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Exploring the Effectiveness of an E-learning Module for Graduate Level Occupational Therapy Students

By

Bryan Gee, MEd

A dissertation proposal

submitted in partial fulfillment of the requirements

for the degree of Doctor of Philosophy in Instructional Design

Idaho State University

Spring 2015

COMMITTEE APPROVAL

To the Graduate Faculty:

The members of the committee appointed to examine the dissertation of Bryan M. Gee find it satisfactory and recommend that it be accepted.

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May 15, 2014

Bryan Gee, PhD, OTD, OTD/L
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RE: Your application dated 5/14/2014 regarding study number 4102: Students Attitudes towards Reusable Learning Objects in Occupational Therapy Entry Level Education

Dear Dr. Gee:

I agree that this study qualifies as exempt from review under the following guideline: 2. Anonymous surveys or interviews. This letter is your approval, please, keep this document in a safe place.

Notify the HSC of any adverse events. Serious, unexpected adverse events must be reported in writing within 10 business days.

You are granted permission to conduct your study effective immediately. The study is not subject to renewal.

Please note that any changes to the study as approved must be promptly reported and approved. Some changes may be approved by expedited review; others require full board review. Contact Tom Bailey (208-282-2179; fax 208-282-4723; email: humsubj@isu.edu) if you have any questions or require further information.

Sincerely,

Ralph Baergen, PhD, MPH, CIP
Human Subjects Chair

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I would like to first recognize the Department of Educational Leadership and Instructional Design at Idaho State University for their high quality doctoral program. I value the skills and abilities I have acquired over the past several years as I have worked with my peers and the faculty to assist me with the development of competencies as an instructional designer.

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Abstract

The purpose of this study was to explore the effectiveness of a series of online, module-based instructional RLOs targeted at entry-level, 1st year, Master of Occupation Therapy (MOT) students. The content of the RLOs addressed both knowledge and implementation of A SECRET for children with a sensory processing disorder, specifically sensory over responsiveness. Nine RLOs were developed and embedded within a commonly used learning management system. As part of the development of the RLOs, a deconstruction procedure was conducted on other sensory processing related e-learning modules. The results of the deconstruction aided the design and development of the A SECRET RLOs. Employing the ADDIE model of instructional design, the author sought expert opinion via a modified Delphi technique to verify the adherence to the said model. The results indicated that the author had adhered to the ADDIE model's processes and procedures with a high level of agreement (M=3.0, or higher, on a four point scale).

Participants (n=8) were evaluated regarding their ability to discriminate between appropriate and inappropriate A SECRET strategies using a selected-response assessment. The participants' overall average score was 68%; a positive finding given the novelty of the instruction, assessment, and the content. As part of the assessment, the participants were prompted to provide a rationale for their selection of the strategies they ranked as being appropriate and inappropriate. Qualitative analysis was used to understand the complexity and congruency of these determinations. The themes that emerged from the qualitative data were: the A SECRET Process, Self-Regulation, the Occupational Therapy Process, Participation, and Safety/Security.

The participants reported positive attitudes toward the A SECRET RLOs (interface, content, and delivery), the A SECRET assessment, and the sensory processing related content delivered in an online format. The overall findings suggest an inherent value for the A SECRET RLOs in assisting occupational therapy students in their program's first year with learning the A SECRET process and then reasoning through simulated cases. Further research is warranted to explore the effectiveness of the A SECRET RLOs within the context of entry level occupational therapy education as well as within other populations (parents, teachers, and caregivers).

CHAPTER I

Introduction

Sensory processing has been defined as the "reception, modulation, integration and organization of sensory stimuli, including behavioral responses to sensory input (Miller & Lane, 2000, p. 2). Sensory processing difficulties occur when there is disruption to how an individual receives and processes sensory information, which results in an abnormal behavioral, cognitive, or emotional response. The abnormal responses typically disrupt an individual's ability to function within routine daily activities including self-care, work and education, play and leisure, social interaction, and the ability to develop and/or maintain relationships (Miller, 2006).

Currently, it is estimated that 5% of children in the United States demonstrate some type of sensory processing disorder (SPD) (Ahn, Miller, Milberger, & McIntosh, 2001). Additionally, it has been reported that the prevalence of SPD among children with disabilities ranges between 40% and 88% (Adrien, Lenoir, Martineau, Perrot, Hameury, Larmande, 1993; Dahlgren & Gillberg, 1989; Glennon, 2010; Kientz & Dunn, 1997; Tomchek & Dunn, 2007). Among those with developmental disabilities, SPD has been identified in children with an Autism Spectrum Disorder (Glennon, 2010; Miller, Schoen, Brett-Green, 2008; Tomchek & Dunn, 2007), Asperger's Syndrome (Dunn, Myles, &Orr, 2002), Attention Deficit Disorder (Mangeot, Miller, McIntosh, McGrath-Clark, Simon, Hagerman, & Goldson, 2001), Angelman's Syndrome (Hickman, 2001), Fragile X

syndrome (Baraneck, Chin, Hess, Kankee, Hatton, & Hooper, 2002; Hickman, 2001), and in infants and toddlers with self-regulation disorders (Schaaf & Anzalone, 2001).

Occupational therapy educators train entry-level occupational therapy students to identify, evaluate, and treat children with sensory processing difficulties and disorders (Reynolds, Watling, Zapletal, & May-Benson, 2012). This charge originates from the American Occupational Therapy Association's (AOTA) 2011 educational standards for Accreditation Council of Occupational Therapy Education (ACOTE) and AOTA's Blue Print for the Future of Entry Level Education (ACOTE, 2010). According to both AOTA's accreditation standards and ACOTE's blueprint, entry level occupational therapists should demonstrate competency in assessing sensory needs and providing stimulation and environmental self-management strategies to those with sensory processing deficits (ACOTE, 2012). It has been reported that 83-90% of occupational therapists working with pediatric populations provide interventions to address their clients' sensory processing deficits (AOTA, 2010). In a separate study, Green, Pituch, Itchon, Choi, O'Reilly, and Sigafoos (2006) reported that a sensory processing approach was the third most frequent strategy in intervention with children with ASD. Furthermore, ACOTE requires students to "demonstrate an understanding of health literacy and the ability to educate and train the client, caregiver, family and significant others, and communities to facilitate skills in areas of occupation as well as prevention, health maintenance, health promotion, and safety" (ACOTE, 2011, p. 25) and, "Apply the principles of the teaching–learning process using educational methods to design

experiences to address the needs of the client, family, significant others, colleagues, other health providers, and the public." (p. 25).

Based upon the literature (see Chapter II), it is evident a wide array of children demonstrate sensory processing disturbances and that occupational therapists incorporate sensory processing approaches to address those difficulties. The type of sensory processing frame of reference (e.g., Dunn's Model of Sensory Processing, Ayer's Sensory Integration, Nosology of Sensory Processing), type of comprehensive intervention strategy (e.g., Ayer's Sensory Integration Intervention, Sensory Treatment and Research Center Sensory Processing Approach), specialized sensory based intervention (e.g., sound-based interventions, therapy ball chairs, weighted vests, deep pressure vests, Wilbarger Deep Pressure Brushing Protocol, and the Astronaut Training Program), and sensory motor intervention (e.g., therapeutic horseback riding) are taught in entry-level occupational therapy programs (Reynolds et al., 2012). However, teaching a clinical reasoning process (e.g., A SECRET) to entry-level occupational therapy students as part of their defined curriculum has not been widely embraced. A SECRET is an acronym for the seven steps, which are arranged as a pneumonic without order of priority: a) Attention, b) Sensation, c) Emotional regulation, d) Culture, e) Relationships, f) Environment, and g) Tasks (Miller, 2006; Bailer & Miller, 2011).

The Sensory Processing Disorder Foundation (SPDF) has developed a Sensory Processing Disorder University (SPDU), which is a repository of instructional modules revolving around the identification and intervention strategies for children demonstrating

sensory processing disturbances (SPDF, 2013). Specifically, the SPDU covers content related to sensory over-responsiveness (SOR), sensory-under responsiveness (SUR), and sensory seeking/craving (SS/SC). However, Miller, the primary author of many of the print resources currently available, has developed a reasoning framework to help teachers, therapists, and caregivers address sensory processing related behaviors in children with SPD (Miller, 2006; Bialer & Miller, 2011). A SECRET, however, is currently not part of formal OT curricula (Reynolds et al., 2012). The transition of a clinical reasoning protocol, such as A SECRET, into an asynchronous online interface for the education of entry-level occupational therapy majors will address a current gap in professional training.

A paucity of research exists within the literature related to the use of multimedia based reusable learning objects (RLOs) as an instructional mechanism for educating and training entry level occupational therapy (OT) students, regardless of the content being taught or the targeted learners (technical, master, or doctoral level). In regard to sensory processing content and training, OT students have access to traditional print material (e.g., text-based books, journals, and professional newsletters) (Miller, 2006; Kranowitz, 2005, Beil & Peski, 2005, Bialer & Miller, 2011) and Web 2.0 platforms (e.g., social media sites and Weblogs), but the majority of the information is targeted at multiple users, including parents and other lay personnel, teachers, and therapists. These resources lack mechanisms to assess knowledge and performance after the learners have been exposed to the information and applied it to the challenging behaviors and environments

in which those children with sensory processing disturbances function. More importantly, none of the abovementioned resources teach problem solving or clinical reasoning skills to OT students.

Purpose of Study

The purpose of the proposed study is to explore the effectiveness of a series of online, module-based instructional RLOs targeted at entry-level occupational therapy student ability to apply a problem solving approach to children with SPD. The content will address both knowledge and implementation of A SECRET for children with SPD. It is also essential to assess OT students' perceptions related to asynchronous online instruction for A SECRET as a window into the appropriateness of both the approach to this learning and the content. In a geographically distant and largely rural environment, such as Idaho, developing this type of curriculum may serve as a source of continuing education for practitioners and training centers ultimately benefiting educational partners: university professors, practitioners, and caregivers.

Research Question(s)

1. What is the level of occupational therapy (OT) students' problem-solving performance for A SECRET after viewing a simulation case study of a child with Sensory Over Responsiveness (SOR) as measured by a post-simulation selected response assessment?
    a. What is the achievement level of OT students in identifying the exemplary two A SECRET strategies appropriate for each element of A SECRET on an instructor-designed problem-solving case scenario?
    b. How do OT students clinically discriminate between appropriate and in-appropriate A SECRET strategies on an instructor-designed problem-solving case scenario?

2. What are OT students' perspectives regarding the A SECRET simulation vignettes to support their application of the reasoning process?

3. What are OT students' attitudes toward online delivery for a series of modules related to A SECRET?

4. Does the Sensory Processing Disorder University online courses adhere to sound instructional design principles as measured on an instructional design assessment rubric?

5. What is the instructional design compliance level for the ADDIE instructional design model used in the creation of A SECRET modules, as measured by a modified Delphi Technique?

Research Design

A case study research design will be employed in this proposed research (see Figure 1). Since the number of participants is limited to a cohort model with a maximum of 14, the case study approach is appropriate. This design also provides opportunity for in-depth description of participants and dialogue throughout the preparation, implementation, and evaluation phases of both the instructional design process and the content application.

Prior to implementation of the treatment, a series of Delphi surveys (O_1) will be sent to instructional design experts (IDEs) to ascertain adherence to the ADDIE model of instructional design for the design and development of the A SECRET instructional RLOs.

Preceding the treatment portion of the proposed study, the researcher will identify appropriate foundational instructional modules in the SPDU repository for participants to complete prior to the actual A SECRET content (Y_1). This content will

cover a range of topics including sensory processing, sensory processing disorders, and an overview of interventions utilized to treat the condition. Up to 14 occupational therapy students will take part in the treatment (X_1) covering A SECRET. In order for participants to take part in the treatment (instruction) (X_1) portion of the study, each learner will need to successfully complete a multiple choice, knowledge-based assessment of the content related to baseline instruction (Y_1) via the SPDU modules. After the treatment, a post-assessment regarding A SECRET problem solving will be undertaken (O_2). Following the completion of the case scenario simulation, a focus group (using a semi structured interview guide) will be conducted with the participants to explore reasoning behind the intervention activities they recommended as a part of the A SECRET plan (O_4). Upon the completion of the semi-structured interview with the researcher, the participants will be asked to complete an online survey exploring attitudes related to the instructional content and delivery interface for the A SECRET RLOs (O_6).

	SPDU Deconstruction	SPDU Instruction	SPDU Knowledge Assessment	A SECRET Instructional Modules	A SECRET Case Scenario	Post Instruction Survey	Post Instruction Focus Group
Case Study Cohort	O_1	Y_1	O_3	X_1	O_2	O_4	O_6

Where:
O_1 = Instructional design deconstruction of existing SPDU online modules;
O_3 = SPDU post instruction selected response assessment;
O_2 = post A SECRET instruction selected response;
O_4 = A SECRET Case scenario selected response assessment;
X_1 = Instruction related to A SECRET (7 RLOs)
Y_1 = SPDU foundational instruction

Figure 1. Research Design Diagram

Definitions of Terms

The following terms are defined for use in this proposed study:

1. ADDIE Instructional Design Model – ADDIE is a basic instructional design framework that is used to represent general areas of tasks that instructional designers employ. Each of the five letters of the ADDIE acronym represents a stage in the instructional design process: 1) analysis, 2) design, 3) development, 4) implementation, and 5) evaluation (Gagne, Wager, Golas, & Keller, 2005).

2. *A SECRET* – A reasoning framework that is focused on devising strategies to support children with sensory processing disturbances in preparation to and/or during moments when they are experiencing sensory challenges. A SECRET is an acronym for attention, sensation, emotion regulation, culture, relationship, environment, and task (Bialer & Miller, 2011).

3. *Clinical Reasoning* – A creative and flexible way at looking at a client's personal characteristics and context then making modifications that will help him/her function more successfully." (Miller, 2006, p. 69). There are several types of clinical reasoning used by occupational therapists including, procedural, narrative, interactive and conditional (Mattingly & Fleming, 1994).

4. *Delphi Method* – "The Delphi technique is a widely used and accepted method for gathering data from respondents within their domain of expertise. The technique is designed as a group communication process, which aims to achieve a convergence of opinion on a specific real-world issue." (Hsu & Sanford, 2007, p. 1).

5. *E-Learning* – "A combination of content and instructional methods delivered by media elements, such as words, and graphics on a computer or mobile device intended to build job transferable knowledge and skills linked to individual learning goals or organizational performance." (Clark & Mayer, 2011, p. 457).

6. *Entry Level Occupational Therapy Student* – A student who is enrolled in an entry level graduate level occupational therapy academic program (first point of entry for the profession of occupational therapy).

7. *Learning Management System* – In online learning, the learning management system functions as the platform to manage the complete learning process (Gagne, Wager, Golas, & Keller, 2005) including learning objects, assessment, grading, communication, etc., (Arman, El-Arif, & El-Gazar, 2008).

8. *Multimedia* – The formats used to present instructional material (video, text, virtual, photo, & audio) (Mayer, 2009).

9. *Online* – The use of Internet and other related at-distance technologies to deliver,

support, and enhance teaching, learning, and assessment (Popovic, Lindic, Indihar, Stemberger & Jailic, 2005).

10. *Problem Solving* – "the ability to combine previously learned knowledge in a new way to solve a new problem" (Polatajko & Mandich, 2004, p. 32).

11. *Reusable Learning Object* – Learning objects (LOs) have been described as "digital entities deliverable over the internet" (Wiley, 2002, p. 6); *reusable* learning objects (RLOs) as "any digital resource that can be used and reused to support learning" Wiley, 2002, p. 6); and, "discrete units of learning" (Lymn et al., 2008, p. 2). RLOs typically are small, discrete, self-contained digital objects that may be sequenced, combined, and used within a variety of instructional activities (Wiley, 2002) including integration into formal lectures or used stand alone for remediation or background knowledge development (Lymn, et al., 2008).

12. *Sensory Over-Responsiveness (SOR)* – An over-response (behavior) to sensory messages being sent from the internal and external sensory receptors of the body and the central nervous system (Miller, 2006, p. 22).

13. *Sensory Processing* – Sensory processing is defined as the "reception, modulation, integration, and organization of sensory stimuli, including behavioral responses to sensory input" (Lane, Miller & Hanft, 2000, p. 2).

14. *Sensory Processing Disturbance* – *"*... is the inability to modulate, discriminate, coordinate, or organize sensation adaptively" (Lane, Miller, & Hanft, 2000, p.2).

15. *Sensory Processing Disorders* – *"*Sensory processing disorder is a heterogeneous condition that includes a variety of subtypes. Individuals with the disorder have impaired responses to, processing of, and/or organization of sensory information that effects participation in functional daily life routines and activities" (Miller, Neilson, Schoen, & Brett-Green, 2009, p. 1).

Limitations and Delimitations

Limitations. A limitation within a research study that identifies and acknowledges potential weaknesses of that given study (Portney & Watkins, 2009). Such weakness would include those of reliability, internal validity, external validity, and

objectivity (Isaac & Michael, 1995). There are several limitations within this proposal.

History. It is expected some participants in the study may have had formal or informal education related to sensory processing, or the reasoning framework of A SECRET. While A SECRET is relatively novel and has not been widely disseminated or used as formal instruction within entry level occupational therapy educational programs or among occupational therapists during direct intervention, there is the possibility of participants' prior exposure. However, the participants will be purposefully selected to determine if they have been exposed to A SECRET. In the event that they have they will be excluded from the study. Therefore, the issue of prior exposure should not be a factor.

A second limitation in this sub category is related to the potential participant's relationship with the researcher who also functions as the director of the MOT program and provides core instruction to all students in the MOT program. Potential participants may choose to take part in the study as a way of gaining favor with the researcher in non-required coursework.

Instrumentation. Several measures will be utilized with the participants in order to answer the research questions within the proposed study. These include a baseline multiple-choice knowledge assessment, a performance-based assessment related to the A SECRET intervention, a focus group interview, and an attitudinal survey using Likert-scaled items. Thus, there is a minimal risk that the measures may impact participant performance in the overall study. Targeted participants for this study, as OT students, will have experience with selected-response formats for assessments. In addition, OT students

are expected to practice the methods introduced from classes in a simulated environments, depending on their semester within the program. The survey and interview measurements may be considered atypical for students enrolled in the OT program as related to subject matter content; however, all University students have experience with scaled surveys related to overall course satisfaction. As a case study research design, the researcher will carefully explain all aspects of the proposed study and the expectations for participation prior to implementation.

Selection. The proposed research uses a case study format. Qualitative research may not be externally valid but does demonstrate strong internal validity (Merriam, 1998). That being said, the researcher will purposefully select point of matriculation in the OT program where the instructional module is implemented. This selection does not allow the researcher to generalize the results of the study to the broader population of graduate level OT students.

Experimental Mortality. Due to the short duration of the instructional material (14 days), as well as the overall study design, experimental mortality is not foreseen to be an issue. In addition, those identified for the research will have a high interest in participation; thus, the likelihood of mortality is low.

Selection Interactions. Potential participants for this study will be isolated to first year, OT students on the ISU campus in Pocatello, Idaho. Students comprise a small cohort (maximum of 14) of students enrolled in occupational therapy courses together; thus, there is high likelihood they will interact and discuss the study. However, the

researcher will encourage interaction only with the primary investigator regarding the content and assessment pieces of the study. The short duration (four hours over a two week timeframe) for the treatment will also discourage interaction among participants.

Delimitations. Delimitations within a research study address how it will be narrowed in scope; that is, how it is bounded (Portney & Watkins, 2009). This study is employing a case study approach using post assessment and survey procedures. There are several delimitations; these are presented below.

The participants solicited for the proposed study will be 1st year OT students. These targeted learners are identified and selected, because they will have little to no formal instruction regarding sensory processing, sensory processing disorders, and, more importantly, A SECRET within the ISU Master of Occupational Therapy (MOT) curriculum.

The sample size has been limited to 14 as this is the maximum number of students admitted in the MOT program each year. Thus, the sample size is small and the results may not be generalized to the broader population of first year master level OT students.

Significance of the Study

There is a paucity of literature related to assessing the use and effectiveness of online training modules for entry-level OT students extensively covering the topic of sensory processing disturbances, and the implementation of A SECRET, in particular. This is of significant relevance in that A SECRET is a process that was originally developed to facilitate critical reasoning among caregivers of children with SPD (Miller,

2006; Bailer & Miller, 2006). The mechanism to transfer this type of reasoning process to parents and caregivers is through the occupational therapist when providing services to their child with SPD. Exploring a method for closing this gap for professionals through formal OT education may increase the effective diagnosis and intervention strategies that can be utilized in the field for these specific topics.

Furthermore, the literature is scarce regarding the use of multimedia-based RLOs to foster the development of clinical reasoning among entry-level OT students. Occupational therapy educators may benefit from knowing how RLOs can be used in entry level occupational therapy education given the shortage of qualified faculty (American Occupational Therapy Association, 2010), increased workload (Romig, Malliet, & Denmark, 2011), and reduced space for teaching sensory processing related theory and intervention within a given curriculum (Reynolds et al., 2012).

CHAPTER II

Review of the Literature

As a research concentration on the use of multimedia RLOs for occupational therapy students, particularly in relation to one method (e.g. A SECRET) and simulated clinical situations, the examination of the research revealed varying degrees of published literature. Five specific content areas are reviewed in this chapter: (A) A SECRET, (B) Clinical reasoning in occupational therapy, (C) E-Learning, (D) reusable learning objects (RLOs), (E) ADDIE Instructional Design (ID), and (F) the Delphi Technique for instructional design evaluation. To make these specific content areas more manageable, the review of literature is arranged by topic.

A SECRET

A SECRET is an mnemonic for A) Attention, S) Sensation, E) Emotion Regulation, C) Culture/Context/Condition, R) Relationships, E) Environment, and T) Task (Miller, 2006) (see Figure 2). A SECRET (Miller, 2006; Bialer & Miller, 2011) is a problem-solving framework developed for parents and caregivers to enhance problem-solving abilities for sensory related behaviors. The framework attempts to capture how clinicians think about sensory related behaviors and the questions to ask that may lead to the design and implementation of strategies to reduce duration, frequency, and/or intensity of episodes for a child with SPD (Miller, 2006; Bialer & Miller, 2011).

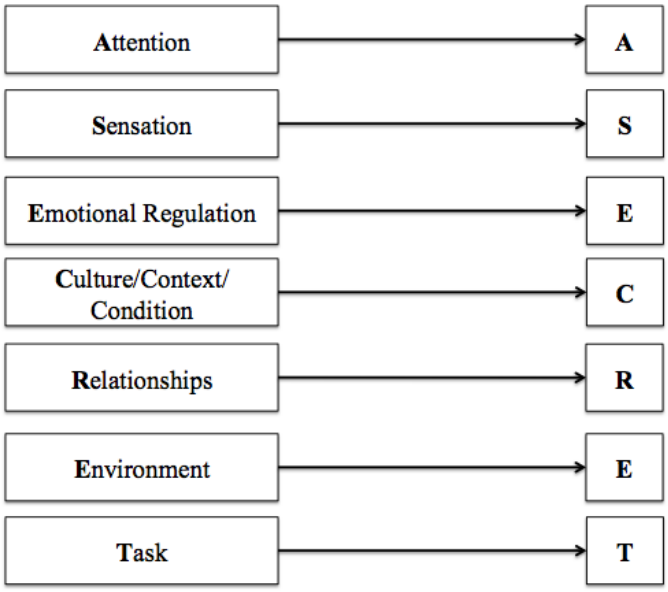

Figure 2. A SECRET Framework

The A SECRET framework first came into print for parents, caregivers, and teachers in the book *Sensational Kids: Hope and Help for Children with Sensory Processing Disorder* (Miller, 2006). In 2008, the framework was imbedded into clinical mentorship training conducted by therapists and researchers at the STAR Center /SPDF in Denver, Colorado. The framework was later expanded into an additional resource titled, *No Longer A SECRET: Unique Common Sense Strategies for Children with Sensory or Motor Challenges* (Bialer & Miller, 2011). Many of the other aspects related to sensory processing diagnosis and treatment targeting students, parents/caregivers, and therapists were created through Sensory Processing Disorder University (SPDU), an e-learning resource launched in 2012. A stand-alone A SECRET module has yet to be developed in a multimedia, online format or paired with existing content within the

SPDU. This lack of association and alignment is a gap that should be filled through purposeful instructional design processes in order to have a complete, cohesive curriculum for SPDU.

The A SECRET framework is targeted to address sensory related behaviors among children who are diagnosed with a sensory processing disorder (SPD) or have sensory processing difficulties that may comorbidly occur with other medical, behavioral or developmental conditions (Miller, 2006; Bialer & Miller, 2011). The framework is intended for use by parents, caregivers, teachers, and therapists (i.e., occupational, physical, and speech).

A SECRET is grounded in the Ecological Model of Sensory Modulation (EMSM) (Miller, Reisman, McIntosh, & Simon, 2001). Generally speaking, the A SECRET framework includes two global categories: First, the individual characteristics (individual influence), which entail attention, interpretation of sensations, and how emotions are self-regulated by the child (Miller, 2006). The task of the therapist or caregiver is to determine how these factors can be modified or changed to increase participation and performance in meaningful activities.

The second category is categorized as contextual elements (external influences) that encompass one's culture, context, current condition, social relationships, physical environment, and tasks (Miller, 2006). This portion is viewed as factors that can be modified or changed external to the child to increase participation and performance in meaningful activities. EMSM postulates that each contextual element interacts with each individual characteristic. This interaction either supports appropriate behavior or creates a

barrier to how the child may respond to a given sensation (Miller, et al., 2001). The ultimate aim of the interaction between the individual characteristics and contextual elements within the EMSM, and on a practical level the A SECRET framework, is to create *the just right* challenge that facilitates an adaptive response within the child who is experiencing a disruption in sensory processing (Miller et al., 2001).

The Attention portion of A SECRET has been defined as the "ability to focus selectively on a desired stimulus or task" (Williamson & Anzalone, 2001, p. 20). The implementation shifts the child's attention toward a desired stimulus/activity or away from a noxious stimulus/activity.

Sensation has been defined as "[t]he operation or function of the senses; perception or awareness of stimuli through the senses" (Webster's Dictionary, 2012). Bailer and Miller (2011) specified the user of the A SECRET framework should identify the sensation(s) the child is not responding to or to which the child is paying too much attention. The user (e.g., caregiver, teacher, or therapist) will also identify other sensations that may increase attention toward a desired sensation/stimuli or override a noxious sensation/stimuli (Bailer & Miller, 2011).

The emotion regulation element is grounded in understanding the process individuals use to manage and cope with emotionally related states occurring on a moment-to-moment basis (Eisenberg, Hofer, & Vaughn, 2007). This element of A SECRET directs the caregiver/teacher to identify the emotion the child is displaying and whether the emotion aligns with the environment and/or the task at hand. They are also directed to determine the status of the child's ability to self-regulate and how to enhance

the ability to self-regulate (Bailer & Miller, 2011).

The culture, condition, and context element of A SECRET identifies three varying aspects in a child's routine. Within A SECRET, context is described as the situation in which an event occurs, including physical, symbolic, social, cultural, or history (Parham & Fazio, 1997). Current conditions are articulated as the social and physical factors that are occurring in the "now." Finally, culture is defined as the rules, customs, habits, routines, and norms of the child's family or group (Bailer & Miller, 2011). The teacher/caregiver is directed toward thinking about the part of the child's family, classroom, community, and/or culture that may be altered or enhanced to avoid negative situations that exacerbate the sensory processing difficulties in the future. They also consider aspects of the child's routine that may be altered to better prepare him/her for age appropriate activities (Bailer & Miller, 2011).

The relationship element of A SECRET has been defined as the connection between two or more people or groups and their involvement with one another, especially as regards the way they behave toward and feel about one another (Bailer & Miller, 2011). The teacher/caregiver is directed to consider if there are issues in the child's relationship with a parent, caregiver, teacher, sibling, peer, therapist, etc., that is causing him/her to exhibit the sensory related behavior. They reflect on relationships that are easier for their child to engage in and then identify the qualities of the positive relationship that the child has with others that can be replicated to reduce the sensory related challenging behaviors (Bailer & Miller, 2011).

The environment element of A SECRET may be defined as the external social and

physical conditions or factors that have the potential to influence an individual (Christiansen & Baum, 1997). The A SECRET framework directs the caregiver/teacher to consider the elements within the environment that may be problematic for the child and then consider how these can be modified in order to enable a more arousing or calming environment depending upon the general sensory related challenging behavior (Bailer & Miller, 2011).

Finally, the task element of A SECRET has been defined as a combination of actions that share a common purpose that is recognized by an individual or group performing the task (Christiansen & Baum, 1997). The A SECRET process directs the caregiver/teacher to consider what aspects of a given task are troubling the child and then consider how the task can be either modified so that it is not as problematic, or how the task can be substituted and what type of other task or activity is needed to reduce the sensory related challenging behavior (Bailer & Miller, 2011).

Overall, the literature explored for this research project has been silent regarding if and how occupational therapy practitioners are implementing A SECRET with their client families and teachers; whether A SECRET is helpful in increasing parental competence to address sensory related behaviors; or, if A SECRET is effective in reducing sensory related behaviors through training of therapy partners (e.g., therapists, teachers, parents, caregivers, occupational therapy students). Within the limited research on A SECRET, no evidence was found of A SECRET being used to teach therapists, teachers, parents, caregivers, or occupational therapy students (the concentration for this proposed research project) using online delivery or simulations with multimedia formats.

Sensory Processing. A SECRET is a reasoning framework used to address the behaviors commonly seen in children who demonstrate sensory processing difficulties and/or disorders (Miller, 2006; Bailer & Miller, 2011). This section will provide an overview of information related to sensory processing difficulties. Currently, it is estimated that 5% of typically developing children in the United States demonstrate some type of sensory processing disorder (SPD) (Ahn et al., 2001). Additionally, it has been reported the prevalence of SPD among children with disabilities ranges between 40–88% (Adrien et al., 1993; Dahlgren & Gillberg, 1989; Glennon, 2010; Kientz & Dunn, 1997; Talay-Ongan & Wood, 2000; Tomchek & Dunn, 2007). Among those with developmental disabilities, SPD has been identified in children with an Autism Spectrum Disorder (ASD) (Glennon, 2010; Miller, Schoen, Brett-Green, 2008; Tomchek & Dunn, 2007), Asperger's syndrome (Dunn, Myles, Orr, 2002), Attention Deficit Disorder (Huecker & Kinnealey, 1998; Mangeot et al., 2001), Angelman's syndrome (Hickman, 2001), in infants and toddlers with regulatory disorders self-regulation (Schaaf & Anzalone, 2001), and those with Fragile X syndrome (Baraneck et al., 2002; Hickman, 2001).

Sensory processing, defined as the "reception, modulation, integration and organization of sensory stimuli, including behavioral responses to sensory input" (Miller & Lane, 2000, p. 2), occurs in the central nervous system (CNS), and, if functioning normally, the CNS knows when to pay attention and when to ignore stimuli in the surrounding environment. For example, while in the classroom, a child with typical sensory processing is able to filter out extraneous sounds, such as the air conditioning, in

order to attend and respond to the teacher's directions. Another important facet of sensory processing is the ability to orient or focus on external information. (Orientation is defined as using the senses to "establish one's position and relationship to all other significant objects in one's environment" (Russel & Nagaishi, 2005, p. 851). A child who does not have typical orientation will not relate appropriately to her surroundings.

SPD is considered a cluster of symptoms that can be categorized into several subtypes: sensory modulation disorder (sensory over responsiveness, under responsiveness & seeking/craving), sensory-based motor disorder (postural disorder and dyspraxia), and sensory discrimination disorder (Miller, 2006; Miller et al., 2007; Miller, Nielson, Schoen, & Brett-Green, 2009). The diagnosis of SPD has been included in the *Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood Manual* (Zero to Three, 1994) and sensory over- and under-responsiveness has been added to the diagnostic criteria for Autism Spectrum Disorders for the DSM – V (American Psychological Association, 2013). Interventions to reduce the symptomology of SPD includes Ayer's Sensory Integration Intervention (May-Benson & Koomar, 2010), sensory-based interventions (e.g. weighted and deep pressure vests, sound-based interventions, and deep pressure proprioceptive brushing), sensory motor (e.g. therapeutic riding, therapy ball chairs), cognitive behavioral approaches (e.g., SticKids, The Alert Program, A SECRET), and parent/caregiver education and training (Gee & Nwora, 2011; Polatajko & Cantin, 2010; Vargas & Camilli, 1999; Case-Smith, & Arbesman 2008; May-Benson, & Koomar, 2010).

Instruction Related to Sensory Processing. Reynolds et al. (2012) conducted a

survey exploring sensory processing within entry-level occupational therapy (OT) education. The authors found that 97% of the responding educational programs indicated they were teaching sensory integration theory and/or sensory integration intervention; however, these were weighted more toward the 2nd and 3rd years of the academic programs. Two-thirds indicated they spend up to 12 hours of lecture time covering sensory related content (Reynolds et al.) with the most frequently taught topics being dyspraxia and sensory modulation, at 94%. The other common topics were the Dunn Model, nosology of sensory processing, and the Alert program.

Reynolds et al. (2012) also reported 41% of the instructors required students to observe an occupational therapy session using a sensory integration (SI) approach through either a live or video demonstration. Furthermore, 89% of the students by the end of their academic program were exposed to and/or used SI during their Level I (i.e., 40 Hours) or Level II (i.e., 12 Weeks) training. Finally, the researchers reported 89.2% of instructors believed having more instructional video would be helpful, with 60% indicating more online resources would enhance their curriculum. The results of the Reynolds et al. study point to a gap in the type of content taught, specifically regarding A SECRET, which is reportedly not being covered in OT curricula. It, then, can be argued that these newly trained therapists are only ever coming into contact with the A SECRET reasoning framework in print media, if at all.

Given that the symptoms of SPD may be chronic in nature and vary in severity, and the amount of research supporting episodic intensive care (Miller, Coll, & Schoen, 2007) as opposed to long-term interventions, OT students would benefit from the A SECRET

problem solving approach to both frame and facilitate clinical reasoning, as well as facilitate the eventual teaching of the process to parents and caregivers who have the day-to-day responsibility to problem solve solutions to their child's challenging behavior. It is imperative that therapists working with families have the most up-to-date information and approaches to better collaborate with their client populations.

Clinical Reasoning in Occupational Therapy

Clinical reasoning has been defined as the thought process that is used by occupational therapists during evaluation and intervention as part of a therapeutic plan of care (Neistadt, 1997). Crabtree (2001) characterized clinical reasoning as "the process of how therapists make sense of clinical situations and how they decide to proceed in therapy" (p. 113). Schell and Schell (2008) articulated it as "the process used by practitioners to plan, direct, perform, and reflect upon client care" (p. 5). Higgs and Jones (2008) further stated it is the therapist's ability to take into consideration the needs, wishes, and ideals of the client. Finally, Harries and Harries (2001) has classified occupational therapists' clinical reasoning by either a style of thought content (e.g. procedural), or as reasoning strategies generated through thought processing (hypothetical or deductive).

A central element of clinical reasoning in occupational therapy is critical thinking (Scanlan & Hancock, 2010), which can be defined as "reflective thinking focused upon deciding what to believe or do" (Norris & Ennis, 1989, p. 1). There are several models of critical thinking (Brookfield 1987; Norris and Ennis, 1989; Garrison, Anderson & Archer, 2001) in which the user proceeds through a process of steps to recognize a

problem, attempt to understand it, analyze it, evaluate it through a diverse lens, and generate possible solutions (Murphy, 2004). In general, it is clear that critical thinking is required in order to be engaged in clinical reasoning in occupational therapy practice (Scanlan & Hancock, 2010).

Clinical reasoning has been explored and delineated into several domains within the occupational therapy literature. The seminal research conducted by Mattingly and Fleming (1994) examined how practitioners (novice to expert) reasoned through clinical care processes in diverse formal (clinical) and informal (community) settings. The results indicated that therapists utilize more than one type of clinical reasoning process that may be dependent upon the practitioner's knowledge base and experience, the client's profile, and the setting in which the therapist is practicing (e.g., hospital, clinic, etc.). Mattingly and Fleming's categories include: a) procedural reasoning, b) interactive reasoning, c) conditional reasoning, and d) narrative reasoning. These categories will be further defined in this portion of the literature review.

Procedural Reasoning. Procedural clinical reasoning focuses on the process used to maximize a client's functioning (Mattingly & Fleming, 1994); it is the process for solving problems of daily functioning that occur as a result of a physical or psychological condition. This has been equated to scientific or problem-based reasoning within the nursing and medical literature (Crabtree, 1998; Schell & Schell, 2008); i.e., the therapist searches for techniques and procedures that can be implemented to improve functioning in spite of a medical or mental condition or disorder (Mattingly & Fleming, 1994). Liu, Chan, and Hui-Chan (2000) reported that therapists practicing in community-based

settings who were considered novices (less than three years of clinical experience) employed procedural reasoning within their intervention planning and delivery. Furthermore, the authors articulated that therapists utilizing procedural reasoning would focus on the impairment (physical or psychological), decide upon the procedural activities that would maximize functioning, and concentrate on the client's performance problems. Abernaty and Hamm (1994) argued the repetitive nature of 'thinking' tasks become unconscious and intuitive. Harries and Harries (2001) further posited that it is very difficult for a researcher to truly capture, measure, and describe what is actually occurring, but it is highly credible that procedural reasoning is occurring.

