discuss it when we meet next week.

40 **Week 2: June 6 - 8**

41 **Interviewer:** Discuss your ongoing interaction with the client.

42 **Responder:** I met with my Subject Matter Expert 3 times last week and 3 times this
43 week. During the first weeks of the project, he was emailing me PowerPoints, test
44 questions used for the online course topic in the past, and short brainstorms. During our
45 meetings the past few weeks, I asked him to "describe the information on the
46 PowerPoint screen in more detail" or, "why is this question important? What information
47 do learners need to answer this question?"

48 One interesting thing that I notice about SMEs is they forget that I don't know what they
49 know and a Powerpoint slide with bullet points isn't enough to describe the depth of
50 knowledge they have acquired through time and experience. They're surprised by the
51 amount of time it takes to share their knowledge. This week, when I welcomed my SME
52 to our 2nd meeting, I reviewed the timeline for the course and said, "we have today and
53 Thursday then you won't see me so many times per week for awhile." His response
54 was, "I didn't realize how much time and effort it is to create an online course." (During
55 our project planning meetings, the frequency of meeting time is clearly illustrated on a
56 timeline with the text, "plan to meet 3 times per week for one hour each meeting.) I think
57 it's fascinating that the words, "we'll need to meet 3 times per week for 3 weeks" are not
58 realized until SMEs start attending meetings and think, "wow, this takes a lot of time and
59 effort."

60 Another interesting thing that I notice about SMEs is their perception of the duration of
61 an online course vs. the amount of material needed to make the course effective.
62 During the analysis phase I always ask, "how long would you like this course to be?"
63 The target length of my current project is 20 minutes. Associates taking this course will
64 probably do it over lunch so 20 minutes would be a good length. Before the online class
65 was developed, my SME's information was presented in a few lunch-&-learn formats
66 with a total in-person course time of @2 hours. Currently, the course looks like it will

67 take the learner 40 minutes to complete. I'm looking forward to a meeting next week to
68 discuss the amount of content and remove information that may not be needed in the
69 course.

70 Overall, my current Subject Matter Expert is excellent to work with. He has a laid back
71 attitude and is easy-going. He's secure in his role and an Underwriter but not interested
72 in any of the creative aspects of the course. He is very willing to make time for meetings
73 and is very prompt to share information. He is definitely one of the best SMEs I've
74 worked with.

75 **Interviewer:** It's great that you have an SME so open to sharing this expertise. I
76 imagine he's been intrigued by learning a bit about YOUR expertise.

77 **Responder:** (From 6/16) All the SMEs I work with are surprised by the amount of time
78 and attention it takes to create an online course. They've never commented on my
79 expertise but always comment on how much time they have to devote to the product.

80 **Interviewer:** Discuss how your design solution compares to other solutions you've
81 implemented.

82 **Responder:** One of the objectives for this course is to build confidence using the
83 material so I knew the learner would need to practice skills and use concepts to build
84 mastery and feel confident. This course has 7 case studies with questions and
85 feedback. Learners are asked to read the case study, answer the question, read the
86 feedback for their answer then, read the feedback for the other answers too. I'm hoping
87 that the process of reading all the feedback will give learners a breadth of feedback for
88 the same situation. This is a different approach than many of my past courses. Usually,
89 I would ask a question and the learner would only see the feedback for the answer they
90 choose and the feedback usually said, "you're right because....." or "think about this
91 again.....here's the correct answer."

92 **Interviewer:** Discuss how you are dealing with ambiguity or uncertainty in the project.

93 **Responder:** I'm currently writing script and storyboarding the project. This part of the
94 creation process is filled with ambiguity and uncertainty. I deal with it through asking
95 questions and a trial and error process. At this point in the process, I resist the urge to
96 take strong ownership in my work because it's important to be open to change. I also
97 resist the urge to develop visuals or interactions until I know the information is solid.

98 I prefer to write and storyboard small sections of the course then present them to my
99 SME. I think it's easier to react to material vs. come up with material so I give the SME
100 the chance to react to what I've written and to simple screen design and interface
101 design elements that describe the idea but are not polished products. Smaller sections
102 of the course are more easily digestible and faster to change. When my SME has
103 commented on each smaller section of the course (and I have confidence that I'm on

104 the right track) I present the entire course to another SME a larger audience. On
105 Monday, June 9th, I'm presenting the course to another SME, who would have been
106 part of the script writing/storyboarding process but she was out of town. After getting her
107 input on Monday, I will share the script with 6 reviewers and meet with them after they
108 review the script.

109 My process looks like this

- 110 ● I collect information
- 111 ● I write script and create simple visuals or interactions
- 112 ● I share small portions of what I did with the SME
- 113 ● I make revisions
- 114 ● I share the course with a larger audience

115 I also publish a "sloppy copy" of the course at this point so the SME can click through
116 the course to see how the interactions will work and get a sense of the visuals on the
117 screen. This has been helpful but problematic at the same time. With the sloppy copy,
118 most SMEs want to react to what they see and how something works. They often
119 comment, "that picture should be larger" or "shouldn't those buttons be placed on the
120 other side of the screen" or "this button doesn't work." I always remind them, "the
121 finished course will look different. I'm sharing this version just to give you an idea of how
122 the course will work."

123 **Interviewer:** Please post any design products, brainstorming or notes to the Design
124 Products folder. THANKS!

125 **Responder:** I added "6-7 Case Study 1 Example" to the Design Products folder. This is
126 an example of one of the case studies in the online course.

127 ***Week 3: June 13 - 15***

128 **Interviewer:** Discuss your interaction with specific models or images. (Mainly models
129 and images in the content. I'm wondering what your thoughts are when you're working
130 with visuals, graphics and such.)

131 **Responder:** Graphic design is one of the most important aspects of a learning
132 experience. Our brains can process visual information more quickly and more clearly
133 than text information. Good visuals are more motivating for learners and can help us
134 remember information for a longer period of time.

135 At this time, the look and feel of this course is in a "sloppy copy" stage. I have chosen
136 some of the images but they have not been "OK'ed" by the SMEs and the reviewers. I
137 don't spend lots of time designing graphics until I know the information in the script is
138 correct.

139 **EXAMPLE:** A SME gives me a statistic that we sell 100 policies per day. I take the time
140 to create a cool infographic that describes this information. At script review, one of the

141 reviewers says, “did you know that information was updated last week? Now, we sell
 142 125 policies per day.” With the new information, I would have to spend the time revising
 143 the infographic.

144 I do have some ideas for graphics for this course but they have not been developed. I
 145 also have a plan to create an infographic using screen text when the information has
 146 been verified.

147 **Interviewer:** Discuss unexpected challenges that have arisen during this project.

148 **Responder:** The script review process may take additional time due to business needs.

149 I’m working with 2 SMEs for this project. SME #1 has contributed all the content to the
 150 course because SME #2 has been on vacation. The original plan was to work on the
 151 course script with SME #1 until SME #2 returned from her vacation then include her in a
 152 1.5 hour meeting with SME #1 and myself, where she could react to the script and make
 153 changes. I would incorporate her feedback into the script before I shared the script with
 154 all reviewers. I had plenty of time in my schedule to make any changes.

155 On Monday, when SME #2 returned from vacation, the department where both SMEs
 156 work was so overwhelmed with work that they asked to change the date of the meeting.
 157 My schedule was carefully orchestrated due to some time off I planned. We were not
 158 able to meet due to scheduling conflicts so I sent out the script as-is, without SME #2’s
 159 ideas and/or changes.

160 I anticipate the results of this missed meeting will be a longer script review process. A
 161 well-planned instructional design process creates the least amount of effort for everyone
 162 involved. Missing this important meeting may add time to the script review process.

163 The Perfect Process

164 I have 100% buy-in from all SMEs with the script and the “sloppy copy” concepts for the
 165 course before we invite others into the script review process. This minimizes discussion
 166 from the SMEs at our script review meetings because they have already “signed off” on
 167 the script.

168 2 SMEs + myself meet for 1.5 hours to “polish” the script = 4.5 hours

169 2 SMEs + myself + 4 additional reviewers meet for 2 hours of script review = 14 hours

170 18.5 total work hours for process

171 The Process I May Encounter

172 1 SME will make many changes when all reviewers are present. SME #1’s changes will
 173 dominate the meetings and extend the meeting time for all reviewers.

174 2 SMEs + myself + 4 additional reviewers meet for 2 hours of script review = 14 hours

175 Add two additional 1 hour meetings to complete script review = 14 hours

176 28 total work hours for process

177 **Interviewer:** You're reflecting on the future possible issues. Is this a normal process for
178 you? How often are you correct in your "forecast?"

179 **Responder:** Yes, I can see things coming. I've had enough experience in life and my
180 profession to know when things can change. First I feel it in my gut then explore the
181 calendar to figure out what may need to happen to keep the project on schedule. I have
182 been 100% correct in my predictions in the past. Unfortunately, when I explain my
183 prediction to a supervisor, the feedback has been, "you're responsible for your
184 deadlines so do whatever you have to do to keep the project on schedule."

185 In the case of this project, during my first script review meeting, the SME who was on
186 vacation dominated the meeting during the first 30-minutes. She spent lots of time
187 reading the script during the meeting (I assume she hadn't read the script thoroughly
188 before the meeting.) At the 15-minute mark I took control and said, "we've only gotten to
189 slide 4 and we have 45 minutes left. I don't want to take more of everyone's time and
190 schedule another script review meeting. Let's step it up and see if we can get through
191 section 4 of the course in the next 45 minutes." We did complete section 4 during our
192 time together and completed the review of the rest of the course during our second 1-
193 hour meeting. Our course is now on schedule but the review process felt rushed vs.
194 thoughtful. I think the group held back some of their feedback due to the expectation of
195 meeting a goal quickly.

196 **Interviewer:** Discuss your personal design strengths that emerged during this project.

197 **Responder:** My work during the past week has not focused on this online course. I only
198 worked 2 days because I strategically scheduled vacation time during the period when
199 the course reviewers would be reading the script in preparation for our script review
200 meeting.

201 I have strong graphic design skills and am looking forward to working with graphic
202 design aspects of the course more intently later next week.

203 When I share the script with all reviewers, I need to "let go" of the course. I can't make
204 changes while others review the course. I become prepared to accept changes shared
205 by others or defend the design choices I've already made.

206 One of my design strengths is to describe things with visuals and use short, concise,
207 conversational narration and occasional text on the screen without narration. One of the
208 reviewers from my training team that has been assigned to review this course has a
209 different style than I do. She's a "thinker" and I'm a "feeler." Her comments during script
210 review meetings always challenge my choices. I'm more creative in my learning design
211 and try to challenge the learner to consider information and think for themselves. Her
212 style is to feed information to the learner and ask them to regurgitate the information in

213 a multiple choice question. I prefer short, concise text. She prefers long-winded
 214 explanations. I believe information can be explained with visuals - but the full visual has
 215 not been developed. She can't "see" what the finished visual will say so she wants to
 216 add volumes of text to explain a concept.

217 This reviewer decided to take time off during our second meeting so we weren't slowed
 218 down by her questions. The meeting had a different feeling without her. It felt calm vs.
 219 always having to stop to answer her questions. Though my previous manager thought 3
 220 people + 3 Underwriters should be on the review team, I think the 3 Underwriters + 1
 221 training team member who really wants to be there is enough.

222 **Interviewer:** Please post any design products, brainstorm or notes to the Design
 223 Products folder. THANKS!

224 **Responder:** I did not post any design products this week. I was out-of-the-office for 3
 225 days so I did not work on the look and feel of the course and there was no change to
 226 the script I completed the previous week.

227 **Week 4: June 19 - 22**

228 **Interviewer:** Discuss specific design areas you might continue nurturing in the future as
 229 a result of what you're learning in this project.

230 **Responder:** Graphic Design

231 There is a mortality study included in this course. It's currently all text with bullet points. I
 232 want to create an infographic to quickly describe the information for the learners.
 233 Infographics are very interesting to me. At the same time I was thinking about
 234 infographics, I was reading a post on an Instructional Design blog. It mentioned the
 235 work of Edward Tufte. I purchased a few of his books and I'm planning to look at them
 236 this weekend.

237 Within the same few days, a coworker asked me if I was interested in having a "coloring
 238 book" that would help me practice visual notetaking characters and symbols. (See
 239 Sunni Brown <http://sunnibrown.com> for visual notetaking. I took her online course last
 240 summer.)

241 I think it's fascinating how the world helps nurture your interests if you stop and say,
 242 "hey, what a coincidence that I want to learn more about putting complex information
 243 into pictures and I stumbled across 2 great resources to help me do that!"