Narrative Reasoning. Narrative reasoning emerges during the clinical process as the therapist and the client collaborate on intervention goals, strategies, and solutions (Mattingly & Fleming, 1994; Neistadt, 1997). This is accomplished, in part, as the therapist attempts to make sense of a client's specific circumstances, the impact of her illness, condition, or disability in daily life. The therapists, with the assistance of the client, then create a collaborative story that is enacted with the client and family members through the intervention process (Schell & Schell, 2008). Schell and Schell further clarified the role of narrative reasoning in the broader medical trend in their elaboration of the definition of evidenced-based health care practice, which has been defined as "the integration of best research evidenced with clinical expertise and patient values" (as cited in Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000, p.1)

Interactive Reasoning. When a clinician uses interactive clinical reasoning, he or she is seeking and obtaining information to increase understanding regarding clients'

feelings about themselves and the therapeutic interventions in which they are currently engaged (Mattingly & Fleming, 1994). Liu et al. (2000) indicated therapists employing this type of reasoning typically tend to interact with the clients and sees them as individuals, instead of through a diagnosed medical condition or classification. Their interactions are focused on gaining an understanding of client needs and knowing how they feel about their treatment (Neistadt, 1995).

Conditional Reasoning. Conditional clinical reasoning typically occurs when a therapist is integrating her knowledge of the clients' medical, psychological, or developmental condition and how it relates to functioning in the specific social and physical contexts on a daily basis (Mattingly & Fleming, 1994). Liu et al. (2000) stated that therapists who are approaching clients using conditional reasoning typically seek understanding of their clients in their contexts to determine how the impairment or condition is now, as well as how it may be in the future. The therapist attempts to integrate procedural and interactive reasoning to address barriers and opportunities in the social and temporal contexts in addition to the physical spaces. As part of this reasoning style, the therapist considers how conditions may change with a focus that is more on participation in meaningful activities. This level of clinical reasoning is typically employed by therapists who are considered experts or advanced level clinicians (Mattingly & Fleming, 1994; Neistadt, 1997; Liu et al., 2000).

Strategies to Improve Clinical Reasoning. Within the profession of occupational therapy, there have been several instructional measures implemented to assist students in the development of clinical reasoning. The aim of each is to better

prepare student practitioners for the diverse challenges within routine clinical practice. There have been several procedures to assist learners to develop clinical reasoning, including but not limited to problem based learning, case based learning, and experiential learning. Typically, the mechanism in place that facilitates reasoning within a given occupational therapy curriculum is the completion of 24 weeks of clinical education. This requires the student therapist to be immersed in a clinical experience off site that is supervised by a preceptor with the student carrying a caseload typical for the given setting in which they are working (ACOTE, 2010).

In addition to clinical fieldwork rotations, occupational therapy programs have utilized pedagogical strategies to better prepare students for the clinical setting. These include case study, problem-based learning (PBL), and experiential learning (Coker, 2010).

The case study method tends be a long, detailed, and well-identified problem or subset of problems for a single student or student groups to consider as a part of decision-making. The primary goal of the case study method is for the learners to apply their background knowledge as well as new learning to solve a complex situation (DeYoung, 2003; Tomey, 2003).

Problem Based Learning. Problem based Learning (PBL) as defined by Barrows and Tamblyn (1980) is the acquisition of knowledge that resulted from the process of working toward understanding and generating a resolution to a given problem. The primary objectives of PBL are: 1) developing effective clinical reasoning; 2) acquiring and structuring knowledge for clinical use; 3) developing self-regulation for lifelong

learning; 4) enhancing motivation for learning; 5) developing a meaningful orientation towards learning; 6) learning to tolerate doubt; and, 7) producing capable and competent clinicians (Barrows, 1986). Twari, Lai, So, and Yuen (2006) found that medical school students demonstrated increased clinical reasoning through problem-based learning when compared to traditional didactic lectures.

Within occupational therapy, problem-based learning (PBL) occurs when OT students are provided with situations in which they are required to first identify the client issues (diagnostics) and then generate client-centered, evidenced-based therapeutic solutions (Coker, 2010). This approach has been widely used in occupational therapy entry-level education (Royeen & Salvatori, 1997; Royeen, 1995).

Experience Based Learning. Experience-based learning involves hands-on experience in a practical setting in order to test information learned in coursework (Coker, 2009). This is in line with the aims of ACOTE, which mandates students complete a minimum of 24 weeks of fulltime fieldwork at the end of their didactic coursework and prior to graduating from an accredited program (ACOTE, 2011) and sitting for the national occupational certification examination (NBCOT, 2013). However, it is being argued that students have experiential learning prior to their departure into fulltime clinical rotations as a mechanism to further increase their ability to reason through complex client cases and plans of care (Coker, 2009).

E-learning and Clinical Reasoning. The literature revealed there is support for the use of e-learning instructional delivery to facilitate or enhance existing clinical reasoning among OT students during fulltime clinical rotations after the completion of

their didactic course work (Creel, 2001; Murphy, 2004; Scanlan & Hancock, 2010, Thomas & Storr, 2005; Trujillo & Painter, 2009; Wooster, 2004). The study conducted by Scanlan and Hancock (2010) explored online synchronous and asynchronous interaction of students completing clinical rotations, and reported that the participants demonstrated an increase with the depth of their clinical reasoning (procedural reasoning), increased understanding of the diagnostic presentation of clients (procedural or scientific reasoning), problem solving client cases, and implementation of OT practice models as a part of the evaluation and intervention processes.

Raidl, Wood, Lehman, and Evers (1995) conducted a study among 413 students in an undergraduate dietetics program during which participants were placed in three groups that covered topics related to cardiovascular disease and dietetic interventions using three different methods of delivery: a drill and practice group, a simulation group, and a simulation test only group. The authors reported the students who were placed in the simulation group demonstrated a statistically significant difference from those who were in the other two groups, and that they had mastered all instructional objectives as well as lower level clinical reasoning skills and higher level decision making skills.

Poulton, Conradi, Kavia, Round, and Hilton (2009) conducted a descriptive study to explore the value of virtual patient cases in a medical school. The authors examined medical students' perception of having what they called 'branched virtual cases' instead of previously implemented 'linear paper cases' to facilitate the clinical decision making process. It was reported that 75% of the students (N = 72) preferred to use the branched virtual cases. The medical tutors reported that students were more engaged when

interacting with the branched virtual cases than with the linear paper cases. The authors, however, did not attempt to capture objective performance data in a more rigorous fashion to determine which delivery method enhanced clinical reasoning.

Through literature explored, there seems to be gaps regarding the use of e-learning to instruct occupational therapy students regarding a framework to facilitate clinical reasoning for challenging behaviors exhibited by clients with sensory processing disorders. Additional research is warranted to identify the type of clinical reasoning categories OT students begin to employ as they interact with simulated case scenarios as part of instruction delivered in an e-learning format.

E-Learning

Estimations are that the e-learning market has a growth rate of 35-40% (Wu, Tsai, Chen, Wu, 2006) with a global market increase of 107 billion dollars by 2015 within business and higher education (Global Market Analytics, 2010). According to the U.S. Department of Education (Aud, et al., 2011), four percent of undergraduate and nine percent of graduate students are completing their degrees wholly online. E-learning is an instructional modality and option in higher education that is increasingly part of the normal planned delivery. There are a variety of terms that have been used to describe instruction delivered over the Internet through brick and mortar higher education institutions, including online learning (Roach & Lemasters, 2006; Palmer & Holt, 2008), distance education (Yukselturk & Yildrim, 2008), web-based learning (Delich et al., 2008), and e-learning (Sun, Tsai, Finger, Chen, & Yeh, 2008; Delich et al., 2008). Ultimately, all of these terms describe the types of learning/instruction that occurs when

the instructor and the learner are not within the same physical location (Delich et al., 2008). However, Clark and Mayer (2011) defined e-learning as how a course is digitized so it may be prepared and stored in an electronic format. Aspects include the instructional content and the strategies implemented to assist the learner to acquire the knowledge being disseminated. The uniqueness of e-learning may eventually wither away and become just another natural option or choice in how instruction is consumed or developed (Delich et al., 2008).

Instruction delivered electronically is frequently achieved through Learning Management Systems (LMS) (Delich et al., 2008). This provides educational opportunities to those who may have significant barriers due to obligations, geography, time, and/or resources (Delich et al.). Advantages to online instruction have been identified: The learner consumes the material within her natural environment and at a pace that can be regulated and controlled (Weiss, 2004); the learner has more time to process information, reflect, and analyze the material before taking action (e.g. discussion boards & assessment measures) (Weiss, 2004; McAlpine, Lockerbie, Ramsay, & Beaman, 2002); and that, in online courses that rely heavily upon synchronous and asynchronous discussion boards, the learner can work off of other participants' threaded discussions and compare and reflect upon other viewpoints (Halter, Kleiner, Hess, 2005; Smith, 2004). It has also been argued that e-learning lowers overall instructional costs and time, is more flexible, can be more responsive and increases morale (Jaiswal, 2013). Finally, Lim and Honey (2003) argued that online instruction enables students to develop the skills to become independent, a key component for students and, later as

professionals, to actively consume information, review research, and develop additional skills as they progress in their careers.

Delich et al. (2008) described several e-learning barriers or challenges from an institutional viewpoint, including (a) delayed or prolonged adoption of e-learning technologies; (b) learners taking active control over content, which challenges the status quo; (c) perceptions by instructors that certain content cannot be taught using instructional technology; and, (d) challenges with maintaining intellectual property rights for content that is developed and disseminated.

Welker and Berardino (2005) categorized weaknesses with e-learning as viewed by students into four areas: confusion, social interaction, access, and added work. In surveying 38 undergraduate students who took part in a fully online course, these researchers found a lack of complete instructions for students, inconsistent feedback from faculty, complex course/assignment calendars, and poor participation in student dependent activities. The authors also reported that social interaction between students and among instructors was a challenge, specifically in relation to delayed responses from instructors, limited opportunity to develop classroom camaraderie, and a decreased amount of instructional activities that promoted team building. Participants conveyed frustration with asynchronous discussion boards, difficulty in keeping up with multiple discussion topics, technical difficulties related to hardware, software, Internet access, and limited transmission speeds compared to the multimedia used as a part of instruction. Finally, the main issue students reported was that the course was always “on” and they

never got a break. This may have led to a perception that the assessment procedures and assignments were more difficult.

Ryan, Carlton, and Ali (1999) found that among post-graduate nursing students (N = 96) who took part in online instruction there were challenges related to technology difficulties with minimal access to technical support. Yucha and Princen (2000) reported that issues related to technology may be a barrier for older or more non-traditional learners who are either not proficient with technology or prefer other styles of instruction.

Sun, Tsai, Finger, and Chen (2008) conducted a survey exploring the factors impacting learners' perceptions with e-learning (N = 295). The authors reported there were seven variables that impact learner satisfaction with e-learning: (a) learner anxiety with computer use, (b) instructor attitude towards e-learning, (c) course flexibility, (d) course quality, (e) perceived usefulness of the course, (f) perceived ease of use of technology, and (g) the diversity of the assessments. Using a sample of 761 undergraduate students enrolled in wholly online courses, Palmer and Holt (2008) reported several predictive factors that impact students' satisfaction with e-learning: level of confidence with communicating and learning in a virtual environment, a clear understanding of what is required and how to succeed in a given e-learning course, and how performance is perceived. In contrast, Upton (2006), in a study of attitudes toward e-learning among speech and language therapy students, found that students (*n* = 87) enrolled in an online psychology/sociology course reported positive experiences in regard to their technical abilities, the LMS, the support provided by the online instructor, and the design and content of the module. Upton also indicated the majority of the students still

preferred face-to-face instruction due to their perceptions of an increased demand on active learning with the e-learning format than what was required in a more traditional face-to-face setting (2006)..

Within entry level OT educational programs, instruction delivered using e-learning resulted in: a) the enhancement of students' clinical reasoning during fieldwork rotations (Creel, 2001; Gallew, 2004; Murphy, 2004; Scanlan & Hancock, 2010; Thomas & Storr, 2005; Trujillo & Painter, 2009; Wooster, 2004); b) the development of evidenced based practice skills among post-professional master and doctoral students (Reynolds, 2010; Richardson, MacRae, Schwartz, Bankston, & Kosten, 2008); c) advanced skills related to occupational therapy practice and the knowledge base of such (Richardson, et al., 2008); and, d) teaching evaluation and intervention strategies for ergonomics in industrial rehabilitation (Weiss, 2004). Though not a comprehensive list, as evidence in the literature there is a consistent trend of using e-learning technologies within entry level occupational therapy education.

Multimedia and Learning. For the purpose of this study and specifically the RLOs to be designed and developed, multimedia will be comprised of video vignettes and case scenarios with both audio and graphics. The assessment measures will employ video, audio, and text.

Multimedia has been defined by Mayer (2009) as the formats used to present instructional material using video, text, virtual, photo, and audio. As background, key assumptions from Mayer's research will be included within the RLO design and development, but will not be formally researched as a part of the study.

Assumptions. Mayer argued there are three assumptions related to the Cognitive Theory of Multimedia Learning (CTML). First, is the dual channel assumption in that individuals have two separate information systems where they process visual and verbal information (Mayer, 2003). The second assumption is the limited capacity assumption. CTML states that within each information-processing channel there is a limited amount of processing that can occur. Third, is the active learning assumption in which Mayer postulates that meaningful learning occurs when the learner is actively engaged within the learning process, specifically when the learner is attending to relevant words and images and then integrating those specific sets of information with each other and prior knowledge.

Mayer argued there are specific instructional methods that instructional designers can use to facilitate meaningful learning when implementing multimedia-based instruction: (a) principles for reducing extraneous processing, (b) principles for managing essential processing, and (c) principles for fostering generative processing. As previously stated, though these elements will not be empirically evaluated within the proposed study, they will be considered in the design and development of the RLOs.

Reusable Learning Objects (RLOs)

Occupational therapy has been employing diverse instructional technologies from hybrid (online/face-to-face) courses to exclusively online offerings for several years (Jedlika, Brown, Bunch, & Jaffe, 2002). Furthermore, other health professions have used instructional technology as part of their entry-level programs, including pharmacy, nursing, physician assistant, speech language pathology, and physical therapy (Blake,

2010; Lymn, Bath-Hextall, & Wharrad, 2008; Windle, McCormic, Dandrea, & Wharrad, 2011).

Interestingly, nursing, pharmacy, and physician assistant programs in the United Kingdom have been using learning objects (LOs) and/or reusable learning objects (RLOs) to bridge the gap in knowledge due to removal of content/courses or to enhance skills and abilities without additional class time (Lymn et al., 2008; Windle et al., 2011). Currently, however, there is a paucity of information regarding the use of RLOs in occupational therapy entry-level education as mechanisms to enhance face-to-face or hybrid instruction.

Out of early research and development by Cisco Systems (1999) and educational pioneers (Wiley, 2002; Gibbons, Nelson, & Richards, 2002) an impressive foundation for creating, documenting, and sharing RLOs has been established. As online methods for delivering both formal and informal educational content have increased, the prospect of greater influence through stable and carefully constructed RLOs has grown (Lymn et al., 2008; Windle et al, 2011).

In general, RLOs are “any digital resource that can be used and reused to support learning” (Wiley, 2002, p. 6). RLOs typically are small, discrete, self-contained digital objects that may be sequenced, combined, and used within a variety of instructional activities (Wiley, 2002) including integration into formal lectures or as stand-alone elements for remediation or background knowledge development (Lymn et al., 2008; Delich et al., 2008). Much like classroom teachers have always created and then shared educational handouts, manipulatives, and “objects” with other learners, RLOs afford even

greater transportability beyond the confines of place and time.

RLOs have been implemented as instructional tools as part of, or adjunctive to, nursing, pharmacy, and physician assistant formal education programs (Lymn et al., 2008; Windle et al., 2011), but there is a lack of published literature documenting the implementation of RLOs into the broader rehabilitation sciences for entry-level education, especially in occupational therapy. There are several characteristics separating RLOs from other pedagogical tools and resources, including reusability, accessibility, interoperability, durability, granularity, sequencing, framing, stringing, and combinability. The RLOs to be designed and developed related to A SECRET in this study will employ these characteristics to increase the likelihood they are instructionally sound and may be reused as part of the SPDU at a later date.

Reusability. Reusability is the hallmark characteristic of the RLO; i.e., the ability to be inserted within multiple instructional contexts over and over is one of the appeals, plus the cost effectiveness of its repeated use (Northrup, 2007; Wiley, 2002, 2009). This is contingent upon the size and scope of the RLO – the larger the size and scope, the more difficult it may be to reuse; conversely, the smaller the size and scope, the easier it may be for an instructional designer to include the RLO within other instructional contexts (Harvey, 2005). This tenet is supported by a number of organizations that have established metadata tagging systems for learning objects (Metros & Bennett, 2002). Without such cataloging, learning object repositories would remain closed; this, again, would discount the principle of being *reusable*. While the field continues to debate the numbers and types of tags that should be associated with learning objects, there is no

doubt that without these processes, it would be difficult to locate and contextualize learning objects both within and across disciplines. The primary aim of creating RLOs covering A SECRET is to have them available within the SPDU's repository of instructional modules to be repeatedly accessed by clients, caregivers, teachers, and therapists in an e-learning delivery format.

Accessibility. Accessibility of an RLO originates from two varied angles: First, accessible by the individual user, specifically ensuring that the RLO conforms with industry and government guidelines. Section 508 of the 1973 Rehabilitation Act (U.S. Department of Education, 1998) requires Federal agencies utilizing electronic information to ensure that it be procured, developed, maintained, and can be used by all individuals with disabilities.

International educational organizations have adopted similar standards to those under Section 508; however, these have been broadened with universal design principles and applied to digital instruction and information (World Wide Web Consortium, 2008). Generally speaking, there is design and delivery software available that naturally lends itself to the universal accessibility of the learner (e.g., *Adobe*, *Articulate*, *Microsoft*, etc.). The underlying aim of the RLO is its use and reuse among diverse audiences outside of the targeted participants, in this proposed research, OT students. That being said, the researcher will be keen to employ general instructional design practices to ensure universal design through multiple modes of instruction to accommodate diverse learners (i.e., audio, visual, text).

The second type of accessibility targets the educator and instructional designer.

This is afforded through the use of repositories in which interested parties can access and use the RLOs for the design of instruction in varying contexts (Burgstahler, Corrigan, & McCarter, 2004). Cataloging of the RLOs is achieved with "meta-tags." As Northrup (2007) indicated, in order for any tool to be used, one must know where the toolbox is, and for what the tool may be used. As more RLOs are created, labeled, and stored, having access to them affords the likelihood that they will be used again and again by different instructors and learners. For the purpose of this this proposed study, the RLOs will be labeled specific to the A SECRET reasoning process but will have identifiers related to a broader audience, such as occupational therapy students who are consumers via the SPDU.

Additional interaction usability may be viewed as a form of accessibility from the user's perspective. Interaction usability has been defined as the ease of navigation and predictability of the user interface (Nesbit et al., 2003). Thus building the RLOs on the same template for look and feel but also within the same delivery mechanism (e.g. Adobe, PowerPoint) may aid the user more comfortable and confident with the interface. The RLOs that were developed for the ISU A SECRET module used the same templates via PowerPoint and interface through Adobe Captivate 8.0.

Interoperability. RLOs should be created so they may be utilized across multiple instructional/virtual contexts (Wiley, 2009). Specifically, the concern is whether RLOS can be used in diverse learning management systems as well as whether a user can access them using diverse delivery and operating systems. Using technology that works well with other types of technology will ensure the RLOs can be arranged and incorporated

under different types of learning management systems, operating systems, etc. The importance of this will grow as alternate tools are accepted, such as tablet computers, smart phones, and simulated environments (Northrup, 2007). Ultimately the RLOs to be created in this proposed research will first be delivered on the Moodle LMS and then in the future on the SPDU website. Thus, the RLOs will need to be designed in a format that works well within more than one structured LMS and an open website.

Durability. Durability is a concept that helps ensure the RLO will have currency, accuracy, and appropriateness. As with any e-learning technology, there typically is a front-end investment of time and financial resources; thus, the instructional designer needs to develop RLOs that will give the most return on investment (Northrup, 2007).

RLOs typically are designed and developed absent specific pedagogy; meaning they are not grounded or driven by a specific learning theory (e.g., behaviorism, information processing, constructivism, etc.) (Wiley, 2002; Merrill, 2009). By developing RLOs absent a specific learning theory, the instructional designer is free to arrange and sequence RLOs based on instructional objectives as opposed to being constrained by external contingencies. This also allows the curriculum specialist to “frame” the context for the RLO in multiple formats. Because the RLO is considered granular (i.e., there is no context within the RLO content; all measurement and pedagogical strategies are outside it), instructors could determine how the RLO will be inserted into a larger course framework. The A SECRET reasoning framework is relatively new (Miller, 2006); yet, it is built upon the Ecological Model of Sensory Modulation (Miller et al., 2001). There have been two print resources published and the practice is being implemented in the

Sensory Processing Disorder Foundation's intensive mentorship trainings for therapists (SPDF, 2013). And, the process is being presented and taught to diverse broad audiences; thus it has some level of durability. Ultimately, the researcher will create RLOs that will need to convey concepts that have durability, which will be validated though the use of the SME as part of the ADDIE instructional design process.

Granularity – Sequencing. Granularity has been typically defined as the RLO's instructional basis (Wiley, 2002). The RLO's discreteness (i.e., its ability to be a separate and distinct entity outside of other learning objects, instructional activities, etc.) dictates how it may be repurposed into diverse instructional contexts, as well as the complexity to which it can evolve (Harvey, 2005; Grunwald & Reddy, 2007). In this case the RLOs to be developed will be distinct from each other (each aspect of A SECRET is different) and the other instructional objects within the SPDU modules.

Framing. RLOs are shaped by the way they are placed within the instructional content (Longmire, 2000; Terzieva & Todorova, 2005). For instance, the A SECRET RLOs will be framed at the end of a sequence of instruction related to sensory processing and sensory processing disorders through SPDU. However, the participants will then transition to their home university's Moodle LMS to access the OT course module's RLOs for the A SECRET instruction. The A SECRET instruction will continue to be contextualized within sensory processing through the objectives, content, video vignettes, and case scenarios.

Stringing. Stringing is a concept characterized via the linear order in which a RLO may be situated with another RLO, as well as other instructional tools and resources

(Metros & Bennett, 2002). This sequencing should be based upon individual learner needs, as well as the instructional goals of a given instructional problem, module, or course and aligned with a single objective (South & Monson, 2002). The RLO's effectiveness and usability is dependent upon when and where it is placed within a sequence of instruction; it is dependent upon how the RLOs are strung within the subject matter content, instructional activities, or expectations for complexity related to the maturity of the targeted learners (Metros & Bennett, 2002). In the proposed research for this study, the RLOs will be arranged in the pre-determined order as identified by the SME. The overall instructional modules will be strung together to ensure the learners have the foundational knowledge prior to moving on to instruction related to intervention and reasoning (problem-solving clinical situations).

Combinability – Scope. An additional asset of an RLO may lie within its ability to be combined with other learning objects, instructional activities, and assessment tools allowing the RLO be framed within the larger instructional context. Taking into account granularity, if the RLO is discrete enough, it may be combined with other RLOs, which would then increase the scope of the instruction of a given lesson, module, or academic course. The RLO could also assume a different position within an instructional plan depending upon curricular goals and the learners' needs.

Regarding the proposed RLOs to be developed, they will be combined with other instructional activities, an advanced organizer, and assessment scenarios. Additionally, the RLOs will need to be appropriately combined with the content within the SPDU, which is one of the underlying aims of working closely with the SME to ensure the

verbiage, content, navigation, aesthetics, etc., are similar to what has already been created to eliminate any significant differences with what the user experiences.

RLO Outcomes. Lymn et al., (2008) conducted a study exploring the effectiveness of pharmacology-related RLOs among 84 baccalaureate nursing students enrolled in a pharmacology prescription course. The authors reported that 90% of the respondents indicated the RLOs aided their understanding and met the learning objectives. Lymn et al. also reported that when the participants of their study had access to all of the RLOs within the course, they viewed their understanding of the content differently than when the RLOs were not available. Participant feedback regarding the RLOs indicated they would reuse them in support of other curriculum content, would request additional RLOs to support future courses in the curriculum, and expressed interest in having access to the same RLOs once they had completed their coursework and they were in practice settings (Lymn et al., 2008). In light of the proposed study the A SECRET module would be designed to have a desired sequence but the users would have access to all the RLOs.

Windle et al. (2011) attempted to track the effectiveness of chemistry-related RLOs implemented among baccalaureate nursing students taking a requisite chemistry course. The authors completed a pre/post quasi-experimental design and concluded the students who had the RLOs as part of the chemistry workshop or through a self-study course attained higher scores on the final examinations. They also reported that participants who used the RLOs valued the functional characteristics (e.g. ability to

access independent of time or location and working at their own speed) over the media components (audio, video, image, and text).

In a pilot study related to RLOs and occupational therapy education, Gee, Strickland, and Salazar (2014) examining student attitudes towards an RLO designed to teach how to write therapeutic goals. Seventy percent of the respondents who consumed the RLO indicated that it was beneficial for them to learn how to write goals. Moreover they also stated that they would reuse them in other courses and during their clinical rotations. The participants used the RLO as it was designed as an on demand resource. However, the authors also reported that there was a slight majority in favor of having more e-learning types of instructional resources used as a part of other occupational therapy specific courses (Gee et al., 2014).

Related to the use of RLOs being meaningful as a tool for parent/caregiver education in pediatric occupational therapy practice, Gee, Moholy, Lloyd, & Seikel (in press). The authors conducted a field test of RLOs related to sensory processing, sensory processing disturbances (auditory and tactile processing) with practicing occupational therapists. The authors reported that Overall, the participants had a positive outlook on the feasibility of the use of RLOs with caregivers. Participants' ratings revealed generally high levels of importance for RLOs, and individual comments supported application of the series of RLO's use and learning. The participant's supportive ratings and comments were often supplemented with statements regarding contingency of use upon their client characteristics (e.g., a child has auditory sensory over-responsiveness but not tactile sensory over-responsiveness). To some extent, participants were able to

identify that these six RLOs were customizable in that an occupational therapist could tailor the use of specific RLOs to meet the needs of an individual client, targeting concerns that are specific to him or her and leaving out other RLOs that did not Participants described optimal use of the RLOs as being a supplemental tool the caregiver would review the RLO, then discuss its content and application with the occupational therapist (Gee et al., in press).

It is evident that other health related professions have been successfully developing and implementing RLOs as part of their entry-level professional educational programs, yielding positive educational results (Lymn et al., 2008; Windle et al., 2011). Yet, there is a significant gap within the literature exploring the use and the effectiveness of RLOs to increase the knowledge and reasoning processes of students enrolled in entry-level occupational therapy programs within the United States.

ADDIE Instructional Design (ID) Model

The ADDIE model of instructional design is a method for creating, revising, or maintaining existing instruction or training (Gagne, Wager, Golas, & Keller, 2005; Peterson, 2003). ADDIE is an acronym for the distinct phases of Analyze, Design, Develop, Implement, and Evaluate (Gagne et al, 2005; Peterson, 2003) (see Figure 3). It has also been argued that ADDIE is a framework upon which most other instructional design models are derived (Molenda, 2003).

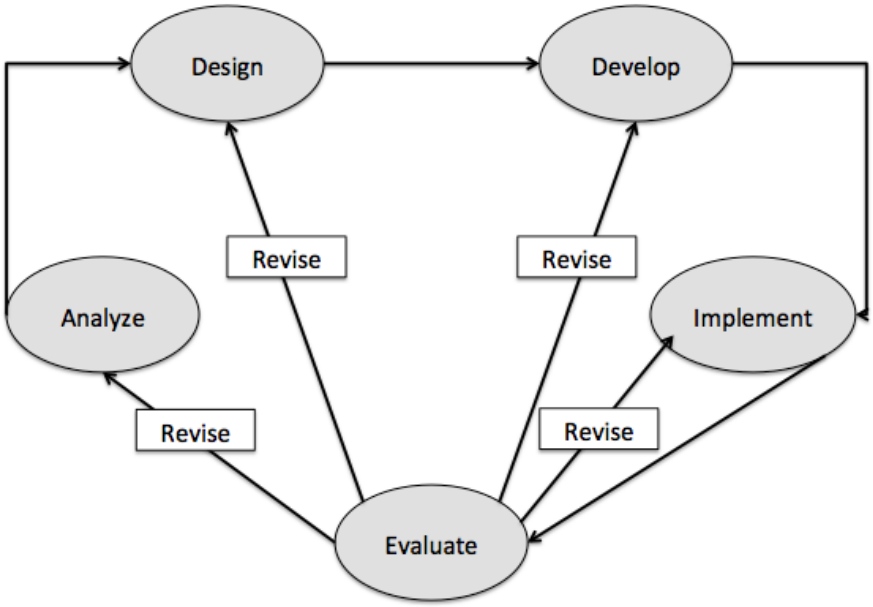

Figure 3. ADDIE Model of Instructional Design (Gagne, Wager, Golas, & Keller, 2005)

Generally, analysis is the process employed to identify and define what is going to be learned (Chan & Robbins, 2006). However, when given more scrutiny, this phase further assesses the level of knowledge and type of content (Bloom, 1956), psychomotor skills (Simpson, 1972), and/or attitudes (Krathwohl, Bloom, & Masia, 1973), as well as the targeted learners, objectives, media, hardware, software, instructional strategies, and fiscal resources for the project (Chan & Robbins, 2006; Vejvodova, 2009).

The second phase in ADDIE is design, during which the designer identifies (or verifies) what the learner will know by the end of the instructional unit, how this will be achieved, and how it will be measured (Vejvodova, 2009). The instructional designer may create concept maps to depict the sequence for each learning object. An instructional timeline documents how long each instructional object will take for

achievement by a given user. Flowcharts that map how a learner will navigate, highlighting the decision points for gauging progress are also formulated (Chan & Robbins, 2009).

The third stage of ADDIE is Development; essentially, where the instructional designer creates, or obtains, the content, multimedia resources, and supportive assessment measures and develops the instructional objects according to the plan initiated through the Analyze and Design phases (Vejvodova, 2009).

Once the content has been developed, it is time for the instructional designer to field test the product with a sample similar to the targeted learners identified in the Analyze phase (Chan & Robbins, 2006). Some view this as the simplest stage and perceive that the instructional designer "takes their hands off the wheel and lets things roll" (p. 493). However, caution is warranted, as the designer must communicate with the prototype audience in order to understand their experience and make alterations, if warranted (Chan & Robbins, 2006).

Once the implementation phase has been completed, the instructional designer will assess the effectiveness of the product. Formative evaluation takes place during each phase of development with only summative evaluation occurring at the end (Chan & Robbins, 2006; Kuo, 2012). Some instructional designers will follow the four levels of program evaluation outlined by Kirkpatrick and Kirkpatrick (2005). This approach assesses the instructional outcomes through measurement of the learners' reaction to the instruction, achievement of the content, changes in behavior, and the overall outcome (Kirkpatrick & Kirkpatrick, 2005).

Though ADDIE is systematic while classified as generic, this is one of the strengths of the model; it can be applied in a variety of settings, including education, human resource training, the military, and corporate instructional events (Gagne et al., 2005; Peterson, 2003; van Rooij, 2010) and under diverse types of instruction (Peterson, 2003).

The peer-reviewed, published literature related to the effectiveness of the ADDIE model (Kuo, 2012; Shibley, Amaral, Shank & Shibley, 2011; Wang 2012) continues to be explored, particularly in relation to the question, "Is the ADDIE model of instructional design effective in the design and development of instruction?" Shibley, et al. (2011) reported using the ADDIE model to guide the redesign of a face-to-face chemistry course in a blended (hybrid) format was the greatest facilitator for the resulting curriculum, which included the implementation of online class guides, learning objects, and collaborative-based groups. They also reported their blended course generated higher exemplary ("A" and "B") grades and fewer average grades ("C") than their face-to-face course (Shibley et al., 2011).

Wang and Hsu (2009) reported using the ADDIE model to develop an online course in a Second Life simulation and contended that having a structured platform for developing the learning task led to effective delivery in a virtual environment. These authors reported that 75% of the participants indicated they were satisfied with the type of instructional delivery (online/virtual) and that their learning experiences were aligned with the course objectives. Though the authors did not report that actual size of their sample as a part of their study.

Kuo (2012) used the ADDIE model to design an interactive multimedia assisted learning (MAL) program to promote proper service attitudes in the hospitality industry (N =104). Using a pre/post quasi-experimental design, Kuo reported that there was a significant difference in scores between those who used the MAL compared to the traditional instruction with the MAL group generating higher scores on a knowledge assessment of hospitality. Kuo documented how the ADDIE model was used during the instructional design process and argued for the ADDIE model to be implemented by instructors for the design of not just smaller instructional modules but curricula as well.

Wang (2012) conducted a quasi-experimental study exploring student's attitudes towards Chinese culinary arts and knowledge of Chinese culinary cooking methods. As part of the study, Wang developed six modules focused on Chinese culinary arts using the ADDIE model to guide the instructional design process, as the modules were novel given the content and application of the content. Wang reported that there were no significant difference in attitudes and knowledge between those who used the instructional modules via online delivery and the face-to-face instruction but that the attitudes and knowledge of Chinese culinary arts increased in both groups (online and face-to-face) (Wang, 2012).

Ultimately, the debate is just emerging within the published literature regarding if the ADDIE Model of Instructional Design is effective in the design and development of instruction. Additional research is warranted at this time and justifies the necessity of the present study.

Delphi Technique for Instructional Design Evaluation

Generally speaking, the Delphi technique is an iterative process used to obtain and refine the opinions and judgments of experts of a particular field (Skulmoski, Hartman & Krahn, 2007). Using questionnaires to query and then determine whether a general consensus on a given topic can be acquired is the thrust for such techniques (Strickland, Moulton, Strickland, & White, 2009). The questionnaires are designed to help the researcher confirm procedures, problems, opportunities, forecasts, and solutions (Skulmoski, Hartman, & Krahn, 2007; Hsu & Sandford, 2007).

The Delphi technique has been widely used in a wide variety of professional domains, including health care, business, education, information technology, engineering, transportation, public policy, and defense (Hsu, 2007; Skulmoski, et al, 2007; Strickland, et al., 2009) The Delphi technique has its origins in the RAND Corporation through the work of Dalkey and Helmer (1963), who were trying to gauge expert opinion on the selection of an industrial targeting system directed toward the Soviet Union.

Delphi Method. While a minimum number of experts to validate a process is important, there are diverse views on the size of the panel in the Delphi process. The main consideration is the homogeneity of the sample; the more it is homogeneous, the smaller the required number. If the sample is heterogeneous, then the sample size will need to be larger, and it will likely be more difficult to obtain a consensus among the group members (Skulmoski, et al., 2007).

There are differing views regarding how many iterations are necessary to reach a consensus. Worthen and Sanders (1987) stated the researcher would likely not see

meaningful results until the process has reached its third round. Keeney, Hasson, and McKenna (2001) argue that in order for the process to allow the panelists to receive feedback and modify their responses, the Delphi needs to have at least two iterations. It has been documented by a few authors (Ludwig, 1997; Custer, Scarcella & Stewart, 1999; Strickland et al., 2009) that three iterations are usually sufficient to collect the necessary level of consensus across participants.

Delphi Process. Isaac and Michael (1981) explained the Delphi process in six steps:

1. Identify the group members whose consensus opinions are sought. If the study goes beyond an intact group such that representatives must be selected, care must be taken to insure that all the various publics or positions are proportionately sampled.

2. Questionnaire One. Have each member generate a list of goals, concerns or issues toward which consensus opinions are desired. Edit the results to a manageable summary of items presented in random order. Prepare the second questionnaire in an appropriate format for rating or ranking (Note: if an established or acceptable listing of such items already exists this first step can be bypassed).

3. Questionnaire Two. Have each member rate or rank the resulting items.

4. Questionnaire Three. Present the results of Questionnaire Two in the form of Questionnaire Three, showing the primary level of group consensus to each item. Where the individual differs substantially from the group, and chooses to remain so on Questionnaire Three, the responder should provide reason or explanation.

5. Questionnaire Four. The results of Questionnaire Three are presented in the form of Questionnaire Four, showing the new level of group consensus for each item repeating the member's latest rating or ranking along with a listing by item of the major reasons members had for dissent from the prevailing group position. Each member rates or ranks each time for the third or final time, in light of the emerging pattern of group consensus and the reasons for dissent.

6. The results of Questionnaire Four are tabulated and presented as the final statement of group consensus. (p.115)

The Delphi technique has been further explained by Strickland, Moulton, Strickland, and White (2010) as depicted in Figure 4.

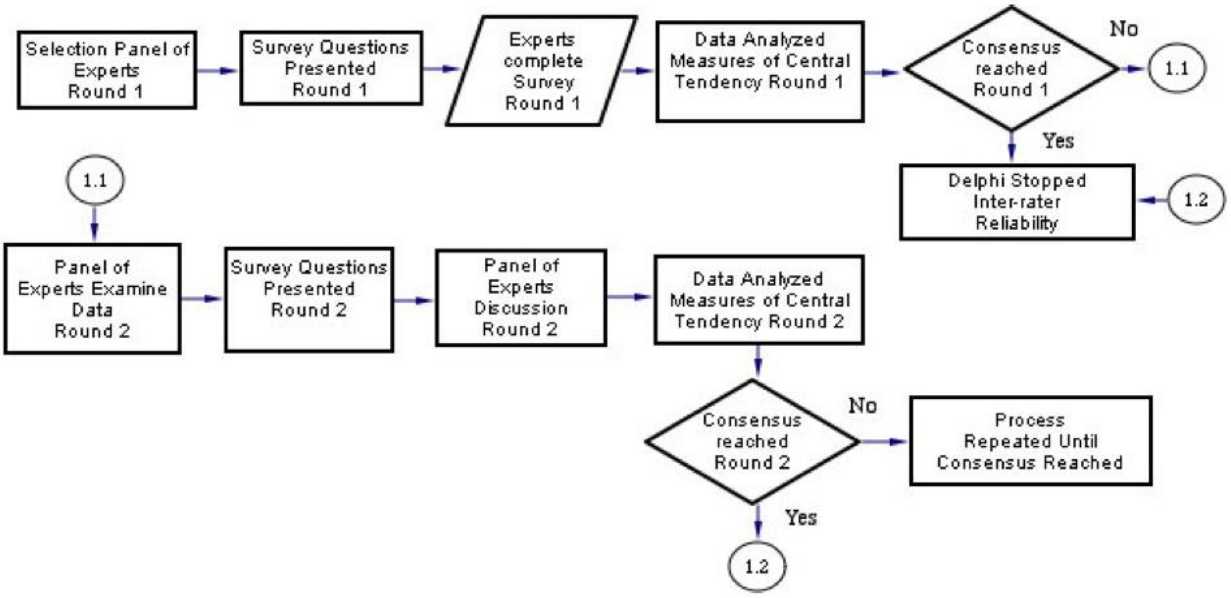

Figure 4. The Delphi Process (Strickland, Moulton, Strickland, & White, 2010)

Delphi Strengths and Weaknesses. The classic Delphi has several advantages over other research designs: First, the anonymity of the participants allows the experts to share their opinions without peer pressure, which may be an issue if focus groups were used instead (Rowe & Wright, 1999; Skulmoski, Hartman, Krahn, 2007).

Second, the iteration process allows the participants to refine their judgments, if needed, in each subsequent round (Hsu, 2007). This can lead to greater reflection on the part of the individual panelist related to thinking, or re-assessment of the item being

examined, or in confirming the original judgment from the previous iteration.

Third, the anonymous group feedback the researcher gives is an opportunity to modify individual members' views. This summary feedback may help to funnel the process to a more precise outcome (Rowe & Wright, 1999; Skulmoski et al., 2007).

Finally, the data obtained through the aggregation of the group process can be analyzed using quantitative parametric and non-parametric procedures (Skulmoski et al, 2007; Yousuf, 2007). Specifically, a researcher can generate a statistical group response where the group's overall opinions are presented as a statistical mean of the opinions of the individual members, yet interpreted as a group response quantitative data to capture the opinions of a group of experts as compared to the type of data gathered through a focus group (Yousuf, 2007).

As with any research design, the Delphi technique has its own set of limitations, including that some judgments of the select group may not truly be representative of the larger population of experts (Barnes, 1987). There may be a tendency for researchers to eliminate opinions that are outliers in order to force a more central consensus (Barnes, 1987), which could lead to an increased dropout rate of participants, and, thus, create an artificial consensus (Linestone & Turoff, 1976). The Delphi process may be more time consuming than that of other nominal group processes (Barnes, 1987). Panel members may not be able to see the larger vision in which they are engaged (Fortune, as cited in Yousuf, 2007) and cultural bias of the experts may lead to similar answers to items (Delkey & Helmer, 1963).

In summary, the Delphi technique is an effective approach to evaluate an

instructional design process through the use of instructional design experts and content through the use of SMEs. The process will be used as part of this study to verify the instructional design procedures employed by the researcher though the use of instructional design experts and an SME.

Summary

The purpose of this study is to explore the effectiveness of a series of online, module-based instructional RLOs targeted at entry-level occupational therapy students. The development and design process will be verified through the use of the ADDIE model and Delphi techniques with other instructional design experts (IDEs) and a subject matter expert (SME). The researcher will investigate student performance on implementing A SECRET as well as their attitudes toward the instructional module and assessment procedures. The literature review focused on the following domains: (1) A SECRET, (2) clinical reasoning in occupational therapy, (3) E-Learning, (4) reusable learning objects (RLOs), (5) ADDIE Instructional Design (ID), and (6), Delphi Techniques for instructional design evaluation.

The review has documented that there is a need to provide instruction related to A SECRET to occupational therapy, and that there are currently modes of delivery to be used in an e-learning format. Thus, there is a significant justification to pursue the proposed research study to design and develop RLOs using sound instructional design procedures and assess their outcomes among occupational therapy students.

CHAPTER III

Method

Purpose of Study

The purpose of this study was to explore the effectiveness of a series of online, module-based instructional RLOs targeted at entry-level, 1st year, Master of Occupational Therapy (MOT) students. The content of the RLOs addressed both knowledge and implementation of A SECRET for children with sensory processing disturbances/disorders. It was also essential to assess the MOT students' perceptions related to asynchronous online instruction for A SECRET. Secondarily, in a geographically distant and largely rural environment, such as Idaho, developing this type of curriculum may serve as a resource for the development of continuing education for practitioners and training center staff, ultimately benefiting all educational partners: university professors, clinicians, teachers, and caregivers.

Research Questions

1. What is the level of master of occupational therapy (MOT) students' problem-solving performance for A SECRET after viewing a simulation case study of a child with Sensory Over Responsiveness (SOR) as measured by a post-simulation selected response assessment?
    a. What is the achievement level of OT students in identifying the exemplary two A SECRET strategies appropriate for each element of A SECRET on an instructor-designed problem-solving case scenario?
    b. How do OT students clinically discriminate between appropriate and in-appropriate A SECRET strategies on an instructor-designed problem-solving case scenario?

2. What are OT students' perspectives regarding the A SECRET simulation vignettes to support their application of the reasoning process?

3. What are OT students' attitudes toward online delivery for a series of modules related to A SECRET?
4. Does the Sensory Processing Disorder University online courses adhere to sound instructional design principles as measured on an instructional design assessment rubric?
5. What is the instructional design compliance level for the ADDIE instructional design model used in the creation of A SECRET modules, as measured by a modified Delphi Technique?

Participants

The participants of this study consisted of eight MOT students between the ages of 20 to 50 years, who were in the first 12 months of the MOT program (a three-year Master of Occupational Therapy degree) at an intermountain west public university. All the participants met the minimum criteria for admission into the MOT program and have a bachelor's degree in an associated area (University Studies, Psychology, Sociology, Exercise Science, etc.). For more information regarding specific demographics of the study's participants please refer to Table 1.

Table 1

Participant Demographics

Participant Demographics	
Master of Occupational Therapy Entry	75% (6)
Bachelor of University Studies Entry	25% (2)
Age (Mean)	25.27
Age (Range)	23-28
Male	37.5% (3)
Female	62.5% (5)
Pre Admission Observation Settings	
Pediatric Outpatient Hospital	25% (2)
School Based	12.5% (1)
Early Intervention	12.5%(1)
Pediatric Inpatient Hospital	12.5% (1)
Adult Inpatient Hospital	25% (2)
Adult Home Health	12.5% (1)
Adult Outpatient Hospital	62.5% (5)
Planned Settings of Future Employment	
Pediatrics (community/hospital)	62.5% (5)
Pediatrics (school based)	62.5% (5)
Adult Neurological	0% (0)
Adult Physical Rehabilitation	62.5% (5)
Geriatrics	12.5% (1)
Hand Therapy	37.5% (3)
Mental Health (adult)	37.5% (3)
Baccalaureate Degrees	
Bachelors of University Studies	3
Fine Arts	1
Psychology	3
Dietetics	1

Inclusion/Exclusion Criteria

Individuals who took part in this research study met the following inclusion criteria. A 1st year occupational therapy student who:

a) Is in his/her first year as an occupational therapy student in the Occupational Therapy Program at Idaho State University.
b) Has had limited access to education related to sensory processing disorders and A SECRET problem solving strategies.
c) Has access to a computer with Internet access.
d) Agrees to complete the foundational instruction for sensory processing and sensory processing disorders via modules from Sensory Processing Disorder University (SPDU).
e) Agrees to complete the A SECRET instructional modules via ISU Moodle during the designated two-week time frame.

Method of Subject Identification and Recruitment

Upon institutional IRB approval the participants for this study were obtained through purposeful sampling methods through the MOT program at the targeted university. A total of 12 participants were recruited from the first year MOT class, which contained 14 students. The eligible MOT students were identified by the researcher, and provided a flyer related to an overview sequence of the study were sent to each potential participant (see Appendix A). Twelve responded to the email and were contacted by the researcher via face-to-face, phone, or email communication to verify they met the inclusion criteria, and to establish a time to review the study protocols and sign the informed consent. Of these initial 12 participants, there were eight participants who completed the entire study. The remaining four participants withdrew for various reasons (lack of time, poor time management, or semester workload issues).

Research Design

A case study research design was employed in this study (see Figure 1 in Chapter I). This design is being implemented in order to better understand the learners' experience with specific events of the participant's interaction with e-learning, multimedia case scenarios, and RLOs (Merriam, 1998). This type of approach provided rich descriptions of the participants' experiences and allowed them to identify their stance on various aspects of the instructional delivery and elaborate upon them as a part of a focus group. Since the number of participants is limited to a cohort model totaling eight participants, the case study approach is appropriate. This design also provided an opportunity for in-depth profiling of participants and dialogue throughout the preparation, implementation, and evaluation phases of the content application (Merriam, 1998).

Assessment Measures

A SECRET Case Scenario Multiple Choice Assessment. In order to capture students comprehension and reasoning when applying the A SECRET problem solving approach using a simulated case. The primary objective of the measure was to develop an assessment to determine if first year occupational therapy students can discriminate among varying levels (exemplary to poor) of intervention strategies and then examine any thematic elements that may emerge as a part of their justification of their choices. The original developer of A SECRET did not go beyond identifying the specific elements of A SECRET (Attention, Sensation, Emotion Regulation, etc.). Therefore, this researcher has attempted to create a process of evaluating adherence to the A SECRET principles and the discrimination between A SECRET strategies that are exemplary and

poor based upon a case study. Please refer to Figure 5 to see a visual representation of the process.

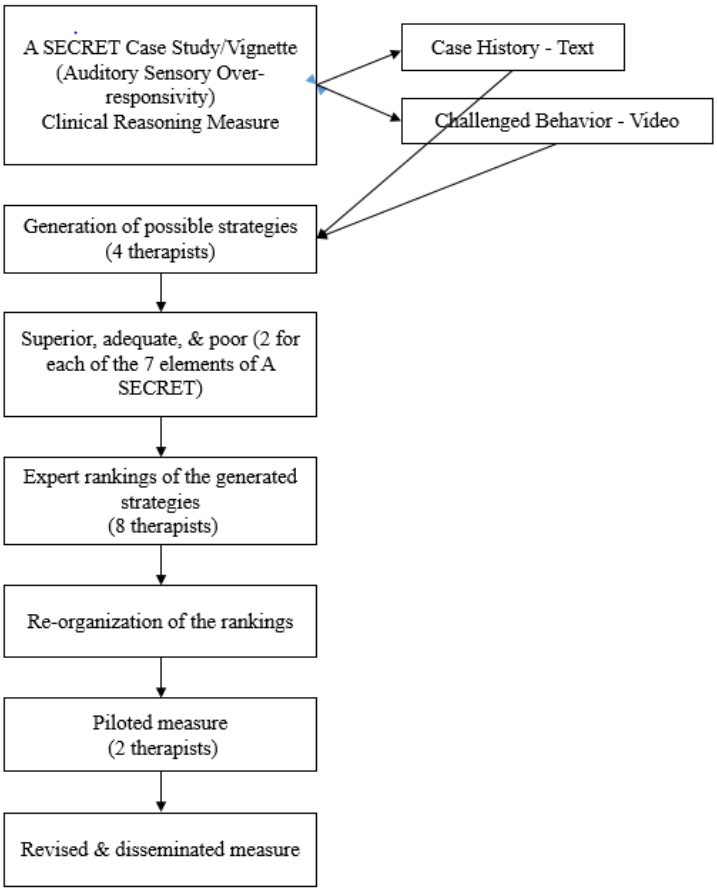

Figure 5. Case Scenario Development Process

The process of designing and developing the measure began with isolating a case study/vignette that overtly exemplified a challenging behavior related to sensory processing disorder, specifically sensory over responsivity. Upon identifying a suitable case scenario, the researcher then developed a list of six strategies for each element of A SECRET using third year MOT students (3) and community occupational therapists (2) who all had experience using the A SECRET problem solving approach. An updated

master list was then complied by the researcher that included six strategies for each element of A SECRET. This list was then reviewed by the students and therapists in the measure development group. As a result of this review, the measure was further modified to correct for clarity, grammar, and to ensure that each strategy was at least plausible and aligned with the developmental history document and the video vignette within the case scenario.

Further validation of the list of strategies was conducted with eight occupational therapy professionals affiliated with the Sensory Treatment and Research (STAR) center in Denver, Colorado. For a description of the participants from the STAR center please refer Appendix C for a summary of the rater's demographics.

Each of the eight occupational therapists reviewed the case history and the video vignette in the case scenario. They then ranked each of the strategies from 1 to 6, with 6 being the in appropriate strategy and 1 the appropriate strategy. In addition to providing their ratings, the therapists then provided a rationale for the two strategies they had identified as appropriate and for the two considered to be in appropriate. An aggregate of their ratings for the appropriate, in appropriate strategies and subsequent adequate ratings were then compiled. Strategies were then grouped into categories as they met at least 50% agreement from the reviewers of the measures (see Table 2). A final list of strategies for each A SECRET element within the A SECRET multiple response assessment may be found in Appendix B, B-1 through B-3. The ratings that attained 50% or higher among the raters were then deemed appropriate or in appropriate. I the event

that the ratings did not meet the 50% threshold, the expert opinion of Dr. Lucy Jane Miller, PhD were used to determine the appropriate and in appropriate strategy ratings.

Table 2

Example Expert Ratings

Task										
Rater 1	**Rater 2**	**Rater 3**	**Rater 4**	**Rater 5**	**Rater 6**	**Rater 7**	**Rater 8**	**Total**		**Combined**
6	6	6	6	6	6	6	6	8/8 = B	Remove Michael from the music program to sit in the audience.	Least Optimal Strategy Average = 71%
4	3	5	1	5	2	4	5	3/8 = B	Have Michael focus less on singing and more on the fine motor movements/gestures.	
5	2	4	5	4	1	5	4	3/8 = M	Have Michael focus less on the fine motor movements/gestures and more on singing the words of the songs.	
3	1	3	4	3	3	3	1	5/8 = M	Assign Michael simple jobs to help the music leader during the entire program.	
2	4	2	3	2	4	2	2	5/8 = T	Assign Michael simple physical tasks/jobs during or in-between songs.	Optimal Strategy Average = 57%
1	5	1	2	1	5	1	3	5/8 = T	Have the teacher/music leader include planned movements in the song/music.	

The reliability of seven A SECRET assessment categories (e.g. Attention, Sensation, Emotion Regulation) were calculated to determine the internal consistently using Chronbach's alpha, α. The Chronbach's alpha for the entire A SECRET assessment was .61, which demonstrates low to moderate internal consistency. However, for each construct there was moderate to high internal consistency. The Attention category on the assessment (questions 1-6) was .67, which is moderate; the Sensation category (questions 7-12) was -.30, which very poor; the Emotion Regulation category (questions 13-18), was .36, which is poor; the Culture category (questions 19-24) was .56, which is poor; the

Relationships category (Questions 25-30) could not be calculated due to the fact that all the participants were 100% accurate in their ratings; the Environment category (questions 31-36) was -.81, which is very poor and the Task category (questions 37-42) was .67, which is moderate.

Attitudinal Survey Towards E-Learning of Sensory Processing. The purpose of the attitudinal survey was to obtain the participant's opinions and views related to the four focus areas; a) instructional interface; b) instructional delivery; c) instructional content; and, d) assessment procedures. The survey consisted of 35 items, 12 related to the instructional interface, seven to the delivery of the instruction, five related to the content of the instruction, and four to the instructional assessment measures. The remaining seven questions captured key participant demographic information (refer to Appendix C).

The reliability of construct of questions in the survey was calculated to determine the internal consistently using Chronbach's alpha, α. The Chronbach's alpha for the entire survey was .51, which showed low internal consistency. However, for each construct there was moderate to high internal consistency. The construct related to the interface of the module (items 1-12) was .68, which is moderate; the delivery of the module (items 13-19) was .83, which is good; content of the module (items 20-24), was .59, which is poor; and, the assessment of the module (items 25-28) was .90, which is excellent.

Focus Group Semi-structured Interview. The semi-structured interview guide was created by the researcher and included 13 open-ended questions related to the instruction/assessment activities. The focus group semi-structured interview guide was

designed to further explore constructs within the Attitudinal Survey Toward E-Learning of Sensory Processing. Specifically, the areas related to the SPDU e-learning assessment and content; the ISU A SECRET Instructional Experience; and, the types of clinical reasoning the participants used during the A SECRET case scenario assessment (refer to Appendix D).

Procedures Applied to the Participants

Once the participants signed the informed consent form they were instructed to complete the sequenced instructional modules with content related to (a) sensory processing, (b) sensory modulation, (c) sensory processing difficulties, and (d) sensory over responsiveness all via the instructional modules delivered through SPDU [(see the research diagram (figure 1 in Chapter I)].

The anticipated time of cumulative instruction for the modules within SPDU has been allocated in Table 3.

Table 3

Timeline for Pre-Intervention Instruction via SPDU

Lesson Title	Learning Module Topics	Duration (approximate minutes)
#102 Sensory Over Responsivity		**30**
	Definition Transitions & Daily Activities Red Flags Assessment Techniques Family Dynamics	
#105 A Sensible Approach to Sensory Processing Disorder – General Principles of Therapy		**60**
	What is OT? Goal Setting Key Principles of Treatment Treatment Strategies Advanced Treatment Constructs Combined Treatment	
#106 Treatment of Sensory Modulation Disorder		**30**
	Sensory Modulation Disorder Treatment of Sensory Over Responsivity	
Total Minutes:		**120**

Upon completion of the assigned modules within the SPDU, the participants began the RLOs related to A SECRET within the learning management system (LMS) (Moodle). After the instruction (X_1), the participants were presented with a multimedia (video, audio, and text) simulated case scenario. The participants reviewed the case scenario and then completed multiple-choice assessment (a quiz within the LMS) related to each of the seven elements of A SECRET, one question for each element. The participant rank-ordered (i.e., 1 = appropriate to 6 = in appropriate) a list of six pre-determined strategies for each element. A rationale for those strategies considered by the participant to be appropriate, as well as a justification for why they chose a ranking of in appropriate (5 or 6). Participants were then directed to move to the next element.

Participants did not have access to the previously viewed client history or video vignette while completing the assessment. Upon completion of the case scenario evaluation, participants were directed to the online survey (see Appendix C).

Upon completion of the online assessments and attitude survey, a focus group was scheduled with the researcher to review case scenario responses. The focus group was used to assist the researcher in obtaining greater insight and depth behind the Likert-style data captured in the online survey. The focus group also allowed the researcher to capture the interaction among the participants and may assist in honing the more salient issues of their experience (Luborsky & Lysack, 2006). A semi-structured interview guide was developed (see Appendix D), including insight into strategies chosen by the participants as they completed the multiple-choice options within the case scenario. The researcher expanded the discussion to allow the participants to elaborate on their experiences and attitudes toward the instructional module and assessment. The focus group lasted approximately two hours, with all eight participants present.

The responses generated from the semi-structured interview were recorded using a digital audio device and transcribed for review and analysis. Data collection for the study consisted of three different modes: the instructional design course deconstruction, general instructional design and feedback via modified Delphi surveys, and participant data collection (online multiple response assessment, attitudinal survey, and a focus group).

Instructional Design Course Deconstruction

Course deconstruction is a process in which the instructional design expert (IDE) conducts an instructional analysis of a learning object, module, or course. This research examined the following constructs: a) instructional design elements, b) content elements, and c) instructional elements. In regard to the proposed research project, it is important to explore the instructional design elements, content, and pedagogy of the SPDU online courses. The value of this process is apparent on several fronts. First, to explore the subtle design nuances, sequencing, and feel of the existing instructional content within SPDU, so that when the new A SECRET module is created and implemented the user does not experience a significant difference in how the content is presented; second, to exemplify instructional design strengths present in the existing content that will be incorporated within the additional modules created. Finally, for the IDE to identify any content or instructional design weaknesses or gaps and eliminate those within the A SECRET module.

Deconstruction of SPDU Module: #102 Sensory Over Responsivity (SOR). The information presented in this section focuses on the deconstruction of one of the SPDU's instructional modules, *#102: Sensory Over Responsivity*. The deconstruction process included the researcher interacting with the content and its multimedia elements to ascertain the strengths as well as any "gaps" within the instructional design. It was ascertained that the modules within SPDU were all designed with similarities with regard to primary page design, secondary page design, and multimedia elements – to provide a

unified “look” for the learner. Thus, the researcher determined analyzing one module was representative of all modules from an instructional design perspective.

While deconstruction is not formally part of the ADDIE analyze phase, the proposed research study will utilize foundational content that is considered prerequisite knowledge; thus, participants will need to successfully complete the SPDU modules. In addition, it is the intent of the researcher to incorporate areas of improvement identified during the deconstruction into the resultant A SECRET RLOs. This will ensure the content themes are consistent with existing SPDU modules and that the prerequisite information is aligned to the A SECRET content.

The deconstruction process was conducted by the researcher using an Instructional Design Deconstruction Assessment Rubric (Strickland, 2013; see Appendix E) to evaluate the instructional design elements within an existing SPDU module. The Instructional Design Deconstruction Assessment Rubric evaluates a given module or RLO’s instructional design elements, content elements and the use of Gagne’s nine instructional events (Gagné, Wager, Golas, & Keller, 2005).

The results of the instructional design deconstruction task indicated that gaps existed within the SPDU Module: #102 SOR. The gaps found were primarily within the instructional design elements and the instructional elements of the module. Superficially, there were issues related to the instructional unit (combined SPDU modules 102-104) assessment procedure where the majority of the questions were loaded towards module 102 (6 of the 14 questions). This disparity in alignment should not impact the quality and comprehensiveness of the foundational content knowledge the participants will take part

in as well as how they are assessed using the same assessment measure as a pre-test for the A SECRET module.

The module also lacked general awareness and adherence to Gagne's Nine Instructional Events (source) where some of them were present but poorly implemented or merely absent. Overall, the researcher recommended the following instructional design strategies to increase the quality of the SPDU Module: #102 SOR as well as the remaining two modules in the unit (#103 Sensory Under-Responsivity & #104 Sensory Seeking/Craving).

1. Establish the aims for the module(s) so that they are more consumer friendly (parent, caregiver, teacher, etc.) instead of being thin on information, directions, and goals. This will lead to less guessing for the novice user in relating to the technology as well as to the content.

2. Create an advanced organizer to demonstrate to the learner the sequence of the content.

3. Establish measureable objectives for the three goals that were established. Specifically, it may be helpful to have an objective for each LO.

4. Develop instructional activities to reinforce learning from previous instruction through case studies and reviews.

5. Develop instruction activities within the LOs to frame case studies and validate what is being seen in video vignettes to ensure that the learner is interpreting what is intended by the objectives (e.g., behaviors related to sensory processing difficulties).

6. Create opportunities to allow the user to interact with the content to review video vignettes, assess knowledge while in an LO, and access a glossary as the user moves through the content.

Though there were instructional design gaps present in the SPDU module, the researcher will ensure these are addressed in the A SECRET RLOs as part of the analysis and the design phases of ADDIE.

ID Process for Creating the A SECRET Instructional Module

The systems approach of creating the RLOs followed the ADDIE instructional design framework of (a) Analyze, (b) Design, (c) Develop, (d) Implement, and (e) Evaluate, and align with Gagne's Nine Instructional Events (Gagne, et al., 2005) for the organization of the content. As previously stated, Evaluation, though depicted as a separate phase within ADDIE, was embedded throughout the first four phases of formative assessment with summative evaluation occurring at the end of the overall process (Gagne, et al., 2005).

During the first four phases of the ADDIE framework, the instructional designer completed a series of tasks to ensure adherence to ADDIE as a specific ID model (Gagne, et al., 2005). These specific phases of the ADDIE model were:

1. Analyze: Where the IDE identifies the goals and objectives of the instructional project; defines the specific characteristics of the targeted learner; explores the resources that are available in order to create the instruction.

2. Design: Where the IDE creates learning outcomes based upon the previously identified instructional goals. Then, the IDE identifies the content, sequence of content, and duration of instruction that will be needed to meet the minimum thresholds of the learning outcomes.

3. Develop: Where the IDE develops the instructional materials and activities.

4. Implement: Where the IDE disseminates the instructional materials to the targeted learners.

5. Evaluate: Where the IDE conducts a formative evaluation after each phase in order to ensure the likelihood of the instructional materials supporting learner success. The IDE conducts summative evaluation procedures once the instruction has taken place to measure student performance in light of the quality of the learning materials.

Data Collection for the ADDIE Instructional Design Model. The validity of each task in the instructional design process was evaluated using the Delphi technique. A subject matter expert (SME) and instructional design experts (IDEs) were used within the Delphi panels. The data from these instruments were analyzed using descriptive statistics (mean, median & standard deviation).

***Construction of instructional modules and measurement instruments*.** The A SECRET module consists of seven RLOs related to each strategy of A SECRET (attention, sensation, emotion regulation, culture/condition, relationships, environment, and task) (see Figure 6).

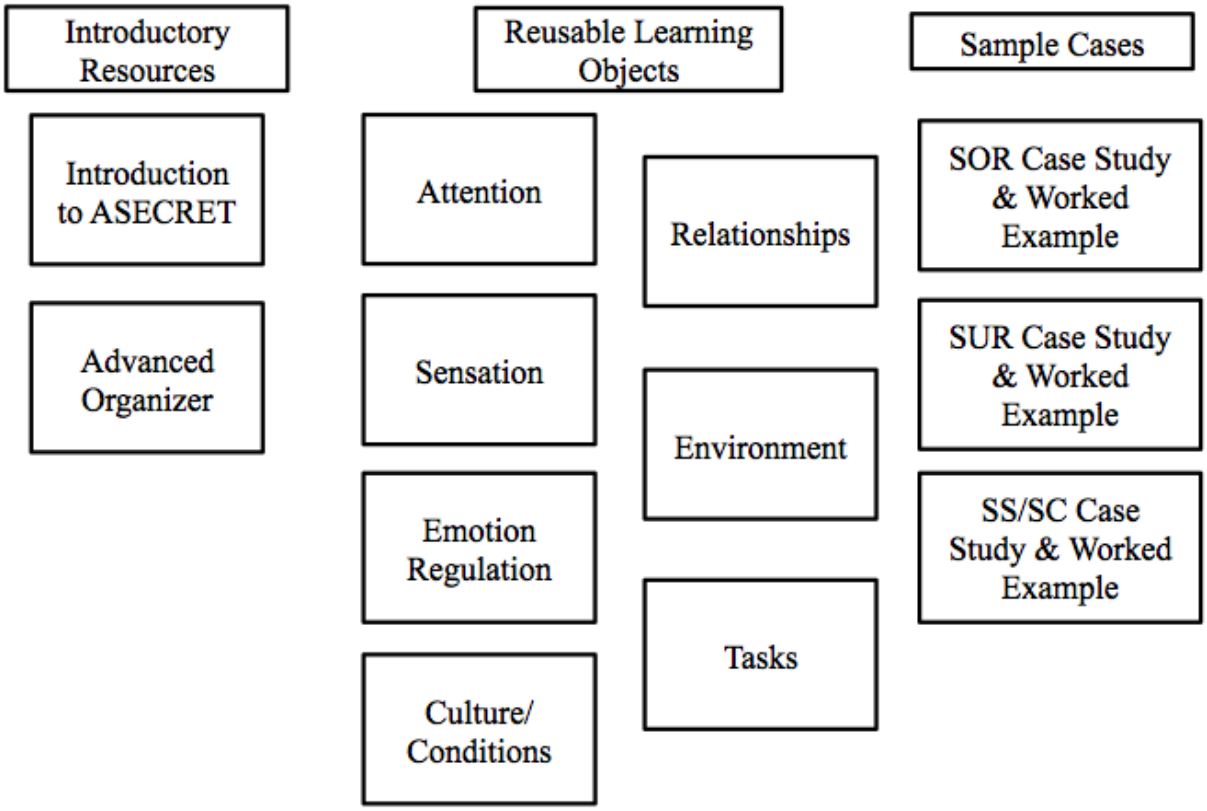

Figure 6: A SECRET Module RLOs.

Analyze Phase. The first phase initiated under the ADDIE ID model is Analyze. There are 11 distinct tasks (Moulton et al., 2010) necessary to successfully accomplish this phase (see Table 4)

Table 4

Analyze Phase Tasks & Delphi Surveys

Task	**Description**	**Face Validity**	**Content Validity**
Task A01	Rationale	SME	SME
Task A02	Goal(s)	SME	SME
Task A03	Objectives	SME	SME
Task A04	Learning Outcomes Statement	SME	n/a
Task A05	Learning Hierarchy w/ Content Map	SME	n/a
Task A06	Learning Influences Document	SME	n/a
Task A07	Learner Characteristics Document	SME	n/a
Task A08	Pedagogical Considerations Document	SME	n/a
Task A09	Learner Constraints Document	SME	n/a
Task A10	Learner Environment Statement	SME	n/a
Task A11	Analysis Timeline Document	SME	n/a

In order to create and maintain a sense of organization, several of the tasks are included in this chapter or provided in Appendix F. Given that there was one SME the researcher worked with, many of the steps of the ADDIE process did not include a full panel Delphi. This was due to the novelty of the A SECRET topics and that the SME was the sole expert in the field. Appendix G has been divided into five subsections that include: a) the task, b) the Delphi survey template for the task, c) the raw data from the Delphi survey, d) the summary analysis of the Delphi survey data, and, e) the final version of the task.

The tasks within the Analyze phase were divided into four domains: 1) content related, 2) instruction related, 3) environment related, and 4), management related (see Figure 6). The Delphi survey procedures to measure the face and content validity of each of the tasks were determined through the analysis of Delphi surveys as exemplified in Figure 7.

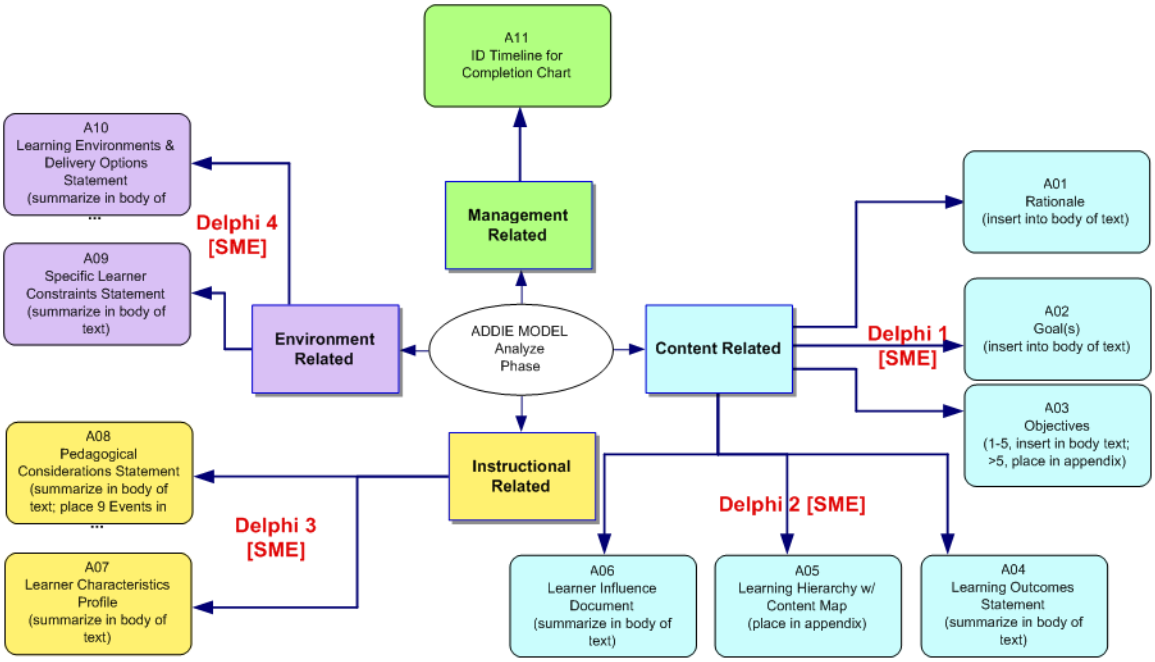

Figure 7. Tasks of the Analyze Phase and Corresponding Delphis © 2010 Strickland, Strickland, Moulton, & White.

The Delphi survey process for this research study was adopted from Strickland, Strickland, Moulton, and White (2010). Strickland et al. conducted a study to verify the face and content validity of the tasks within the Analyze phase of the ADDIE ID model. Strickland et al., sent out their survey to a panel of IDEs and SMEs using a Delphi procedure. The results of the Delphi process indicated there was a 97% agreement level among the IDE experts. Thus, given that the processes identified yielded face and/or

content validity, they were included in this research study according to the ADDIE procedures previously validated.

Task A01. The rationale for the content serves as a guide from which the project's goals and objects were derived:

> The purpose of the A SECRET instructional module is to create reusable learning objects (RLOs) that may be utilized and reused by Idaho State University (ISU) master of occupational therapy students (MOT). The MOT students will work with children or individuals experiencing sensory processing difficulties or have a sensory processing disorder as while on a Level I or Level II fieldwork and/or PTOT 5518/19 practicum rotations. Furthermore, there currently are no comprehensive multimedia resources within, or external to, ISU and/or Sensory Processing Disorder University (SPDU) that provides instruction to individuals (students, parents, caregivers, teachers, therapists, etc.) in regard to the A SECRET problem solving approach.
>
> The design and development of the online module (an RLO for each element of A SECRET) will be have the ability to be managed and disseminated using online formats increasing the accessibility to targeted stakeholders (students, parents, caregivers, teachers, therapists, etc.). Furthermore, the module will include content from the A SECRET problem solving approached (Bailer & Miller, 2011; Miller, 2006) and video vignettes that model the reasoning and process. The creation of the module will address an existing a gap in content within the SPDU online curriculum and in the training of the first year MOT students at ISU and future occupational therapy practitioners, in general. Furthermore, the A SECRET module will aid occupational therapy students with the development of their clinical reasoning with addressing challenging behaviors in children/individuals with sensory processing difficulties. Using the RLOs to build a foundation of knowledge a problem based approach with a case scenario in which the students will have to weigh in on regarding how to address sensory processing challenge in a child and provide a rationale for their clinical decisions. The A SECRET e-learning module will be initially geared towards the first year MOT students in Pocatello Idaho; however, it will be designed and developed with a broader audience in mind for dissemination in a virtual environment.

Task A02. Project goals. The primary purpose of this study was to explore the effectiveness of an online training program using RLOs for A SECRET (a problem solving approach for sensory processing related behaviors). The specific goals of the training were as follows:

1. The targeted learners will acquire content about sensory processing disorders and how these impact daily functioning, social relationships, learning, play, and self-help in children/individuals as evidenced of a passing score of 70% on a selected response assessment via the SPDU.

2. The targeted learners will acquire content to assist them with discriminating between exemplary and poor A SECRET strategies to help manage a child/individual's behaviors that may be grounded within sensory processing difficulties with 70% accuracy on a selected response assessment.

3. The targeted learners will acquire methods for problem solving sensory processing difficulties that children or individuals may demonstrate in typical day-to-day environments with 70% accuracy on a selected response assessment.

Task A03. Project Objectives. The following content objectives were identified for the RLOs for the A SECRET module:

1. The learner will demonstrate the application of the *Attention* strategy within A SECRET as depicted in a video simulation case study on a selected response assessment measure.
   a. The learner will *discriminate* between exemplary and poor intervention strategies for the element of *Attention* after viewing a video simulation case study on a selected response assessment measure.

2. The learner will demonstrate the application of the *Sensation* strategy within A SECRET as depicted in a video simulation case study on a selected response assessment measure.
   a. The learner will *discriminate* between exemplary and poor intervention strategies for the element of *Sensation* after viewing a video simulation case study on a selected response assessment measure.

3. The learner will demonstrate the application of the *Emotion Regulation* strategy within A SECRET as depicted in a video simulation case study on a selected response assessment measure.
   a. The learner will *discriminate* between exemplary and poor intervention strategies for the element of *Emotional Regulation* after viewing a video simulation case study on a selected response assessment measure.

4. The learner will demonstrate the application of the *Culture* strategy within A SECRET as depicted in a video simulation case study on a selected response assessment measure.
    a. The learner will *discriminate* between exemplary and poor intervention strategies for the element of *Culture* after viewing a video simulation case study on a selected response assessment measure.

5. The learner will demonstrate the application of the *Relationships* strategy within A SECRET as depicted in a video simulation case study on a selected response assessment measure.
    a. The learner will *discriminate* between exemplary and poor intervention strategies for the element of *relationships* after viewing a video simulation case study on a selected response assessment measure.

6. The learner will demonstrate the application of the *Environment* strategy within A SECRET as depicted in a video simulation case study with on a selected response assessment measure.
    a. The learner will *discriminate* between exemplary and poor intervention strategies for the element of *Environment* after viewing a video simulation case study on a selected response assessment measure.