244 **Course Design Project**

245 Helping people who review the course understand their roles and time commitment. I
 246 can say, "please read the script and record your comments before our script review
 247 meeting. At the meeting, we'll look at each course slide and discuss the narration text
 248 and screen text. This will be your time to make changes to the course. Please come
 249 prepared so the process runs smoothly." What really happens? When we meet, SMEs

250 are reading the script during the meeting. It slows the process and their feedback isn't
251 as meaningful because they haven't looked at the course as a whole. They're reacting
252 to each slide separately.

253 People who have acted as a SME tend to have a better idea about their role because
254 they've experienced the process.

255 I just had a brainstorm! Maybe I need to create an infographic that describes the role of
256 the SME!

257 Instructional Design

258 I want to put time into creating more detailed scenarios where the learner can make
259 choices with consequences. This was my intent with this course. This idea changed
260 because 3 of the information gathering meetings were cancelled. (I lost 3 hours of time
261 with my main SME.) Instead, the scenarios became a question and answer format
262 where the learner looks at some information and chooses an answer then is asked to
263 read the feedback for the other answers to learn more.

264 There is a visual example of a "simple" scenario in the Design Products folder. 6-7 Case
265 Study 1 Example

266 **Interviewer:** How are models manifesting themselves in the design project? What
267 models or frameworks are you using? (Note that others might find these evident, but
268 you may not be consciously applying them. ADDIE, Agile, Merrill's First Principles,
269 ARCS model, Gagne's 9 Events only name a few... If none of these are evident, are
270 there some advanced "rules" that you are following - based on your own experience of
271 what works?)

272 **Responder:** I'm an ADDIE model user. I'm sort of "Designing" and "Developing" at the
273 same time.

274 Gagne's 9 Events are in my brain. I just mentioned to the reviewers how important it is
275 to "gain attention" at the beginning of the course.

276 This is the first time I've worked with the Underwriting department. They feel like their
277 Associates are very motivated. They feel comfortable "pushing" lots of content. I'm
278 working on the first course in a series of 7. This course feels very informational but it
279 does engage the learner to think for themselves and consider possibilities in the last half
280 of the course.

281 Now that I think about this, I deleted some of the course content based on one SME's
282 comments, "these slides don't really bring value to the course." The slides that were
283 deleted weren't filled with information but they did add contrast to a really boring course.

284 **Interviewer:** What tangible results do you have this week? Do you feel this is normal for
285 a typical week, or do you feel you are under or over your typical output? Discuss.

286 **Responder:** Tangible results

287 I have completed the course script with all reviewers feedback included. Reviewers
288 have one more chance to look at the script and make changes themselves via a shared
289 doc. The script will officially be “done” on Tuesday, June 24. Audio recording will
290 happen on Thursday, June 26.

291 Normal for a typical week?

292 This week feels like more than a typical week ... but I always seem to work extended
293 days if I take time off ... even if they're planned months in advance.

294 I'm definitely making up for my time off last week. (I took Thursday, Friday and Monday
295 off for recouping from a medical procedure.) Instead of working 8.25 hour days, I've
296 worked

297 Tuesday - 9

298 Wednesday - 9.25

299 Thursday - 8.5

300 Friday - 10.25

301 I have a “sloppy copy” for the design of the course. I'll develop the sloppy copy after the
302 script is completed. (I learned long ago not to go to crazy with the design until the script
303 is feeling completed. So many changes can happen with the script and I hate wasting
304 time designing a course only to completely change the design when the script is final.

305 The remainder of my time this week has been focused on expired online classes in my
306 department. I work in a large Corporation and our courses have to go through
307 Compliance and Legal before their expiration date. I'm currently working on 5 expired
308 courses. I have 2-days scheduled to complete the process for each course.

309 I sincerely don't feel as connected to this project as I have to other projects.

310 Reason #1: Our department supervisor moved to another position in the company. Our
311 new manager begins work on June 30th. Our department is being led by a higher
312 administrator who has been in Italy for the past week. Though I'm on track with my
313 work, I'm not inspired. The training team feels a bit like lost sheep! So sad.

314 Reason #2: Health issues. I had Moh's Surgery and scheduled some recuperation time.
315 My focus has been more on my health vs. my project (which it should be!)

316 Reason #3: It's summer in Minnesota. Many people on my project team are out for
317 vacation throughout the project. This is problematic because focus on the project is
318 short. (But, this is how it's suppose to be! People in Minnesota need to enjoy the
319 summer because we focus on work during the cooler months of the year.)

320 Reason #4: I was head-hunted and interviewed for a position I was interested in. It's
321 easy to deviate my focus when I'm Idreaming about other professional possibilities. :-)

322 Reason #5: I haven't sat back and creatively thought, "what could I do that I could learn
323 from this project?" Usually I explore examples from others and decide, "this is what I
324 want to try with this project!" I haven't had time to do that this time around and I feel like
325 this project is "lame" vs. "innovative." I always remind myself, "it is what it is based on
326 the time available and the support I have to create a piece of artwork." If time and
327 support from SMEs is lacking, the project will suffer.

328 **Interviewer:** Please post any design products, brainstorm or notes to the Design
329 Products folder. THANKS!

330 **Responder:** I posted a "Brainstorm" doc. I like having one place to go when I have
331 brainstorms.

332 ***Week 5: June 26 – 28***

333 **Interviewer:** How would you explain your process to the client this week?

334 **Responder:** I have a completed and approved script and audio. Now I will begin to
335 author the course, which means I will take the images I chose along with the audio and
336 "make it work." I'll also design the course using the images we've talked about
337 throughout the process.

338 **Interviewer:** Discuss how this project is progressing.

339 **Responder:** This project is on schedule. I'm beginning my favorite part of each project:
340 taking all the elements and making them work along with developing the images. I
341 shared a "sloppy copy" of the course but now, I will take the images and make them
342 sparkle through graphic design.

343 **Interviewer:** How did themes emerge? (When you are pulling all your content together
344 and determining what to do with it, how to organize it etc., ideas emerge that lead you to
345 "know" how to categorize and organize that information. I want you to discuss that
346 process. Does that make sense?)

347 **Responder:** With the project, the SME shared a PowerPoint that had some
348 organization. I took the main points and categorized them further then asked for more
349 information. Some of the original categories were divided.

350 **EXAMPLE:** The "welcome section" originally had information about Underwriter and
351 Advisor roles. The information in this section has been a department focus so we
352 decided to create a separate section for roles. It's short but it stands out in a positive
353 way.

354 **Interviewer:** Please post any design products, brainstorm or notes to the Design
355 Products folder. THANKS!

356 **Responder:** I posted a few screenshots of the progress of the course design: some
357 before and after shots of a few screens.

358 **Week 6: July 4 - 7**

359 **Interviewer:** As this reflection process comes to an end, how would you describe your
360 design process for this project to another designer?

361 **Responder:** I use the ADDIE model.

362 Analysis

363 I collected information that would be included in the course using a PPTX and verbal
364 interviews.

365 Design

366 One of the objectives of this course is to build learner confidence. There are a number
367 of practice interactions in this course.

368 Development

369 The course is currently being developed. I'm authoring the course.

370 Implementation

371 The course I'm working on has not been implemented yet. It will be paired with a
372 classroom experience where discussion will take place around the "grey areas" of
373 Financial Underwriting.

374 Evaluation

375 I have not gotten to this phase of the project yet. The group who will be participating in
376 this learning experience took a pre-test so we will ask them to take the test again to
377 prove the effectiveness of this learning experience.

378 **Interviewer:** Do you think you altered any processes as a result of the reflection
379 process? Did you think differently while designing? Explain... Alternatively, did you
380 instead find yourself holding more strictly to your typical design process?

381 **Responder:** One Alteration: I'm working on ways to help my SMEs in the future
382 One week, one of my SMEs said, "I didn't realize how much time it takes to create an
383 online course." I've been working on a PowerPoint to use to introduce new SMEs to the
384 process.

385 Another thing I did differently

386 I took the time to check-in with my SMEs during a meeting last week. I thought it would
387 be valuable to check in with them while they were "in the process" vs. after the course
388 was done. I asked them, "is there anything you would change about this process to
389 make it easier for you?" Both SMEs remarked they thought the process worked great
390 and they wouldn't change a thing. They appreciated the flexibility I had when they
391 needed it. They liked how I kept the project moving. One SME really liked how I

392 followed-up with a list of to-do's via email to help keep him on track. When he received
393 the email, he completed the to-do's when he had a minute.

394 **Interviewer:** What did this reflection process mean to you?

395 **Responder:** The reflection process gave me the opportunity to evaluate each step in
396 my process. I rarely take the time to look back upon the week and consider what went
397 right and what could be revised for the next course.

398 I enjoy journaling in my personal life. I like looking back and saying, "I remember doing
399 that" or "wow, I remember thinking that." Reflection is such an important part of any
400 process but we rarely have or feel like it's valid to take the time in our professional lives!

401 **Interviewer:** Please post any design products, brainstorming or notes to the Design
402 Products folder. THANKS!

403 **Responder:** I'll post a few of my final assessment questions on Monday evening after
404 work. I need to grab some screenshots while I'm at my desk.

405 **Interviewer:** After you have finished your reflections, I will review/comment, and then
406 send you one last survey! Thanks!!!!

407 **Responder:** Thank you for the opportunity to participate. This was a very meaningful
408 experience! I'll look forward to the time you're ready to share the results!

Lisa SRIS Final

Part 1	
I don't often think about my thoughts.	1 -never true
I rarely spend time in self-reflection.	1 -never true
I frequently examine my feelings.	5 - always true
I don't really think about why I behave in the way that I do.	1 -never true
I frequently take time to reflect on my thoughts.	4 - sometimes true
I often think about the way I feel about things.	5 - always true
Part 2	
I am not really interested in analyzing my behavior.	1 -never true
It is important for me to evaluate the things that I do.	5 - always true
I am very interested in examining what I think about.	5 - always true
It is important to me to try to understand what my feelings mean.	5 - always true
I have a definite need to understand the way that my mind works.	5 - always true
It is important to me to be able to understand how my thoughts arise.	5 - always true
Part 3	
I am usually aware of my thoughts.	4 - sometimes true
I'm often confused about the way that I really feel about things.	4 - sometimes true
I usually have a very clear idea about why I've behaved in a certain way.	4 - sometimes true
I'm often aware that I'm having a feeling, but I often don't quite know what it is.	4 - sometimes true
My behavior often puzzles me.	4 - sometimes true
Thinking about my thoughts makes me more confused.	1 -never true
Often I find it difficult to make sense of the way I feel about things.	4 - sometimes true
I usually know why I feel the way I do.	4 - sometimes true

Lisa REFLECT Results

Q#	Criterion	Lisa
1.1	Writing spectrum	CR-CL
1.1	Presence	R
1.1	Conflict description	R
1.1	Emotion	TA
1.1	Analysis/meaning-making	R
1.1	Attention to assignment	TA
1.2	Writing spectrum	R
1.2	Presence	R
1.2	Conflict description	R
1.2	Emotion	HA
1.2	Analysis/meaning-making	HA
1.2	Attention to assignment	TA
1.3	Writing spectrum	HA
1.3	Presence	R
1.3	Conflict description	R
1.3	Emotion	R
1.3	Analysis/meaning-making	CR-CL
1.3	Attention to assignment	R
2.1	Writing spectrum	CR-TR
2.1	Presence	R
2.1	Conflict description	CR-TR
2.1	Emotion	TA
2.1	Analysis/meaning-making	R
2.1	Attention to assignment	R
2.2	Writing spectrum	R
2.2	Presence	R
2.2	Conflict description	R
2.2	Emotion	TA
2.2	Analysis/meaning-making	R
2.2	Attention to assignment	R
2.3	Writing spectrum	R
2.3	Presence	R
2.3	Conflict description	R
2.3	Emotion	TA
2.3	Analysis/meaning-making	R
2.3	Attention to assignment	R
3.1	Writing spectrum	CR-CL
3.1	Presence	R