7. The learner will demonstrate the application of the *Task* strategy within A SECRET as depicted in a video simulation case study with on a selected response assessment measure.
    a. The learner will *discriminate* between exemplary and poor intervention strategies for the element of *Task* after viewing a video simulation case study on a selected response assessment measure.

The project rationale, goals and learning objectives were assessed through Delphi survey 01 (see Appendix F-1). This survey used a four-point Likert scale, with 1 as Strongly Disagree, 2 as Disagree, 3 as Agree, and 4 as Strongly Agree. The values of mean (*M*), standard deviation (*SD*), and median (*Mdn*) of the responses were calculated to report the consensus of the subject matter expert (SME). The SME responded favorably (Strongly Agree or Agree) to the 21 items. Only one round was required for the

Delphi. Table 5 lists the descriptive statistics of the responses from the SME. Refer to Appendix F–1 for the Delphi survey 01, the raw and summary data.

Table 5

Delphi Survey 01: Descriptive Statistics of Responses

Survey	Number of Items	*M*	*SD*	*Mdn*
Delphi 01: Design Phase (Task A01-A03)	21	3.90	0.21	4

Task A04. Learning Outcomes Statement. As a result of the occupational therapy students participating in the A SECRET module, participants will demonstrate the ability to *identify* and then *apply* strategies for each element of A SECRET. Theoretically, participants will move from Bloom's *knowledge* level to the *application* level as they complete the module. The application of the A SECRET module will occur as discrimination between exemplary and poor A SECRET strategies are made from viewing a case scenario.

There will be seven RLOs within the module, one for each element of A SECRET. Participants will be exposed to a description of the element and the reasoning process for applying the element to a challenging behavior. At the end of the module, the learners will be presented with a case scenario depicting a challenging behavior experienced by a child with a sensory modulation disorder. The case scenario will be accompanied by a selected-response assessment evaluating participants' ability to discriminate between exemplary and poor strategies. The long term aim, however, is to

have the learners demonstrate the ability to apply the A SECRET problem solving process with their own clients as they take part in clinical rotations under the supervision of licensed occupational therapists. Moreover, ultimately the module will assist the learners in demonstrating increases in their clinical reasoning abilities as they become entry-level practitioners.

Task A05. Learning Hierarchy with Concept Map. The learning hierarchy and concept map aided the research with mapping out the complexity of the A SECRET content and the sequence of the presentation of A SECRET in retrospect to the instruction that was contained in the SPDU modules the participants were presented prior to consuming the A SECRET module. Please refer to Appendix F–5 to view the Learning Hierarchy with Concept Map.

Task A06. Learning Influences Document. The learning influences document was a tool that the researcher used to ensure that the planned design of the A SECRET RLO incorporated several components including but not limited to Gagne's Nine Instructional Events, universal design/accessibility and assessment measures. Please refer to Appendix F-6 for the completed learning influences document.

The Delphi Survey 02 was used to assess the face and content validity of Tasks A04 through A06. The same SME was used to provide feedback on the survey. Delphi Survey 02 used a four-point Likert scale, with 1 as Strongly Disagree, 2 as Disagree, 3 as Agree, and 4 as Strongly Agree. The values of mean (*M*), standard deviation (*SD*), and median (*Mdn*) of all the responses were calculated to report from the subject matter

expert (SME). Delphi survey 02, the raw and summary data may be found in Appendix F-7.

Table 6

Delphi Survey 02: Descriptive Statistics of Responses

Survey	Number of Items	*M*	*SD*	*Mdn*
Delphi 02: Design Phase (Task A04-A06)	21	3.95	0.22	4

Task A07. Learner Characteristics Profile. The targeted learners for this study were Occupational Therapy students who were enrolled in Idaho State University's Master of Occupational Therapy program (MOT). These learners were in their first year of their program of study and typically were between the ages of 20 and 55 years of age. Undergraduate degrees represented the liberal arts, social or basic sciences. In order to be granted admission to the MOT program, students have met very specific academic performance thresholds related to GPA, English language abilities, acceptable performance on graduate performance examinations, and the completion of an undergraduate degree. They enter the program having some exposure and experience to sensory processing related interventions, but lack formal instruction related to the conditions, neurological underpinnings, the theoretical frameworks related to sensory processing and sensory integration, and the relationship between the symptoms of the condition and the intervention strategies to either remediate symptoms and/or enhance participation and performance in functional tasks and activities. Students receive the aforementioned level of instruction and clinical training during the first semester of their

third year in the MOT program. For more specific information related to the learner profile of these participants, please see Appendix F-10.

Task A08. Pedagogical Statement. Providing instruction that is grounded in a variety of instructional and learning theories is best practice to ensure that learning exploration occurs for both the instructor and the learner. This philosophy is especially true for instructors and learners participating in e-learning formats. Instructors should take diverse approaches in order to engage the learner in a variety of learning and assessment tasks. For this purpose, Gagne's Nine Instructional Events were used, specifically:

a) gain attention,
b) describe the instructional goal,
c) stimulate recall of prior knowledge,
d) present the material to be learned,
e) provide guidance for learning,
f) elicit performance "practice",
g) provide informative feedback,
h) assess performance, and
i) enhance retention and transfer (Gagne, Wager, Golas, Keller, 2005, pg. 30).

Mayer's (2011) modalities of e-learning were employed throughout the A SECRET module, particularly within the reusable learning objects (RLOs) (each element of A SECRET) to provide engaging, motivating, and meaningful instruction. Each

instructional module and/or lesson had mechanism(s) to prime the learner toward the content and its sequence. Thus, an advanced organizer was implemented within the Learning Management System (LMS) as well as an in each A SECRET RLO. The advanced organizer was also aligned with the instructional objects for the module.

The instruction delivered for this e-learning format was designed and presented to take into account the content and delivery in order to maintain the learner's overall attention to the content and its sequencing. Content for novice learners was built on a hierarchal sequence using Blooms taxonomy within the cognitive domain. The content and assessment activities were designed to facilitate the learner's view that the A SECRET content was relevant beyond this module in real world applications within occupational therapy practice, specifically regarding its application to children and adults with sensory processing difficulties.

The e-learning instruction was sequenced based on the goals and objectives for the A SECRET module (Tasks A02 & A03) and each subsequent RLO. Moreover, the instructional designer created instruction that was centered on the student; hence, the learner had access to each RLO to be reused and with 24/7 availability. The learners could also access the RLOs out of sequence based upon their interest level. Therefore, in addition to employing strategies championed by Gagne (2005), Keller's ARCS Model of Motivation (as cited in Driscoll, 2004) was a strategy valued by the instructor and instructional designer.

The Delphi Survey 03 for Tasks A07 and A08 was conducted using the same SME to evaluate face and content validity. Delphi survey 03 used a four-point Likert

scale, with a 1 as Strongly Disagree, 2 as Disagree, 3 as Agree, and 4 as Strongly Agree. The values of mean (*M*), standard deviation (*SD*), and median (*Mdn*) of all the responses were calculated to report the attitudes of the subject matter expert (SME). Delphi survey 03 may be found in Appendix F–11.

Table 7

Delphi Survey 03: Descriptive Statistics of Responses

Survey	Number of Items	*M*	*SD*	*Mdn*
Delphi 03: Design Phase (Task A07-A08)	14	3.94	0.21	4

Task A09. Learner Constraints Statement. The instructional designer anticipated several constraints, which may inhibit the learning process and instructional delivery system of the modules for the prospective learners (first year occupational therapy students). The modules covering the topics including sensory processing, diagnostics, and A SECRET was via a learning management system (LMS). Therefore, the targeted learners had the required PC/Mac capabilities with sufficient web connectivity (DSL) to participate in asynchronous communications and discussion, download and interact with the RLO's and view any media (audio, video, text, animation, etc.) that may be streamed online from various websites (SPDU and ISU Moodle LMS's). Moreover, the targeted learners had previous experience using e-learning tools (Moodle, Adobe Flash, PDF's etc.) and interfaces in order to interact with and navigate through the Adobe Captivate multimedia software. The researcher, used best practices to assure any future diverse learners would be supported through Section 508. It is anticipated that some of the

enrolled learners may have visual and/or hearing impairments, which may impede access to some of the content or learning activities afforded within each of the A SECRET RLO's. Therefore, the instructional designer will need to ensure multiple opportunities and modes to receive the same information for all the learners (text, audio, video, etc.). Furthermore, the instruction designed and developed within the Moodle LMS should be ADA and 508 compliant.

Task A10. Learning Environment and Delivery Options. Through this task it was determined that instruction would be designed via Microsoft PowerPoint (2010) and developed using Adobe Captivate 8 (2014). Furthermore, the instruction would be delivered in an asynchronous online format via the Moodle LMS. Please refer to Appendix F-14 for the complete description of the learning environment and delivery options.

The Delphi Survey 04 for tasks A09 and A10 was conducted with the same SME to assess face and content validity. Delphi survey 04 used a four-point Likert scale, with a 1 as Strongly Disagree, 2 as Disagree, 3 as Agree, and 4 as Strongly Agree. The values of mean (*M*), standard deviation (*SD*), and median (*Mdn*) of all the responses were calculated to report the attitude towards the tasks of the subject matter expert (SME). Delphi survey 04 may be found in Appendix F–15.

Table 8

Delphi Survey 04: Descriptive Statistics of Responses

Survey	Number of Items	*M*	*SD*	*Mdn*
Delphi 04: Design Phase (Task A09-A10)	15	3.90	0.29	4

Task A11. Project Timeline. The project timeline was established to create anticipated dates of completion/deadlines related to the tasks with the phases of the ADDIE ID model. This assisted the researcher to ensure deadlines were met and tasks were completed. Please refer to Appendix F-18 for a more detailed description of the project timeline.

Design phase. The Design phase of the ADDIE ID model consisted of six tasks that functioned as the foundation for all the instructional objects, activities, and assessment procedures (Moulton, Strickland, Strickland, White & Zimmerly, 2010). The seven tasks within this phase and the types of Delphi experts that were needed to establish face and content validity are listed in Table 9.

Table 9

Design Phase Tasks & Delphi Surveys

Task	**Description**	**Face Validity**	**Content Validity**
Task D01	Task Analysis	SME	n/a
Task D02	Flowcharts	IDE	n/a
Task D03	Flowcharts with Content	SME	n/a
Task D04	Storyboards	SME/IDE	n/a
Task D05	Assessment Instruments	SME	n/a
Task D06	Test Assessment Instruments	SME	n/a

A visual representation of the seven steps of the Design phase of the ADDIE ID model is represented in Figure 8. Appendix H contains subsections consisting of the following tasks: a) the task, b) Delphi survey template for the task, c) the raw data from the Delphi survey, d) the summary analysis of the Delphi survey data, and e) the final versions of the task, if changes were warranted.

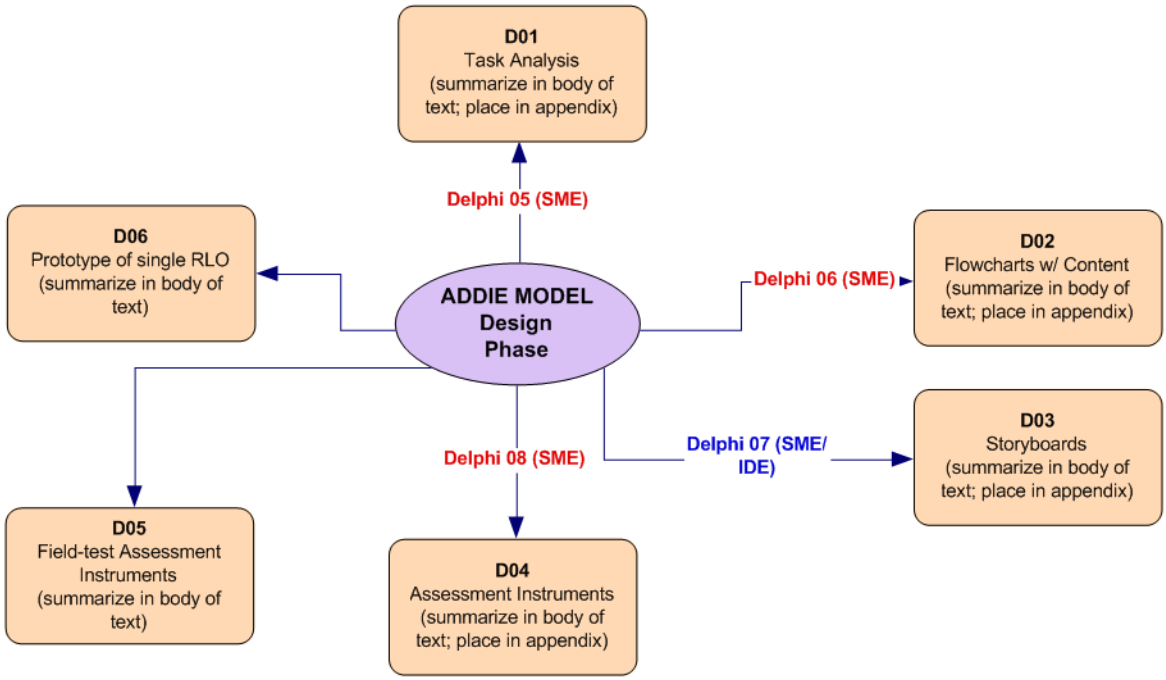

Figure 8. Tasks of the Design Phase and Corresponding Delphis © 2010 A. Strickland, J. Strickland, Moulton, & White.

Task D01. Task Analysis. The purpose of the task analysis was to determine the essential prerequisites necessary for the learners to take part in the targeted instruction. The task analysis is the first in the Design phase of the ADDIE ID model. The validity of the task analysis was measured through a Delphi process using one SME. The researcher used the objectives (Task A03) to align all the tasks and subtasks to be performed in this study (please refer to Appendix G-1).

Delphi survey 05 used a four-point Likert scale, with a 1 as Strongly Disagree, 2 as Disagree, 3 as Agree, and 4 as Strongly Agree. The values of mean (*M*), standard deviation (*SD*), and median (*Mdn*) of all the responses were calculated to report the attitude of the subject matter expert (SME) towards the tasks of the Design phase. Delphi survey 05, the raw data and summary data may be found in Appendix G-2.

Table 10

Delphi Survey 05: Descriptive Statistics of Responses

Survey	Number of Items	*M*	*SD*	*Mdn*
Delphi 05: Design Phase (Task D01)	8	3.90	0.29	4

Task D02. Flowcharts with Content. Flowcharts were used to visually represent each step in the project's process related to the goals and objectives (please refer to Appendix G-4). A panel of one SME and three IDEs were used for Delphi 06. Using a four-point Likert scale, with a 1 as strongly disagree, 2 as disagree, 3 as agree, and 4 as strongly agree, the panel responded positively to the five items. The values of mean (*M*), standard deviation (*SD*), and median (*Mdn*) of all the responses were calculated to report the consensus of the SME and IDE. Delphi survey 06, the raw and summary data may be found in Appendix G-5.

Table 11

Delphi Survey 06: Descriptive Statistics of Responses

Survey	Number of Items	*M*	*SD*	*Mdn*
Delphi 06: Design Phase (Task D02)	5	3.89	0.30	4

Task D03. Storyboards. Storyboards for RLOs 1-9 included careful attention to document how each slide looked with the text, video, and audio narration (please refer to Appendix G-8). The story boards were evaluated by the same panel of IDEs who responded positively to all 12 items of the survey. Delphi survey 07 used a four-point Likert scale, with a 1 as Strongly Disagree, 2 as Disagree, 3 as Agree, and 4 as Strongly

Agree. The values of mean (*M*), standard deviation (*SD*), and median (*Mdn*) of all the responses were calculated to report the consensus of the subject matter expert (SME). Delphi survey 07 may be found in Appendix G-9.

Table 12

Delphi Survey 07: Descriptive Statistics of Responses

Survey	Number of Items	*M*	*SD*	*Mdn*
Delphi 07: Design Phase (Task D03)	4	3.90	0.29	4

Task D04. Assessment Instruments. The A SECRET case scenario assessment were developed as individual quizzes within seven of the RLOs and were designed at Bloom's cognitive level of knowledge, comprehension and application. Delphi survey 08 used a four-point Likert scale, with a 1 as Strongly Disagree, 2 as Disagree, 3 as Agree, and 4 as Strongly Agree. The same SME was used for this survey, who responded positively to the six items on Delphi 08 survey. The values of mean (*M*), standard deviation (*SD*), and median (*Mdn*) of all the responses were calculated to report the consensus of the subject matter expert (SME). Delphi survey 08 may be found in Appendix G-9.

Table 13

Delphi Survey 08: Descriptive Statistics of Response

Survey	Number of Items	*M*	*SD*	*Mdn*
Delphi 08: Design Phase (Task D04)	4	3.91	0.27	4

Task D05. Field-Tested Assessment Instruments. A field test was conducted with two individuals who were also occupational therapy students to further ensure that the directions and process of the case scenario assessment were clear. Feedback that was generated from this was used to update the assessment measure.

Task D06. Prototype of RLO. Prototypes of all nine RLOs were built for a pilot test. Each prototype RLO included the proposed content, video, script, narration and assessment procedures.

Develop phase. During this phase the researcher followed the plan devised in the design phase. The researcher developed the RLOs in a flash-based multimedia software tool (Adobe Captivate 8). The RLOs were be imbedded within the Moodle learning management system (LMS) website.

Implement phase. The RLOs were placed within the instructional module that was a part of ISU's Moodle LMS. The participants logged into the Moodle course, viewed the RLOs, completed the case scenario assessment, and completed the post instruction survey and focus group.

Evaluate phase. For the purpose of this study, formative evaluation of the content was conducted to assess the adherence to the ADDIE process and the quality of the nine modules via eight Delphi Surveys with an expert SME and IDEs. The feedback that was give as a part of the process was used to update the content, interface and assessment aspects of the modules.

Participant Data Collection. Student data collection was generated and collected as part of three categories: 1) measuring participants' performance generating strategies

as a result of asynchronous online instruction; 2) measuring student attitudes toward the online asynchronous instructional interface, and 3) discovering participants reasoning processes related to the strategies generated using the A SECRET framework.

Data collection for student performance. Data was collected to assess student performance with the A SECRET framework through a multiple-choice instrument. Specifically, the participants reviewed a clinical scenario that included background information and a short video clip. When they had reviewed the clinical scenario they will move on to the multiple choice questions where they were asked to review six intervention techniques for each strategy area of A SECRET (See Appendix F- 7). For instance, they would start with Attention and would be presented with six strategies to address the Attention portion of A SECRET. They then needed to identify and rank the two most effective strategies for that element (1, 2), rank the two strategies that were poor (5, 6) and the remaining two would be categorized as intermediate (3, 4). Once they had determined the two most effective and poor strategies they were then prompted to provide a rationale regarding why their choices are the most effective or poor given the background information of the case scenario. This process will be repeated by the participants for each portion of the A SECRET framework for a total of seven groups of strategies. Once a section had been completed, the participants were not able to return and change responses or rationale; they were asked to move on to the next section. The participants were able to review their choices, rationale, and score for the assessment after they had completed the remaining assessment measures.

Data collection for student reasoning. A semi-structured interview instrument was developed as a mechanism to further discover the reasoning processes the students used to select the exemplary strategies in each section of the A SECRET case scenario (see Appendix D). This interview was conducted through a focus group format. The participants took part in this the focus group interview approximately one week after completing the A SECRET case scenario in order to ensure that their views, feelings, and opinions were fresh in their minds.

Data collection for student attitudes. A Likert-scaled instrument was created to measure the students' attitudes toward the online instruction (see Appendix C). A 28-item instrument with a four-item rating scale was presented once the participants completed the SPDU and the ISU A SECRET instruction, but prior to the focus group interview. This measure was delivered using an online survey tool (Survey Monkey®). Given the type of data this tool gathers (nominal & ordinal), the researcher conducted descriptive statistics (mean, median & standard deviation) and a correlational analysis using the Spearman method (Portney & Watkins, 2009). Please refer to Chapter IV for a more detailed description of the findings.

Summary

In order to answer the five research questions for this study, seven core RLOs were designed and developed using the ADDIE ID model, related to A SECRET, a problem solving approach used by parents, teachers, and therapists that addresses behavioral challenges common among children with sensory processing disorders. Validation procedures were conducted using a Delphi technique in order to ensure that

the researcher had adhered to the ADDIE ID model tasks. Data from the Delphi instruments were analyzed prior to conducting the study in order to revise and refine the modules created. In addition, data was collected from multiple-choice tests, surveys, strategy analyses from RLOs, and focus group interview.

CHAPTER IV

Results

The purpose of this study was to explore the effectiveness of a series of online, module-based instructional RLOs targeted at entry-level, 1st year, Master of Occupation Therapy (MOT) students. The content of the RLOs addressed both knowledge and implementation of A SECRET for children with a sensory processing disorder, specifically sensory over responsiveness. It was also essential to assess the MOT students' perceptions related to asynchronous online instruction for A SECRET. Secondarily, in a geographically distant and largely rural environment, such as Idaho, developing this type of curriculum may serve as a resource for the development of continuing education for practitioners and training center staff, ultimately benefiting all educational partners: university professors, clinicians, teachers, and caregivers.

Research Question 1

This research question has two sub-questions. These are presented in this section with the analyses for each separately discussed. The results for part of "a" of this research question is presented directly below. For part "b" the findings are presented further in this section.

What is the level of occupational therapy (OT) students' problem-solving performance for A SECRET after viewing a simulation case study of a child with Sensory Over- Responsiveness (SOR) as measured by a post-simulation selected response assessment?

a. What is the achievement level of OT students in identifying the exemplary two A SECRET strategies appropriate for each element of A SECRET on an instructor-designed problem-solving case scenario?

b. How do MOT students clinically discriminate between appropriate and in-appropriate A SECRET strategies on an instructor-designed problem-solving case scenario?

Among the 12 participants, eight completed all portions of the research study. Of the four who did not complete, none made it beyond reviewing the nine RLOs within the researcher's A SECRET module. All eight full participants completed the A SECRET Case Scenario assessment, which required the student to identify and rank the two most appropriate strategies for that element (signified by the number 1 or 2), rank the two strategies that were in-appropriate (designated as 5 or 6) and the remaining two categorized as adequate (identified as 3 or 4) from a pre-determined list of six strategies for each A SECRET element.

Participants' rankings were compared to the grading key with one point given for each ranking that fell within the correct category of appropriate, in-appropriate, or adequate. If the participant ranked a strategy in the wrong order but in the correct category, it was still considered correct. Descriptive statistics (mean, mode, median, standard deviation, range and sum) were calculated for each category of the assessment

using SPSS 23.0 (IBM, 2013) for the participants' aggregate scores on the selected response portion of the A SECRET case scenario assessment (see Table 14)(see Appendix H for raw data).

Table 14

Descriptive Statistics for the ASECRET Case Scenario Assessment

	A SECRET Category						
Statistic	Attention	Sensation	Emotion Regulation	Culture	Relationships	Environment	Task
N	8	8	8	8	8	8	8
M	4.12	3	3.37	3.12	6	2.37	4
Mdn	3.5	3	3.5	3.5	6	2	4
Mode	3	2	2	4	6	2	4
Std Dev.	1.64	0.92	1.40	1.72	0	0.91	1.51
Range	2-6	2-4	2-6	1-6	6	1-4	2-6
Sum	33	24	27	25	48	19	32

A total of 6 points were possible for each element category on the assessment with a total of 42 points possible. However, based upon how the assessment was developed the participant could receive 100% by getting all 6 of the rankings in the correct order or they could have gotten a 67% by getting up to 4 ranked correctly but they were unable to get 83% or five of the rankings correct. If the participants initially made an incorrect ranking, their subsequent rankings had a higher probably of also being incorrect. During the Analyze phase instructional design process it was estimated that

generally a 70% overall on the A SECRET Case Scenario Assessment would constitute a "good" score given the limitations of the ranking system and the novelty of the type pilot implementation of assessment.

When looking at the aggregate performance, participants scored the lowest in the element category of environment (*M* = .37, *SD* = 0.91) while 100% of the participants obtained full credit in the element category of relationships (*M* = 6, *SD* = 0). In addition to the descriptive statistics, frequency distributions were calculated for each element category on the selected response portion of the A SECRET case scenario assessment notable findings are identified for each element category.

A frequency distribution were calculated and analyzed for the attention category of the assessment which is presented below (see table 15). Included in this analysis was the number correct, frequency and percent correct.

Table 15

Frequency Distribution: Attention Category (n = 8)

Number correct	Frequency	Percent	Valid Percent	Cumulative Percent
2	1	12.5	12.5	12.5
3	3	37.5	37.5	50
4	1	12.5	12.5	62.5
6	3	37.5	37.5	100
Total	8	100	100	

In the category of the assessment, four of the participants (*n* = 8) obtained at least four points or higher (up to six points). The remainder of the participants scoring 3 points, or less

A frequency distribution were calculated and analyzed for the sensation category of the assessment which is presented below (see table 16). Included in this analysis was the number correct, frequency and percent correct.

Table 16

Frequency Distribution: Sensation Category (n = 8)

Number correct	Frequency	Percent	Valid Percent	Cumulative Percent
2	3	37.5	37.5	37.5
3	2	25	25	62.5
4	3	37.5	37.5	100
Total	8	100	100	

On the sensation category of the assessment, the participants' obtained a less than optimal score with the majority of them obtaining 3 points, or less, out of 6 total points (see Table 16).

A frequency distribution were calculated and analyzed for the emotion regulation category of the assessment which is presented below (see table 17). Included in this analysis was the number correct, frequency and percent correct.

Table 17

Frequency Distribution: Emotion Regulation Category (n = 8)

Number correct	Frequency	Percent	Valid Percent	Cumulative Percent
2	3	37.5	37.5	37.5
3	1	12.5	12.5	50
4	3	37.5	37.5	87.5
6	1	12.5	12.5	100
Total	8	100	100	

Half of the participants obtained 4 points, or higher on the emotion regulation portion of the assessment. With the remaining half of the participants scoring 3 points, or less, on the emotion regulation category on the assessment (see Table 17).

A frequency distribution were calculated and analyzed for the culture category of the assessment which is presented below (see table 18). Included in this analysis was the number correct, frequency and percent correct.

Table 18

Frequency Distribution: Culture Category (n = 8)

Number correct	Frequency	Percent	Valid Percent	Cumulative Percent
1	2	25	25	25
2	1	12.5	12.5	50
3	1	37.5	37.5	87.5
4	3	12.5	12.5	100
6	1			
Total	8	100	100	

Fifty percent of the participants scored at least 4 points, with the remaining 50 percent at 3 points, or less on the culture portion of the assessment. More importantly, there were two participants who obtained 1 point on the culture category of the assessment (see Table 18).This was the one of most difficult categories on the assessment for the participants.

A frequency distribution were calculated and analyzed for the relationship category of the assessment which is presented below (see table 19). Included in this analysis was the number correct, frequency and percent correct.

Table 19

Frequency Distribution: Relationships Category (n = 8)

Number correct	Frequency	Percent	Valid Percent	Cumulative Percent
6	8	100	100	100
Total	8	100	100	

The most significant result occurred within the relationships category of the selected response portion of the assessment: Each participant scored the maximum of 6 points (see Table 19).

A frequency distribution were calculated and analyzed for the environment category of the assessment which is presented below (see table 19). Included in this analysis was the number correct, frequency and percent correct.

Table 20

Frequency Distribution: Environment Category (n = 8)

Number correct	Frequency	Percent	Valid Percent	Cumulative Percent
1	1	12.5	12.5	12.5
2	4	50	50	62.5
3	2	25	25	87.5
4	1	12.5	12.5	100
Total	8	100	100	

Less than 50% of the participants scored 3 points, or higher, on the environment category of the assessment. Surprisingly, this constituting it as the category with the lowest overall scores among the participants (see Table 20).

A frequency distribution were calculated and analyzed for the task category of the assessment which is presented below (see table 21). Included in this analysis was the number correct, frequency and percent correct.

Table 21

Frequency Distribution: Task Category (n = 8)

Number correct	Frequency	Percent	Valid Percent	Cumulative Percent
2	2	25	25	25
4	4	50	50	75
6	2	25	25	100
Total	8	100	100	

Finally, six of the eight participants obtained 4 points, or higher, on the task category of the assessment (see Table 21). The participants' overall aggregate percentage

correct was 68%, which was 2% less than the targeted percentage accuracy goal between the participants' ratings and the expert ratings derived from the occupational therapy clinicians who practice at the SPDF (see Table 22). The participants were able to reach, or exceed, the 70% threshold for only three elements of A SECRET (i.e., sensation, relationship, and task). Further scrutiny regarding participant performance related to their ability to discriminate between appropriate or in appropriate A SECRET strategies. This revealed that the participants' average score remained within the 68% accuracy.

Table 22

A SECRET Case Scenario Raw Scores

Participant	Attention	Sensation	Emotion Regulation	Culture	Relationships	Environment	Task
1	6	2	4	2	6	3	6
2	3	2	2	1	6	3	4
4	6	4	4	6	6	2	4
6	6	4	4	6	6	4	6
7	2	2	3	4	6	3	4
8	4	4	4	4	6	3	4
10	3	4	2	3	6	2	2
12	6	3	6	4	6	4	4
Sum	33	24	27	25	42	19	32
Percentage	78%	57%	64%	60%	100%	45%	68%
Target	70%	70%	70%	70%	70%	70%	70%

Continuing with the analysis of Research Question 1 *[What is the level of occupational therapy (OT) students' problem-solving performance for A SECRET after viewing a simulation case study of a child with Sensory Over-Responsiveness (SOR) as measured by a post-simulation selected response assessment?]*, the following sub-question was investigated:

b. How do MOT students clinically discriminate between appropriate and in-appropriate A SECRET strategies on an instructor-designed problem-solving case scenario?

To determine how the participants discriminated between appropriate and inappropriate A SECRET strategies, the researcher analyzed the rationales for choices of effective and ineffective strategies on the Case Scenario and Assessment instrument. After being presented with a developmental history and a video vignette of a challenged area (related to sensory processing) of a pediatric client, each participant provided a rationale for their rankings of the top two exemplary and two poor strategies for each element of A SECRET (attention, sensation, emotion regulation, etc.). There were eight rationales for the exemplary strategies and eight for the ineffective strategies across each element. Thus, a total of 112 rationales (56 appropriate and 56 in-appropriate) were analyzed.

The process of qualitative analysis of the student's rationale for their ranking of (appropriate or inappropriate strategies) are sequenced below.

1) The students' original rationales were taken from the Moodle course, into which the ISU A SECRET module was imbedded and categorized by the type of rationale (appropriate or inappropriate) and then placed into a spreadsheet.
2) The researcher then read and re-read (Corbin & Strauss, 2008) the transcription and created preliminary codes for both groupings of rationales (appropriate and in-appropriate). The researcher used the following strategies

to generate codes based upon Corbin and Strauss, (2008): “a) stimulate the inductive process, b) not taking the participants statements for granted, and c) avoids rushing past the diamonds in the rough.” (p. 67).

3) Once all the rationales had been coded by the researcher (Corbin & Strauss, 2008), the initial codes and a word-processed document for each type (appropriate and inappropriate) were uploaded into a qualitative data analysis management system called *DeDoose*.
4) Following this, the official codes were further consolidated into categories by the researcher (Corbin & Strauss, 2008), which represented broader groupings related to the reasoning behind strategies ranked by the participants.
5) After arranging the categories, the researcher returned to the raw data in order to ensure it (original coded quotes) were represented the newly created categories. The researcher reviewed and reorganized the categories based upon this additional review.
6) From that point, the researcher sought to develop higher level representations of the categories through generalized themes and subthemes to discover how the participants critically discriminated between the A SECRET strategies that would be appropriate or inappropriate for application to the client in the case scenario.

7) The proposed themes were presented to the participants via a word-processed document for their review, comment, and possible modification. The participants returned no clarifications or modifications related to the representation of their reasoning approach.

A total of 221 codes were ultimately developed and applied to the appropriate and/or in-appropriate documents. This generated 145 excerpts, 79 among the rationales for inappropriate A SECRET strategies and 66 excerpts for the appropriate A SECRET strategies. Furthermore, there were 95 codes applied to the rationales for the appropriate strategies and 126 codes for the inappropriate strategy rationales.

Themes from the Rationale Statements. The themes (see Figure 9) that emerged from the initial codes and then the categories ultimately resulted in a binary focus (e.g., positive or negative) that was inherent with how the participants' rationales were gathered from the A SECRET case scenario. As previously stated, the participants had to document a rationale for their rankings from a list of pre-determined A SECRET strategies; specifically, for the strategies they viewed as being appropriate (identified as 1 or 2) or inappropriate (5 or 6).

A total of five themes emerged from the qualitative data analysis of the participant rationales. Of the five themes, each included sub-themes that represent the above mentioned binary portrayal that ties back to appropriate and inappropriate strategies. Yet, it is important to note that each theme captured the binary representation,

however, the binary response was not a spontaneous result of qualitative analysis, but represented that the participants were forced within the A SECRET assessment to reflect, rank, and identify a rationale for a positive and a negative relationship among those rankings.

In the next section, a description of each qualitative theme is presented, which includes an example of the theme as presented through the raw qualitative data from the participants. A conceptual representation of the themes was also created, but it does not reflect a hierarchy or relationship between the themes. For the sake of clarity the majority of the in vivo quotes/codes/categories are taken directly from the rational statements the participants submitted via A SECRET case scenario selected response assessment. There are occasions where quotes from the focus groups are added and noted as such. These quotes were later added to the analysis as included added additional merit to the description as well as strength to the themes which are presented in Figure 9.

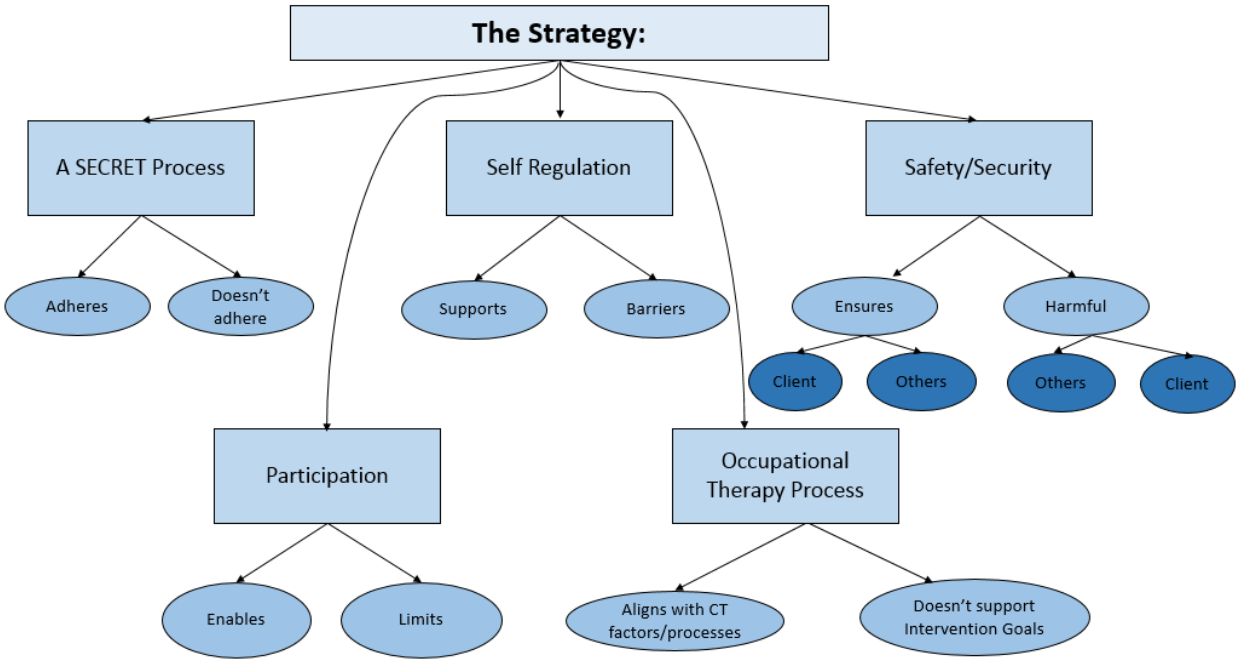

Figure 9. Appropriate/Inappropriate Rationale Qualitative Themes.

A SECRET Procedure. The theme represents how some of the participants used a rigid application of the A SCRET process to determine the appropriate or inappropriate strategies. Participants' decisions were nuanced on whether or not the strategy fell within the A SECRET process but for some they relied on a very concrete application of the A SECRET process.

Adheres. Details of this sub-theme included comments that related to how the pre-determined strategy adhered to the A SECFRET procedure explicitly or indirectly. One participant articulated their opinion of a strategy via the goal of an 'element' within A SECRET:

> The main goal of emotion regulation is to help Michael to regulate his emotions when he is experiencing too much sensation. Talking about the program before hand and providing suggestions for him to use in the moment is a good way for him to self soothe when feeling overwhelmed.

A similar rationale was provided by another participant related to addressing an 'element' of A SECRET:

"I also ranked providing fidget toys as a least appropriate strategy because it does not address the emotional regulation aspect as much as it would the sensory aspect for Michael."

A statement from a participant during the focus group referred to the 'element' of sensation:

"Yeah, I just got done thinking back to the A SECRET videos, I mean, like what did they say worked best for sensation [sic]."

An additional perspective was that the identified strategies that were appropriate were more focused on the element in question within the case scenario.

> I chose the first two strategies as the most appropriate for Emotional Regulation because they both help Michael to expect the sensory input that he will be faced with. They are the most focused on emotional regulation out of all the choices.