Q#	Criterion	Lisa
3.1	Conflict description	R
3.1	Emotion	TA
3.1	Analysis/meaning-making	R
3.1	Attention to assignment	R
3.2	Writing spectrum	CR-TR
3.2	Presence	R
3.2	Conflict description	CR-TR
3.2	Emotion	TA
3.2	Analysis/meaning-making	CR-CL
3.2	Attention to assignment	R
4.1	Writing spectrum	CR-TR
4.1	Presence	R
4.1	Conflict description	CR-TR
4.1	Emotion	R
4.1	Analysis/meaning-making	CR-TR
4.1	Attention to assignment	R
4.2	Writing spectrum	CR-TR
4.2	Presence	R
4.2	Conflict description	R
4.2	Emotion	HA
4.2	Analysis/meaning-making	CR-TR
4.2	Attention to assignment	R
4.3	Writing spectrum	CR-CL
4.3	Presence	R
4.3	Conflict description	R
4.3	Emotion	CR-CL
4.3	Analysis/meaning-making	CR-CL
4.3	Attention to assignment	R
5.1	Writing spectrum	TA
5.1	Presence	TA
5.1	Conflict description	TA
5.1	Emotion	HA
5.1	Analysis/meaning-making	R
5.1	Attention to assignment	R
5.2	Writing spectrum	TA
5.2	Presence	R
5.2	Conflict description	TA
5.2	Emotion	TA
5.2	Analysis/meaning-making	TA
5.2	Attention to assignment	R

Q#	Criterion	Lisa
5.3	Writing spectrum	HA
5.3	Presence	TA
5.3	Conflict description	TA
5.3	Emotion	HA
5.3	Analysis/meaning-making	TA
5.3	Attention to assignment	TA
6.1	Writing spectrum	TA
6.1	Presence	R
6.1	Conflict description	R
6.1	Emotion	HA
6.1	Analysis/meaning-making	TA
6.1	Attention to assignment	R
6.2	Writing spectrum	CR-TR
6.2	Presence	R
6.2	Conflict description	CR
6.2	Emotion	TA
6.2	Analysis/meaning-making	CR-TR
6.2	Attention to assignment	R
6.3	Writing spectrum	R
6.3	Presence	R
6.3	Conflict description	R
6.3	Emotion	CR-CL
6.3	Analysis/meaning-making	CR-CL
6.3	Attention to assignment	R

APPENDIX P – WILLIAM CASE RECORD**William Kickoff Interview Notes**

1 5/30/3014

- 2 • Introduction of what will happen in meeting.
- 3 • Discuss current projects and timelines
- 4 • Discuss this research study
- 5 • Google Docs - I have his email address and he is familiar with Google docs
- 6 • We proceeded with the discussion below.

7 **Interviewer:** Since you remain anonymous in this study, I typically assign a pseudonym
8 for my participants. Would you like to choose your own?

9 **Interviewer:** How many projects?

10 **Responder:** Single client, multiple projects, divided by states depending on states
11 Working on 2 simultaneously.

12 Implementation project is primary

13 **Interviewer:** How many people are working on this project?

14 **Responder:** 30; 15 IDers; 5 learning consultants (SME coordinators)
15 eLearning developers (10)

16 **Interviewer:** What is your role in the project?

17 **Responder:** Sr IDer, adult learning theory, training components, mentoring them,
18 developing courses.

19 **Interviewer:** What percentage of the design work will you provide vs. someone from
20 your team?

21 **Responder:** 50-75% overall design, skeletal
22 content development 10-15%

23 **Interviewer:** Describe the deadlines for this project.

24 **Responder:** Joined the team last week, but it's been going on since ACA was enacted
25 Component ends this year

26 **Interviewer:** Describe the client for this project.

27 **Responder:** large health insurance company

28 **Interviewer:** What might happen if you miss any milestones or deadlines for this
29 project?

30 **Responder:** Trainers go in front ill prepared, or rescheduled. already happened before
31 he started.

32 **Interviewer:** When we begin our study, how far into the project's timeline will you be?

33 **Responder:** at least a year

34 rolling project. each state could be a different

35 finished one state, starting on a new state; revisiting complete state, running through
36 QA to improve it. Then, adding those enhancements to next state.

37 **Interviewer:** When we begin our study, how far into the project's work will you be?

38 **Responder:** already addressed

39 **Interviewer:** How long is the project you are working on during this study?

40 **Responder:** Will end high end structural design in 4 months.

41 Infrastructure, then revamp standards, parameter-driven content to streamline later
42 development, then short content development within the structural content.

43 Content, content, content

44 **Interviewer:** On average, what percentage of your workweek do you expect to be
45 dedicated to this project during the six weeks of this study?

46 **Responder:** 50-75%

47 **Interviewer:** Describe the project. What differences or similarities can you draw
48 compared to other projects?

49 **Responder:** This is further down documentation path than I am accustomed to. They
50 have a lot of stuff; PPT slides with no adult learning theory applied to it. A lot of rework.
51 Political angle of telling people they have to do it again.

52 Do we really need training; Blank slate if yes. I normally would be able to do the whole
53 thing from scratch which is very comfortable

54 WORD, PDF, PPT, elearning component, blended learning,

55 20-70-10

56 They think everything is about classroom learning

57 social learning is the 70%

58 I'm hinting around at self-guided training.

59 A lot of education in this curriculum.

- 60 I see education as knowledge (only a body of knowledge)
61 training is the skills
- 62 Similar with alot of clients. Prevents them from reviewing the content. They change
63 things because of opinion, instead of effectiveness.
- 64 • We discussed surveys
 - 65 • We discussed the survey links provided via email.
 - 66 • We discussed the weekly reflective journal led by my guided questions.
 - 67 • I posted the first week's reflection on Sunday, but will post the remaining
68 questions each Friday. will complete by end of day, in Sunday.
 - 69 • Subsequent sets of reflection questions will be provided by me each Friday and
70 will follow the same weekly schedule.
 - 71 • We discussed design products.
 - 72 • As part of the study, I would like to review the design products developed during
73 the week. Please place whatever you can into the appropriate week's folder. If
74 you cannot provide something, please describe the product in depth in your
75 reflection journal.
 - 76 • I asked what questions can I answer for you about this study or the process?

William Timeline and Schedule

Event	Planned Complete Date	Responsible Party
Design Project Kickoff	5/19/14	Participant
Onboard Meeting	5/30/14	Both Researcher and Participant
Demographic Survey Delivered	6/1/14	Researcher
Demographic Survey Completed		Participant
Reflection Survey Delivered	6/1/14	Researcher
Reflection Survey Completed		Participant
Reflection 1 Delivered	6/1/14	Researcher
Reflection 1 Completed	6/3/14	Participant
Reflection 1 Comments provided	6/4/14	Researcher
Reflection 1 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 2 Delivered	6/6/14	Researcher
Reflection 2 Completed	6/8/14	Participant
Reflection 2 Comments provided	6/10/14	Researcher
Reflection 2 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 3 Delivered	6/13/14	Researcher
Reflection 3 Completed	6/15/14	Participant
Reflection 3 Comments provided	6/17/14	Researcher
Reflection 3 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 4 Delivered	6/20/14	Researcher
Reflection 4 Completed	6/22/14	Participant
Reflection 4 Comments provided	6/24/14	Researcher
Reflection 4 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 5 Delivered	6/27/14	Researcher
Reflection 5 Completed	6/29/14	Participant
Reflection 5 Comments provided	7/1/14	Researcher

Reflection 5 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 6 Delivered	7/4/14	Researcher
Reflection 6 Completed	7/6/14	Participant
Final Survey Delivered	7/7/14	Researcher
Reflection 6 Comments provided	7/8/14	Researcher
Final Survey Completed	7/9/14	Participant
Reflection 6 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant

William Demographic Survey

Age	41-45
Gender	Male
Total years of active, professional work experience do you have in a corporate environment:	22
Total years of active, professional work experience do you have in an academic environment:	2
Total years have you been actively designing instruction in a corporate environment?	15
How many years, in total, have you been actively designing instruction in an academic environment	2
Percentage of current role that typically involves designing instruction?	100%
Ratio of design time typically dedicated to designing for internal clients vs external clients	51-75%
Percentage of design time typically spent on designing individually (compared to as part of a team)?	26-50%
Notes	Most of my career has been as a contract consultant

William SRIS Scale Baseline

Part 1	
I don't often think about my thoughts.	1 - never true
I rarely spend time in self-reflection.	1 - never true
I frequently examine my feelings.	2 - rarely true
I don't really think about why I behave in the way that I do.	1 - never true
I frequently take time to reflect on my thoughts.	2 - rarely true
I often think about the way I feel about things.	2 - rarely true
Part 2	
I am not really interested in analyzing my behavior.	1 - never true
It is important for me to evaluate the things that I do.	5 - always true
I am very interested in examining what I think about.	5 - always true
It is important to me to try to understand what my feelings mean.	5 - always true
I have a definite need to understand the way that my mind works.	5 - always true
It is important to me to be able to understand how my thoughts arise.	5 - always true
Part 3	
I am usually aware of my thoughts.	3 - 50/50
I'm often confused about the way that I really feel about things.	4 - sometimes true
I usually have a very clear idea about why I've behaved in a certain way.	2 - rarely true
I'm often aware that I'm having a feeling, but I often don't quite know what it is.	4 - sometimes true
My behavior often puzzles me.	4 - sometimes true
Thinking about my thoughts makes me more confused.	3 - 50/50
Often I find it difficult to make sense of the way I feel about things.	4 - sometimes true
I usually know why I feel the way I do.	2 - rarely true

William Reflection Journal

1 Week 1: 5/30 - 6/1

2 **Interviewer:** Discuss your previous experiences that are guiding you during this project.

3 **Responder:** I have over 10 years of experience in training and instructional design. I
4 draw on my time as a ID contractor for large companies. I often have a large resource
5 library and several SMEs. The most important this I have learned from working is
6 several different industries is to respect the SMEs expertise and concentrate on
7 packaging their knowledge for the given audience.

8 **Interviewer:** Are there any non-ID experiences, personal or professional, that are
9 guiding you in this particular project? If so, tell me about it.

10 **Responder:** As I have been observing the activity around healthcare recently, it
11 occurred to me that getting some experience in the healthcare field would be good for
12 my resume.

13 **Interviewer:** Discuss how you framed the design problem.

14 **Responder:** The project involves health insurance information for several different
15 states. While there will be overlap, each state has a several unique concerns. I will be
16 designing a knowledge management system to minimize effort when presenting
17 common concepts as well as creating development standards so all content adheres to
18 sound instructional design practices.

19 **Interviewer:** Discuss your own internal beliefs that are guiding you during this project.

20 **Responder:** Due to time and resource demands, the trainers are currently working with
21 a 'knowledge dump' of slides with few, if any, common adult learning components. Once
22 the current 'emergency' issues are resolved of getting passable content complete to
23 adhere to government timelines, I will set criteria for a content audit and standards for
24 future development.

25 **Interviewer:** So, it sounds like your internal beliefs surround the idea that getting into a
26 knowledge dump situation is not good, particularly because of the way you believe
27 adults learn...? Can you expand a bit on this belief? Are there any others guiding you?

28 **Responder:** Most of my practical adult learning knowledge has been self-taught or
29 through personal experience. Sites I use as references, such as ASTD and Langevin
30 sites all have very useful advice on developing and presenting effective training.
31 Training that is not engaging or interactive is often ineffective has been the message
32 from my resources and the lessons my experience has taught me. Training imparts
33 skills, education imparts knowledge; as long as the distinction is recognized, I have no
34 problem.

35 **Interviewer:** Please post any design products, brainstorm, summaries or notes to the
36 Resources folder for this week. THANKS!

37 **Week 2: 6/6 - 6/8**

38 **Interviewer:** Discuss your ongoing interaction with the client.

39 **Responder:** My interaction with the client is through phone, email and instant
40 messaging. The client has also provided a list of useful web site both internal and
41 external that I use for research and reference. There are regular meeting where
42 progress, risks, and issues are discussed and plans made to provide assistance where
43 needed. Most of my work is on my own.

44 **Interviewer:** Discuss how your design solution compares to other solutions you've
45 implemented.

46 **Responder:** As I considered the body of knowledge this effort will encompass, I
47 realized that training in any form would not be effective long term. There is just too
48 much information that is growing and changing at too fast a rate. My proposed solution
49 encompassed several components in addition to traditional training. There is a
50 knowledge management component to track the information as it stands and how it
51 may change. A social media component would allow associates to review tips and
52 issues from other associates and then post their own contributions. A structured on the
53 job training program would avoid the typical issues when someone is just told to shadow
54 a senior associate, such as KSA gaps or learning bad habits. These have been
55 proposed and met with enthusiasm, but an approval process is in place and will take
56 time.

57 **Interviewer:** Impressive that you were able to steer them from a typical solution.

58 **Interviewer:** Discuss how you are dealing with ambiguity or uncertainty in the project.