Finally, a participant connected a specific intervention with the 'element' of attention:

> I put the least effective at giving him more space to rock and spin, as this could be very distracting to other children and maybe embarrassing to the child. This rocking may also distract his attention (another part of A SECRET) from the task he is supposed to be doing. Also, by playing on the playground may also heighten his senses too much already before the program instead of calming him down depending on the stimuli he encounters while playing.

Doesn't Adhere. Within the case scenario there were several distractors that were set up to not support the A SECRET process. The sub-theme of "Doesn't Adhere" captures the participants' rationales for rating strategies lower, because they did not support or adhere to the process. One participant determined that a strategy was less effective based upon the type of strategy it fit best into, categorically:

"The 3rd to last strategy is a sensation strategy rather than an emotional regulation strategy which is why I ranked it as 6th."

A second participant's thinking was similar, as it did not address the category of the case scenario question:

"I also ranked providing fidget toys as a least appropriate strategy because it does not address the emotional regulation aspect as much as it would the sensation aspect for Michael"

Another participant stated that the strategy needed to be aligned with the element in question:

"Using a weighted blanket is more of a sensory diet item and could be distracting and cause him not to focus on the music. Providing more space is more of an environmental strategy than a sensation strategy."

A final rationale of a participant indicated the strategies ranked as inappropriate did not support the process or the issue in question:

“Again removing him from the program does not address the issue of A SECRET. He needs to participate with the help and direction given to him.”

Self-Regulation. Self-regulation included emotional regulation and the participants’ opinions related to the opportunity for the client to learn how to self-regulate or the opportunity of others to teach the client how to self-regulate.

Supports. The sub-theme of supports entails the strategies that would support the client’s ability to self-regulate or attain the status of being emotionally regulated. A participant described how the strategy ranked as appropriate supported teaching self-regulation using the clients’ caregivers to help him anticipate what would happen in the music program.

> The two I ranked the highest involved his parents making a plan for Michael during the music program. By assessing his arousal level prior to the concert, they could prepare him before he gets too overwhelmed. By talking to Michael directly about the music program, he is aware of what he should be doing at every part of the music concert.

Another participant also described how a strategy might help orient the client’s attention to stay on task without facilitating his challenged area. Gaining and maintaining attention is a foundational cognitive skill needed to regulate oneself or one’s emotions in spite of challenging or competing sensations within the context.

> I put that the teacher could be more animated or have puppets to gain attention. Since Michael is not over sensitive to visual stimuli as much as he is noises and tactile experiences, this could be a way to help gain his attention to stay on task without overwhelming his senses. Also, using visual stimuli could be

> for the teacher to wear brightly colored clothes, or something that will gain Michael's attention.

Barriers. The sub-theme of barriers may be described as the strategies the participants' viewed that would not support the development of the client's self-regulation. One participant described how the strategies that were ranked as inappropriate were not assisting the client with controlling his feelings in a complex and sensory dynamic environment.

> Because Michael has problems with multi-senses having more songs with even bigger movements will further distract and disorganize how he handles the program. The songs already have a fair amount of movement in them and Michael does not do well with the noise and movement so having even more movement will most likely not help Michael to regulate his feeling of being overwhelmed. Having fidget toys may distract Michael even more from the program and will most likely not help him to control his feelings.

A second participant articulated a rationale for the ranking of an inappropriate strategy based upon the fact that its focus either did not address the opportunity for the client to learn how to self-regulate or that it did not relate to regulation of any type:

> I ranked having Michael decide if he wants to participate as one of the least appropriate strategies because one of his goals is to increase social participation and if you just allow him to choose he might not get to learn and use those self-regulation tasks which could be used in the future even in a setting different from the school Christmas program. I also ranked providing fidget toys as a least appropriate strategy because it does not address the emotional regulation aspect as much as it would the sensory aspect for Michael.

Safety/Security. The theme of safety/security may best describe the rationales that were devised in relationship to the promotion of the client's safety and security during the task within the contextual presentation of the case scenario. Some participant rationales justified their rankings of strategies, because they ensured the safety of the client or others within the context, and vice versa.

Ensures. Ensures is a sub theme that exemplified the participants' justifications within their rationales by interpreting that a strategy would ensure the safety/security of the client and others within the case scenario. One of the participants indicated they ranked an appropriate strategy as certain way because it provided him with both emotional safety and security. Specifically, this participant found the strategy could be implemented with discretion (to protect the client):

> I think the two most effective strategies would be for Michael to either sit by a preferred classmate or by an aid [sic] that could discreetly give him strategies for sensory input that he needs. By sitting by someone that he likes, Michael will feel more comfortable in the situation in general, and the aid [sic] could provide sensory input that he needs to stay on task.

One participant gaged the ranking and rationale by awareness of the client's feelings and emotions in response to the implementation of a given strategy during the focus group.

> I felt like I did just when I, like I said earlier [sic], just thinking about how he's, how he's going to feel if you separate him or don't involve him. He might already feel like a loner because everyone else around him is seeing it or whatever and listening and he's kind of in his own little world……

During the same focus group, another participation explained they were more concerned of how the client would function in diverse and future contexts.

> Or even about how he's going to have to like he's going to have to be able to function in real life like, you know, he was, you know [sic], in elementary school for this program or whatever and what about, what happens when he gets to college and he has to, you know um, you know, maybe graduating or um, presentations-Like we have to do like um, I think that we have, you know, to think about how real, you know, real life context, and how it's going to affect him.

Finally, a participant articulated a rationale that included ensuring social participation and discretion.

> I think putting Michael with students (preferably) that have a calming effect and imitate appropriate behavior will be best for him because it helps with social participation and also shows Michael how to imitate socially acceptable behavior (for social acceptance). My next choice would have a teacher/aid [sic] provide discrete cues to help him stay on task because he may need to be cued and we want that to be discrete.

Harmful. A few participants expressed concern regarding strategies that they viewed would have a potential negative impact upon the client's sensory processing, participation, and overall wellbeing within the context of the case. Additionally, there were rationales where the participants' concerns extended beyond the client to other children. This is exemplified with one participant who stated,

> The two least effective (strategies) would be to have the school cancel the music program, as this is unfair to the rest of the students that participate in it, as well as their parents. Also, by having him not participate, he may feel left out or 'different' then the rest of the students.

Another participant stated a similar rationale related to the potential harm a strategy might cause to the client and others:

> Having the school shorten the program is not an appropriate strategy because there are so many other children involved and probably traditions of which songs are included that it is probably not very rational to expect them to change everything just for Michael. Also, recommending to the school that they not do the program again is not a very appropriate strategy because the culture may necessitate a holiday program for parents/grandparents and eliminating the program entirely does not seem very feasible or reasonable.

Another participant stated a concern for how the strategy might have a negative impact upon the client’s feelings during the context in question.

> The two least effective would be to place Michael by a child that is unpredictable or someone that he doesn't know. This may make him feel uncomfortable, which will heighten the other issues he will have during the music performance.

Yet, another participant had a similar rationale related to harming the child or the group as a result of a poorly devised strategy.

> Having the school place noise cancelling boards through the auditorium is not a practical strategy because not many schools are going to be willing to pay the high cost for that, and it would affect the sound quality, which is what an auditorium is used for, and if the audience couldn't hear it would diminish the quality greatly.

Participation. Participation was a theme that was derived from the combination and rearrangement of several codes and categories that included occupational performance, meaningful activities and tasks, motivation, etc., within the present and future contexts for the client. The theme was divided into two sub-themes related to strategies that enabled participation and those that limited participation for the client.

Enables. This is a strategy that enables opportunities for growth, access to affordances, and ways to learn to regulate oneself, socialize, and to enjoy the typical routines common with most children. One participant's rationale illustrates this sub-theme by stating:

"Having him sit next to a preferred classmate seems like the best option here because it allows him to be with a peer that could motivate and give him the right input (sensory)."

Another participant argued that "tasks" will give the client more purpose during the music program and the activities presented within the video portion of the case scenario.

> Giving him more tasks to do is the most appropriate for this section because it will give him a job to do which distracts him from being bored. Hand gestures and body movements would be more entertaining for him than just singing, and would give him more participation in the program.

Another participant advocated for the use of predictability to enable participation of the client.

> Having Michael's parents talk to him prior to the program will provide more structure and predictability to the program. Also, by having the teacher provide a visual aid will help inform him what he needs to do, providing him with some structure and predictability in an unfamiliar setting.

Alternatively, a participant argued that reducing sensations would support attentiveness, which is foundational for increased participation in meaningful activities.

"Decreasing tactile sensation may increase his focus on the program and not on the object. Allowing the children to get up and move will increase his attentiveness."

Finally, a participant articulated within the rationale the idea of increasing support for participation in meaningful tasks in order to avoid social consequences.

> We've been like relating to um, like a social setting [sic], because by cancelling the play or having him in that concert like again, he's going to be, I guess different than other people even though like him being in that situation might be hard at first so I think it's important to learn techniques where he's able to not have that difference, you know, have that stereotype and so uh, that can relate to the social aspect.

Limits. This is a strategy that creates a barrier for the client to remain stagnant with the sensory processing related behavioral challenges. One participant provided the following rationale this way:

*"*Also sitting on a Disco-Sit® may provide too much movement and stimulation where Michael will become over aroused by too much movement."

An alternative perspective raised was that a strategy could be counterproductive to increasing attentiveness to the task at hand in the case scenario.

"I also put giving him small, fidgety toys to play with as being less effective, because it will distract him from what he is supposed to be accomplishing."

An additional view from a participant indicated a similar opinion.

> I think if all the kids were moving their bodies, it would be likely that Michael would start getting aroused and it would be hard for him to regulate his behavior after that initial arousal. He would start seeking more sensation after that initial arousal and it would be very distracting and frustrating. We also want Michael to take parts [sic] in these kinds of activities, so giving him a choice wouldn't be ideal, either.

Finally, another participation viewed the limitation to participation as having a cumulative effect upon the client sensory processing abilities.

> While it is unlikely that schools will stop doing music programs adding extra movements or walking to get the props would not be a good way to address ways to change the culture. Standing to get new props may cause Michael to be bumped in the hustle to get new props and that extra tactile input may do more harm. Also more movement may be more distracting to Michael and will potentially overload multiple senses.

Occupational Therapy Process. The occupational therapy process includes the foundational tasks employed by occupational therapists to identify and document occupational performance deficits, develop intervention plans (including goals), intervention plan implementation, and re-evaluation. This theme includes two sub-themes in which the majority of the participants identified the client factors or processes as being major influences upon their rationales.

Aligns with client factors/processes. This theme captures the participants' justifications for the strategies they chose based upon alignment with the client factors and/or processes that are inherent influences on identifying occupational performance deficits

and their impact upon function. One participant articulated that using the client's strengths could help him overcome some of his sensory processing difficulties.

> Michael is not attending to the instructor and seems distracted, if the teacher could use humor, props or colors she might be able to get Michaels [sic] attention. One of Michael's moderate differences was visual, so he can use his strengths to overcome his deficits which were his sensitivity to auditory sensations (the loud singing) from the children.

Another described the rationale for a specific strategy choice, because it would benefit the client based upon the client's sensory processing difficulties.

> I think when I was looking at the different ones to distract him (the client) like holding objects or doing other things I'm like well, his condition (sensory processing) is this something that would be beneficial so that's kind of why I chose that one [sic].

Similar examples exemplified the alignment of the client's sensory processing difficulty with how they were reasoning through the appropriate and inappropriate A SECRET strategies. The statements below originated from the participants clarifications made during the focus group.

> And so I remember thinking about that in, and I actually talked about it in a lot of my paragraphs (rationales) about how we don't want to over stimulate him (the client) [sic] because it's going to lead to more adverse behaviors. As opposed to maybe if he gets all of this, you know, sensory input then he'll chill out, which in the videos it said that isn't the case for sensory seeking and so um, I felt like I had used what I learned based on what I had inferred his diagnosis to be.

> I thought about like was it having the parents clap louder um, I was like no [sic}, that's not going to help like, that's adding to his stress like- In that instance I would have, you know, I thought back like okay, well, that's definitely not going to help him because of where he's at.

Doesn't support intervention goals. The participants described their opposition to some of the strategies, and their rationales were justifying their objections were rooted in how a given strategy did not support the client's goals presented within the developmental history. One participant linked a strategy back to the client's goals to increase social participation:

> Having him only participate for 25 minutes is a strategy that could be useful, but where one of his goals is to increase social participation I feel it would be more appropriate to look into changing other aspects before simply removing Michael from the program. That is also why I ranked having him sit in the audience as a least appropriate strategy because it does not allow him to work on self-regulating or social participation and so while it does change the task it changes it so much that he is no longer really participating.

Another participant justified the lower ranking of a strategy based upon the foundational goal of treatment and how the strategy did not align with the treatment plan.

> Discussing Michael's medications may be appropriate in the initial assessment, but the goal of the treatment is for Michael to learn to identify and regulate his emotions. If Michael is able to sing or be a part of the concert, I wouldn't think it would be appropriate to only allow him to sing a certain number and then have him sit back.

Another participant was concise regarding how a strategy did not fit with the needs of the client.

“Removing Michael from the program would just be distracting and difficult for the parents and Michael and not actually address his needs.”

The topic of medications came up several times in the rationales, and participants were concerned if it was common practice among therapists or appropriate for children with his type of sensory processing difficulty. Below are two statements which were made during the focus group as the participants reflected upon the A SECRET strategy (in-appropriate) for the attention category portion from the assessment.

> And on the first question I know it talked about medications. And I didn’t know even how that played like if that is common to use with kids with SPD or not. But I Figured that it was something that, I mean, [sic] would be kind of a last resort because you would want them to learn how to work through it.

“I feel like that's kind of contradicting like us [sic], I guess, like I think I wrote that, it was like my last one-or second to last one.”

The participants used several types of strategies and underlying reasoning triggers that guided how they discriminated between strategies that were appropriate and inappropriate. The rationales they generated and the syntheses of such provides a glimpse into how 1st year MOT students reason through static clinical problems and options. Research questions 2 and 3 are discussed in the following sections. Data that were collected from a descriptive survey and a subsequent focus group that occurred seven days after completing the survey are presented. The purpose of the focus group was to capture expanded reasoning related to sections of the survey instrument. The focus group included all eight participants and lasted two hours. There were varying levels of

participation from the participants with some being very vocal and others contributing minimally.

The researcher followed a semi-structured interview guide (see Appendix E). There were several occasions when the group's conversations went off track and/or were unrelated. During such moments, the researcher prompted the group back to the questions at hand. Therefore, information that was gathered, but not relevant to the research question or the questions within the semi-structured interview guide, are not reported in this section. The findings presented below follow the pattern of providing a summary of the quantitative descriptive data from the student survey followed by direct quotes obtained from the focus group transcription that related to specific sections within the attitudinal survey.

Research Question 2

> What are OT students' perspectives regarding the A SECRET simulation vignettes to support their application of the reasoning process?

As a part of the online attitudinal survey, the participants were asked to anonymously identify their perceptions that related to the assessment procedures within SPDU and the researcher's A SECRET module (a four point Likert scale was used for ratings with 1 = Strongly Disagree; 2 = Disagree; 3 = Agree, and 4 = Strongly Agree). The quantitative findings presented in this section emerged from the post-instruction survey and the qualitative conclusions were gathered from the post instruction focus group (see Appendix I for the raw data). In the table below (Table 23), the construct of

assessment is explored with descriptive statistics (*M, Mdn*, and *SD*) for each question within that construct.

Table 23

Frequency Distribution: Assessment (n = 8)

Survey Question	*n*	*M*	*Mdn*	*SD*
SPDU Instruction & Assessment	8	3.75	4	0.462
A SECRET Case Scenario (Directions)	8	3.25	3	0.462
A SECRET Case Scenario (Content Application)	8	3	3	0.755
Preference towards Case Scenario	8	3	3	0.755

Within the assessment portion of the survey, the participant's ratings had a mean of 3 or higher, indicating favorable attitudes towards the assessment procedures. When asked how the SPDU instruction could be improved for the A SECRET process, the participants indicated there was not enough content to clearly explain and apply the process.

As one participant explained,

"I think just a little more in depth on the SPDU because it was such a short little snippet about A SECRET."

A second participant suggested additional examples:

> "You really didn't understand it until we went into the Moodle stuff. I think just more examples would have helped me the most. Because they give you one

> example and I'd be like I think I might understand what they're talking about but then when I got to Moodle (ISU A SECRET) I was like oh, now I actually get it."

Another participant further articulated a need to have more clinically-based examples:

> "Maybe more like video examples that are actually like using A SECRET in the clinic."
>
> "And…. pointing out what they're doing and why."

Finally, participants argued for additional instructional supports to help maintain their attention and to assist them with the volume of the information presented.

> "But I think that's where having maybe like a PDF that you could follow along with because for me just watching a video is, I don't know, [sic] I get ADD when I'm just watching a video."
>
> I'd have a piece of paper that says this is what they're doing."

The participants were asked their opinions regarding the A SECRET case scenario at the end of the A SECRET module. In general, the participants felt the assessment was too long, that it was time limited (i.e., one hour to complete), and that they could not go back and review the video vignette and developmental history as they proceeded through the assessment. All of this may have added stress to some of the participants' performances on the assessment and how they articulated their rationales for the appropriate or inappropriate strategies. Five of the eight participants indicated they did not have enough time to complete the assessment; however, all of the participants completed multiple response questions and provided a rationale for the appropriate and inappropriate strategies. The following feedback typifies this:

> I didn’t like spend as much time as I wanted to and I went forward and I couldn’t go back and I'm like what [sic], they said I could like see it because it like said on there, read this as many times as you need to so I like Figured that meant you could go back and then- I was like uh, so I kind of had to, I don’t know, I think I would have been more accurate on the assessment if I would have been able to go back.

“So you didn’t want to spend a lot of time on there because you knew that you were going to be asked questions and we wanted to make sure that we had enough time to answer the questions.”

> Yeah, I felt like by the time I had like thoroughly read through the um [sic], the occupational profile and then watch the video I was like, oh my gosh, 10 minutes or however long was already gone and now I have like only so much time to finish all the rest of this. I don’t have time to go back.

“I thought the assessment would be shorter. There's only an hour.”

> Like I knew it was coming, I knew it was coming (the assessment time limit) and I was like trying as fast as I could to like look through and everything and, and write it but in that and then I kept making more mistakes and, and um, I just didn’t feel like towards the end I could hardly think through and because towards the end it was getting almost like harder because you're like well, this could work kind of for here too because it seemed like it could, that's how it's designed- [sic]. Um, that it can work in multiple areas so it was hard to, for me anyways, tease out, um, you know, really what's the top two, what's the bottom two and then I had some that were like three but I really felt like one through three could really all be good um so, it was a little stressful.
>
> I just tried, I just tried to keep my answers short but had I not, like, well, [sic] I didn’t know that you were looking for, you know, what are the top answers, I know that was the question, what did you put for the top two but a lot of the questions the top, the top two answers I put were really similar. So I just kind of put the same justification for them so I just kept my answers short. So I didn’t have a problem with time.

> Sitting down, like going through and you're like well [sic], that option sounds really good but this one does too, so I don't know which one to put first. So like even- It took me longer to decide the order than it did to justify why.
>
> I think, I didn't read it as thoroughly as I would have had I known that I couldn't go back because I did the same thing as 'participant', I was like oh, I'll have time to go back. And once I see the questions then I'll know more of what I'm looking for and so I just kind of briefly read it all and then I was like oh, I should have paid more attention to that because now I'm not really sure how to answer all of these questions [sic]. And I wish I could see that.

One participant differed regarding the ability to review some of the content during the assessment.

"I don't think I even tried to go back. Probably, probably [sic] because my grade wasn't tied to it. I would have been pissed if I couldn't go back but my grade was tied to it."

In response to being queried if the participants had enough information from the researcher's A SECRET module to rank and reason through the listed appropriate and in-appropriate strategies, the following was offered:

> I think it was more obvious in some than others. And so in some situations like yeah, I felt like I had enough then others I'm like, I don't even know and that's why I'm like I might have to sit here for 10 minutes but I'm running out of time [sic]. But I would say overall no, not to make a sound clinical decision.

"Yeah, I felt it was kind of left up to what you think. There wasn't a lot of examples given in the modules. Of, of bad especially there were good ones, yeah, there was but not each time [sic]."

> But like even more than that like, you know [sic], the, the videos might have been 30 minutes but there was a lot of redundancy. They said the same thing over and

> over and over again and a lot of times they didn't elaborate. Um, like I really did feel like I was hearing the same thing and so yeah, like there was a lot of information in them for sure but they were redundant enough to where I don't feel like I would be comfortable making any decisions for a patient based on them.
>
> I feel like the actual, like the beginning was very repetitive and the end was fairly repetitive. As far as the quizzes go but like the actual like what you were learning about each component was very, was very brief. Um, and I felt like almost as you like went through, by the time you got to like some of the contextual ones like you really weren't getting a whole lot of actual content about that um…Part of the acronym [sic].
>
> I think uh, like the further I got into the different questions there was some strategies that seemed like it could be or a different one - but it also sounded good for this one too and was the best option, so I was a little confused about it [sic]. Is it supposed to be in this category? Or that category? So that was a little confusing to me.

When prompted with questions regarding how the module could be improved, the participants recommended modifications to the quizzes that were imbedded within each A SECRET RLO, as well as having charts to follow along with, or actually fill out when watching the videos within the RLOs or the supplemental videos of the A SECRET process provided at the end of the module.

> I think it would be nice to be able to get involved a little bit like the, there was the quizzes and stuff but-maybe like a video that we could watch and we would diagnose or we would point out things and then like go over it. Does that make sense? So get us involved in, you know, in a real life scenario because in some of the videos like if I wasn't paying as good attention I'll go back and be like I don't even know what's going on here. Um, because like I don't really know the things to look for- Right now, I don't know what is considered normal behavior as

> opposed to a child with uh, you know, with SPD so I think getting involved in, you know, like a little bit more hands approach-would be better for me [sic].
>
> I think even like having a printout of the chart and given a video and then filling out the chart, I think it just may be like practice would help. I mean just being able to watch and like evaluate quickly so I think just having that chart, like maybe a couple of videos and a couple, and actually-fill out the chart on those [sic].

The participants were unable to articulate content that was specifically missing that would have aided in making more sound clinical decisions. When prompted to identify what factors (outside of the instruction presented in the study) assisted the participants in improving their decisions regarding which strategies were appropriate and inappropriate, the following is representative:

> Based on what we did learn like um, with Michael like and his diagnosis when you sit down and think about what we did learn about it um, you know, they talked about how maybe sometimes like giving him toys to where he could um, you know, get sensory, sorry, I can't talk very well. So to where he could have those needs fulfilled for him um, but then we also have to think about him acting out-Because he is sensory seeking. And so like just kind of thinking about his diagnosis and thinking about the situation and maybe it's because I have kids like I understand kind of how kids work a little bit and so like I think a lot of it was just using like my brain rather than what I'd learned. Like I felt like a lot of it was kind of obvious maybe - maybe obvious isn’t the best word but I mean like you should be able to use your reasoning to understand the situation-Even without the, the video (instructional modules) [sic].
>
> I think it would be nice to be able to get involved a little bit like the, there was the quizzes and stuff but-Maybe like a video that we could watch and we would diagnose or we would point out things and then like go over it. Does that make sense? So get us involved in, you know, in a real life scenario because in some of the videos like if I wasn’t paying as good attention I'll go back and be like I don’t

> even know what's going on here. Um, because like I don't really know the things to look for- Right now, I don't know what is considered normal behavior as opposed to a child with uh, you know, with SPD so I think getting involved in, you know, like a little bit more hands approach which would be better for me [sic].

Research Question 3

Similar to Research Question 2, Research Question 3 required analysis of the findings from the attitudinal survey. The participants were probed regarding their perceptions relating to the interface (see Table 24), the instructional delivery (see Table 27), and the instructional content (see Table 26) for the researcher's A SECRET module. As a part of the attitudinal survey measure, a four point Likert scale was used for ratings with 1 = Strongly Disagree; 2 = Disagree; 3 = Agree, and 4 = Strongly Agree.

The quantitative findings in this section emerged from the post instruction survey (see Appendix I for the raw data) and the qualitative conclusions were gathered from the post instruction focus group.

> What are OT students' attitudes toward online delivery for a series of modules related to A SECRET?

Student Attitudes toward the interface. Student attitudes toward the interface (i.e., images, video, audio, text, & controls) of the A SECRET module are presented in Table 24 (See Appendix C for the survey instrument). The means of each of the eight categories

were between *M*=3.12 and *M*=3.62 and represent that these participants either "agreed" or "strongly agreed" that the interface elements supported their content learning within the A SECRET module (A four point Likert scale was used for ratings with 1 = Strongly Disagree; 2 = Disagree; 3 = Agree, and 4 = Strongly Agree). In the table below (Table 24), the construct of interface is explored with descriptive statistics (*M*, *Mdn*, and *SD*) for each question within that construct.

Table 24

Frequency Distribution: Interface (n = 8)

Survey Question	*n*	*M*	*Mdn*	*SD*
Use of Still Image (A SECRET Module)	8	3.12	3	0.353
Use of Video Clips (A SECRET Module)	8	3.62	4	0.517
Use of Audio Elements (A SECRET Module)	8	3.5	3.5	0.534
Quality of Audio Elements (A SECRET Module)	8	3.37	3	0.571
Learner Controls (A SECRET Module)	8	3.62	3	0.571
Navigation (A SECRET Module)	8	3.38	4	0.744
Text Based Information (A SECRET Module)	8	3.38	3	0.517
Placement of Text (A SECRET Module)	8	3.5	3.5	0.534

Based upon the analysis of the focus group discussions regarding the audio elements, the participants' views were mixed as evidenced by the following exchange among several participants during the focus group.

> I thought it was helpful because it was more like being in a classroom and I prefer to be in a classroom so I thought that helped but then also having like a power point to print out would have helped on that one also because I was writing all the stuff that was being shown and then trying to listen and fill in the blanks so [sic].

> I think it probably depends on what kind of learner you are, like I'm definitely not an audio learner at all. So it's like really hard for me to focus if I don't have like some, like if I write it down then I remember it but like if I just listen to it and I don't so I think it depends, I think it would depend maybe on the type of person but yeah, I agree with (Participant) on like having, you know, something where you can take notes on would have helped [sic].
>
> I thought it was good having example videos though. Like watch this and look for this. Uh, just because then it wasn't just something, no, there's this kid, here's this kid Michael, he's got a, you know. Such and such disorder, you can actually watch it and see him become kind of overwhelmed. Rather than just read about it and then just don't really know what to look for. So I thought it was good to watch and listen to the videos and therapists [sic].

"Just listening instead of always just watching the video like in the SPD helped me because it just eliminated some of the distracting factors of actually watching somebody. So listening while reading the slides was useful."

Additional opinions included difficulties with the audio hardware/volume as they interacted with some of the RLOs.

"I don't know if it was my computer but, I had a hard time hearing them (the presentations). But that may have been just mine…."

"Yeah, I had a hard time hearing like the real life videos, specifically the therapist who were treating children, I thought were really hard."

"What I will say, it was hard to, and you had to be on uh, the right computer to get it to work."

Yet, the issues the participants reported might have been a result of a slow Internet connection or limited bandwidth for the multimedia based RLOs.

"Yeah, I had to use an older computer."

"I had to come to the school to do it because none of my devices at home [worked]."

“Yeah, I couldn't do it at home.”

“I couldn't get [it] to work here so, because it said I had to download something and I didn’t know if I would be allowed to do that at ISU so I had to go through like three different computers.

The participants indicated the video elements within the RLOs supported their understanding of the A SECRET process.

> I would say it definitely did for me especially, like guiding someone through the process kind of helped me be guided through the process [sic]. Watching the therapist talk to the parents it definitely helped me to lock in what was being said.
>
> I liked how, I don’t remember which of the videos it was but they were talking about something and she was like oh, that would go under this category instead. And I was like oh yeah, I should have caught that. And then like I started paying more attention like-Have they really focused on what they're supposed to, oh okay, what part would that really go under and so that helped me [sic].

However, one participant wanted a more realistic representation of the A SECRET process incorporated within the instructional module.

> I think, I don’t know if it would be realistic to do this but it was really helpful to see the process of talking with the parents-But maybe to have also seen the behaviors-Of who they were talking about. Because you, as an outsider you're kind of like okay, yeah, I can see where this is coming from but I haven't seen a kid, like this or I haven’t seen this certain like scenario. So it's a little harder to understand where as when we did see the very specific videos you were like okay, I can think through like this. So if, if there was a way to have the parent, like the process but to also see the child in that moment what they're struggling in, I think would be like the ideal [sic].

When the participants were asked if they reviewed the three, one-hour A SECRET sessions in which the developer of the process, Dr. Lucy Jane Miller, worked through real-world cases with caregivers (provided at the end of the A SECRET module), only three of the eight participants had, but each only reviewed one of the three videos available.

Attitudes toward instructional delivery. Student attitudes toward the instructional delivery of SPDU preparatory content and the A SECRET module are presented in Table 25. A four point Likert scale was used for ratings with 1 = Strongly Disagree; 2 = Disagree; 3 = Agree, and 4 = Strongly Agree. The results indicate the participants had similar preferences towards instructional delivery of content related to sensory processing presented from an online (*M* = 3.37), face-to-face format (*M* = 2.78), or blended (M = 3.25). They also indicated the quality of SPDU and the A SECRET module were of higher quality than other sources they had accessed. These participants' indicated preference for blended instruction is greater than a solely online interface for sensory processing topics and other occupational therapy related topics. In the table below (Table 25), the construct of delivery is explored with descriptive statistics (*M*, *Mdn*, and *SD*) for each question within that construct.

Table 25

Frequency Distribution: Delivery (n = 8)

Survey Question	*n*	*M*	*Mdn*	*SD*
Face to Face Preference (Sensory Processing Inst.)	8	2.78	3	0.64
Online Preference (Sensory Processing Inst.)	8	3.37	3	0.51
Blended Preference (Sensory Processing Inst.)	8	3.25	3	0.70
Flexibility of Online Inst. (Sensory Processing Inst.)	8	3.12	3	0.64
Future Online Inst. (Sensory Processing Inst.)	8	2.75	3	0.70
Future Online Inst. (OT Inst.)	8	2.62	2	0.91
Quality of Online Inst.	8	3	3	0.92

Though the majority of the attitudes were favorable in relationship to the delivery of the instruction there were some that were less than a 3 including face to face preference (*M* = 2.78), future online instruction related to sensory processing (*M* = 2.78) and general occupational therapy (*M* = 2.62). When the question was presented in the focus group regarding preferences toward online instruction, five of the eight indicated they preferred a blended approach; two indicated they preferred face-to-face instruction; and, one stated an affinity toward online instruction. The participants who preferred the blended or face-to-face were asked why classroom setting was preferable:

> I think uh, just having it presented in person and you get, it seems like you can pay attention a little bit more to certain things but then reviewing it on a web or whatever is convenient-So it's, kind of make it's easier to do that [sic].

“Yeah, I would say that about online too but then what makes me go the other way is like being able to ask the person that's presenting questions or for clarification. It’s good too [sic].

Five out of the eight participants indicated that their preference toward online instruction primarily revolved around convenience of the instructional approach. However, they still preferred blended instruction over strictly online instruction.

"I think the best thing about the online formatting is the convenience, like I would say I don't learn as well online, but it's really convenient."

> I think, well I've taken online classes in the past and like I can do it fine and I think it, there is very much of a convenience aspect to that. It was very convenient. But I think to help it really like click, what would make it better is having that interaction- And being able to like do it in person. I think it's okay online and stuff um, and it's very convenient, easy to do but for me it's missing that like, being able to ask questions [sic].
>
> I've taken classes like that where it's, you know, once a week you meet, Skype or something where the whole class is in a virtual classroom. And so you can interact with the professor and then the rest of the week you're doing your work on your own online or out of a book or whatever but that because then you don't have to have an actual classroom and people are getting together once a week [sic].

"I was going to say and then you feed off of other classmates too because you see their questions and it creates discussion, questions and answers."

> Um, I think for me like why I prefer in class is because when I'm in class I know what I'm supposed to be doing, you know, like I don't really have the option of doing other things like and so maybe it's like a lack of discipline, I, that's probably exactly what it is. But um, it's so easy for my mind to wander or to check Facebook 80 million times or me e-mail um, doing online stuff like I am, if there are other options for me to do stuff chances are I'm probably going to be doing it [sic].
>
> I would say it makes a difference too with online presentations like where they're reading and you can actually tell that they're just reading something. That gets really old really fast. But especially in a classroom they're, most of the time they're, you know, talking to you and then you're held accountable [sic]."

"And I've had online classes that I've like a lot because the Professor's just talking to you like you're actually there and it's a lot easier to pay attention so [sic]."

> I know in some classes like the professor or whoever is teaching can tell if you're understanding it or not so. They look at you and they see that you might not be getting it and they'll go further in details whereas online, even with the chatting it don't [sic].
>
> I think the reason I like online more than in class is just because I learn a lot better when I find the answer for myself so I hate asking questions because I won't remember what they tell me, I'll, it goes in one ear and out the other whereas if I get on Google and actually look for it and then like I find sources and I look for the information I'm going to remember it because I put more work into it [sic]. And so I think that's the reason why I like the online is like I'm able to pause the video and spend my time on what I need to focus on and I don't have to focus on what so and so doesn't understand, like if I get that I can move past that and I can focus on what I need to. And so, I don't know.

When the participants were asked their views about having the MOT Program at ISU include more online learning objects (RLOs) or online instruction, several participants had strong opinions:

> It seems that a lot of things are starting to move that way just because technology is improving. Personally I benefit from being able to ask questions, and being able to discuss that so like being able to like read it and see the presentation but also being able to like ask my questions and then sum it up in my own words, for me that's a big benefit. I think I would lose, I would lose that-Um, if it was a lot online even if there was the pop up option because I may not know how to like express how to express myself on paper as well as in person or I won't feel like I'll get my question truly across. Where as in person you can be like no, I, that's not exactly what I meant, I meant this way, it's hard to do that on an online format.
>
> What I'm kind of thinking about is like and I, I do think this kind of applies to learning in a roundabout way but like, when we are with each other all day every day we kind of develop relationships and, you know, study groups and stuff so I feel like you would have less of that relationship building ability. You know, if we were to move to more online stuff. And I feel like in the course of the year, I guess, two years, that I've been here um, I feel like I've really developed um, in a way that online would prevent because like, I am here, I am more responsible than I've ever been in my life, you know, like I am on time for things, like I, so I feel

> like outside of like the actual classroom environment there's other stuff to be learned by showing up every day and you know, being around the people that we're around every day [sic].

"Well, in this program too we do a lot of generic abilities, that something you can't really work on online."

> I mean, I think there's a lot you can learn from like your classmates as well as your professors and a lot of the things that we learn involve like practicing, you know, like practicing treatments on each other, you know, something that you can't do online.

> Well, I've had classes that have like combined it where it's been mostly online and then every week we were supposed to meet as a group and do group projects and stuff and so you had to be responsible and be prepared for the next time you met with the group so you could be uh, so you could contribute and I really like that because it was the combination of during the week you can do, you know, learn material on your own and then you also have that interaction with the with the teacher [sic].

Attitudes toward instructional content. Student attitudes toward the instructional content (SPDU & the researcher's ISU A SECRET module) are presented in Table 26. The post instruction attitudinal survey employed a four point Likert scale was used for ratings with 1 = Strongly Disagree; 2 = Disagree; 3 = Agree, or 4 = Strongly Agree. In the table below (Table 26), the construct of content is explored with descriptive statistics (*M*, *Mdn*, and *SD*) for each question within that construct.

Table 26

Frequency Distribution: Content (n = 8)

Survey Question	*n*	*M*	*Mdn*	*SD*
SPDU Increased Understanding	8	3.5	3.5	0.53
SPDU Prepared Learners	8	3.37	3	0.51
A SECRET Prepared Learners	8	2.87	3	0.64
A SECRET Prepared Learners	8	2.97	3	0.64
A SECRET as a Therapeutic Tool	8	3	3	0.53

The participants' attitudes toward the SPDU preparatory instruction was more favorable than the instruction provided in the A SECRET module. However, the participants' less favorable views are in regards to their own abilities to generate novel strategies for future pediatric clients. Conversely, their attitudes toward the SPDU instruction was from the perspective that it prepared them to learn the A SECRET process.

As part of the focus group discussion, the participants articulated various opinions regarding attitudes and experiences with the SPDU instruction, which was put in place as a mechanism to foster the participants' understanding of sensory processing, sensory processing disorders (sensory modulation and its subtypes), and foundational ideas and tactics to reduce the symptomology and increase participation and performance in age appropriate activities.

> I feel like it could go either way. Like there's things that I really liked, it seemed really redundant. So I heard the same information over and over and over again,

> which helped me to remember it. A But then at the same time I'd be sitting there and like they would move from one subject to another instead of like having like sensory over processing all together like, I'd be like wait that doesn't make sense and be like oh, that's because they moved onto another topic, does that make sense? So in a way I kind of feel like it would have been nice to have it all laid down like all of it sensory over processing, you know, like that. Um, but then at the same time it was nice to hear it over and over again [sic].
>
> I kind of like the way it was sequenced um, because it gave you some information of what over responsiveness was then you could compare it to what they were saying about under responsiveness to help increase my understanding.

"I guess I just liked in the videos when they told you what the structure was going to be. Like especially we're going to go over it as a whole and then go into more details in a separate lessons."

Another participant agreed with this opinion stating,

"Yeah, I like that too because it took what you were learning and then you were able to apply it to like a specific example. So that was helpful."