59 **Responder:** The simple answer is, "When in doubt, ask." This holds true for most
60 issues.

61 Other issues that may cause contention are met with a 5 step process; define goals,
62 define roles, define viewpoints, gather proposals, and select solution with steps 1-4 in
63 mind. I have found that with doubt comes disagreement, if everyone's point of view is
64 taken into consideration, whatever solution is devised gets more support and is
65 therefore more likely to succeed.

66 **Interviewer:** Please post any design products, brainstorm or notes to the Design
67 Products folder. THANKS!

68 **Week 3: June 13 - 15**

69 **Interviewer:** Discuss your interaction with specific models or images. (Mainly models
70 and images in the content. I'm wondering what your thoughts are when you're working
71 with visuals, graphics and such.)

72 **Responder:** The content is somewhat limiting as far as visual opportunities. Most of the
73 material is explanation of rules for general situations. For example, if a plan enrollee
74 needs transportation to a medical procedure, when can the enrollee make the
75 arrangements themselves versus a care coordinator. So far, we've used colorful if ...
76 then tables so pages aren't too bland. Stock photography is another option, but I'm not
77 convinced it is any more mnemonically sound to add a picture of a random
78 'doctor/patient chatting' scene to a page. Arranging text, use of whitespace, and
79 animation are other options. For classroom training, I focus on exercises where learners
80 are applying the rules in hypothetical scenarios, rather than just reading.

81 **Interviewer:** Discuss unexpected challenges that have arisen during this project.

82 **Responder:** It is not a visual body of knowledge. It is a struggle to find ways to present
83 content visually, as described above.

84 **Interviewer:** Discuss your personal design strengths that are emerging during this
85 project.

86 **Responder:** My ability to repackage information in more retainable packages. By that I
87 mean; use of simple phrases, color, white space, animation, and repetition in way that
88 help the learner retain and apply the information.

89 **Interviewer:** Please post any design products, brainstorming or notes to the Design
90 Products folder. THANKS!

91 ***Week 4: June 20–22***

92 **Interviewer:** Discuss specific design areas you might continue nurturing in the future as
93 a result of what you're learning in this project.

94 **Responder:** Modularization of content is becoming a major influencer on how we will
95 develop the large body of knowledge into a cohesive training initiative. As stated before,
96 the team is developing a health care management system that varies in each state.
97 While there is a core of information that will form the core of the curriculum, all along the
98 workflow, there are parameter and terminology differences that will need to be
99 addressed.

100 **Interviewer:** Is modularization something you think you could improve on? Or just
101 something you want to develop more expertise on because it's so valuable to the
102 project?

103 **Responder:** New technologies could always contribute to better implementations of a
104 modular system. I always advocate modularization when applicable as it makes ongoing
105 maintenance and updates so much easier.

106 **Interviewer:** How are models manifesting themselves in the design project? What
107 models or frameworks are you using? (Note that others might find these evident, but
108 you may not be consciously applying them. ADDIE, Agile, Merrill's First Principles,
109 ARCS model, Gagne's 9 Events only name a few... If none of these are evident, are
110 there some advanced "rules" that you are following - based on your own experience of
111 what works?)

112 **Responder:** My client encourages use of Rapid Instructional Design. While I am not in
113 favor of rushing a project, the tenants of RID are sound and I would use them as a sort
114 of quality checklist in future instructional design projects.

115 **Interviewer:** I like that the client's preferences are also something you can apply later to
116 a degree with future clients to address. If it weren't for your client, would you use
117 others? Which? Or, how would your design look differently, if at all?

118 **Responder:** I always use ADDIE as a starting point, but I am always willing to shift to a
119 different if the analysis indicates a better suited methodology.

120 **Interviewer:** What tangible results do you have this week? Do you feel this is normal
121 for a typical week, or do you feel you are under or over your typical output? Discuss.

122 **Responder:** I have redesigned the templates for eLearning modules, course syllabi,
123 and overall curriculum development plans. I feel these will make development, review,
124 and maintenance of the documents easier and with fewer errors.

125 While these are not typical deliverables, the work load was about average.

126 **Interviewer:** Please post any design products, brainstorming or notes to the Design
127 Products folder. THANKS!

128 **Week 5: June 27 - 29**

129 **Interviewer:** How would you explain your process to the client this week?

130 **Responder:** My process is simple: I review any existing documentation on the topic at
131 hand, for example, a particular state's implementation of managed care, second, I meet
132 with the client SME to go over any questions I may have as well as any new
133 developments that may post-date the documentation, I then draft the necessary course
134 materials and submit them to the SME for content review and a client-side instructional
135 designer for peer review.

136 **Interviewer:** Discuss how this project is progressing.

137 **Responder:** It is progressing quite well. I believe there are 2 reasons for this, it is a
138 simple process and it has been clearly communicated to all parties.

139 **Interviewer:** How often does that happen? What happens when it doesn't?

140 **Responder:** It happens around half the time, usually when leadership has limited
141 awareness of adult learning concepts and are more hands-off. When it doesn't, a case
142 is made for leadership for whatever is determined is the most advantageous
143 methodologies, if not accepted, the team will simply adapt.

144 **Interviewer:** How did themes emerge? (When you are pulling all your content together
145 and determining what to do with it, how to organize it etc., ideas emerge that lead you to
146 "know" how to categorize and organize that information. I want you to discuss that
147 process. Does that make sense?)

148 **Responder:** Because we are dealing with specific state implementations of a national
149 plan, The common pattern is first, the national information that is common to all states,
150 then, we deal with the nuances that apply to each state for a given topic. The pattern
151 emerges as Topic A, National, Topic A, State, Topic B, National, Topic B, State, etc.
152 The order of the topics has been established from years of delivering similar content.

153 **Interviewer:** Please post any design products, brainstorm or notes to the Design
154 Products folder. THANKS!

155 **Week 6: July 4 - 7**

156 **Interviewer:** As this reflection process comes to an end, how would you describe your
157 design process for this project to another designer?

158 **Responder:** The process here is a sort of Agile Rapid Instructional Design as there is a
159 new iteration for each state as it comes up on the timeline. Time should be taken for a
160 core curriculum and determine how new deviations from the core will be addressed.

161 **Interviewer:** Do you think you altered any processes as a result of the reflection
162 process? Did you think differently while designing? Explain... Alternatively, did you
163 instead find yourself holding more strictly to your typical design process?

164 **Responder:** This process resulted in me exploring the system more that I normally
165 would have, therefore resulting in increased risk awareness and helpful efficiencies
166 being discovered sooner.

167 **Interviewer:** What did this reflection process mean to you?

168 **Responder:** It was a new way of thinking of the process. the new perspective led to
169 additional useful discoveries as outlined in 6.2.

170 **Interviewer:** Please post any design products, brainstorm or notes to the Design
171 Products folder. THANKS!

172 **Interviewer:** After you have finished your reflections, I will review/comment, and then
173 send you one last survey! Thanks!!!!

William SRIS Final

Part 1	
I don't often think about my thoughts.	2 - rarely true
I rarely spend time in self-reflection.	2 - rarely true
I frequently examine my feelings.	2 - rarely true
I don't really think about why I behave in the way that I do.	4 - sometimes true
I frequently take time to reflect on my thoughts.	4 - sometimes true
I often think about the way I feel about things.	2 - rarely true
Part 2	
I am not really interested in analyzing my behavior.	1 - never true
It is important for me to evaluate the things that I do.	5 - always true
I am very interested in examining what I think about.	4 - sometimes true
It is important to me to try to understand what my feelings mean.	4 - sometimes true
I have a definite need to understand the way that my mind works.	4 - sometimes true
It is important to me to be able to understand how my thoughts arise.	4 - sometimes true
Part 3	
I am usually aware of my thoughts.	4 - sometimes true
I'm often confused about the way that I really feel about things.	3 - 50/50
I usually have a very clear idea about why I've behaved in a certain way.	3 - 50/50
I'm often aware that I'm having a feeling, but I often don't quite know what it is.	2 - rarely true
My behavior often puzzles me.	3 - 50/50
Thinking about my thoughts makes me more confused.	4 - sometimes true
Often I find it difficult to make sense of the way I feel about things.	3 - 50/50
I usually know why I feel the way I do.	3 - 50/50

William REFLECT Results

Q#	Criterion	William
1.1	Writing spectrum	TA
1.1	Presence	TA
1.1	Conflict description	TA
1.1	Emotion	HA
1.1	Analysis/meaning-making	TA
1.1	Attention to assignment	TA
1.2	Writing spectrum	TA
1.2	Presence	R
1.2	Conflict description	R
1.2	Emotion	HA
1.2	Analysis/meaning-making	TA
1.2	Attention to assignment	R
1.3	Writing spectrum	HA
1.3	Presence	TA
1.3	Conflict description	R
1.3	Emotion	HA
1.3	Analysis/meaning-making	HA
1.3	Attention to assignment	HA
2.1	Writing spectrum	HA
2.1	Presence	TA
2.1	Conflict description	TA
2.1	Emotion	HA
2.1	Analysis/meaning-making	HA
2.1	Attention to assignment	R
2.2	Writing spectrum	R
2.2	Presence	R
2.2	Conflict description	R
2.2	Emotion	TA
2.2	Analysis/meaning-making	R
2.2	Attention to assignment	R
2.3	Writing spectrum	R
2.3	Presence	R
2.3	Conflict description	R
2.3	Emotion	TA
2.3	Analysis/meaning-making	R
2.3	Attention to assignment	R
3.1	Writing spectrum	R
3.1	Presence	R

Q#	Criterion	William
3.1	Conflict description	CR-CL
3.1	Emotion	HA
3.1	Analysis/meaning-making	TA
3.1	Attention to assignment	R
3.2	Writing spectrum	R
3.2	Presence	TA
3.2	Conflict description	R
3.2	Emotion	TA
3.2	Analysis/meaning-making	TA
3.2	Attention to assignment	R
4.1	Writing spectrum	TA
4.1	Presence	R
4.1	Conflict description	R
4.1	Emotion	HA
4.1	Analysis/meaning-making	R
4.1	Attention to assignment	TA
4.2	Writing spectrum	TA
4.2	Presence	R
4.2	Conflict description	R
4.2	Emotion	HA
4.2	Analysis/meaning-making	R
4.2	Attention to assignment	TA
4.3	Writing spectrum	TA
4.3	Presence	R
4.3	Conflict description	TA
4.3	Emotion	HA
4.3	Analysis/meaning-making	TA
4.3	Attention to assignment	R
5.1	Writing spectrum	TA
5.1	Presence	R
5.1	Conflict description	TA
5.1	Emotion	HA
5.1	Analysis/meaning-making	TA
5.1	Attention to assignment	R
5.2	Writing spectrum	R
5.2	Presence	R
5.2	Conflict description	TA
5.2	Emotion	HA
5.2	Analysis/meaning-making	TA
5.2	Attention to assignment	R

Q#	Criterion	William
5.3	Writing spectrum	HA
5.3	Presence	TA
5.3	Conflict description	HA
5.3	Emotion	HA
5.3	Analysis/meaning-making	TA
5.3	Attention to assignment	TA
6.1	Writing spectrum	TA
6.1	Presence	TA
6.1	Conflict description	TA
6.1	Emotion	HA
6.1	Analysis/meaning-making	R
6.1	Attention to assignment	R
6.2	Writing spectrum	R
6.2	Presence	TA
6.2	Conflict description	TA
6.2	Emotion	HA
6.2	Analysis/meaning-making	R
6.2	Attention to assignment	R
6.3	Writing spectrum	R
6.3	Presence	TA
6.3	Conflict description	TA
6.3	Emotion	HA
6.3	Analysis/meaning-making	R
6.3	Attention to assignment	TA

APPENDIX Q – BRIAN CASE RECORD

Brian Kickoff Interview Notes

1 Agenda:

- 2 • Discuss current projects and timelines
- 3 • Discuss this research study and next steps
- 4 • Will share a Google Doc with: Designer Reflection Study.
- 5 • I will provide a summary of the schedule that we defined via the appropriate
- 6 Google Doc.
- 7 • I also told him I would provide instructions (via the Resources subfolder) for how
- 8 to access Google Drive and the Docs from the file manager.
- 9 • We then proceeded with the discussion below.

10 **Interviewer:** How many design projects are you currently working on?

11 **Responder:** 1 large project

12 **Interviewer:** How many people are working on this project?