When asked what could be improved with the SPDU training modules, participants were primarily concerned with the poor video quality, excessive length of some of the videos and the density of content, or the lack of density (specifically of SPDU's presentation of the A SECRET process).

One participant stated it this way,

"The second video was what, an hour or something total where the other ones were broken up in different short segments."

"Yeah, I liked how the ones were broken up into short because you could a couple, go do something else and come back."

“And digest it, yeah.”

> There was the one that was like, what was it like over an hour? And it was, it was two or three different sections. It was hard to know like which was going with what. And maybe where was a good stopping point that you could- Make sure you were getting everything.
>
> I think the A SECRET, like, section in the SPDU, I don’t know if that's what you're looking for was really like short, I think so I was kind of like okay [sic], well, this seems like a good thing but I don’t really understand what's going on yet, there's just this Table that looks very intimidating almost kind of because there was, it was all of it on both sides, which makes sense now but in the first being introduced to that um, and seeing it, it was almost, there wasn't enough, I think to understand what was going on.

A few of the participants (four participants) experienced the need to take notes during the SPDU content due to the pace of instruction and the depth of the content within the SPDU modules.

> One thing that I was thinking about with my comment earlier is I don’t know if anybody else tried to take like crazy notes, like I have pages and pages and pages of notes. And so like that was one of the things that I kind of found is the problem is kind of back to where it was jumping around like whenever I would like go to look at like sensory over processing I had it in so many different sections um, and so it was kind of hard to match it all together.

“I had to keep like pausing too, because things would go really quick so would just stop it right when it was on the slide that I wanted to write and take notes.”

Another presented a reasonable recommendation to include a companion outline with the instruction:

"Yeah, I think that that would have been helpful if they had like some kind of printout that had like the written stuff because I'd always try to write so I'd pause it and so I could listen."

The participants' attitudes and views toward the overall instructional experience (SPDU and A SECRET module) were diverse. Yet they provided valuable feedback regarding how the instruction could be enhanced for occupational therapy students as a part of a stand-alone instructional process or imbedded within a curricular course (e.g., PTOT 5528/48, *Child and Adolescent Occupations*).

Research Question 4

> Does the Sensory Processing Disorder University online courses adhere to sound instructional design principles as measured on an instructional design assessment rubric?

The deconstruction process was conducted by the researcher using an Instructional Design Deconstruction Assessment Rubric (Strickland, 2012; see Appendix E) to evaluate the instructional design elements within an existing SPDU module. The Instructional Design Deconstruction Assessment Rubric evaluates a given module or an RLO's instructional design elements, content elements, and the use of Gagne's nine instructional events.

As previously stated the ID deconstruction process was conducted as a part of the Analyze phase of the ADDIE instructional design process. The completed rubric which documents both the steps of analysis and findings of the ID deconstruction process can be

found in Appendix E and a detailed description of the process was presented in Chapter III.

The results of the ID deconstruction task indicated that gaps existed within the SPDU Module: #102 SOR. The gaps, primarily, were found within the instructional design foundations and the content elements of the module. Superficially, there were issues related to the content unit (combined SPDU modules 102-104) assessment procedure; i.e., the majority of the questions (6 of the 14 questions) were loaded toward Module. The researcher determined that this disparity in alignment would not impact the quality and comprehensiveness of the foundational content knowledge in which the participants will take part or how they would be assessed using the existing SPDU assessment measure as a pretest for the A SECRET module.

The SPDU module also lacked general awareness and adherence to Gagne's Nine Events of Instruction. Some of the events were present, but poorly implemented (i.e., interactivity beyond a summative assessment), while others were absent (i.e., formative evaluation, advanced organizers, a learning objective for each learning object, and a rationale for the sequence of instruction). Overall, the researcher recommended the following instructional design strategies to increase the quality of the SPDU Module: #102 SOR as well as the remaining two modules in the unit (#103 Sensory Under-Responsivity and #104 Sensory Seeking/Craving).

1. Establish the aims for the module(s) so they are more consumer-friendly (e.g., parent, caregiver, teacher, etc.) instead of being thin on information, directions,

and goals. This will lead to less guessing for the novice user in relating the content and interface design.

2. Create an advanced organizer to demonstrate to the learner the sequence of the subject matter content and to enhance awareness of cueing built into the interface.

3. Establish measureable objectives for the three goals. Specifically, it may be helpful to have an objective for each LO. This will assist the subject matter expert and the instructional design expert with future revisions to the content.

4. Develop instructional activities to reinforce learning from previous instruction through case studies and purposeful reviews.

5. Develop instructional activities within the LOs to frame case studies and validate what is being seen in video vignettes to ensure the learner is interpreting the intended outcomes (e.g., behaviors related to sensor processing difficulties).

6. Create opportunities to allow the user to independently interact (i.e., establish learner control) with the content to review video vignettes, assess knowledge while in a LO, and access a glossary while moving through the module.

While there were instructional design gaps present in the SPDU module, the researcher strived to ensure these were addressed during the analysis and design phases of the A SECRET RLOs.

Research Question 5

What is the instructional design compliance level for the ADDIE instructional design model used in the creation of A SECRET modules, as measured by a modified Delphi Technique?

To address Research Question 5, the researcher designed and executed eight modified Delphi surveys focused on the Analyze and Design phases of the ADDIE model (Gagné, Wager, Golas, & Keller, 2005) used in the creation of the A SECRET

instructional module. Each Delphi survey was administered to a subject matter expert (SME), instructional design experts (IDE), or both. Data from the surveys were analyzed to identify the level of adherence (see Appendices E and F).

Analyze Phase. The Analyze phase of the ADDIE model of instructional design is comprised of 11 individual tasks. Four Delphi surveys were conducted for the 11 tasks (see Figure 6 in Chapter III). Results of the Delphi surveys were examined to determine face and content validity for each of the 11 tasks.

Each of the four Delphi surveys were based on a four-point scale indicating the SME's agreement that the researcher had adhered to each individual task within the Analyze Phase. Specifically, the scale used a rating of 1 as Strongly Disagree, 2 as Disagree, 3 as Agree, and 4 as Strongly Agree. Any rating that fell below 3.0 (Agree) was flagged and scrutinized to determine if modifications could be made to increase the researcher's adherence to the ADDIE process. If modifications were made to any task, the corresponding Delphi survey was re-administered to decide if the changes resulted in increased agreement. If items received a rating of at least 3.0 during the first iteration of the Delphi survey, a subsequent iteration was not pursued. Each of the modified Delphi surveys used a four point Likert scale was used for ratings with 1 = Strongly Disagree; 2 = Disagree; 3 = Agree, and 4 = Strongly Agree. Descriptive statistics for the Delphi surveys for the Analyze phase (Delphi 01, Delphi 02, Delphi 03, and Delphi 04) are

contained in Table 27. Means and standard deviations represent overall numbers for each Delphi survey.

Table 27

Descriptive Statistics for Final Delphi Surveys 01 through 04.

	M	***SD***	***Mdn***
Delphi 01	3.90	.21	4
Delphi 02	3.95	.22	4
Delphi 03	3.91	.21	4
Delphi 04	3.90	.29	4

Overall, the findings indicated that for each of the 11 tasks, the researcher adhered to the Analyze phase of the ADDIE model. The SME who served as the sole panelist for the Analyze phase provided a rating of 3.0, or higher, for each of the four surveys.

Design Phase. The Design phase of the ADDIE model was comprised of six individual tasks. Four modified Delphi surveys were administered for the six tasks (see Figure 7 in Chapter III). Results from the six Delphi surveys were examined to determine face and content validity.

Each of the four Delphi surveys were based on a four-point scale indicating the rater's (SME and/or IDE) agreement that the researcher had adhered to the individual tasks within the Design phase. Specifically, the scale used indicated 1 as Strongly Disagree, 2 as Disagree, 3 as Agree, and 4 as Strongly Agree. Individual responses to each item were assessed. Any rating of that fell below a 3.0 (Agree) was flagged and

scrutinized to determine if modifications could be made to increase the researcher's adherence to the ADDIE process. If modifications were made to any task, the corresponding Delphi survey was re-administered in an attempt to reach agreement (a rating of 3 or higher) by the SME and/or IDE panel. If items received a rating of at least 3.0 during the first iteration of the Delphi survey, a subsequent iteration was not pursued. Descriptive statistics for the Delphi surveys for the Design phase (Delphi 05, Delphi 06, Delphi 07, and Delphi 08) are contained in Table 28. Means and standard deviations contained in the Table represent overall numbers for each Delphi survey.

Table 28

Descriptive Statistics for Final Delphi Surveys 05-08

	M	***SD***	***Mdn***
Delphi 05	3.90	.29	4
Delphi 06	3.89	.30	4
Delphi 07	3.90	.29	4
Delphi 08	3.91	.27	4

It is evident in Table 28 that each Delphi survey resulted in scores higher than 3.0, indicating a high level of agreement among the panel members that the design phase parameters were met. In summary, the researcher attempted to adhere to the ADDIE model of instructional design in developing RLOs for the A SECRET content module. The findings from the eight Delphi surveys conducted serve as confirmation of this.

Summary

Overall, the participants' performance on the A SECRET module was in close approximation of the overall goals for the content and instructional design. The participants' performances were not isolated to the type of strategy grouping, specifically to the elements of A SECRET that addressed the individual characteristics of a client (attention, sensation, emotion regulation), versus the contextual elements related to the client (culture, relationships, environment and the task). Meaning, the student performance was not confined to either of the two aspects of the A SECRET process (individual characteristics or contextual elements). In formulating rationales, the participants were deliberate in their arguments for the ratings they made regarding the appropriate and inappropriate strategies. The findings from their strategy rationales resulted in binary approaches as well as aspects that were procedural and contextual as they approached the challenging behavior within the case.

CHAPTER V

Summary, Discussions, Conclusion, and Recommendations

The purpose of this study was to explore the effectiveness of a series of online, module-based instructional RLOs targeted at entry-level, 1st year, Master of Occupation Therapy (MOT) students. Gupta and Bilics (2014) challenged the profession of occupational therapy when they stated, "It behooves occupational therapy educators to be concerned with whether their teaching approaches are efficacious, to understand why some instructional methods work better than others to communicate certain concepts or values and, most important, to know whether students are achieving the expected learning outcomes and competencies." (p. S87). This study is a small contribution to their challenge.

The content of the RLOs addressed both knowledge and implementation of A SECRET for children with a sensory processing disturbance/disorder, specifically sensory over-responsiveness. It was also essential to assess the MOT students' perceptions related to asynchronous online instruction for the A SECRET module. Secondarily, in a geographically distant and largely rural environment, such as Idaho, developing this type of curriculum may serve as a resource for the development of continuing education for practitioners and training center staff, ultimately benefiting all educational stakeholders: university professors, clinicians, teachers, and caregivers.

Summary

Twelve participants voluntarily took part in the study during the third semester of their first year of the MOT program at a public university in the Intermountain West of the United States. These participants were concurrently enrolled in a research methods course at the time of the study. Four participants withdrew prior to completing the assessment portion of the study due to difficulty with time management and "feeling overwhelmed".

The study required the participants to complete two phases: Phase one, which was foundational instruction via Sensory Processing Disorder University (SPDU), and phase two through ISU's LMS with the content centered on A SECRET related to sensory processing, sensory processing disturbances/disorders and interventions for this condition. Once the participants completed the ISU A SECRET module, a post-treatment, selected-response assessment was administered to measure content knowledge and implement the concepts of A SECRET. Following this, an online survey was administered to gauge the participants' perceptions of the instructional method and content, the assessment method for the content (A SECRET), and the delivery method (through an online LMS). The researcher also conducted a follow-up focus group session to gain additional insight.

A mixed methods design was employed for the research study. For Research Question 1, descriptive statistics (mean, mode, median, and standard deviation) and

frequency distributions were calculated to understand how the eight participants performed on the selected-response measurement for the A SECRET case scenario. The qualitative data that were generated in the second portion of the selected-response items were then analyzed using qualitative analysis procedures. This allowed the researcher to discover how the participants determined their rankings of appropriate and inappropriate strategies related to the case scenario.

The second research question related to the participants' perceptions toward the A SECRET simulation vignette. The researcher conducted descriptive statistics (mean, median, and standard deviation) and the qualitative data were analyzed from the questions yielding narrative responses to gather a richer holistic representation of the participants' perceptions.

Research Question 3 related to the participants' attitudes toward the online delivery of the ISU A SECRET module. The researcher conducted descriptive statistical analysis (mean, mode, median, and standard deviation) of specific portions of the attitudinal survey. The quantitative data was then enhanced by adding the narrative statements that emerged from the focus group meeting. Combining the qualitative data from the focus group and the quantitative data from the attitudinal survey provided a more eclectic representation of their attitudes and descriptions of their experiences with the online instruction.

Research Questions 4 and 5 related to the Analyze and Design phases of the overall instructional design process prior to implementing the ISU A SECRET module. Along with the typical validation of the researcher's adherence to the ID model used for developing the A SECRET content, examination was undertaken – a deconstruction process – to identify design gaps within specific SPDU modules related to sensory modulation that were used as prerequisite content. The deconstruction was conducted using a pre-determined rubric (Strickland, 2012) in order to identify specific aspects of the module to review and rate.

The modified Delphi process facilitated validation from one SME and a panel of IDEs. The feedback that was obtained related to the design and development of the nine RLOs the researcher created for the ISU A SECRET module and verified that the researcher had adhered to the processes of the ADDIE Analysis and Design phases.

Findings and Discussion

Research Question 1 was developed to assess the performance of the participants (1st year MOT students) on the A SECRET case scenario selected response assessment. However, in order to determine the achievement as well as the reasoning process the participants employed during the assessment, the research question was parsed into two separate sub questions a) performance/achievement, and b) reasoning.

Research Question 1. What is the level of master of occupational therapy (MOT) students' problem-solving performance for A SECRET after viewing a simulation

case study of a child with Sensory Over Responsiveness (SOR) as measured by a post-simulation selected response assessment?

a. What is the achievement level of OT students in identifying the exemplary two A SECRET strategies appropriate for each element of A SECRET on an instructor-designed problem-solving case scenario?
b. How do OT students clinically discriminate between appropriate and in-appropriate A SECRET strategies on an instructor-designed problem-solving case scenario?

This is the first study of its kind exploring the effectiveness of an e-learning module to influence knowledge and reasoning of students who are occupational therapy majors. Previous research studies that have been conducted within the profession of occupational therapy have focused on using e-learning technologies to augment Level II clinical rotations (Creel, 2001; Murphy, 2004; Scanlan & Hancock, 2010, Thomas & Storr, 2005; Trujillo & Painter, 2009; Wooster, 2004), which typically occurs at the end of a program's course of study.

To investigate sub-question "a" for Research Question 1 (*What is the achievement level of OT students in identifying the exemplary two A SECRET strategies appropriate for each element of A SECRET on an instructor-designed problem-solving case scenario?*) descriptive statistics (mean, median, and standard deviation) were used. The results indicated the overall performance of the participants (n = 8) on the A SECRET selected-response assessment were two percentage points away from the initial achievement criterion (70%) established by the researcher during the Analyze phase of the instructional design process (see Appendix E). This indicates a positive finding

regarding the instructional influence of the ISU A SECRET module given that the participants were MOT students in their first year of study who had not completed any courses related to occupational therapy interventions (e.g., PTOT 5525/45, *Psychosocial Dysfunction in Occupation*; PTOT 5528/48, *Child & Adolescents Occupations*). Without implementing the A SECRET Case Scenario as both a pre- and post-measure, it is difficult to determine how much the RLOs could have impacted the participants' knowledge of A SECRET and their ability to apply it.

The participants' overall mean of correct rankings of the strategies was 68% on the selected-response portion of the A SECRET case scenario and is below the 70% targeted criterion established by the researcher as part of the ADDIE process. This threshold was determined due to several factors: 1) the novelty of the instruction, 2) the uniqueness of the content, and 3) the lack of in depth exposure to the intervention process for specific conditions and populations at this point in the program. The participants were able to reach, or exceed, the 70% criterion for only three elements of A SECRET: sensation, relationship, and task. It is difficult to ascertain why the participants performed well with these three elements and not on the other four. The participants scored less than 70% on the latter four elements (attention, emotion regulation, culture, and environment). Of those four, the developer of the A SECRET reasoning process, Dr. Lucy Miller, PhD OTR/L, reported that the element of "culture" was the most difficult

for her and her therapists at the SPDF to teach and their clients/caregivers to understand (personal communication November 2013).

Culture can be a difficult concept to define, especially in the context of the A SECRET reasoning approach, as it was poorly defined by Miller (2006) and Bailer and Miller (2011). Culture may be interpreted differently by therapists, parents, or caregivers. The RLO containing the element of culture could be enhanced with additional video-based examples to provide more diverse applications of this element's strategies with different sensory problem difficulties or different ages of children.

The participants' specific performances with sensation, relationship, and task exceeding the predetermined threshold are indicators that those RLOs were effective in informing them of the content and the process related to these portions of A SECRET. It is further argued that the participants' overall performance on the assessment (i.e., approaching the targeted threshold of 70%) adds merit to the effectiveness of the RLOs in teaching the MOT students to reason through challenging behaviors related to sensory processing through a simulated format.

Conversely, the participants had taken part in a course during the second semester in the MOT curriculum titled "5522 Occupational Performance" that focused on the task (activity) analysis procedure, which may be why they scored well on the "task" subtest on the assessment. However, it is difficult to ascertain why each participant accurately ranked each item on the relationship subtest. It may be assumed the items on that subtest

were too easy, or that the items ranked as appropriate vs. inappropriate were too obvious to the participants. However, it is also likely that the Relationship RLO was the most effective at conveying the information through the use of quality multimedia, content, case examples, and instructional design strategies employed.

Similar to this research study, other investigations have been conducted using RLOs to enhance learning within professional health care education and training. Specifically, Lymn et al. (2008) reported that RLOs enhanced the understanding of concepts in nursing students (*n* = 84) learning pharmacology. Lymn et al. (2008) conveyed that nursing students who used RLOs related to pharmacology to supplement face-to-face teaching indicated that the RLOs enhanced their understanding of the concepts. Beth-Hextall, Wharrad, and Leonardi-Bee (2011) found that students [nursing or public health (*n* = 38)] who used RLOs focusing on the topic of meta-synthesis research design reported increased self-perceived learning after using the RLOs. There are only two published studies, to date, using RLOs within occupational therapy entry-level education (Gee, Strickland, & Salazar, 2014) and practice (Gee, Moholy, Lloyd & Seikel, 2015). The findings from the Gee et al. (2014) and the Gee et al., (2015) investigations both indicated the value of RLOs as an adjunctive instructional resource to support student learning.

In the current research investigation, given that this was the participants' first exposure to the A SECRET reasoning process, their performance should be considered

promising. Furthermore, this is the first study of its kind exploring the use of RLOs to instruct students related to a reasoning process and, specifically, the A SECRET reasoning approach.

The findings from Research Question 1, sub-question B (*How do MOT students clinically discriminate between appropriate and in-appropriate A SECRET strategies on an instructor-designed problem-solving case scenario?*) used a general qualitative analysis procedure (Strauss & Glasson, 2008; Merriam, 1998).

The themes (see Figure 9) that emerged from the initial codes and the resultant categories produced a binary focus (e.g., positive or negative) that was inherent with how the participants' rationales were gathered from the A SECRET case scenario. As previously stated, the participants had to document a rationale for their ranking of pre-determined A SECRET strategies; specifically, for those they viewed as being appropriate (identified as 1 or 2) or inappropriate (5 or 6).

A total of five themes emerged from the qualitative data analysis of the participant rationales. These general themes included: 1) A SECRET Process; 2) Self-Regulation; 3) Safety/Security; 4) Participation; and, 5) the Occupational Therapy Process.

The themes that occurred from the participants' appropriate and inappropriate rationales may be related to several factors – the content of the RLOs, previous instruction, and pragmatics. The first two themes, A SECRET Process and Self-

Regulation, may be directly attributed to the A SECRET instruction via the RLOs. The "A SECRET Process" theme represents a strong indicator that the participants internalized the content and the process of A SECRET, and they were attempting to actively implement it as they discriminated between appropriate and inappropriate A SECRET strategies. This may be stronger evidence of the effectiveness of the RLOs' influence on learning and application than their performance on the A SECRET selected-response assessment.

The theme of "Self-Regulation" related to content was directly addressed as part of the RLO titled "Emotion Regulation". Furthermore, a concept known as the "ART of Therapy" was presented in a summary slide at the end of each RLO. The summary included a brief discussion addressing clients' ability to self-regulate as one of the aims of the A SECRET process, as well as when working globally with individuals who demonstrate sensory processing disturbances. Therefore, the theme of Self-Regulation emerging from the qualitative data was not surprising given the direct and indirect instruction related to self-regulation as well as the frequency of the instruction as it was presented on 10 occasions within the A SECRET instructional module.

The themes of Participation and the Occupational Therapy Process were likely influenced both by the A SECRET module and previous occupational therapy course work (PTOT 5522, *Occupational Performance*, PTOT 5521, *Self-Exploration in Occupation*, and PTOT 5513, *Occupational Therapy Professions*). The content of those

courses are rooted in the purpose and function of occupation as a therapeutic tool, in the *Occupational Therapy Practice Framework 3rd Edition* (AOTA, 2014), and in the process related to occupational therapy service delivery. It was evident within these two themes that the participants were using content gained from those courses to assist them in making decisions between A SECRET strategies that were appropriate and inappropriate.

The final theme of safety/security was more pragmatic in that the participants seemed to be concerned more with how the strategy would safely support the client, the other children in the video vignette, the client's parents, or the school community as a whole. It is easily assumed that the participants brought these perspectives with them to the MOT program at ISU. However, an underlying contribution may have provided a more balanced, sensitized perspective due to participants' exposure and/or adherence to AOTA's Code of Ethics and Ethical Standards (2010). Specifically, this theme is related to the principles of non-maleficence (doing no harm) and social justice (fairness to all) to which the participants seemed to be sensitized as they navigated through the assessment. When comparing the categories/themes to Mattingly and Fleming's (1994) seminal work on clinical reasoning among occupational therapy practitioners, the codes contained in the themes could be placed into two different categories: procedural reasoning, and conditional reasoning. There were a total number of 110 code categories that aligned with procedural reasoning and 38 with conditional reasoning with the majority of the codes

classified as procedural reasoning; thus, one would anticipate this with 1st year occupational therapy students who have had no exposure to direct treatment course work or clinical rotations.

As a point of reminder, procedural reasoning has been characterized as the process used to maximize a client's functioning; i.e., the process for solving problems of daily functioning that occur as a result of a physical or psychological condition (Mattingly & Flemming, 1994). Conditional clinical reasoning occurs when an occupational therapist is integrating his/her knowledge of the clients' medical/psychological/developmental condition and how it relates to functioning in the specific social and physical contexts on a daily basis (Mattingly & Fleming).

The participants were unable to develop or use narrative reasoning given that the client or the client's family presented in the case scenario was not available for reciprocated interaction. Furthermore, the participants in this study could not employ interactive reasoning for the same reason. The fact the A SECRET case scenario was a simulation limited the affordances for the participants to develop and/or display the use of the latter types of reasoning. However, it was interesting to capture how the participants were reasoning through the case scenario, and, specifically, to see how their early course work (PTOT 5521, *Occupational Performance*) provided a vernacular and framework in addressing the client's needs via the A SECRET process.

Research Question 2. What are OT students' perspectives regarding the A SECRET simulation vignette to support their application of the reasoning process?

Within the online attitudinal survey, the participants were asked to anonymously identify their perceptions related to the assessment procedures following the researcher's A SECRET module. Overall, the attitudes of the participants were favorable toward the simulation vignette used to assess their ability to discriminate between appropriate and inappropriate strategies related to A SECRET. The descriptive statistics related to the participants' attitudes toward the case scenario directions (M = 3.25; SD = 0.462), content (M = 3; SD = 0.755), and general preference for the case scenario (M= 3; SD = 0.755) were favorable. Yet, the participants vocalized concerns regarding the directions: They assumed they would have more time and access to the case scenario during the selected-response assessment. These perceptions likely lowered their overall ratings of the directions.

The descriptive statistics of attitudes toward the content of the A SECRET case scenario were M = 3, Mdn = 3 with a SD = 0.755. The participants' ratings were positive but not strong. There were several factors that may have contributed to this finding. First, this may have been a novel testing experience for the students as it was solely online. The type of assessment likely was unique to their academic experience when asked to discriminate between six distractors and then formulate a rationale to justify their ratings of the distractors (A SECRET strategies).

Finally, the descriptive statistics of the participants' ratings related to their overall preference for the case scenario were *M* = 3, *Mdn* = 3, and *SD* = 0.755. Again, there was a positive perception among the participants regarding the case scenario. Yet, their attitudes may have been blunted due to the novelty of the assessment. Overall, participant perceptions could have been higher due to two specific factors. First, eliminating or expanding the time limit to answer each question; and, second, providing unlimited access to the developmental history and the client video vignette. It is important to note that those two specific factors were deliberately controlled by the researcher. By incorporating a time limit within the assessment (ratings and justifying them with a rationale) and limiting access to the client information, the researcher was attempting to replicate some aspects of clinical practice. When in the moment of making decisions while observing a challenging behavior that is disrupting performance, the occupational therapist does not have the luxury to refer back to a video or other information. Instead, they rely upon memory and judgments made as they were initially accessing the information. Hence, these factors were foundational to ensure the experience was more than merely a selected-response test; that they are a reflection of clinical reasoning within a simulated occupational therapy session.

Exploring the rehabilitation literature (e.g., occupational and physical therapy, and speech language pathology) related to the findings of this study regarding the use of multimedia, simulation has been used more practically with inter-professional education

(IPE) as opposed to occupational therapy. Williams, Brown, Scholes, French, and Archer (2010) reported occupational therapy students who participated in an IPE DVD-based simulation scored the highest on the Learning Satisfaction Scale (comprehension, understanding, and usefulness of the information presented; sense of mastery to use the presented information) compared to physical therapy, paramedic, and nursing students. The Williams et al. study indicated that occupational therapy students highly valued the simulation process presented as part of their clinical affiliation.

Interestingly, the occupational therapy profession has begun exploring different types of simulation within entry-level OT as recently as 2014 (Bethea, Castillo, & Harvison) via an instructional practice pattern survey. Additional research has been conducted on the mechanics of simulation and possible implications for occupational therapy education and clinical practice (Stewart, 2001; Tomlin, 2005). Yet, at the time of this study, the literature was sparse related to outcomes and perceptions of simulation among consumers of occupational therapy education. These findings and descriptions of the participants' attitudes toward the A SECRET case scenario, though narrow, provide a starting point in addressing the gap in the profession's understanding regarding perceptions of the use of simulation as part of OT training.

Research Question 3. What are OT students' attitudes toward online delivery for a series of modules related to A SECRET?

The tools used to gather data to answer Research Question 3 included the majority of the questions from the post-instruction attitudinal survey measure; therefore, the following discussion of the findings related to this question will occur by construct: student attitudes toward the interface; attitudes toward instructional delivery; and, attitudes toward instructional delivery. An interpretation and discussion of the findings are presented within the following section.

***Student Attitudes toward the interface*.** Student attitudes toward the interface (i.e., images, video, audio, text, and controls) of the A SECRET module were positive with the means of each of the eight categories between $M = 3.12$ and $M = 3.62$. This indicates the participants either "agreed" or "strongly agreed" that the interface elements supported their content learning within the A SECRET module. Overall, their perceptions were positive in regard to the interface. Their positive inclinations may be due to the use of standard instructional media via Adobe *Captivate 8.0*. The participants' ages (21-27) may be another indicator that they have had exposure to similar interfaces. Additionally, the multimedia-based reusable information objects (RIOs) (text, video, audio, and images) were developed and imbedded within each of the nine A SECRET RLOs using sound instructional design procedures (e.g., Clark & Mayer, 2011; Gagne et al., 2005),

which may be another factor related to the favorable preference toward the interface elements.

***Attitudes toward instructional delivery*.** The participant attitudes toward the instructional delivery of SPDU preparatory content and the A SECRET module indicated there were diverse preferences in regard to delivery of the sensory processing content: online format (M = 3.37), blended (M = 3.25), or face-to-face format (M = 2.78); though a minor difference between their preference was toward online or blended formats. This is an important finding that supports further exploration of the use of RLOs to supplement instruction within the occupational therapy curriculum at ISU.

The participants also indicated the quality of SPDU and the A SECRET module were of higher quality than other sources they had accessed (e.g., websites, books, etc.) for their studies. This, again, may be due to the novelty of the sensory processing and A SECRET content using multimedia that included not only content but video clips exemplifying the concepts taught. As a part of the instructional design process, the researcher deconstructed a module for the SPDU to ensure the content, interface, and experience of the nine A SECRET RLOs were not extremely different from the SPDU modules.

Schaber, Wilcox, Whiteside, Marsh, and Brooks (2010) conducted a study to assess the effectiveness of using online vs face-to-face instruction to develop affective skills related to occupational therapy practice. The authors reported that students

performed better using online instruction (videos and narrated *PowerPoint* slideshows) than those who completed the instruction in a face-to-face format. Schaber et al. also indicated students who completed the online instruction viewed it to be a more effective means of increasing their learning than those who received face-to-face instruction for the same content.

Schaber et al. (2010) also recounted attitudes of participant preferences for online instruction being slightly more favorable than face to face instruction. However, caution is warranted, because of the diversity for occupational therapy students to demonstrate (cognitive, psychomotor, and/or affective) (ACOTE, 2011; NBCOT, 2013) in order to exhibit competency as an occupational therapy professional. There is a lack of evidence demonstrating one type of instructional delivery (online, blended, or face to face) is more appropriate with the development of the above-mentioned competencies as distinctly related to occupational therapy practice.

Attitudes toward instructional content. The participants' attitudes toward the SPDU preparatory instruction were more favorable than the instruction provided in the A SECRET module. The assessment may have been viewed as less than favorable due to several factors: 1) sequence of instruction; 2) disparity of difficulty within the assessments (SPDU and A SECRET); 3) novelty of the A SECRET Case Scenario Assessment; 4) their ability to self-reflect accurately on their own skills and abilities; and, 5) the lack of opportunity for real-world practice, feedback, and implementation.

Research Question 4. Does the Sensory Processing Disorder University online courses adhere to sound instructional design principles as measured on an instructional design assessment rubric?

An instructional design deconstruction process (Strickland, 2012) was conducted by the researcher. The results indicated the SPDU online course lacked several key instructional design elements. The results indicated gaps existed within the SPDU course: #102 SOR.

The SPDU online course lacked formative evaluation, advanced organizers, a learning objective for each learning object, a rationale for the sequence of instruction, and interactivity beyond a summative end-of-module assessment. After a thorough analysis, the researcher recommended the following enhancements to the SPDU module: 1) create objectives for each lesson/object within the module; 2) develop an advanced organizer to prime the learners regarding topics they had just completed and what was ahead; 3) imbed instructional activities to regain attention and assess knowledge; and, 4) frame case studies with background information and follow-up with summarized observation.

The process of deconstruction aided the researcher in 1) identifying the instructional design gaps with the SPDU modules; 2) purposefully remediating those gaps within the ISU A SECRET module; and, 3) incorporating similar design features to better project cohesion between the SPDU modules and the ISU A SECRET module so that transitions between the two entities in the future would exhibit a similar feel, look, design, and interface.

The deconstruction process that was developed by Strickland (2012) seems to be somewhat novel within the literature. At the time of this study, limited information regarding agreed upon constructs for analysis and the process of identification and remediation of instructional design deficits was found. There are some institutionally and commercialized approaches that assess the effectiveness of e-learning course work, but these were not chosen because they were beyond the scope of this study. Among those are the Quality Matters (2014) Rubric for Higher Education and the University of California: Chino rubric for online instruction (2014). Though these resources are highly reputable, they are also laborious and may have exceeded the parameters of the deconstruction process as they evaluate not only the interface of the instruction but also the given content. Additionally, these would have extended the duration of the project beyond the timeline originally indicated for the analysis of the SPDF instruction for the development of the ISU A SECRET module.

Additional resources available that may be used to assess RLOs, including the Learning Object Evaluation Tool (Kay & Knaack, 2008), Checklist for Evaluating SREB-SCORE Learning Objects (SREB, 2007), and the Learning Object Review Instrument (Nesbit, Belfer, & Leacock, 2003). These resources were not implemented as a part of the ID process as they are primarily used to assess the effectiveness of an RLO which was beyond the scope of this study.

Research Question 5. What is the instructional design compliance level for the ADDIE instructional design model used in the creation of A SECRET modules, as measured by a modified Delphi Technique?

The researcher attempted to adhere to the ADDIE model of instructional design in developing RLOs for the A SECRET content module. The findings from the eight Delphi surveys conducted served as confirmation that the process was indeed followed. The researcher utilized a modified Delphi technique. The Delphi panel consisted of three instructional design experts (IDE) and one subject matter expert (SME). (Due to the novelty of the instructional topic, there was only one SME from whom feedback could be obtained.)

The modified Delphi technique that was implemented aided the researcher by instilling a high level of motivation and competence in developing an instructional product that could be used well beyond the targeted audience within this study. Additionally, the process aided the researcher with grounding in both the theoretical and artistic aspects of the instructional design process (Moore, Bates, & Grundling, 2002). The ADDIE model of instructional design provided a systematic approach to design and development for this novel instructional approach within occupational therapy and for the topic (A SECRET), which has limited dissemination outside of print material at the time of this research. The process has opened the door for the researcher to not only develop online instruction for occupational therapy entry level education, but also for sub-skills related to assessment development, problem-based learning using simulated cases,

mechanisms for future applications of the ID process, and potential application of the A SECRET module to diverse populations (e.g., therapists, students, parents, teachers, and caregivers).

Implications

The findings from this study have several implications related to the A SECRET instructional modules. These are based on general instruction design processes and strategies. In reviewing feedback from the participants via the attitudinal survey and/or the focus group, the following recommendations were generated when the ISU A SECRET module is implemented in the future.

Instructional design recommendations

Instruction

- Insert quiz questions that are staggered through each A SECRET instructional lesson to replace the current configuration of three quiz questions at the end of each lesson. This may serve as an attention gaining practice as well as performance assessment for their understanding of the A SECRET process as they proceed through the module.

- Provide summary PDF handouts for learners to use during the multimedia instruction. This may aid learners in tracking the information presented, as well as eliciting follow-up questions to be discussed with the instructor or therapist and/or serve to reinforce the content.

- Add optional closed captioning to the A SECRET presentations to support learners' diverse preferences.

- Create chapters or section markers for each A SECRET lesson to assist with pacing and increase the learner control of what is viewed and when.

- Provide learners with worksheets with the A SECRET categories that enable or facilitate the learners to fill in the A SECRET strategies as they are identified and discussed in the video examples (see Figure 10 for a possible example of this).

Challenged Area (related to sensory)	Elements from "A SECRET"						
	Attention	Sensation	Emotion Regulation	Cuture	Relation-ships	Environment	Task

Figure 10. A SECRET Worksheet

- Develop a guided learning activity into the instructional sequence between the last instructional module (Module #9, A SECRET Summary) and the A SECRET case scenario assignment; i.e., the learners would watch the developer of the A SECRET approach conduct an interview with a caregiver concerning a challenging behavior related to sensory processing. The OT student would then track the strategies as they follow along with the video and input these into an assignment sheet.

- The modules were designed using Adobe *Captivate* 8.0 (2014) with the researcher designing and developing each learning object (LO) as granular content that could be combined or arranged to form an instructional sequence. The content that resulted reinforces the concept of "reusable" by allowing flexibility under a variety of possible sequencing demands. For instance, SPDF can utilize individual reusable information objects (RIOs) or complete RLOs to fulfill the needs of their varied clientele – instructors, clinicians, caregivers, or their clients. (Please refer to Figure 11 for an example.)

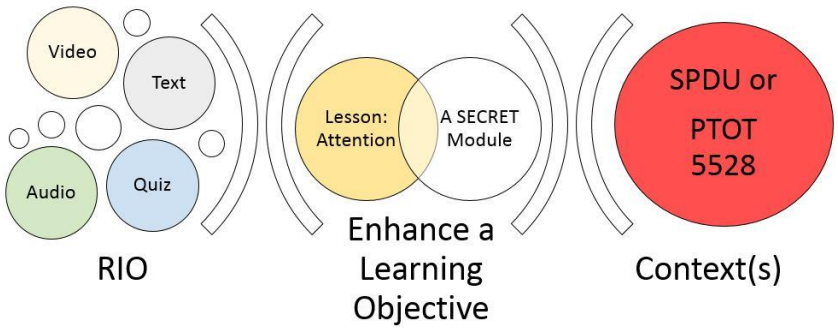

Figure 11. RIO and RLO Relationships

- Given that the A SECRET module does not integrate well with the SPDU's learning management platform/website, the A SECRET module that was designed and developed can be deconstructed and rebuilt into other platforms due to the foundational design of using RIOs. Not only will they have the RLOs but the RIOs so that they can be rebuilt in a system that they prefer.

- Conduct further analysis of the 9 RLOs using the Learning Object Evaluation Tool (Kay & Knaack, 2008), Checklist for Evaluating SREB-SCORE Learning Objects (SREB, 2007), and the Learning Object Review Instrument (Nesbit, Belfer, & Leacock, 2003).