13 **Responder:** handful working on pilot, who will not work on larger project. About 5 pilot
14 project members are currently working concurrently on national-level version of the
15 project

16 Train the Trainer in August

17 Pilot is September

18 Pilot: 12 people

19 National rollout: 6 from pilot, plus another 10 people.

20 Instructional designer - Brian

21 Brian's Project manager

22 Learning services dept (1 person called program manager all the training that touches
23 external audiences)

24 There are several Territory Managers in ~~for~~ each region (we're working with 1 of them
25 for now in southeast)

26 Territory manager's manager

27 Underwriter (southeast)

28 Underwriting manager

- 29 Another project manager
- 30 SME (1 from commercial claims, 2 from risk control, 2 marketing folks for the national
31 rollout, business analysts to determine which agencies have potential business
32 opportunities).
- 33 **Interviewer:** What is your role in the project?
- 34 **Responder:** Senior Instructional Designer Specialist
- 35 **Interviewer:** What percentage of the design work will you provide vs. someone from
36 your team?
- 37 **Responder:** 100%!!
- 38 Lots of PPT exists. Have to design the slides and pre-work....
- 39 **Interviewer:** Describe the deadlines for this project.
- 40 **Responder:** Lots of deadlines, but because of bottlenecks, some are getting pushed
41 out.
- 42 Get PPT files and speaker notes finalized and signed off on by managers.
- 43 **Interviewer:** Describe the client for this project.
- 44 **Responder:** agents/producers who sell commercial insurance (not company
45 employees; we consider these people to be our customers)
- 46 **Interviewer:** What might happen if you miss any milestones or deadlines for this
47 project?
- 48 **Responder:** Bottlenecks already occurring, but not on his side
- 49 **Interviewer:** When we begin our study, how far into the project's timeline will you be?
- 50 **Responder:** Started in May - Pilot in September
- 51 **Interviewer:** When we begin our study, how far into the project's work will you be?
- 52 **Responder:** 60% done with PPTs. want finalized in next 2 weeks.
- 53 3 phase project: 1: prework, introduction to industry and helpful to new agents; 2: PPT
54 3: a week after, the territory manager and underwriter will meet with agents with a
55 planned discussion to get some summative assessment and prepare a plan for their
56 success in selling.
- 57 60-90 days later - another check-in to measure the success and coach.
- 58 Learning that there's no need for the pre-work right now, but may be necessary later.
- 59 **Interviewer:** How long is the project you are working on during this study?
- 60 **Responder:** May-Sept, then work on national rollout

61 **Interviewer:** On average, what percentage of your work week do you expect to be
62 dedicated to this project during the six weeks of this study?

63 **Responder:** The number will grow over the next 6 weeks. It's about 40-50% dedicated.
64 The number is low because of the bottleneck at the agency. About 75% will be spent on
65 project as time progresses.

66 **Interviewer:** Describe the project.

67 **Responder:** Commercial insurance: businesses. We break up into region.

68 End product: training in a box geared to training agents and brokers on specific industry
69 (not fully identified) retail, hospitality, real estate, etc.

70 A zip file for every territory manager. They would provide the great training program ½
71 day, set up a training with them so they can grow their businesses at a deeper
72 intermediate level. Teach how they can sell more product... Any territory manager can
73 use this training.

74 Using a pilot in the southeast to test the product. 12 agents in 2 industries (hospitality
75 and construction). Roll out 2 ½ day workshops in mid-September

76 Train the trainer in August

77 **Interviewer:** What differences or similarities can you draw compared to other projects?

78 **Responder:** Differences: 16 years at company, never worked with an external
79 audience. Different set of dynamics. politics are involved because we're dealing with
80 relationship with one of our customers.

81 Design and delivery is the same. I do a lot of similar things. Collect, analyze, process of
82 PPT for most.

83 In his dept, 20-25 different IDers

84 entry-level IDer

85 Sr IDer:

86 Sr Instructional Design specialist: (only 3) put on larger, more complex projects. Job
87 task analysis to design training.

- 88 • We discussed surveys
- 89 • We discussed the survey links provided via email.
- 90 • We discussed the weekly reflective journal led by my guided questions.
- 91 • I will post the first week's reflection on Monday Morning 6/15
- 92 • Brian will complete by end of day, Wednesday.
- 93 • I will review and may respond during the week.

- 94 • Subsequent sets of reflection questions will be provided by me each Monday and
95 will follow the same weekly schedule.
- 96 • We discussed design products.
- 97 • As part of the study, I would like to review the design products developed during
98 the week. Please place whatever you can into the appropriate week's folder. If
99 you cannot provide something, please describe the product in depth in your
100 reflection journal.
- 101 • I asked what questions can I answer for you about this study or the process?

Brian Timeline and Schedule

Event	Planned Complete Date	Responsible Party
Design Project Kickoff	5/31/14	Participant
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Demographic Survey Completed	6/10/14	Participant
Reflection Survey Delivered	6/10/14	Researcher
Reflection Survey Completed	6/10/14	Participant
Reflection 1 Delivered	6/13/14	Researcher
Reflection 1 Completed	6/16/14	Participant
Reflection 1 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 2 Delivered	6/20/14	Researcher
Reflection 2 Completed	6/23/14	Participant
Reflection 2 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 3 Delivered	6/27/14	Researcher
Reflection 3 Completed	6/30/14	Participant
Reflection 3 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 4 Delivered	7/4/14	Researcher
Reflection 4 Completed	7/7/14	Participant
Reflection 4 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 5 Delivered	7/11/14	Researcher
Reflection 5 Completed	7/14/14	Participant
Reflection 5 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant
Reflection 6 Delivered	7/18/14	Researcher
Reflection 6 Completed	7/21/14	Participant
Final Survey Delivered	7/21/14	Researcher

Final Survey Completed	7/24/14	Participant
Reflection 6 Additional Joint Discussion	ongoing as necessary	Both Researcher and Participant

Brian Demographic Survey

Age	41-45
Gender	Male
Total years of active, professional work experience do you have in a corporate environment:	16
Total years of active, professional work experience do you have in an academic environment:	0
Total years have you been actively designing instruction in a corporate environment?	10
How many years, in total, have you been actively designing instruction in an academic environment	0
Percentage of current role that typically involves designing instruction?	51-75%
Ratio of design time typically dedicated to designing for internal clients vs external clients	76-100%
Percentage of design time typically spent on designing individually (compared to as part of a team)?	76-100%

Brian SRIS Scale Baseline

Part 1	
I don't often think about my thoughts.	2 - rarely true
I rarely spend time in self-reflection.	2 - rarely true
I frequently examine my feelings.	2 - rarely true
I don't really think about why I behave in the way that I do.	3 - 50/50
I frequently take time to reflect on my thoughts.	2 - rarely true
I often think about the way I feel about things.	2 - rarely true
Part 2	
I am not really interested in analyzing my behavior.	3 - 50/50
It is important for me to evaluate the things that I do.	2 - rarely true
I am very interested in examining what I think about.	2 - rarely true
It is important to me to try to understand what my feelings mean.	2 - rarely true
I have a definite need to understand the way that my mind works.	3 - 50/50
It is important to me to be able to understand how my thoughts arise.	2 - rarely true
Part 3	
I am usually aware of my thoughts.	4 - sometimes true
I'm often confused about the way that I really feel about things.	2 - rarely true
I usually have a very clear idea about why I've behaved in a certain way.	4 - sometimes true
I'm often aware that I'm having a feeling, but I often don't quite know what it is.	3 - 50/50
My behavior often puzzles me.	2 - rarely true
Thinking about my thoughts makes me more confused.	2 - rarely true
Often I find it difficult to make sense of the way I feel about things.	2 - rarely true
I usually know why I feel the way I do.	4 - sometimes true

Brian Reflection Journal**Week 1: June 16 - 18**

- 1 **Interviewer:** Discuss any previous experiences that are guiding you during this project.
- 2 **Responder:** During the 10 years that I've been in my current department I've had lots of
3 exposure to the business of selling commercial insurance including many of the key
4 roles involved (underwriting, sales, risk control, claims, etc.). My knowledge of the
5 business helps me to design training programs that contain content with a high degree
6 of relevance to the learner. Additionally, I've worn many hats during my career as an
7 instructional designer, including that of project manager. The level of project
8 management skills I possess makes it easy for me to plan and organize my work,
9 understand what needs to happen on a daily basis and reach out to those who I feel can
10 best help me to achieve project goal and meet deadlines. Finally, we use the ADDIE
11 model of training design and development. Because we follow the same process for all
12 of the projects we work on, the tasks involved in designing and developing training are
13 fairly similar regardless of the type of training program it is.
- 14 **Interviewer:** Discuss how you framed (or are framing) the design problem.
- 15 **Responder:** The design problem I'm faced with in this project involved helping our
16 clients grow their book of business in certain industries. Their success = our success.
17 The more business they write with us the more money they make and the more money
18 we make. All of this takes place in the context of building and nurturing relationships
19 between agency presidents, producers and our company. The design problem centers
20 around putting together a training program that these producers will value - and want
21 more of!
- 22 **Interviewer:** Discuss your own internal beliefs that are guiding you during this project.
- 23 **Responder:** My beliefs center around the learner and their experience. I believe that in
24 order for learners to apply the training we provide, we need to understand their
25 expectations, goals, existing knowledge and how they would benefit from the
26 information we provide and the skills we help them to develop. I believe in providing
27 training that is highly relevant to the learner in the context of their job. I believe in
28 providing only the information that will help them be more successful in their work - no
29 more and no less. I believe that every design decision made needs to support the
30 learner in their goal to improve (i.e. not including exercises or content for the sake of
31 entertainment or just to "mix it up", not including "nice-to-know" information unless I'm
32 forced to, etc.).
- 33 **Interviewer:** Valuable perspective!

34 **Interviewer:** Please post any design products, brainstorms or notes to the Design
35 Products folder. THANKS!

36 **Week 2: June 20 - 25**

37 **Interviewer:** Discuss your ongoing interaction with the client.

38 **Responder:** I have very little direct contact with the client who, in this case, is an
39 agency in North Carolina. The Territory Manager and Underwriter share the overall
40 responsibility for managing our relationship with the client, so most communications go
41 through one of them (primarily the Territory Manager). The only direct contact I've had
42 with the client was about a month ago when I met with her to describe my need to
43 speak briefly with a couple of agents in order for me to conduct a more in-depth
44 audience analysis. Since then I've met for 30 minutes with two agents (separate
45 meetings on different days) to discuss what they know, don't know and would like to
46 know about the topics. I also asked them to describe what the training workshop would
47 need to consist of in order for audience members to walk out of the half-day class
48 feeling like this was a fantastic use of their time and wanting more from us. I received a
49 lot of great insight from these two conversations and have adjusted some of the content
50 we've already developed accordingly.

51 **Interviewer:** Discuss how your design solution compares to other solutions you've
52 implemented.

53 **Responder:** This is my first time working with an external audience, so in that sense,
54 I've never implemented this type of training solution before. In general terms, however,
55 this workshop is a little different from others I've designed and developed because of
56 the fact that these are not company employees. This audience has little to no tolerance
57 for engaging in small-group activities or taking a test/quiz during the training (both of
58 which would be familiar and welcomed by company employees. If this solution were
59 intended for company employees, we would also have other options available regarding
60 Levels 1, 2 and 3 evaluations. Because this is an external audience, we would have to
61 send a Level 1 evaluation to them via email following the workshop (rather than using
62 our Learning Management System to force participants to submit the evaluation in order
63 to get official credit for having taken the training). Based on my conversations with the
64 two agents, it would be very unlikely that we would receive any Level 1 evaluations back
65 if we were to send them via email because they get a lot of those types of things and
66 agents neither have the time nor the desire to complete and submit things like that. If we
67 want to get Level 1 feedback we would have to carve out time during the workshop
68 while the audience is still in the room, but I don't think we will have this opportunity.

69 **Interviewer:** Discuss how you are dealing with ambiguity or uncertainty in the project.

70 **Responder:** There are only two sources of ambiguity and uncertainty. The first comes
71 from my inexperience working with this type of external audience; I don't have as clear

72 an understanding of their expectations as I'd like to (I was only able to speak with two of
73 them and we're planning on having 10 - 12 in the class). The second source of
74 uncertainty pertains to logistics. We're planning on conducting these two training
75 classes in mid-August, but we have not received firm dates from the client as to when
76 they would be available. Because of this we're also not able to book conference rooms,
77 flights, hotels, catering, etc.