Assessment

- Increase the time limit from 60 minutes to 90 minutes to provide the learners time to reflect and articulate their rationales for their rankings of appropriate and inappropriate strategies. There were several participants who indicated they did not have enough time to review the case material prior to the selected-response portion of the assessment. Increasing the time may provide this opportunity, as well as a higher degree of satisfaction in rating the strategies and providing a rationale for their rankings.

- Create options within the Moodle Assessment tool that allows the learner to view the developmental history and/or the video vignette once the selected response portion has begun.

Recommendations for Future Research

The purpose of this study was to explore the effectiveness of a series of online, module-based instructional RLOs targeted at entry-level, 1st year, Master of Occupation Therapy (MOT) students. The nature of the case study approach that was used had inherent limitations, including the inability to generalize, limited opportunity to conduct analysis beyond descriptive statistics, and a more narrow focus of questioning and discovery. Therefore, it is recommended that additional research be conducted using the same instructional content and delivery, but with an approach that permits a larger sample size and including using control and experimental groups.

An increased sample size would allow for the exploration of relationships between the four constructs on the attitudinal survey and/or different demographic profiles of the participants. The above mentioned design recommendations could be accomplished using MOT students enrolled in their first year from ISU as well as students from larger academic institutions in the region (e.g., Eastern Washington University, University of Utah, and Touro College: Henderson).

Using cohorts of students within the ISU MOT program could result in varying types of opportunities for further research and development. Assessing student performance across the three different cohorts within the ISU MOT program to evaluate

their performance with the selected-response case scenario, as well as tracking differences with how each cohort approached the case scenario would provide insight. Performance of participants who took part in the A SECRET Module as a stand-alone instructional activity versus those who had the module imbedded within a formal course relevant to the A SECRET process (e.g., PTOT 5528, *Child and Adolescent Occupations*, which occurs in the fall of the third year) could also be examined.

Another possibility would be to determine if the ISU A SECRET module could be implemented within courses that address adults diagnosed with mental illness who also exhibit symptoms related to sensory processing disturbances. A case study could be conducted assessing the attitudes of students regarding the existing content and the difficulty or ease of aligning the content to adult populations within PTOT 5525 (*Psychosocial Dysfunction in Occupation*).

For this study, the A SECRET instructional module was developed to target a variety of learners, although it was tested using 1st year MOT students. The module could be implemented in a different instructional context with caregivers, parents, and teachers of children with sensory processing disturbances. This could be conducted within the context of the SPDU to evaluate performance within the instructional content module and then the long-term outcomes (three, six, and 12 months post instruction) in order to assess retention as well as performance in implementing it with their own child in addressing behaviors that are rooted in sensory processing.

Summary

The purpose of this study was to explore the effectiveness of a series of online, module-based instructional RLOs targeted at entry-level, 1st year, Master of Occupation Therapy (MOT) students. Several notable findings emerged from the study that supports the use of RLOs within entry level occupational therapy. The results if this study suggest that using RLOs as a medium to teach a clinical reasoning procedure to address sensory processing related challenging behaviors using a simulated case scenario may be effective. The findings also suggest that occupational therapy students employ clinical reasoning that is rooted in the targeted content and draws from previous learning as well as their personal pragmatic experiences when presented in a simulated environment.

These findings lend support to the growing body of evidence (Lymn et al., 2008; Beth-Hextal et al., 2011; Gee et al., 2014; Gee, Moholy et al., 2015) toward the effectiveness of RLOs in health care professional education as well as the positive perceptions students have of using RLOs as an instructional tool. For the profession of occupational therapy, the process of designing and implementing a case-based simulation is significant given that the profession is moving toward an increased use of e-learning instructional methods, particularly in relation to real-world simulations, due to faculty shortages, growing workforce demands, limited staffing to provide trainees with oversight in certain practice settings, and competition for clinical site placements among the growing number of academic programs (Bethea, Castillo, & Harvison, 2014). The

findings also align with the profession's increased use of video simulation, second only to live actors (Bethea et al., 2014). The A SECRETE RLOS appear to support this trend. It was evident as a result of the participants' review of the A SECRET RLOs that they used the content and the guiding principles to assist them as they applied the process to a simulated case scenario. Though their decisions were influenced by previous instruction, guiding principles (ethics), and their personal perceptions, the intervention had an impact upon their success in adequately discriminating between appropriate and inappropriate strategies.

The findings also highlight the process of deconstruction as a valuable method. The application of the ADDIE model of instructional design facilitated identification of gaps in instruction, limitations within the design, and created opportunities for seamless development of the ISU A SECRET module to support the existing SPDU modules. Because this research study included the formal implementation of the ADDIE model as confirmed through a modified Delphi technique, the RLOs incorporated reliable instructional design strategies.

Overall, the findings from this study lay the groundwork for using RLOs as an augmentative instructional resource to support the development of clinical reasoning skills to address sensory processing difficulties in children. Additionally, the method provides a novel framework to develop additional case-based scenarios and assessments

to further challenge the reasoning abilities of more advanced students as they progress through an occupational therapy curriculum.

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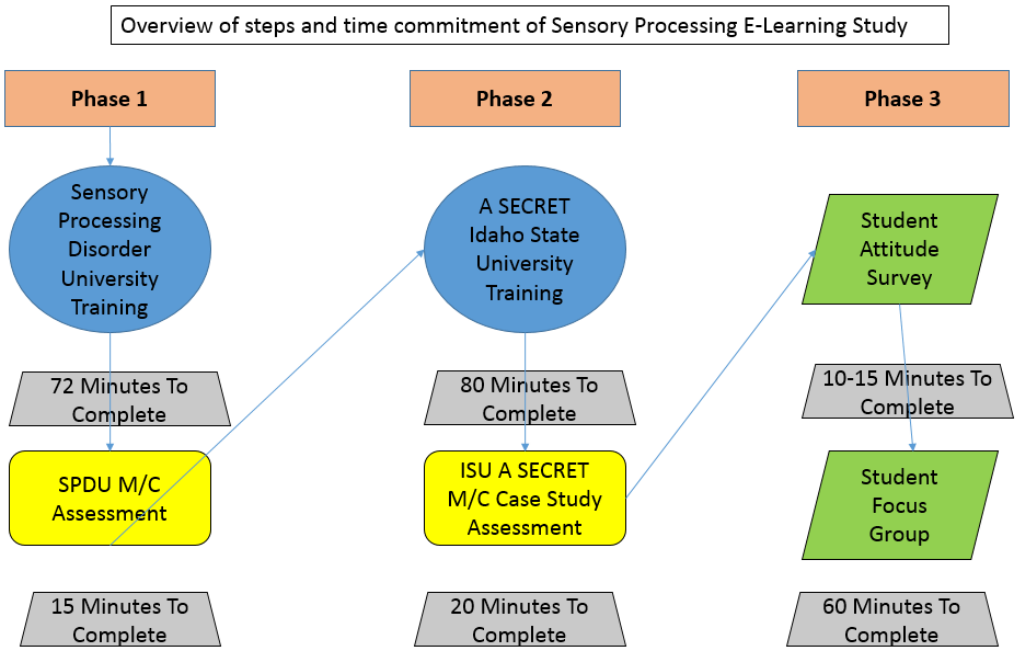
APPENDICIES

APPENDIX A

Study Overview


Overview of steps and time commitment of Sensory Processing E-Learning Study
Phase 1
Phase 2
Phase 3
Sensory Processing Disorder University Training
A SECRET Idaho State University Training
Student Attitude Survey
72 Minutes To Complete
80 Minutes To Complete
10-15 Minutes To Complete
SPDU M/C Assessment
ISU A SECRET M/C Case Study Assessment
Student Focus Group
15 Minutes To Complete
20 Minutes To Complete
60 Minutes To Complete

APPENDIX B

Finalized A SECRET Strategies

Question 1
Not yet answered
Points out of 1.00
Flag question
Edit question

Please rank each of the six listed strategies for A SECRET element of *ATTENTION*. The #1 being the most appropriate strategy and #6 being the least appropriate strategy to address the client's challenging sensory related behavior. Please be sure to review all six of the strategies and then rank each one. When ranking them take into consideration the clients occupational profile, the setting where the behavior is occurring and maintaining or increasing his social participation. You will be asked additional questions regarding the rationale of your choices in the next two questions.

The music leader could be more entertaining by being silly, using large gestures, stimulating props, or puppets.	Choose...
The music leader could wear brightly colored clothing that is easy for the children to see.	Choose...
Have Michael's parents provide him with extra applause and cheers.	Choose...
Have Michael placed next to different children in the class.	Choose...
Have the teacher/music leader only allow Michael to sing a few of the songs.	Choose...
Discuss with Michael's parents about medication options.	Choose...

Question 4
Not yet answered
Points out of 1.00
Flag question
Edit question

Please rank each of the six listed strategies for A SECRET element of *SENSATION*. The #1 being the most appropriate strategy and #6 being the least appropriate strategy to address the client's challenging sensory related behavior. Please be sure to review all six of the strategies and then rank each one. When ranking them take into consideration the clients occupational profile, the setting where the behavior is occurring and maintaining or increasing his social participation. You will be asked additional questions regarding the rationale of your choices in the next two questions.

Have Michael go out to the playground and spend time climbing, jumping and swinging for 15 minutes prior to the music program.	Choose...
Michael could give himself a self-hug or squeeze his hands together when he becomes overwhelmed during the music program.	Choose...
Have Michael use a heavier prop to hold on to or move during the songs.	Choose...
Have a Michael sit on a "Disco-sit" air cushion to give the opportunities for movement sensations while he sits.	Choose...
Provide more space on the stage for Michael to rock and spin during the music program.	Choose...
Have Michael use a weighted blanket to wrap around his body during the music program.	Choose...

Question 7
Not yet answered
Points out of 1.00
Flag question
Edit question

Please rank each of the six listed strategies for A SECRET element of *Emotion Regulation*. The #1 being the most appropriate strategy and #6 being the least appropriate strategy to address the client's challenging sensory related behavior. Please be sure to review all six of the strategies and then rank each one. When ranking them take into consideration the clients occupational profile, the setting where the behavior is occurring and maintaining or increasing his social participation. You will be asked additional questions regarding the rationale of your choices in the next two questions.

Michael's parents could assess is level of arousal prior to the program and give him activities to do to help him self regulate prior to the program.	Choose...
Have Michael's parents talk with him about the program and what will happen during each part of the music program.	Choose...
Have his teacher or classroom aide cue him to self-regulate and slow his body down during the music program.	Choose...
Provide Michael with sensory small fidget toys/objects to play with while he sits and sings.	Choose...
Include more music that has the all the children move their whole body instead of mostly their arms and their hands.	Choose...
Have the Michael decide if he wants to take part in the music program.	Choose...

Question **10**
Not yet answered
Points out of 1.00
Flag question
Edit question

Please rank each of the six listed strategies for A SECRET element of *CULTURE*. The #1 being the most appropriate strategy and #6 being the least appropriate strategy to address the client's challenging sensory related behavior. Please be sure to review all six of the strategies and then rank each one. When ranking them take into consideration the clients occupational profile, the setting where the behavior is occurring and maintaining or increasing his social participation. You will be asked additional questions regarding the rationale of your choices in the next two questions.

Have the school shorten the holiday program from 50 minutes to 25-30 minutes in duration to accommodate Michael's sensory needs.	Choose...
Have Michael and the other children stand in-between songs in order to acquire new props in order to get some movement.	Choose...
Michael's teacher/music leader could remove the types of props to avoid his overreaction to tactile sensations within the existing props.	Choose...
Include more music that has the all the children move their whole body instead of mostly their arms and their hands.	Choose...
Have Michael not take part in this type of music program in the future.	Choose...
Recommend to the school that they not do this type of school activity in the future.	Choose...

Question **13**
Not yet answered
Points out of 1.00
Flag question
Edit question

Please rank each of the six listed strategies for A SECRET element of *RELATIONSHIP*. The #1 being the most appropriate strategy and #6 being the least appropriate strategy to address the client's challenging sensory related behavior. Please be sure to review all six of the strategies and then rank each one. When ranking them take into consideration the clients occupational profile, the setting where the behavior is occurring and maintaining or increasing his social participation. You will be asked additional questions regarding the rationale of your choices in the next two questions.

Have Michael sit next to a teacher/aid who is calming and could discretely provide appropriate sensory input that he needs.	Choose...
Have the Michael sit next to his preferred classmates who will help him regulate and imitate appropriate behaviors, songs, and movements.	Choose...
Have Michael sit next to a teacher/aid that is calming and could provide appropriate sensory input he wants.	Choose...
Have Michael's mother sit with him on the stage during the program.	Choose...
Consider children that Michael does not know and place him next to them.	Choose...
Consider placing Michael next to other children who are controlling and unpredictable.	Choose...

Question **16**
Not yet answered
Points out of 1.00
Flag question
Edit question

Please rank each of the six listed strategies for A SECRET element of *Environment*. The #1 being the most appropriate strategy and #6 being the least appropriate strategy to address the client's challenging sensory related behavior. Please be sure to review all six of the strategies and then rank each one. When ranking them take into consideration the clients occupational profile, the setting where the behavior is occurring and maintaining or increasing his social participation. You will be asked additional questions regarding the rationale of your choices in the next two questions.

Have all the children stand during some of the songs to allow for movement opportunities.	Choose...
Place Michael at the outer edges of the group.	Choose...
Have Michael place cotton balls in his ears during the music program.	Choose...
Allow Michael to sit on a dynamic surface during the program.	Choose...
Have Michael wear headphones during the music program.	Choose...
Have the school place sound/noise cancelling boards in the auditorium they perform in.	Choose...

Question **19**

Not yet answered

Points out of 1.00

Flag question

Edit question

Please rank each of the six listed strategies for A SECRET element of *EMOTION REGULATION*. The #1 being the most appropriate strategy and #6 being the least appropriate strategy to address the client's challenging sensory related behavior. Please be sure to review all six of the strategies and then rank each one. When ranking them take into consideration the clients occupational profile, the setting where the behavior is occurring and maintaining or increasing his social participation. You will be asked additional questions regarding the rationale of your choices in the next two questions.

Have the teacher/music leader include planned movements in the song/music.	Choose...
Assign Michael simple physical tasks/jobs during or in-between songs.	Choose...
Have Michael focus less on the fine motor movements/gestures and more on singing the words of the songs.	Choose...
Have Michael focus less on singing and more on the fine motor movements/gestures.	Choose...
Have Michael only take part in the first 25 minutes of the music program.	Choose...
Remove Michael from the music program to sit in the audience.	Choose...

APPENDIX B-2

Raters Demographic Information

Year Graduated	Degree	Years working with pediatric populations
2007	Masters	6
2011	Masters	2
2010	Masters	3
1999	Clinical Doctorate	7
1981	Research Doctorate	32
2001	Bachelors	13
1991	Masters	22
1974	Research Doctorate	40

APPENDIX B-3

Aggregate of Raters Ratings of for the A SECRET Assessment

Attention										
Rater 1	**Rater 2**	**Rater 3**	**Rater 4**	**Rater 5**	**Rater 6**	**Rater 7**	**Rater 8**		**A rating 1 = exemplary to a rating of 6 = very poor.**	**Combined Scores**
2	5	5	2	5	3	4	5	**4/8 = B**	The music leader could wear brightly colored clothing that is easy for the children to see.	
1	1	2	4	2	1	2	1	**7/8 = T**	Have Michael placed next to different children in the class.	**Least Optimal Strategy Average = 67.5%**
5	3	1	6	1	2	3	2	**4/8 = T**	Have the teacher/music leader only allow Michael to sing a one or two of the songs.	
6	6	6	5	6	6	6	6	**8/8 = B**	Discuss with Michaels parents about medication options to assist him with his behavior.	
4	2	4	3	4	5	5	3	**5/8 = M**	Have Michaels parents provide him with extra cheers and feedback from the audience.	
3	4	3	1	3	4	1	5	**5/8 = M**	The music leader could be more entertaining by being silly, using large gestures, stimulating props, or puppets.	**Optimal Strategy Average = 39%**

Sensation

Rater 1	**Rater 2**	**Rater 3**	**Rater 4**	**Rater 5**	**Rater 6**	**Rater 7**	**Rater 8**		**A rating 1 = exemplary to a rating of 6 = very poor.**	
6	4	5	6	3	1	6	5	**5/8 = B**	Provide more space on the stage for Michael to rock and spin.	**Least Optimal Strategy Average = 35%**
4	1	2	4	2	5	1	4	**5/8 = T**	Have a Michael sit on a "Disco-sit" air cushion to give the opportunities for movement sensations while he sits and sings.	
5	6	3	5	4	6	5	6	**6/8 = B**	Provide Michel with a Therapy Ball to sit on during the music program.	

1	3	1	3	1	2	2	3	**5/8 = T**	Have Michael use a heavier prop to hold on to or move during the songs.	
2	5	6	1	6	3	3	1	2/8 = M	Michael could give himself a self-hug or squeeze his hands together when he becomes overwhelmed.	**Optimal Strategy Average = 42%**
3	2	4	2	5	4	4	2	4/8 = M	Have Michael use a weighted blanket to wrap around himself during the music program.	

Emotion Regulation										
Rater 1	**Rater 2**	**Rater 3**	**Rater 4**	**Rater 5**	**Rater 6**	**Rater 7**	**Rater 8**			
6	6	6	6	6	6	6	6	**8/8 = B**	Recommend that the teacher/music leader remind Michael of a punishment or a negative reinforce as a result of his behavior.	**Least Optimal Strategy Average = 71%**
3	3	5	3	5	4	4	1	5/8 = M	Have his teacher/aide/parent cue him to self-regulate and slow his body down.	
2	5	4	1	4	2	1	2	**5/8 = T**	Provide Michael with sensory small fidget toys/objects while he sits and sings.	
1	2	2	5	1	5	2	3	**5/8 = T**	Include more music that has the all the children move their whole body instead of just their arms and their hands.	
4	1	3	4	3	1	3	4	6/8 = M	Have Michaels parents talk with him about the sequence of activities he can plan on as a part of the program	**Optimal Strategy Average = 35%**
5	4	1	2	2	3	5	5	**3/8 B**	Have Michaels caregiver assess is level of arousal prior to the program and give him activities to do.	

Culture										
Rater 1	**Rater 2**	**Rater 3**	**Rater 4**	**Rater 5**	**Rater 6**	**Rater 7**	**Rater 8**			

5	5	6	5	6	6	6	6	**8/8 = B**	Have Michael not take part in the program in the future.	
3	2	2	3	3	1	3	2	**5/8 = M**	Michael's teacher/music leader could remove the types of props to avoid his overreaction to tactile sensations within the existing props.	**Least Optimal Strategy Average = 57%**
1	3	3	2	1	3	1	3	**5/8 = T**	Include more music that has the all the children move their whole body instead of mostly their arms and their hands	
2	4	4	1	4	4	2	1	**5/8 = T**	Have Michael and the other children stand in-between songs in order to acquire new props get some movement.	
4	1	2	4	2	2	4	4	**6/8 = M**	Have the school shorten the holiday program from 50 minutes to 25-30 minutes in duration.	
6	6	5	6	5	5	5	5	**3/8 = B**	Recommend to the school that they not do this type of school activity in the future.	**Optimal Strategy Average = 42%**

Relationships										
Rater 1	**Rater 2**	**Rater 3**	**Rater 4**	**Rater 5**	**Rater 6**	**Rater 7**	**Rater 8**			
6	5	6	6	6	6	4	6	**7/8 = B**	Consider placing Michael next to other children who are controlling and unpredictable.	**Least Optimal Strategy Average = 64%**
1	1	4	2	3	1	2	1	**6/8 = T**	Have the child sit next to his preferred classmates who will help him regulate and imitate appropriate behaviors.	
4	6	5	5	4	5	5	5	**6/8 B**	Consider children that Michael does not know and place him next to them.	
3	2	2	4	2	3	3	3	**5/8 = M**	Have Michael sit next to a teacher/aid that is calming and could provide appropriate sensory input he desires.	
2	3	1	1	1	2	1	2	**6/8 = T**	Have Michael sit next to a teacher/aid that is calming and could discretely provide appropriate sensory input he needs.	**Optimal Strategy Average = 49.5%**

5	4	3	3	5	4	6	4	5/8 = M	Have Michaels mother sit with him on the stage during the program.	

Environment										
Rater 1	**Rater 2**	**Rater 3**	**Rater 4**	**Rater 5**	**Rater 6**	**Rater 7**	**Rater 8**			
2	5	6	5	6	3	6	6	**6/8= B**	Have the school place sound cancelling boards in the auditorium the perform in.	**Least Optimal Strategy Average = 50%**
4	2	2	6	2	4	4	1	**3/8 M**	Have Michael place cotton balls in his ears.	
6	1	3	1	3	1	2	2	5/8 T	Place Michael at the outer edges of the group.	
5	4	4	4	4	2	5	3	5/8 M	Have Michael wear sound cancelling headphones.	
1	6	1	3	1	5	1	4	**4/8 T**	Have all the children stand during some of the songs to allow for movement opportunities.	**Optimal Strategy Average = 43.5%**
3	3	5	2	5	6	3	5	4/8 M	Allow the Michael to sit on a dynamic surface during the program.	

Task										
Rater 1	**Rater 2**	**Rater 3**	**Rater 4**	**Rater 5**	**Rater 6**	**Rater 7**	**Rater 8**	**Total**		**Combined**
6	6	6	6	6	6	6	6	**8/8 = B**	Remove Michael from the music program to sit in the audience.	**Least Optimal Strategy Average = 71%**
4	3	5	1	5	2	4	5	**3/8 = B**	Have Michael focus less on singing and more on the fine motor movements/gestures.	
5	2	4	5	4	1	5	4	3/8 = M	Have Michael focus less on the fine motor movements/gestures and more on singing the words of the songs.	
3	1	3	4	3	3	3	1	5/8 = M	Assign Michael simple jobs to help the music leader during the entire program.	
2	4	2	3	2	4	2	2	**5/8 = T**	Assign Michael simple physical tasks/jobs during or in-between songs.	**Optimal Strategy Average = 57%**

1	5	1	2	1	5	1	3	**5/8 = T**	Have the teacher/music leader include planned movements in the song/music.	

APPENDIX C

Occupational Therapy Students' Attitudes towards Online Instruction Related to Sensory Processing Interventions

OT Students Attitudes Towards E-Learning of Sensory Processing

5. The learner controls (start, pause, slider) used to navigate through each presentation were effective.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

6. The navigation within the A SECRET module assisted me with the movement through the module.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

7. The text-based information included within the module was important for learning the content of A SECRET.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

8. The placement of the text on each screen supported my understanding of A SECRET.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

9. The order of each lesson of A SECRET increased my understanding of the content presented in the A SECRET learning module.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

OT Students Attitudes Towards E-Learning of Sensory Processing

10. The process of logging into the ISU Moodle instructional site was not difficult.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

11. Moving from one A SECRET lesson to another was intuitive.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

12. Transitioning between the lessons contained in the A SECRET learning module to the A SECRET assessment (case scenario) was easy to navigate.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

OT Students Attitudes Towards E-Learning of Sensory Processing

Students' Attitudes Towards the Instructional Delivery

13. After completing the ISU "A SECRET module", I would prefer learning about sensory processing related topics through a face to face lecture.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

14. After completing the ISU "A SECRET module", I would prefer learning about additional sensory processing related topics through online instruction.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

15. After completing the ISU "A SECRET" module, I prefer learning about sensory processing related topics through both a combination of face to face and online instruction.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

16. Completing the sensory processing course (SPDU & ISU A SECRET Module) online allowed me to arrange my other commitments (other courses, work, family, etc.) more effectively.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

OT Students Attitudes Towards E-Learning of Sensory Processing

17. After completing the "A SECRET module", I would prefer to learn about additional sensory processing topics and interventions through online delivery in the future.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

18. After completing the A SECRET module, I would prefer to have additional occupational therapy instruction in an online format.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

19. The quality of the content presented in the online instruction is more information that I have received from other sources including: courses, therapists, books, website, etc.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

OT Students Attitudes Towards E-Learning of Sensory Processing

Students' Attitudes Towards the Instructional Content

20. The Sensory Processing Disorder University (SPDU) modules supported my understanding of sensory processing disorders in children.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

21. After participating in the Sensory Processing Disorder University (SPDU) modules, I felt prepared to learn about A SECRET.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

22. After participating in the "ISU A SECRET module", I am confident in my abilities to generate strategies for the individual characteristics (attention, sensation & emotion regulation) of a child.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

23. After participating in the "ISU A SECRET module", I am confident in my ability to generate strategies for the contextual elements (culture, relationships, environment, & task) of where a child functions.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

OT Students Attitudes Towards E-Learning of Sensory Processing

24. Participating in the "ISU A SECRET module" will provide me with therapeutic tools in preparation for a Level II fieldwork experience.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

OT Students Attitudes Towards E-Learning of Sensory Processing

Students' Attitudes Towards the Assessment Procedures

25. The information that was presented in the SPDU modules directly related to the questions on the SPDU assessment.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

26. The "ISU A SECRET" case scenario assessment directions were clear.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

27. The "ISU A SECRET" case scenario assessment allowed me to apply what I had learned from the A SECRET instructional module.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

28. I prefer to demonstrate my understanding of the instructional content through the use of a case study, similar to the ISU A SECRET Case Study/Quiz.

- ◯ Strongly Disagree
- ◯ Disagree
- ◯ Agree
- ◯ Strongly Agree

OT Students Attitudes Towards E-Learning of Sensory Processing

Demographic Information

29. Please identify the type of entry point you were admitted into the program as?

- ◯ Masters of Occupational Therapy (MOT)
- ◯ Bachelors of University Studies (BUS)

30. Please identify your age (in years).

31. Please identify what year of occupational therapy student you are?

- ◯ 1st year
- ◯ 2nd year
- ◯ 3rd year

32. Please list what discipline you received your undergraduate degree in (e.g. exercise science, special education).

33. Please identify your gender.

- ◯ Male
- ◯ Female

Other (please specify)

OT Students Attitudes Towards E-Learning of Sensory Processing

34. Please identify where you have completed your clinical observation hours in preparation for the MOT program.

- [ ] Pediatric Outpatient Hospital
- [ ] School Based
- [ ] Early Intervention
- [ ] Pediatric Inpatient Hospital
- [ ] Adult Inpatient Hospital
- [ ] Adult Home Health
- [ ] Adult Outpatient Hospital
- [ ] Skilled Nursing Facility
- [ ] Inpatient Behavioral Health
- [ ] Outpatient Behavioral Health
- [ ] Community Based Behavioral Health

35. Please identify what population you are planning on working with upon graduation from ISU's MOT program.

- [ ] Pediatrics (community/hospital)
- [ ] Pediatrics (school based)
- [ ] Adult Neurological
- [ ] Adult Physical Rehabilitation
- [ ] Geriatrics
- [ ] Hand Therapy
- [ ] Mental Health (adult)
- [ ] Other (please specify)

APPENDIX D

Focus Group Semi Structured Interview Guide

Semi Structured Interview Guide for Focused Group

Greetings, in the first portion of our discussion, I will ask you questions that relate to the instruction you took part in through the Sensory Processing Disorder University or SPDU. Specifically, we will discuss the assessment activities and the content presented through Idaho State University and the Sensory Processing Disorder University.

Part 1: Questions related to SPDU e-learning assessment and content.

SPDU Content

1. Did the sequence of SPDU modules support your increased understand of SPD and the associated SPD strategies and interventions?
    a. What did you prefer regarding the sequence of modules?
    b. What would you change regarding the sequence modules?

2. What were the specific modules of the SPDU that assisted you with generating A SECRET strategies to address the sensory related behavioral challenges within the case scenario at the end of the A SECRET instructional lessons?

3. What specific factors were missing from the SPDU modules that would have assisted you with the generation of A SECRET strategies to address the sensory related behavioral challenges in the case scenario at the end of the instructional modules?

SPDU Pre Treatment Assessment

4. What are your opinions of the SPDU Assessment procedure that you took part in at the end of the SPDU instructional modules?
    a. How many you think that they were appropriately matched with the objectives of the modules?
    b. How many of you thought that they were inappropriately matched?

Part 2: ISU A SECRET Instructional Experience

Interface

5. Let's discuss your overall impressions of the following portions of the A SECRET lessons?
    a. In what ways did the audio support your learning?
    b. How did the quality of the video reinforce the topics presented?
        1. In what ways did the clinician vignette within each A SECRET lesson support your understanding of the elements or steps of A SECRET?
        2. In what ways did the parent interview vignette within each A SECRET lesson support your understanding of the A SECRET process?

6. In general, which categories of A SECRET strategies were easier for you to understand and apply:
   a. the ***individual characteristics*** (attention, sensation & emotional regulation)?
   b. the ***contextual elements*** (culture, relationships, environment, tasks)?

Instructional Delivery

7. By the show of hands how many of you preferred to have instruction delivered in an online format?
   a. Why did you prefer the online format?
   b. For those who did not prefer the content delivered in the online format, why?
   c. Would you prefer to have additional content related to this topic or other occupational therapy topics in an online format?

8. What additional information or instructional activities would have helped you understand the A SECRET elements better?

ISU A SECRET Assessment

9. What are your opinions of the ISU A SECRET case scenario assessment procedure that you took part in at the end of the A SECRET instructional lessons?
   a. What are your opinions of not having a chance to go back and review the scenario during the assessment?

10. Did you have enough information from the ISU A SECRET module to generate strategies that you felt adequately address the sensory related behavioral challenge?
    a. What information assisted you in the case scenario?
    b. What information would you liked to have included in the A SECRET lessons?

11. What specific factors were missing from the ISU A SECRET module that would have assisted you with the generation of A SECRET strategies to address the sensory related behavioral challenges in the case scenario at the end of the instructional lessons?

12. What were the general influences (external to the ISU A SECRET lessons) for the A SECRET strategies you generated based upon the case scenario?

    a. How did you determine which of the 6 strategies were the most appropriate for the given element of A SECRET?

    b. How did you determine which of the 6 strategies were the least appropriate for the given element of A SECRET?

c. Were the influences based upon the instruction you may have received prior to the study? If so what were they?
   1. Occupational therapy coursework
   2. Clinical observations (preprogram admission observations or Level I)?
   3. Other print materials?
   4. Other electronic resources?

d. Were the influences based upon the instruction you took part in via the Sensory Processing Disorder University as a part of the study? If so what were they?

e. Were the influences based upon the A SECRET instructional modules as a part of the study? If so what were they?

13. I have provided you with a list and definitions of different types of clinical reasoning approaches that occupational therapist use as a part of clinical practice (see handout)?
   a. By the show of hands how many of you used procedural clinical reasoning?
   b. By the show of hands how many of you used narrative clinical reasoning?
   c. By the show of hands how many of you used pragmatic clinical reasoning?
   d. By the show of hands how many of you used narrative clinical reasoning?

   e. Those of you who used procedural clinical reasoning, how do you believed you used it?
   f. Those of you who used narrative clinical reasoning, how do you believed you used it?
   g. Those of you who used pragmatic clinical reasoning, how do you believed you used it?
   h. Those of you who used narrative clinical reasoning, how do you believed you used it?

Appendix E

SPDU Module #102 Course Deconstruction Rubric and Summary

ID Module Deconstruction
Evaluation Rubric

Reviewer: Bryan Gee

Module Title: SPDU Module #102 Sensory Over Responsivity

LO Title (if appropriate):

Please place an "x" for the rating that best represents your assessment of each criterion using the scale provided. Please comment on each of the criteria related to your specific rating. Summary comments relative to your ratings are required; use the reverse side of the form, if needed.

Criterion	Quality Rating				Criterion Specific Notes
	Poor	Fair	Good	Exemplary	
Instructional Design Elements					
Screen Interface Design (layout): Overall design supports processes for reducing cognitive load; screen elements are balanced with clear cues for learner interaction.		x			Each LO is listed on the home screen for the course. It is difficult to ascertain if they are listed in a specific hierarchal sequence or not, though it is assumed as such. The user needs to click on the hyper link to open the LO which is a flash type of play called 'Flow Player'. Flow player has two buttons to play and pause the instruction, a slide bar to move forward, and buttons for volume, mute and full screen.
2. Graphical elements: Still images are appropriate in size and detail; video images are embedded for ease of access; animations support the targeted content.			x		There are minimal images used in the LOs. Each video is imbedded within the movie which is layered on top of a presentation slide that includes texts containing the key words presented in the narration. Each video is attempting to provide an example related to the textual and audio content.
3. Textual elements: Font styles are appropriate for readability (i.e., typeface is clear for screen display; style and size are aligned with reading level of targeted learners; font effects support content cues).			x		The textual elements are presented with adequate color and contrast, sizing, and font style. The words are easy to read
4. Auditory elements: Sound is clear; pacing of narration, if used, supports the learner characteristics; appropriate cues for content are included.			x		The narration which is conducted by Dr. Lucy Jane Miller is very clear, but

Criterion	Quality Rating				Criterion Specific Notes
	Poor	Fair	Good	Exemplary	
					sometimes the pacing is a bit fast as the audio clips may be joint too closely together.
Navigation/hyperlinks: Navigational schemes are clear (i.e., graphical images incorporated into navigation are intuitive; placement of navigation is consistent; navigation is logical for movement through screens); all hyperlinks are active and appropriately directed to the resources.			x		All hyperlinks are active and work well depending upon the type of Internet connection the user has. There may be some loading time.
Content Elements					
Targeted Audience: The learners are aligned with the expected achievement criteria for the targeted content.		x			The targeted audience for the instructional module in question is very diverse and includes, teachers, therapists, and parents/caregivers. The expected achievement criteria is established and given to the user if and when they would like to obtain CE credits (therapists or teachers) which is passing 14 question multiple choice exam with 80% correct responses.
Learning Context: The content is grounded in a clear context; i.e., foundational knowledge; prerequisite skills and/or experiences; delivery parameters; alternative formats for diverse learners, etc.		x			
Subject Matter: The topical content is clearly conveyed and aligned with the targeted learner profile.				x	The SM is adequately conveyed and aligned with the targeted learner profiles of the parent, teacher and therapist.
Chunking: The content is broken into manageable components for the targeted content and learner profile.			x		The content of each module of SOR, SUR and SS/SC is broken up following the same structure which allows for the feel of consistency to the user across all three modules.
Sequencing: The content is logically arranged to transition from one concept to another, or from one level of content to the next and is aligned with the targeted learner profile.		x			The sequence of the LO's within the module are arranged in what seems to be a logical fashion from definitions to diagnostics. Though there is not clear rationale for it and the learner must assume that the content cannot be

Criterion	Quality Rating				Criterion Specific Notes
	Poor	Fair	Good	Exemplary	
					consumed outside of the hierarchal sequence.
Assessment: Assessment is aligned with the targeted content, including type of evaluation, time allocation, etc.		x			Six of the fourteen questions in the assessment measure is targeting the instructional module in question. The questions relate to diagnostics, identification, and transitions. Which seems to be geared more towards parents and teachers than therapists.
Instruction Elements (e.g., 9 Events of Instruction)					
Method for gaining learner's attention: There is a clear method for centering the learner to the content that is to be targeted.	x				There were little to no strategies used to gain the learners attention.
Identification/presentation of objective(s): The targeted objective is obviously presented to the learner.		x			1. Identify the three subtypes of Sensory Modulation Disorder (SMD) 2. Understand behavioral and emotional challenges of the three subtypes of SMD 3. Understand the functional challenges of each subtype of SMD These goals are presented to the learner at the beginning of three instructional modules. There are no learning objective(s) presented at the beginning of each LO. The goals that are stated are difficult to measure. Yet there is an indirect goal for folks who would like to obtain continuing education credit.
Technique for recall of prior knowledge: A method for helping the learner to recall prior knowledge is present.	**x**				This is not present in the module.
Content for targeted objective: The content presented aligned with the targeted objective; sequencing is logical for acquiring the learning.		**x**			The module is aligned each of the three instructional goals.
Strategies for guided learning: There is obvious tactics for guiding the learner through the targeted content	**x**				Outside of the assessment procedure there are no instructional activities that attempt to facilitate guided learning or processing through the new content.

Criterion	Quality Rating				
	Poor	Fair	Good	Exemplary	Criterion Specific Notes
Strategies for eliciting performance: The designer has incorporated methods for demonstrating performance through practice with the content.	x				Outside of the assessment procedure there are no instructional activities that attempt to facilitate guided learning or processing through the new content.
Mechanism for providing feedback: Methods for feedback on correction or confirmation of understanding of the targeted content are included.			x		The assessment that is optional for the learner to complete [in order to obtain CE credit (teachers/therapists)] but you do get immediate feedback whether your response is correct or if it is wrong.
Method for assessing performance: Plans for content assessment and feedback to the learner on achievement are included.			x		The method for assessing the learner's performance is voluntary in order to obtain professional continuing education credit. There are not incentives to facilitated nonprofessional participants to take part in the assessment measures. The assessment measure contains 14 questions where 6 of those questions are related to the module in question.
Method for enhancing retention and transfer: A plan for assisting the learner in retaining the new content is included; information for transfer of the knowledge to future learning is communicated.	x				Outside of the assessment procedure there are no instructional activities that attempt to facilitate guided learning or processing through the new content.

Summary Analysis:

Instructional Design Elements:

The overall feel, design and access of the interface is consistent with what users may encounter with other Web 2.0 technologies specifically accessing and using YouTube or other video formats used to deliver instruction. The user has access to five LOs that seem to be in priority order based upon how they are organized (hierarchy) but this is not clear to the user. That being said the interface is simple and consistent with other video players used in other multimedia formats. There is a consistent lack of interactivity with in the instructional module which has a negative impact

Content Elements:

The content area received an overall category of fair. The most consistent challenge within this area is that the instruction is targeting three types of learners who interact with the content of concern in three very different areas. This makes it difficult to establish consistent goals and objectives which are then to be aligned with assessment measures.