78 I'm dealing with the first source of ambiguity by relying on my experience designing and
79 developing training for other, internal audiences. My knowledge of instructional design
80 best practices, adult learning theory, training delivery dynamics, and the like are guiding
81 my decisions in the absence of complete information. The tasks involved in designing
82 training for adult learners in a corporate setting are fairly similar regardless of the topics
83 and audience, so the little bit of uncertainty isn't much of an issue. Plus, this is just a
84 pilot so we're expecting to make changes and improvements; I'm sure we won't get
85 everything perfect the first time.

86 The second source of uncertainty is being managed by the Territory Manager. I don't
87 have much control over that aspect of the project, so I just keep doing what I'm doing,
88 driving toward a mid-August deliverable. If that date gets pushed out because of a lack
89 of responsiveness on the client's part, then that's just more time for the project team to
90 refine the content.

91 **Interviewer:** Great reflection!

92 **Interviewer:** Please post any design products, brainstorming or notes to the Design
93 Products folder. THANKS!

94 ***Week 3: June 27 - July 2***

95 **Interviewer:** Discuss your interaction with specific models or images. (Mainly models
96 and images in the content. I'm wondering what your thoughts are when you're working
97 with visuals, graphics and such.)

98 **Responder:** The project I'm working on now doesn't call for a lot of images and
99 graphics. There are a few charts and tables of data, but it's mostly bullets of text. Each
100 of the two PPT files I'm creating has about 50 - 60 slides, so my goal is to do what I can
101 to make the slides as visually appealing as possible without adding images and
102 graphics just for the sake of doing so (pictures of two people shaking hands, some guy
103 in a business suit staring at the camera, someone at a desk wearing a headset, and the
104 like). For these slides, I'm trying to avoid having slide after slide be nothing but a text
105 box with bulleted text on a white background. The presentations are broken into three
106 parts: 1) essential information about the industry, 2) Claims, and 3) Risk Control. In part
107 1 I added a relevant picture to the background of several slides but washed them out by
108 increasing the transparency so that the text on the slide isn't difficult to read because of
109 the image in the background. When I do this, I choose images that match the content of

110 the slide. I didn't add these kinds of background images to the other two parts for two
111 reasons: A) these slides were given to me by the Claims and Risk Control departments
112 and they have a specific look and feel that needs to be preserved, and B) adding
113 background image to every slide in a 50 - 60 slide deck would become tedious and
114 would defeat the purpose after a while (it would lose its impact).

115 Generally speaking, when it comes to adding relevant images and graphics to a course
116 I adhere to the research presented in a book entitled e-Learning and the Science of
117 Instruction by Ruth Clark and Richard Mayer. I could go on and on about how the
118 details of the inclusion of images, but it's all summed up in that book.

119 As for the use of models, we don't do that. We purchase the images we need from
120 Fotolia or Photos.com.

121 **Interviewer:** Discuss unexpected challenges that have arisen during this project.

122 **Responder:** The only real unexpected challenge in this project so far is that the
123 company that has agreed to be our guinea pig and work with us on this pilot effort has
124 not yet given us any solid dates for when we could conduct the training. The territory
125 manager who works with their representative has been asking her for several weeks for
126 these dates so that we can work out all of the logistics. She has promised to give us
127 these dates more than once and has not done so as of today. Currently, the plan is to
128 conduct these two workshops in the Southeast, modify the content based on feedback
129 from the pilot audience, then roll it out to two other regions: the Northwest and the
130 Northeast. We have already committed to certain dates with these two other regions, so
131 if we don't get the dates mentioned above very soon, we may have no choice but to tell
132 the company in the Southeast that we're going to conduct the initial pilot with one of
133 these other regions first, then perhaps we can deliver this training to them late in the
134 year if they're still interested. There are no other unexpected challenges so far. But that
135 might change when we get to the implementation phase of the project.

136 **Interviewer:** Discuss your personal design strengths that emerged during this project,
137 or are emerging during this project.

138 **Responder:** As it happens, these training workshops don't require a whole lot of
139 design. In fact, they're really not true workshops (although that's what the project team
140 keeps calling them), they're more like presentations. There are no small-group activities
141 or exercises, no break-out room discussions or assignments, no pre-work, no Level 2
142 assessments, etc. The biggest challenge from a design perspective is to make sure the
143 speaker notes are as clear and comprehensive as possible so that whoever ends up
144 delivering these presentations in the future will all send the same (or at least similar)
145 messages. I guess the only real strength that's being employed is my ability to design
146 individual PPT slides - making sure they're not too dense, that the images and graphics
147 are relevant and necessary, the bullets are clear and concise, etc.

148 Although it's not part of design, my biggest strength here has to do with my project-
 149 management skills. There is an official project manager, but he has about a dozen other
 150 projects that he's managing as well. Because of my extensive experience managing all
 151 phases of these types of projects, he knows that he doesn't need to worry about this
 152 one since I'm on it. This being the case, I'm taking on more of a project-management
 153 role than our organizational model would normally allow. Actually, I prefer this. Having
 154 spent so much of my career managing my own projects, it's good to keep these skills
 155 alive. I'm working with 7 different subject-matter experts on the development of content
 156 for these presentations, and keeping that many balls in the air takes practice and a
 157 decent set of organizational skills.

158 **Interviewer:** Please post any design products, brainstorming or notes to the Design
 159 Products folder. THANKS!

160 ***Week 4: July 4 - 9***

161 **Interviewer:** Discuss specific design areas you might continue nurturing in the future as
 162 a result of what you're learning in this project.

163 **Responder:** I'm not really learning anything new from an instructional design
 164 perspective on this project. What I'm mostly learning are the dynamics of working with
 165 this type of external (non-employee) learner group. But the design areas I will always
 166 continue nurturing are these:

- 167 ● Relevance of the content to the specific characteristics and learning needs of the
 168 audience. If there's a "golden rule" in instructional design, this would be it in my
 169 opinion.
- 170 ● Less is more. Only provide learners with the information they need to improve
 171 their performance in the areas identified during the analysis phase of the project.
 172 Keeping it simple and to the point also helps to avoid cognitive overload. And
 173 tends to reduce learning transfer.
- 174 ● Practice (when applicable)! Most people learn best by doing. When the training
 175 outcomes involve behavior change, give learners an appropriate amount of
 176 opportunity to practice performing the way they are expected to when they get
 177 back to their desk.

178 **Interviewer:** How are models manifesting themselves in the design project? What
 179 models or frameworks are you using? (Note that others might find these evident, but
 180 you may not be consciously applying them. ADDIE, Agile, Merrill's First Principles,
 181 ARCS model, Gagne's 9 Events only name a few... If none of these are evident, are
 182 there some advanced "rules" that you are following - based on your own experience of
 183 what works?)

184 **Responder:** We use the ADDIE model of training design and development. The need
 185 for this training program came from the business; we didn't conduct a needs analysis to

186 identify this. I conducted a brief audience analysis (we often don't have time to conduct
187 a thorough audience analysis) by discussing the demographics, experience and other
188 characteristics of the audience with those who work directly with them and are most
189 familiar with their learning needs, preferences, etc.

190 There wasn't much in the way of design. We were told that we only have about 4 hours
191 in a live setting with these folks. Their tolerance for small-group discussions and other
192 formal activities was low, and time being so limited, we ended up going with a largely
193 lecture-based design, while at the same time, focusing the delivery as much as possible
194 on getting the audience engaged in a rich discussion.

195 Development entailed the coordination of 6 subject matter experts each contributing
196 separate pieces of two 4-hour presentations. This content is in its final draft phase and
197 is being reviewed by others from a corporate level for message accuracy and
198 consistency.

199 Implementation requires the project manager to coordinate all of the logistics for
200 conducting two a train-the-trainer sessions as well as the two live workshops that will
201 immediately follow. The facilitation of each workshop will be handled by two or three
202 subject matter experts (most of whom also developed the content).

203 Given the low tolerance the audience has for course evaluations taking the form of
204 online surveys and the like, we're going to try to save the last 10 minutes or so to gather
205 feedback (Level 1) from the audience. We are also currently trying to determine what
206 types of quantitative data we can use to evaluate (Levels 3 and 4) the success of this
207 project.

208 **Interviewer:** What tangible results do you have this week? Do you feel this is normal
209 for a typical week, or do you feel you are under or over your typical output? Discuss.

210 **Responder:** Unfortunately, I have no tangible output this week. There are only three
211 pieces of output for this project: the PPT slides, a facilitator guide and a participant
212 guide. The PPT slides are still being developed/evaluated, and the facilitator and
213 participant guides won't be created until the PPT files are in their final state.

214 **Interviewer:** Please post any design products, brainstorming or notes to the Design
215 Products folder. THANKS!

216 **Week 5: July 15th (ish)**

217 **Interviewer:** How would you explain your process to the client this week?

218 **Responder:** I'm not sure I understand this question. Do you mean, how would I explain
219 to the client the activities that are happening this week? Do you mean that processes
220 typically change frequently, so how would I explain to the client the process we're using
221 this week? Do you mean how would I explain to the client that part of the overall
222 process that applies to this phase of the project we're working on?

223 It's really how you interpret the question, but if you're asking, I'll say: Do you mean how
 224 would I explain to the client that part of the overall process that applies to this phase of
 225 the project we're working on?

226 I would explain to the client that this week we're in the process of putting the finishing
 227 touches on both PPT files - making sure that:

- 228 ● The speaker notes are complete and reflect what's on the slide
- 229 ● The content on each slide is relevant to the audience
- 230 ● All animations work as they should
- 231 ● The content flows in a logical manner that best suits the audience

232 I would explain that once our review is complete we'll have a final draft of the PPT files
 233 which we'll share with you ASAP.

234 **Interviewer:** Discuss how your project is/projects are progressing.

235 **Responder:** The project is progressing nicely. We finally have solid dates in place for
 236 the train-the-trainer sessions (there will be two of them on consecutive days) and the
 237 actual workshops (there will be two half-day sessions, both on the same day in the
 238 same location with mostly the same audience participating in each one). I have the PPT
 239 files for each workshop pretty close to finalized; there are just a few comments I
 240 received from our team of content reviewers that need to be incorporated into the
 241 presentations. My goal is to have both PPT files in their final state (and ready to be
 242 reviewed by the representative of the company for which we are creating these
 243 workshops) by mid next week. After that, all that will be left is to create the facilitator and
 244 participant guides. According to the project plan, everything is on track.

245 **Interviewer:** How did themes emerge? (When you are pulling all your content together
 246 and determining what to do with it, how to organize it etc., ideas emerge that lead you to
 247 "know" how to categorize and organize that information. I want you to discuss that
 248 process.)

249 **Responder:** I didn't actually pull the content together. I oversaw a group of subject
 250 matter experts who were responsible for identifying existing content to use, or for
 251 creating content from scratch based on the topic outline that was agreed upon by the
 252 client. My job was to make sure that:

- 253 ● The slides conformed to the corporate "look and feel" in terms of graphics, color
 254 scheme, font styles, etc.
- 255 ● The speaker notes are clear and comprehensive enough for anyone with a
 256 certain level of knowledge could use when delivering this workshop at any time in
 257 the future in any region of the country
- 258 ● There was specific content for each item in the topic list
- 259 ● The main topics and presenters flowed in a logical order
- 260 ● The amount of content matched the amount of time we'll have

261 • All feedback received from the reviewer group gets incorporated
 262 All of that being said, I did my best to insure that principles of adult learning theory and
 263 brain science were taken into account during the content-development phase: starting
 264 from broad concepts, then getting into more specific information, not providing too much
 265 detailed information that would be categorized as “nice to know” versus “need to know”,
 266 making sure that the audience understands why we’re telling them the things we are
 267 (how what the information we’re providing will help them be more successful in their
 268 job), and so on.

269 **Interviewer:** Did you find that as you did your part, the themes change in any way -
 270 especially since you’re looking for the “need to know” stuff? If so, how did you address
 271 this? If not, was it because you couldn’t due to client constraints or there just was no
 272 need? If you could design this from scratch, how much would it differ from what you
 273 were provided?

274 **Responder:** Major themes didn’t change, but a few of the slides did get eliminated after
 275 certain folks reviewed them - they were geared more toward larger, national-sized
 276 companies rather than medium-sized companies which is what the target audience is
 277 interested in pursuing from a sales perspective. After getting this feedback from the
 278 reviewer, I set up a meeting with that person and the person who created that section of
 279 the presentation so we could discuss it. The meeting only took about 20 minutes.

280 If I could design this from scratch, I think I would create content that focuses less on
 281 who we are as a company and what our services and capabilities are, and I’d focus
 282 more on digging into the more advanced aspects of the industries. I’d try to present
 283 detailed information that the audience could use to speak with more authority to
 284 prospective buyers; speaking in a way that makes it clear to the buyer that the
 285 salesperson really understands their (the buyer’s) business, thus building credibility right
 286 from the start. Although both presentations do focus on these issues, I think I might
 287 have spent more time on them than we did. But I’ll find out which approach would be
 288 best after we conduct the training at the end of August.

289 **Interviewer:** Please post any design products, brainstorms or notes to the Design
 290 Products folder. THANKS!

291 ***Week 6: July 16 - 23***

292 **Interviewer:** As this reflection process comes to an end, how would you describe your
 293 design process for this project to another designer (not solely based on this project)?

294 **Responder:** I would describe my design process as being rather typical of live,
 295 instructor-led workshops. The only difference would be that other people are
 296 responsible for developing the content, rather than me having to comb through a lot of
 297 existing material, looking for what I consider to be the most relevant pieces to include in
 298 the training. I would discuss my thoughts surrounding the audience’s lack of interest in

299 group activities, which is not the case when you're developing training for company
300 employees. I would describe this particular project as more of a project-management
301 effort where you have to work with several different subject matter experts as they
302 determine what information to share with the audience. I would explain how you have to
303 make sure that each SME understands some of the basics of adult learning theory and
304 the need to present need-to-know information, you have to keep them engaged
305 throughout the presentation and you have to challenge them because of their existing
306 level of familiarity with the subject.

307 **Interviewer:** Do you think you altered any processes as a result of the reflection
308 process? Did you think differently while designing? Explain... Alternatively, did you
309 instead find yourself holding more strictly to your typical design process?

310 **Responder:** I don't think I altered any processes as a result of the reflection process.
311 This, to me, was more about explaining to someone else the steps I go through and the
312 thought processes I use when designing and developing training like this.

313 **Interviewer:** What did this reflection process mean to you?

314 **Responder:** To me, the reflection process was all about helping you to learn about how
315 I think and work as an instructional designer. It was kind of like being interviewed slowly
316 over a period of weeks. I'm glad I could contribute to the study of an industry that I love
317 being a part of. I'd love to be able to share my PPT files with you, but my company wouldn't
318 go for that. Some of the material is confidential.

319 **Interviewer:** Please post any design products, brainstorming or notes to the Design
320 Products folder. THANKS!

321 **Interviewer:** Also, once you have finished, I will send you a link to a brief survey

Brian SRIS Final

Part 1	
I don't often think about my thoughts.	2 - rarely true
I rarely spend time in self-reflection.	3 - 50/50
I frequently examine my feelings.	2 - rarely true
I don't really think about why I behave in the way that I do.	4 - sometimes true
I frequently take time to reflect on my thoughts.	2 - rarely true
I often think about the way I feel about things.	2 - rarely true
Part 2	
I am not really interested in analyzing my behavior.	4 - sometimes true
It is important for me to evaluate the things that I do.	2 - rarely true
I am very interested in examining what I think about.	2 - rarely true
It is important to me to try to understand what my feelings mean.	2 - rarely true
I have a definite need to understand the way that my mind works.	2 - rarely true
It is important to me to be able to understand how my thoughts arise.	2 - rarely true
Part 3	
I am usually aware of my thoughts.	4 - sometimes true
I'm often confused about the way that I really feel about things.	2 - rarely true
I usually have a very clear idea about why I've behaved in a certain way.	4 - sometimes true
I'm often aware that I'm having a feeling, but I often don't quite know what it is.	3 - 50/50
My behavior often puzzles me.	1 - never true
Thinking about my thoughts makes me more confused.	1 - never true
Often I find it difficult to make sense of the way I feel about things.	2 - rarely true
I usually know why I feel the way I do.	4 - sometimes true

Brian REFLECT Results

Q#	Criterion	Brian
1.1	Writing spectrum	R
1.1	Presence	R
1.1	Conflict description	R
1.1	Emotion	HA
1.1	Analysis/meaning-making	R
1.1	Attention to assignment	R
1.2	Writing spectrum	R
1.2	Presence	R
1.2	Conflict description	R
1.2	Emotion	TA
1.2	Analysis/meaning-making	R
1.2	Attention to assignment	R
1.3	Writing spectrum	R
1.3	Presence	R
1.3	Conflict description	R
1.3	Emotion	HA
1.3	Analysis/meaning-making	R
1.3	Attention to assignment	R
2.1	Writing spectrum	TA
2.1	Presence	R
2.1	Conflict description	R
2.1	Emotion	TA
2.1	Analysis/meaning-making	R
2.1	Attention to assignment	R
2.2	Writing spectrum	CR-CL
2.2	Presence	R
2.2	Conflict description	CR-CL
2.2	Emotion	HA
2.2	Analysis/meaning-making	CR-CL
2.2	Attention to assignment	R
2.3	Writing spectrum	R
2.3	Presence	R
2.3	Conflict description	R
2.3	Emotion	HA
2.3	Analysis/meaning-making	R
2.3	Attention to assignment	R
3.1	Writing spectrum	R
3.1	Presence	R

Q#	Criterion	Brian
3.1	Conflict description	R
3.1	Emotion	HA
3.1	Analysis/meaning-making	R
3.1	Attention to assignment	R
3.2	Writing spectrum	R
3.2	Presence	R
3.2	Conflict description	R
3.2	Emotion	TA
3.2	Analysis/meaning-making	R
3.2	Attention to assignment	R
4.1	Writing spectrum	R
4.1	Presence	R
4.1	Conflict description	R
4.1	Emotion	HA
4.1	Analysis/meaning-making	R
4.1	Attention to assignment	TA
4.2	Writing spectrum	R
4.2	Presence	R
4.2	Conflict description	R
4.2	Emotion	TA
4.2	Analysis/meaning-making	R
4.2	Attention to assignment	R
4.3	Writing spectrum	TA
4.3	Presence	R
4.3	Conflict description	TA
4.3	Emotion	HA
4.3	Analysis/meaning-making	TA
4.3	Attention to assignment	R
5.1	Writing spectrum	TA
5.1	Presence	R
5.1	Conflict description	HA
5.1	Emotion	HA
5.1	Analysis/meaning-making	TA
5.1	Attention to assignment	R
5.2	Writing spectrum	TA
5.2	Presence	R
5.2	Conflict description	R
5.2	Emotion	HA
5.2	Analysis/meaning-making	R
5.2	Attention to assignment	R

Q#	Criterion	Brian
5.3	Writing spectrum	TA
5.3	Presence	R
5.3	Conflict description	R
5.3	Emotion	HA
5.3	Analysis/meaning-making	R
5.3	Attention to assignment	R
6.1	Writing spectrum	R
6.1	Presence	R
6.1	Conflict description	R
6.1	Emotion	HA
6.1	Analysis/meaning-making	TA
6.1	Attention to assignment	R
6.2	Writing spectrum	R
6.2	Presence	R
6.2	Conflict description	TA
6.2	Emotion	HA
6.2	Analysis/meaning-making	TA
6.2	Attention to assignment	R
6.3	Writing spectrum	R
6.3	Presence	R
6.3	Conflict description	R
6.3	Emotion	TA
6.3	Analysis/meaning-making	R
6.3	Attention to assignment	R

APPENDIX R – DEMOGRAPHIC RESULTS

	Michelle	Matthew	Brenda	Catherine	Lisa	William	Brian
Gender	Female	Male	Female	Female	Female	Male	Male
Age	36 - 40	36 - 40	46 - 50	41 - 45	46 - 50	41 - 45	41 - 45
Total years of active, professional work experience corporate/academic environment	9/9	10/2	26/0	12/14	4/10	22/2	16/0
Total years actively designing instruction in a corporate/academic environment	9/9	6/2	20/0	2/12	4/10	15/2	10/0
% of role dedicated to instructional design	76 - 100%	51 - 75%	76 - 100%	51 - 75%	76 - 100%	76 - 100%	51 - 75%
% of time designing for internal (vs. external) clients	< 10%	10 - 25%	76 - 100%	51 - 75%	76 - 100%	51 - 75%	76 - 100%
% designing alone (vs. on a team)	76 - 100%	< 10%	76 - 100%	51 - 75%	76 - 100%	26 - 50%	76 - 100%

APPENDIX S – COLLECTIVE REFLECT RUBRIC RESULTS

Q#	Criterion	Michelle	Matthew	Brenda	Catherine	Lisa	William	Brian
1.1	Writing spectrum	HA	R	HA	R	CR-CL	TA	R
1.1	Presence	TA	R	R	R	R	TA	R
1.1	Conflict description	TA	R	TA	R	R	TA	R
1.1	Emotion	HA	TA	HA	TA	TA	HA	HA
1.1	Analysis/meaning-making	R	R	HA	TA	R	TA	R
1.1	Attention to assignment	HA	R	TA	R	TA	TA	R
1.2	Writing spectrum	CR-CL	TA	TA	HA	R	TA	R
1.2	Presence	R	TA	TA	TA	R	R	R
1.2	Conflict description	R	TA	TA	HA	R	R	R
1.2	Emotion	TA	HA	HA	HA	HA	HA	TA
1.2	Analysis/meaning-making	R	R	TA	HA	HA	TA	R
1.2	Attention to assignment	R	TA	TA	TA	TA	R	R
1.3	Writing spectrum	R	R	TA	R	HA	HA	R
1.3	Presence	R	R	R	R	R	TA	R
1.3	Conflict description	R	R	R	R	R	R	R
1.3	Emotion	TA	HA	HA	TA	R	HA	HA
1.3	Analysis/meaning-making	R	R	R	R	CR-CL	HA	R
1.3	Attention to assignment	R	R	R	R	R	HA	R
2.1	Writing spectrum	CR-CL	R	R	R	CR-TR	HA	TA
2.1	Presence	R	R	R	R	R	TA	R
2.1	Conflict description	CR-CL	R	R	R	CR-TR	TA	R
2.1	Emotion	R	R	HA	TA	TA	HA	TA
2.1	Analysis/meaning-making	CR-CL	R	R	R	R	HA	R
2.1	Attention to assignment	R	R	R	R	R	R	R
2.2	Writing spectrum	HA	R	R	TA	R	R	CR-CL
2.2	Presence	TA	R	R	R	R	R	R
2.2	Conflict description	TA	R	R	R	R	R	CR-CL
2.2	Emotion	HA	HA	TA	HA	TA	TA	HA
2.2	Analysis/meaning-making	TA	R	R	R	R	R	CR-CL
2.2	Attention to assignment	TA	R	R	R	R	R	R
2.3	Writing spectrum	R	R	TA	TA	R	R	R
2.3	Presence	TA	R	R	TA	R	R	R
2.3	Conflict description	TA	R	TA	TA	R	R	R
2.3	Emotion	HA	R	HA	TA	TA	TA	HA
2.3	Analysis/meaning-making	R	CR-CL	TA	R	R	R	R
2.3	Attention to assignment	TA	R	R	R	R	R	R
3.1	Writing spectrum	HA	HA	R	TA	CR-CL	R	R
3.1	Presence	R	TA	R	TA	R	R	R

Q#	Criterion	Michelle	Matthew	Brenda	Catherine	Lisa	William	Brian
3.1	Conflict description	R	R	CR-CL	R	R	CR-CL	R
3.1	Emotion	HA	HA	TA	TA	TA	HA	HA
3.1	Analysis/meaning-making	R	CR-CL	R	R	R	TA	R
3.1	Attention to assignment	R	TA	R	R	R	R	R
3.2	Writing spectrum	R	CR-CL	CR-CL	HA	CR-TR	R	R
3.2	Presence	R	R	R	TA	R	TA	R
3.2	Conflict description	CR-CL	R	CR-CL	TA	CR-TR	R	R
3.2	Emotion	TA	R	R	HA	TA	TA	TA
3.2	Analysis/meaning-making	CR	CR-CL	R	TA	CR-CL	TA	R
3.2	Attention to assignment	R	R	R	TA	R	R	R
4.1	Writing spectrum	CR-CL	TA	HA	R	CR-TR	TA	R
4.1	Presence	R	TA	TA	R	R	R	R
4.1	Conflict description	CR-CL	TA	TA	R	CR-TR	R	R
4.1	Emotion	TA	TA	HA	TA	R	HA	HA
4.1	Analysis/meaning-making	R	HA	TA	R	CR-TR	R	R
4.1	Attention to assignment	R	TA	TA	R	R	TA	TA
4.2	Writing spectrum	R	CR	HA	HA	CR-TR	TA	R
4.2	Presence	R	R	TA	TA	R	R	R
4.2	Conflict description	R	CR-CL	HA	TA	R	R	R
4.2	Emotion	HA	HA	HA	HA	HA	HA	TA
4.2	Analysis/meaning-making	R	CR-CL	HA	TA	CR-TR	R	R
4.2	Attention to assignment	TA	R	TA	TA	R	TA	R
4.3	Writing spectrum	HA	R	CR-CL	HA	CR-CL	TA	TA
4.3	Presence	TA	TA	R	R	R	R	R
4.3	Conflict description	HA	TA	CR-CL	TA	R	TA	TA
4.3	Emotion	HA	HA	TA	TA	CR-CL	HA	HA
4.3	Analysis/meaning-making	HA	TA	R	R	CR-CL	TA	TA
4.3	Attention to assignment	TA	R	R	R	R	R	R
5.1	Writing spectrum	TA	HA	HA	TA	TA	TA	TA
5.1	Presence	TA	TA	R	R	TA	R	R
5.1	Conflict description	TA	HA	HA	R	TA	TA	HA
5.1	Emotion	HA	HA	HA	TA	HA	HA	HA
5.1	Analysis/meaning-making	TA	HA	HA	R	R	TA	TA
5.1	Attention to assignment	TA	TA	TA	R	R	R	R
5.2	Writing spectrum	R	R	R	TA	TA	R	TA
5.2	Presence	R	R	R	R	R	R	R
5.2	Conflict description	R	R	R	R	TA	TA	R
5.2	Emotion	HA	TA	R	HA	TA	HA	HA
5.2	Analysis/meaning-making	TA	R	TA	TA	TA	TA	R
5.2	Attention to assignment	R	R	R	R	R	R	R

Q#	Criterion	Michelle	Matthew	Brenda	Catherine	Lisa	William	Brian
5.3	Writing spectrum	R	R	CR-CL	CR-CL	HA	HA	TA
5.3	Presence	R	R	R	R	TA	TA	R
5.3	Conflict description	R	R	CR-CL	R	TA	HA	R
5.3	Emotion	HA	HA	HA	HA	HA	HA	HA
5.3	Analysis/meaning-making	R	R	R	CR-CL	TA	TA	R
5.3	Attention to assignment	R	R	R	R	TA	TA	R
6.1	Writing spectrum	R	HA	CR-CL	CR-CL	TA	TA	R
6.1	Presence	R	TA	R	R	R	TA	R
6.1	Conflict description	R	TA	TA	R	R	TA	R
6.1	Emotion	HA	HA	HA	TA	HA	HA	HA
6.1	Analysis/meaning-making	R	TA	R	CR-CL	TA	R	TA
6.1	Attention to assignment	R	TA	R	R	R	R	R
6.2	Writing spectrum	HA	R	R	CR-TR	CR-TR	R	R
6.2	Presence	TA	R	R	R	R	TA	R
6.2	Conflict description	TA	TA	R	R	CR	TA	TA
6.2	Emotion	HA	TA	TA	R	TA	HA	HA
6.2	Analysis/meaning-making	R	R	CR-CL	CR-TR	CR-TR	R	TA
6.2	Attention to assignment	TA	R	CA	R	R	R	R
6.3	Writing spectrum	R	R	R	R	R	R	R
6.3	Presence	R	R	R	R	R	TA	R
6.3	Conflict description	R	R	HA	R	R	TA	R
6.3	Emotion	HA	TA	HA	CR-TR	CR-CL	HA	TA
6.3	Analysis/meaning-making	R	R	R	CR-TR	CR-CL	R	R
6.3	Attention to assignment	R	R	R	R	R	TA	R

APPENDIX T – INITIAL AND FOLLOW UP REFLECTION COMPARISON

A complete comparison of reflection levels using REFLECT rubric.

Designer	Questions	Initial level	Follow up level
Michelle	1.1	HA	R
		TA	R
		TA	R
		HA	HA
		R	R
		HA	R
Michelle	4.1	CR-CL	TA
		R	R
		CR-CL	R
		TA	HA
		R	R
		R	TA
Michelle	4.2	R	TA
		R	R
		R	R
		HA	HA
		R	TA
		TA	R
Matthew	3.1	HA	CR-CL
		TA	R
		R	CR-CL
		HA	HA
		R	CR-CL
		TA	R
Matthew	3.3	TA	R
		TA	R
		TA	R
		HA	R
		TA	R
		TA	R
Brenda	1.2	TA	R
		TA	TA
		TA	R
		HA	HA
		TA	R

Designer	Questions	Initial level	Follow up level
		TA	R
Brenda	1.3	TA	R
		R	R
		TA	R
		HA	TA
		R	R
		R	R
Brenda	2.3	TA	R
		R	R
		TA	R
		HA	HA
		TA	R
		R	R
Lisa	3.2	CR-TR	CR-CL
		R	R
		CR-TR	CR-CL
		TA	TA
		CR-CL	CR-CL
		R	R
William	5.2	R	TA
		R	R
		TA	R
		HA	HA
		R	R
		R	R
Brian	5.3	TA	R
		R	R
		R	CR-CL
		HA	HA
		TA	CR-CL
		R	R

APPENDIX U – COLLECTIVE SRIS BASELINE/POST-STUDY RESULTS

		Michelle	Michelle	Matthew	Matthew
Area	Statement	Baseline	Post-Study	Baseline	Post-Study
Engagement	I don't often think about my thoughts.	2	2	2	1
Engagement	I rarely spend time in self-reflection.	2	2	1	1
Engagement	I frequently examine my feelings.	4	4	5	4
Engagement	I don't really think about why I behave in the way that I do.	2	2	1	1
Engagement	I frequently take time to reflect on my thoughts.	4	4	4	4
Engagement	I often think about the way I feel about things.	4	4	5	4
Need	I am not really interested in analyzing my behavior.	2	2	1	1
Need	It is important for me to evaluate the things that I do.	4	5	5	5
Need	I am very interested in examining what I think about.	4	4	5	5
Need	It is important to me to try to understand what my feelings mean.	4	5	5	5
Need	I have a definite need to understand the way that my mind works.	4	4	5	5
Need	It is important to me to be able to understand how my thoughts arise.	4	3	5	5
Insight	I am usually aware of my thoughts.	4	4	5	4
Insight	I'm often confused about the way that I really feel about things.	3	3	3	2
Insight	I usually have a very clear idea about why I've behaved in a certain way.	3	4	4	5
Insight	I'm often aware that I'm having a feeling, but I often don't quite know what it is.	3	2	2	2
Insight	My behavior often puzzles me.	2	2	1	1
Insight	Thinking about my thoughts makes me more confused.	2	2	1	1
Insight	Often I find it difficult to make sense of the way I feel about things.	2	2	2	1
Insight	I usually know why I feel the way I do.	3	2	5	5

		Brenda	Brenda	Catherine	Catherine
Area	Statement	Baseline	Post-Study	Baseline	Post-Study
Engagement	I don't often think about my thoughts.	1	1	2	2
Engagement	I rarely spend time in self-reflection.	1	1	1	2
Engagement	I frequently examine my feelings.	5	4	4	4
Engagement	I don't really think about why I behave in the way that I do.	1	1	2	2
Engagement	I frequently take time to reflect on my thoughts.	4	3	5	4
Engagement	I often think about the way I feel about things.	4	5	5	4
Need	I am not really interested in analyzing my behavior.	2	1	1	1
Need	It is important for me to evaluate the things that I do.	5	4	5	5
Need	I am very interested in examining what I think about.	3	4	5	5
Need	It is important to me to try to understand what my feelings mean.	4	3	4	5
Need	I have a definite need to understand the way that my mind works.	5	5	5	5
Need	It is important to me to be able to understand how my thoughts arise.	3	4	5	5
Insight	I am usually aware of my thoughts.	5	5	4	4
Insight	I'm often confused about the way that I really feel about things.	2	3	4	3
Insight	I usually have a very clear idea about why I've behaved in a certain way.	4	3	4	3
Insight	I'm often aware that I'm having a feeling, but I often don't quite know what it is.	2	2	5	3
Insight	My behavior often puzzles me.	2	2	4	2
Insight	Thinking about my thoughts makes me more confused.	3	1	4	2
Insight	Often I find it difficult to make sense of the way I feel about things.	2	2	4	2
Insight	I usually know why I feel the way I do.	4	4	4	4

		Lisa	Lisa	William	William	Brian	Brian
Area	Statement	Baseline	Post-Study	Baseline	Post-Study	Baseline	Post-Study
Engagement	I don't often think about my thoughts.	2	1	1	2	2	2
Engagement	I rarely spend time in self-reflection.	3	1	1	2	2	3
Engagement	I frequently examine my feelings.	4	5	2	2	2	2
Engagement	I don't really think about why I behave in the way that I do.	2	1	1	4	3	4
Engagement	I frequently take time to reflect on my thoughts.	3	4	2	4	2	2
Engagement	I often think about the way I feel about things.	3	5	2	2	2	2
Need	I am not really interested in analyzing my behavior.	1	1	1	1	3	4
Need	It is important for me to evaluate the things that I do.	5	5	5	5	2	2
Need	I am very interested in examining what I think about.	5	5	5	4	2	2
Need	It is important to me to try to understand what my feelings mean.	5	5	5	4	2	2
Need	I have a definite need to understand the way that my mind works.	5	5	5	4	3	2
Need	It is important to me to be able to understand how my thoughts arise.	5	5	5	4	2	2
Insight	I am usually aware of my thoughts.	3	4	3	4	4	4
Insight	I'm often confused about the way that I really feel about things.	4	4	4	3	2	2
Insight	I usually have a very clear idea about why I've behaved in a certain way.	4	4	2	3	4	4
Insight	I'm often aware that I'm having a feeling, but I often don't quite know what it is.	2	4	4	2	3	3
Insight	My behavior often puzzles me.	2	4	4	3	2	1
Insight	Thinking about my thoughts makes me more confused.	1	1	3	4	2	1
Insight	Often I find it difficult to make sense of the way I feel about things.	3	4	4	3	2	2
Insight	I usually know why I feel the way I do.	3	4	2	3	4	4

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ABSTRACT**A MULTIPLE CASE EXPLORATION OF DESIGNERS AND REFLECTION IN THE DESIGN SPACE**

by

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For decades, scholars have searched for ways to more effectively teach and practice instructional design. A variety of strategies have been employed to address the ambiguity in and challenges of the field. Much of the focus in the education of instructional designers has been on teaching students how best to use the many models developed for the field (Rowling, 1992). These efforts, while meant to help the new instructional designer succeed, have often been stifled by the ever-changing landscape of what instructional designers are asked to do in their roles after graduation (Kenny, Zhang, Schwier, & Campbell, 2005). Other research centers around the ways students can fuse their new instructional design knowledge with practical activities.

While many scholars have begun to focus on alternative methods for preparing instructional designers and improving instructional design processes, *instructional designers* themselves have been neglected. We teach instructional designers about the profession before we have truly understood the professional. From a teaching standpoint, this approach contradicts the very foundation of instructional design education: that of recognizing that the learners/users are at the center of instructional design (Cennamo & Kalk, 2004).

The purpose of this qualitative study was to examine instructional designers during design by engaging them in structured reflection as (a.) a way to better understand instructional designers in the design space and (b.) a technique for instructional designers to improve their design. Seven designers were asked to explore their thoughts, feelings, and experiences over six weeks while engaged in a design project.

This study used various data collection methods including reflection journals, interviews, and surveys. The Self-Reflection Insight Scale (SRIS) and REFLECT rubric were utilized to measure reflection abilities, and grounded theory was employed to conceptualize the data (Strauss & Corbin, 1990), while concentrating on discovery and the development of theory (Charmaz, 1983).

Results showed that each designer is unique; designers rely on distinctive designer precedents; designers perceive reflection to positively impact their design products; designers' depth of reflection waxes and wanes; and designers reflect more deeply when provided with feedback.

AUTOBIOGRAPHICAL STATEMENT

Tamme Quinn Grzebyk teaches graduate and undergraduate courses in the College of Education and the College of Business at Wayne State University. She also serves as an Adjunct Assistant Professor in Business Communications at Walsh College, in Troy, Michigan. Her research interests include professional and organizational development; leadership and performance improvement through reflection and self-awareness; and the methods by which communication and process can be applied to improve creativity and performance outcomes. Her instructional design, performance/process improvement, and leadership experiences span the information technology, healthcare, and consumer products industries. In addition to a successful corporate career, Quinn Grzebyk began VerbalWise LLC, a consulting business specializing in performance and process improvement, which she continues to manage. She lives in Plymouth, Michigan, with her husband and two young daughters.