Instructional Elements (e.g., 9 Instructional Events):

The instructional module and the LOs within lacked several of the events of instruction. Which may not be a problem if viewing the instruction from the view of all three instructional modules (102 -104) When looking at the three modules tied together (102 SOR, 103 SUR, and 104 SS/SC) the assessment measure does add a needed component. The Module and LO's look to be plugged in with minimal resources to established interconnection between the modules, their alignment with the goals. The alignment of the LOs seem to be in a priority or hierarchy but this is not clear.

Strengths:

The existing content is well written using existing content used to target parents and teachers. The topics of each LO is consistent with the LOs within the other modules (103 & 104) which aids the user with feeling comfortable with the content titles as they proceed forward into later modules. Many of the video interviews and case study vignettes are helpful to reinforce the content.

Areas of Improvements:

The module needs to have established objectives for each LO, activities for guided learning and transfer and retention. Their needs to be more direction and justification for the module in question (#102 SOR) and its sister modules (103-104).

Specific ID Recommendations:

1. Establish the aims the module(s) so that they are more consumer friendly (parent, caregiver, teacher) instead being lean on information, directions, and goals so that there is less guessing for the novice user to the technology as well as to the content.
2. Creating an advanced organizer to demonstrate to the learner the sequence of the content.
3. Establish measureable objectives for the three goals that were established. Specifically it may be helpful to have an objective for each LO.
4. Develop instructional activities to reinforce learning from previous instruction though case studies and reviews.
5. Develop instruction activities within the LOs to frame case studies and validate what is being seen in video vignettes to ensure that the learner is interpret what they are intended to interpret (e.g. behaviors related to sensor processing difficulties).
6. Create opportunities to allow the user to interact with the content with the opportunity to review video vignettes, assess knowledge while in an LO, access a glossary as the user moves through the novel content.

APPENDIX F

Analyze Phase

Appendix F-1

ADDIE Analyze Phase
Task A01 – A03: Rationale/Goal/Objectives
Delphi Survey 01

A SECRET Delphi Survey 01

Delphi Survey 1 of 8

In order to best represent your feedback on the A SECRET instructional module project, I ask that you proceed as follows:
1. Carefully and thoroughly review the documents attached related to the project's rationale, the goal, and the objectives.
2. Mark the rating that most represents your expert evaluation for each item in the survey.
3. Please complete the survey no later than March 12th, 2014.

Feel free to contact Bryan Gee with any additional questions or concerns (geebrya@isu.edu or (208) 282-3629).

Project Rationale (Task A01)

1. The benefit of this project to the institution or organization is clearly stated.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

2. The benefit of this project to the targeted learners is clearly stated.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

3. The need for this project is clearly stated.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

4. The geographical scope for this project is clearly stated.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

A SECRET Delphi Survey 01

5. The project's subject matter is clearly stated.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

6. The project's approach to the problem is clearly stated.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

7. The project's expected outcome is clearly stated.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

Project Goal (Task A02)

8. The goal of this project is clearly stated.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

9. The goal of this project states what the project is to accomplish.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

A SECRET Delphi Survey 01

10. The goal of this project clearly indicates how the success will be indicated.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

11. The goal of this project appears to be achievable.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

12. The goal of this project appears to be significant to the field of knowledge indicated by the rationale.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

13. The goal of this project appears to be measurable.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

14. Considering the target population, the goal of this project appears to be realistic.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

A SECRET Delphi Survey 01

15. The outcomes of the project appear to be obtainable.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

Project Objectives (Task A03)

16. Each objective of this project module is aligned to the goal statement.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

17. Each objective of this project module contains a behavior/action verb that is measureable.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

18. Each objective of this project module has an identified audience.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

19. Each objective of this project module contains a degree/constraint that is clearly stated.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

A SECRET Delphi Survey 01

20. Each objective of this project module contains a condition/situation that is clearly stated.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

21. Each objective of this project is aligned to the identified audience.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

22. Please feel free add any other comments or concerns that you might have regarding the specific materials you reviewed.

APPENDIX F-2

Raw Data

Delphi Survey 1	SME Rating
DS_1_Q1	4
DS_1_Q2	4
DS_1_Q3	4
DS_1_Q4	4
DS_1_Q5	4
DS_1_Q6	4
DS_1_Q7	4
DS_1_Q8	4
DS_1_Q9	4
DS_1_Q10	4
DS_1_Q11	4
DS_1_Q12	4
DS_1_Q13	4
DS_1_Q14	4
DS_1_Q15	4
DS_1_Q16	4
DS_1_Q17	4
DS_1_Q18	4
DS_1_Q19	4
DS_1_Q20	4
DS_1_Q21	4

APPENDIX F-3

Delphi Survey 01

Summary Data

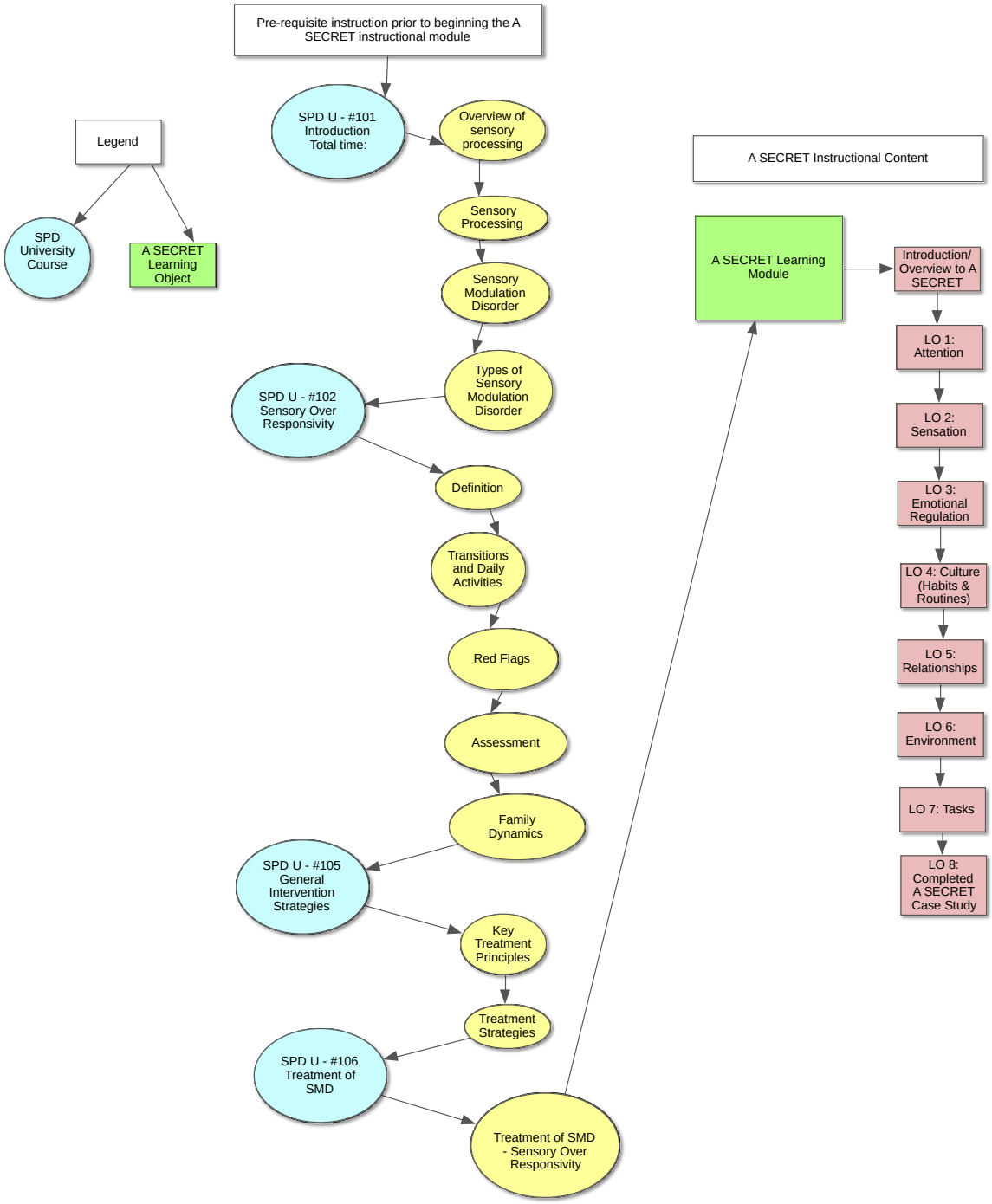
Delphi Survey 01: Descriptive Statistics of Responses

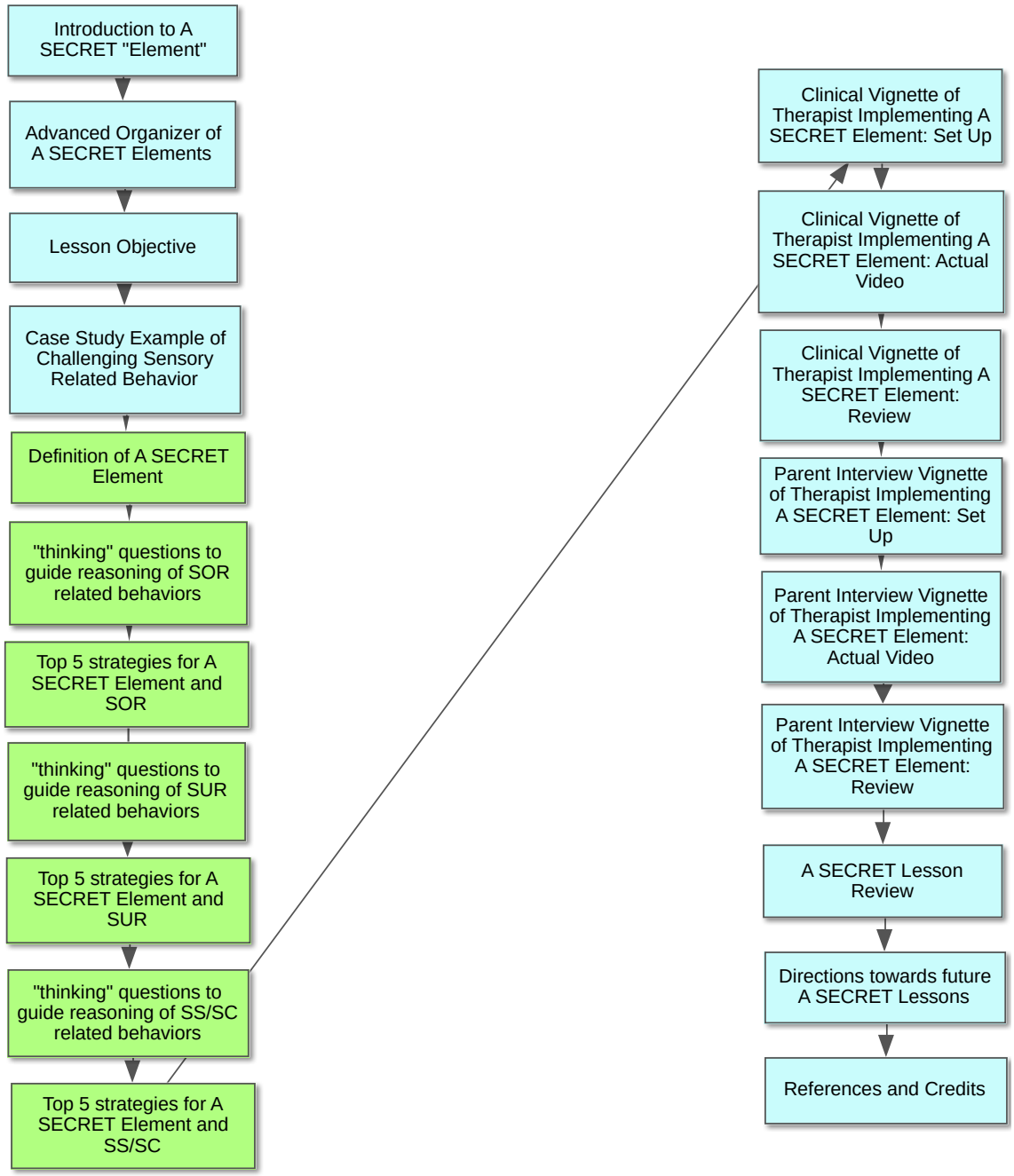
Survey	Number of Items	*M*	*SD*	*Mdn*
Delphi 01: Analyze Phase (Task A01-A03)	21	3.90	0.21	4

APPENDIX F-4

TASK A05: LEARNING HIERARCHY WITH CONCEPT MAP

AND SAMPLE RLO CONCEPT MAP




Introduction to A SECRET "Element"
Advanced Organizer of A SECRET Elements
Lesson Objective
Case Study Example of Challenging Sensory Related Behavior
Definition of A SECRET Element
"thinking" questions to guide reasoning of SOR related behaviors
Top 5 strategies for A SECRET Element and SOR
"thinking" questions to guide reasoning of SUR related behaviors
Top 5 strategies for A SECRET Element and SUR
"thinking" questions to guide reasoning of SS/SC related behaviors
Top 5 strategies for A SECRET Element and SS/SC
Clinical Vignette of Therapist Implementing A SECRET Element: Set Up
Clinical Vignette of Therapist Implementing A SECRET Element: Actual Video
Clinical Vignette of Therapist Implementing A SECRET Element: Review
Parent Interview Vignette of Therapist Implementing A SECRET Element: Set Up
Parent Interview Vignette of Therapist Implementing A SECRET Element: Actual Video
Parent Interview Vignette of Therapist Implementing A SECRET Element: Review
A SECRET Lesson Review
Directions towards future A SECRET Lessons
References and Credits

APPENDIX F-5

TASK A06: LEARING INFLUENCE DOCUMENT

Task A06 Learner Influence Document (LID)

Based on the project Objectives (Task A03) address the following:

Item/Event	Strategies
1. What events will the instructional designer utilize to gain the learner's attention?	Identifying the objective of the RLO. Case vignettes both text and multimedia.
2. What techniques will the instructional designer use to maintain the learner's attention?	Each RLO will utilize include audio and video vignettes to support the content and then follow up discussions deconstructing the vignettes. Each RLO will be no longer than 7-12 minutes.
3. What events will the instructional designer provide to stimulate recall of prerequisite knowledge?	The RLOs require that the learner remember content from the SPDU modules related to diagnosis and intervention strategies related to sensory processing difficulties.
4. How will the instructional designer communicate the learner's responsibility?	The responsibility of the learner is built within the overall structure of the research study and the learner is reminded of the sequence of events through the framework of the Moodle course and an advanced organizer.
5. What techniques will the instructional designer use to inform the learner of expected instructional outcomes?	The expected outcome of each RLO is summarized at the end of the RLO and the A SECRET Module.
6. What techniques will the instructional designer employ to produce inquiry?	Inquiry within the RLOs is established through guiding questioning that prompts the learner on how to apply a given element within the A SECRET framework.
7. How will the instructional designer enhance the learner's recall of the material (i.e., short-term memory)?	Initially the learner has to complete an assessment via the SPDU in order to proceed to the A SECRET module. Subsequent to the A SECRET module the learner completes a case study with M/C questions. Furthermore, each RLO has vignettes of a clinical and caregiver cases that they follow through each RLO and the module itself. The design of each RLO will employ many of the strategies identified by Mayer in order to reduce cognitive load.
8. How will the instructional designer elicit learner participation?	The learner's participation is elicited through the completion of various assessment procedures and attitudinal surveys where they not only demonstrate their performance but voice their opinions on the content and the instructional delivery of that content.
9. How will the instructional designer utilize feedback gathered from the instructional and the practice materials?	Feedback for the SPDU module assessment is given to the learner after each question (only if they responded correctly). Feedback regarding the learner's performance will be given once they have completed the focus groups at the end of the study.
10. What learner capabilities will the instructional designer develop as an outcome?	The primary aim is the application of the A SECRET framework as a clinical reasoning resource that they then would use during therapy and to educate caregivers/
11. How has the instructional designer responded to any particular learning trait?	The instructional designer is presenting the content through text, video and audio, again taking into account many of the strategies recommended by Mayer. Ultimately the RLOs would appeal to diverse learning styles.

Item/Event	Strategies
12. How will the instructional designer assess learner satisfaction with the instruction?	An attitudinal survey at the end of the study.
13. How will the instructional designer accommodate any learner disability (psychomotor, cognitive, & emotional)?	The RLOs will be multimedia with text, audio, video and images. The RLOs will be viewed basically as movies and thus the ID will strive to ensure that the RLOs are 508 compliant.

APPENDIX F-6
Task A04 – A06: Learning Outcomes Statement/Learning Hierarchy w/ Content Map/Learning Influence Document
Delphi Survey 02

A SECRET Delphi Survey 02 Interation 2

Introduction

Delphi Survey 2 of 8

In order to best represent your feedback on the A SECRET instructional module project, I ask that you proceed as follows:
1. Carefully and thoroughly review the documents attached related to the project's learning outcomes statement, learning hierarchy and concept map, and learner influence document.
2. Mark the rating that most represents your expert evaluation for each item in the survey.
3. Please complete the survey no later than May 3rd, 2014.

Feel free to contact Bryan Gee with any additional questions or concerns (geebrya@isu.edu or 208-282-3629).

Learning Outcomes Statement (Task A04)

1. There is an accurate description of the short-term learning effect for each of the objectives for each RLO/Module.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

2. There is an accurate description of the long-term learning effect for each of the objectives for each RLO/Module.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

3. There is an accurate description of how the learner is expected to change as a result of each objective.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

Page 1

A SECRET Delphi Survey 02 Interation 2

4. There is an accurate description of what is expected to change as a result of the instruction.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

Learning Hierarchy w/ Content Map (Task A05)

5. It appears the concept map accurately presents each goal of the project. (Refer to Task A02 for the goal(s), if needed.)

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

6. It appears the concept map accurately presents each of the primary objectives. (Refer to Task A03 for the objectives, if needed.)

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

7. Using the project goal(s) and the project objectives [Task A02 and Task A03] as references, it appears the concept map accurately links each goal with its corresponding primary objective(s).

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

A SECRET Delphi Survey 02 Interation 2

8. Using the project objectives as reference, it appears the concept map accurately presents each of the secondary objectives.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

9. Using the project objectives as reference, it appears the concept map accurately links each of the secondary objectives to its corresponding primary objective.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Strongly Disagree
- ◯ Disagree

10. The total concept map presents an accurate depiction of the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

11. The total concept map displays appropriate linkages among all elements.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

12. The essential prerequisite learner knowledge/skills to achieve the objectives are identified.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

A SECRET Delphi Survey 02 Interation 2

13. The hierarchal map provides accurate graphical representation of the prerequisite knowledge/skills the learner is to achieve before commencing work on this project's objectives.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

Learner Influence Document (Task A06)

14. There is an accurate description for gaining the learner's attention within each RLO/Module.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

15. There is an accurate description for maintaining the learner's attention within each RLO/Module.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

16. There is an accurate description for assessing the learner's satisfaction within the instruction for each RLO/Module.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

A SECRET Delphi Survey 02 Interation 2

17. There is an accurate description of how each RLO/Module will include a focus on specific learner capabilities.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

18. There is an accurate description of how each RLO/Module will stimulate the learner's prerequisite knowledge (or skills).

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

19. There is an accurate description of how each RLO/Module will accommodate identified learner disabilities.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

20. There is an accurate description of how each RLO/Module will respond to a participant's particular learning traits.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

21. Please feel free add any other comments or concerns that you might have regarding the specific materials you reviewed.

APPENDIX F -7
Delphi Survey 02 Raw Data

Delphi Survey 2	SME Rating
DS_2_Q1	4
DS_2_Q2	4
DS_2_Q13	4
DS_2_Q4	4
DS_2_Q5	4
DS_2_Q6	4
DS_2_Q7	4
DS_2_Q8	4
DS_2_Q9	4
DS_2_Q10	4
DS_2_Q11	4
DS_2_Q12	4
DS_2_Q13	4
DS_2_Q14	4
DS_2_Q15	4
DS_2_Q6	4
DS_2_Q7	4
DS_2_Q18	4
DS_2_Q19	4
DS_2_Q20	4
DS_2_Q21	4

Appendix F-8
Delphi 02 Survey Summary Data

Survey	Number of Items	*M*	*SD*	*Mdn*
Delphi 02: Analyze Phase (Task A04-A06)	21	3.95	0.22	4

APPENDIX F-9

TASK A07: LEARNER CHARACTERISTICS PROFILE

GENERAL INFORMATION

	Data Collected	Resources Used
1.0 General Characteristics of the Target Population	First year master's level occupational therapy students (adult learners)	Demographics based upon inclusion criteria
1.1 Age Range	18-55 years of age	Demographics based upon inclusion criteria
1.2 Gender Distribution	50% male – 50% female	Demographics data obtained as a part of pre module survey
1.3 Special Needs	None specifically identified but may be reported by participants. The ID will assume that some of the learners may have an impairment that may impact their ability to view or hear the content within the learning modules.	Self-reported by participants but not required.
1.4 Ethnic/Cultural Background	80% non-Hispanic/white, other 20% of Hispanic, Asian, Native American, Pacific Islander and/or African American backgrounds.	Demographics data obtained as a part of pre module survey
1.5 Language Distribution	English as a primarily language	Demographics based upon inclusion criteria and obtained as a part of pre module survey

ACADEMIC INFORMATION

	Data Collected	Resources Used
2.0 What entry behavior(s) is needed for learner success?	8th grade reading level	Program admissions pre requisites
2.1 What is the attitude toward target content material?	Participants will need to have interest in learning about sensory processing, intervention and reasoning skills to address sensory processing related behaviors.	Program admissions pre requisites
2.2 What is the learning preference(s) or modality?	E-learning, audio, visual, text instructional modalities.	Inclusion criteria
2.**3 Is it reasonable to expect that the material to be cognitively learned by these learners?**	Yes.	
2.4 What is a reasonable time frame for the targeted content to be mastered?	15 minutes per RLO.	Inclusion criteria
2.5 What is the motivation for the learner to complete this targeted content?	Obtain knowledge regarding sensory processing and sensory processing difficulties, learn to use strategies to address sensory processing related behaviors.	Inclusion criteria, they will gain exposure in advance to their peers and other therapists. They will also receive a certificate of completion of the training.

PRIOR INFORMATION NEEDED

	Data Collected	Resources Used
3.**0** **What prior knowledge is needed for learner success?**	Have an understanding of some behavior, development in children.	Program admissions pre requisites
3.**1** **What prerequisite cognitive skills are needed for learner success?**	Problem solving	Program admissions pre requisites
3.**2** **What prerequisite motor skills are needed for learner success?**	Ability to operate a computer, turning it on and off, typing with a standard keyboard and operating a mouse type device.	Inclusion criteria
3.**3** **What previous experience would the learner have that would inhibit success?**	Previous education and training related to sensory processing.	Inclusion criteria

APPENDIX F -10
Delphi Survey 03

A SECRET Delphi Survey 03 Iteration 2

Introduction

Delphi Survey 3 of 8

In order to reach consensus with task A 08 the Delphi Survey 3 the 2nd iteration will be re-administered with revised documents for your feedback.

In order to best represent your feedback on the A SECRET instructional module project, I ask that you proceed as follows:
1. Carefully and thoroughly review the documents attached related to the project's pedagogical influence statement.
2. Mark the rating that most represents your expert evaluation for each item in the survey.
3. Please complete the survey no later than May 17th, 2014.

Feel free to contact Bryan Gee with any additional questions or concerns (geebrya@isu.edu or 208-282-3629).

Pedagogical Considerations Statement (Task A08)

1. It appears that the Pedagogical Considerations Statement has addressed issues regarding instructional sequencing.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

2. It appears that the Pedagogical Considerations Statement has addressed issues regarding instructional motivation.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

3. It appears that the Pedagogical Considerations Statement has addressed issues student-centered learning.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

A SECRET Delphi Survey 03 Iteration 2

4. It appears that the Pedagogical Considerations Statement has addressed issues regarding use of an advance organizer or some system to clarify the instructional goals and objectives of the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

APPENDIX F-11

Delphi Survey 03 Raw Data

Delphi Survey 03	SME Rating
DS_3_Q1	4
DS_3_Q2	4
DS_3_Q3	4
DS_3_Q4	4
DS_3_Q5	4
DS_3_Q6	4
DS_3_Q7	4
DS_3_Q8	4
DS_3_Q9	4
DS_3_Q10	4
DS_3_Q11	4
DS_3_Q12	4
DS_3_Q13	4
DS_3_Q14	4

APPENDIX F-12
Summary of Responses

Delphi Survey 03: Descriptive Statistics of Responses

Survey	Number of Items	*M*	*SD*	*Mdn*
Delphi 03: Analyze Phase (Task A07-A08)	14	3.94	0.21	4

APPENDIX F-13

Task A09 & A10

TASK A10: LEARNING ENVIRONMENT AND DELIVERY OPTIONS

Learning Environment and Delivery Options Statements
Task A10

Learning Environment Statement

Prompt	Response
1.0 What are the specific electronic hardware requirements for this project?	The learner must have a laptop, tablet or PC that can connect to the internet, access the SPDU portal and the ISU Moodle portal. They must have the ability to stream audio and video.
2.0 What are the specific requirements in order to easily navigate the content materials (e.g., web–based items, 508-compliant resources, etc.)?	It is recommended that the learner use Mozilla Firefox as this web browser works best with the ISU Moodle portal.
3.0 What are the specific software requirements needed for the learner to use the instructional materials?	The learner should have Adobe Flash in order to view the audio/video presentations in the SPDU and Moodle portals.
4.0 What are the specific learner requirements for successful use of the materials (e.g., sufficient time to complete assignments in one session, alternative formats, etc.)?	The learner will have two weeks to view both the SPDU modules (2 hours and 14 minutes) and the ISU A SECRET module (70 minutes).
5.0 Include any statements that may have been used to support Item #13 in Task A07: Learner Influence Document (LID).	

Delivery Options Statement

Prompt	Response
1.0 What is the delivery plan for the targeted content's assignments?	The instruction delivery for the assessment measure will be a quiz (assessing their application of the A SECRET approach)

	within Moodle that has the learner review a case (audio/video included) and then complete up to14 multiple choice type questions.
2.0 What is the delivery plan for the targeted content's activities?	The ISU A SECRET module will be delivered via Moodle as the LMS and each RLO will be built using either Adobe Captivate or StoryLine.
3.0 What is the delivery plan for the targeted content's assessments?	
4.0 What is the plan for learner self-directed materials (e.g. homework, out-of-class assignments)?	The instructional material essentially is out of class material as it is not tied to a specific course taken by 1st year OT students. Yet the researcher will be emailing participants reminders regarding content they have completed and content remaining and the time limit to access the content.
5.0 What is the plan for any remedial learning based on pre-test assessment feedback?	Learners who experience difficulty with the pre module assessment via the SPDU will be allow to review the content and complete the assessment until they have received and 80% score.
6.0 What is the plan for the availability of auxiliary formats for materials (e.g., printed, podcast, Wiki, blog, twitter feeds, etc.)?	None.
7.0 What is the plan for student-to-instructor communication and interactions (e.g., face-to-face, synchronous, asynchronous, etc.)?	As a part of the instruction portion of the study, the researcher will contact the participants via email in order to appraise them of their progress with the completion of the instructional material and assessment procedures.

APPENDIX F - 14
Delphi Survey 04

A SECRET Delphi Survey 04

Survey Directions

Delphi Survey 4 of 8

In order to best represent your feedback on the A SECRET instructional module project, I ask that you proceed as follows:
1. Carefully and thoroughly review the documents attached related to the project's learner constraints statement, learning environment and delivery options statement.
2. Mark the rating that most represents your expert evaluation for each item in the survey.
3. Please complete the survey no later than May 27th, 2014.

Feel free to contact Bryan Gee with any additional questions or concerns (geebrya@isu.edu or 208-282-3629).

Learner Constraints Statement (Task A09)

1. It appears the learner constraints (e.g. Time, budget, user preferences, organizational culture, available technology) have been reasonable addressed for target population of the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

2. It appears the learner constraints regarding ADA considerations have been reasonable addressed for target population of the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

3. It appears the learner constraints regarding network software have been reasonable addressed for target population of the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

Learning Environment & Delivery Options Statement (Task A10):

A SECRET Delphi Survey 04

4. It appears the specific hardware requirements have been accurately described for the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

5. It appears the specific requirements to navigate the content materials have been accurately described for the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

6. It appears the specific software requirements have been accurately described for the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

7. It appears the specific learner requirements have been accurately described for the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

8. It appears the specific learner requirements for students with physical disabilities have been accurately described for the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

A SECRET Delphi Survey 04

9. It appears the specific learner requirements for students with English as a second language have been accurately described for the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

10. It appears the specific learner requirements for students with cognitive disabilities have been accurately described for the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

11. It appears the specific delivery plan for content assignments has been accurately described for the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

12. It appears the specific delivery plan for content activities has been accurately described for the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

13. It appears the specific delivery plan for content assessments has been accurately described for the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

A SECRET Delphi Survey 04

14. It appears the specific delivery plan for content assessment feedback has been accurately described for the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

15. It appears the specific delivery plan for student-to-instructor communication has been accurately described for the project.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

16. Please feel free add any other comments or concerns that you might have regarding the specific materials you reviewed.

APPENDIX F-15
Delphi Survey 04 Raw Data

Delphi Survey 04	SME Rating
DS_4_1	3
DS_4_2	4
DS_4_3	4
DS_4_4	3
DS_4_5	3
DS_4_6	3
DS_4_7	4
DS_4_8	3
DS_4_9	4
DS_4_10	4
DS_4_11	4
DS_4_12	4
DS_4_13	4
DS_4_14	3
DS_4_15	3

APPENDIX F-16
Delphi 04 Survey Summary Data

Delphi Survey 04: Descriptive Statistics of Responses

Survey	Number of Items	*M*	*SD*	*Mdn*
Delphi 04: Analyze Phase (Task A09-A10)	15	3.90	0.29	4

APPENDIX F - 17

TASK A11: PROJECT TIMELINE

Project Timeline
Task A11

Task	Task Detail	Time (in weeks)	Comments
Analysis Phase			
1	**Create Task A01**: Project Rationale	1 week	
2	**Create Task A02**: Project Goal	1 week	
3	**Create Task A03**: Learning Objectives	1 week	
4	Delphi Survey 01: Send to SMEs and IDEs		
5	Delphi Survey 01: Feedback received		
6	Delphi Survey 01: Data analysis		If the results are acceptable, produce the final version of Tasks A01 through A03. If the results are not acceptable then repeat the process.
7	**Create Task A04**: Learning Outcomes	1 week	
8	**Create Task A05**: Learning Hierarchy w/ Concept Map	1 week	
9	**Create Task A06**: Learning Influence	1 week	
10	Delphi Survey 02: Send to SMEs and IDEs		
11	Delphi Survey 02: Feedback received		
12	Delphi Survey 02: Data analysis		If the results are acceptable, produce the final version of Tasks A04 through A06. If the results are not acceptable then repeat the process.
13	**Create Task A07**: Learner Characteristics	1 week	
14	**Create Task A08**: Pedagogical Consolations	1 week	
15	Delphi Survey 03: Send to SMEs and IDEs		
16	Delphi Survey 03: Feedback received		
17	Delphi Survey 03: Data analysis		If the results are acceptable, produce the final version of Tasks A07 through A08. If the results are not acceptable then repeat the process.
18	**Create Task A09**: Learner Constrains		
19	**Create Task A10**: Learning environment and Delivery options		
20	Delphi Survey 04: Send to SMEs and IDEs		
21	Delphi Survey 04: Feedback received		
22	Delphi Survey 04: Data analysis		If the results are acceptable, produce the final version of Tasks A09 through A10. If the results are not acceptable then repeat the process.
23	**Create Task A14**: Project Timeline		
24	Delphi Survey 05: Send to SMEs and IDEs		
25	Delphi Survey 05: Feedback received		

APPENDIX G
DESIGN PHASE

APPENDIX G - 1
TASK D01: TASK ANALYSIS

Task Analysis Worksheet
Task D01

Task/Subtask	Knowledge Type (**D, P, S**)	Prerequisite (**Y/N**)	Environment Factors (**T, E, M, P, L**)	Domain Type (**C, M, A, MO**)	Importance (**H, M, L**)	Difficulty (**H, M, L**)
Objective 1: Demonstrate the application of the Attention strategy within A SECRET as depicted in a video simulation with a score of at least 70% on a multiple choice assessment measure.						
Identify the challenging behavior (sensory related) that is exhibited by the child/client.	D	Y	T, M, P, L	C	H	L
Determine what sensory processing category the challenging behavior may be related to (SOR, SUR, SS/SC, or SBMD).	D	Y	T, M, P, L	C	M	M
Identify possible sub strategies that may exist to increase or decrease the child's/client's attention to the challenging experience.	S	Y	T, M, P, L	C	M	M
Determine if the sub strategy that aligns with the child's/client's neurological sensory system (vestibular, tactile, olfactory, etc.)	S	Y	T, M, P, L	C	M	M
Determine if sub strategy aligns with the environment where the challenging behavior occurs.	S	Y	T, M, P, L	C	M	M
Determine if the sub strategy may be implemented by the responsible caregiver for the given environment where the behavior occurs	S	Y	T, M, P, L	C	H	M
Choose a sub strategy to implement in order to modify the child's attention towards, away from a problematic sensation.	D	Y	T, M, P, L	C	M	M
Objective 2: Demonstrate the application of the Sensation strategy within A SECRET as depicted in a video simulation with a score of at least 70% on a multiple choice assessment measure.						
Identify the challenging behavior (sensory related) exhibited by the child/client.	D	Y	T, M, P, L	C	H	L
Determine what sensory processing category the challenging behavior may be related to (SOR, SUR, SS/SC, or SBMD).	D	Y	T, M, P, L	C	M	M

Identify possible sub strategies that may exist to increase or decrease the child's/client's reaction towards a sensation.	S	Y	T, M, P, L	C	M	M
Determine if the sub strategy that aligns with the child's/client's neurological sensory system (vestibular, tactile, olfactory, etc.)	S	Y	T, M, P, L	C	M	M
Determine if sub strategy aligns with the environment where the challenging behavior occurs.	S	Y	T, M, P, L	C	M	M
Determine if the sub strategy may be implemented by the responsible caregiver for the given environment where the behavior occurs.	S	Y	T, M, P, L	C	H	M
Choose a sub strategy to implement in order to modify the child's attention towards, away from the problematic sensation.	D	Y	T, M, P, L	C	M	M
Objective 3: The learner will demonstrate the application of the Emotion Regulation strategy within A SECRET as depicted in a video simulation with a score of at least 70% on a multiple choice assessment measure.						
Identify the challenging behavior (sensory related) exhibited by the child/client.	D	Y	T, M, P, L	C	H	L
Determine what sensory processing category the challenging behavior may be related to (SOR, SUR, SS/SC, or SBMD).	D	Y	T, M, P, L	C	M	M
Identify possible sub strategies that may exist to enhance the child's/clients ability to regulate their emotions during or after the challenging behavior.	S	Y	T, M, P, L	C	M	M
Determine if the sub strategy that aligns with the child's/client's neurological sensory system (vestibular, tactile, olfactory, etc.)	S	Y	T, M, P, L	C	M	M
Determine if sub strategy aligns with the environment where the challenging behavior occurs.	S	Y	T, M, P, L	C	M	M
Determine if the sub strategy may be implemented by the responsible caregiver for the given environment where the behavior occurs.	S	Y	T, M, P, L	C	H	M

Choose a sub strategy to implement that will aid the child/client with regulating their emotions during or after the challenging behavior that reduces the intensity, frequency or duration of a challenging behavior.	D	Y	T, M, P, L	C	M	M
Objective 4: The learner will demonstrate the application of the Culture strategy within A SECRET as depicted in a video simulation with a score of at least 70% on a multiple choice assessment measure.						
Identify the challenging behavior (sensory related) exhibited by the child/client.	D	Y	T, M, P, L	C	H	L
Determine what sensory processing category the behavior may be related to (SOR, SUR, SS/SC, or SBMD).	D	Y	T, M, P, L	C	M	M
Identify possible sub strategies that may exist to modify the culture/current condition when or where the child functions and experiences the challenging behavior.	S	Y	T, M, P, L	C	M	M
Determine if sub strategy aligns with the environment where the challenging behavior occurs.	S	Y	T, M, P, L	C	M	M
Determine if the sub strategy may be implemented by the responsible caregiver for the given environment where the behavior occurs.	S	Y	T, M, P, L	C	H	M
Choose a sub strategy to implement in order to modify the child’s/client's culture/current condition that reduces the intensity, frequency, or intensity of a challenging behavior.	D	Y	T, M, P, L	C	M	M
Objective 5: The learner will demonstrate the application of the Relationships strategy within A SECRET as depicted in a video simulation with a score of at least 70% on a multiple choice assessment measure.						
Identify the challenging behavior (sensory related) exhibited by the child/client.	D	Y	T, M, P, L	C	H	L
Determine what sensory processing category the behavior may be grounded in (SOR, SUR, SS/SC, or SBMD).	D	Y	T, M, P, L	C	M	M
Identify possible sub strategies using the child's relationships to assist them with decreasing the duration, frequency and intensity of the challenging behavior.	S	Y	T, M, P, L	C	M	M
Determine if sub strategy aligns with the environment where the challenging behavior occurs.	S	Y	T, M, P, L	C	M	M

Determine if the sub strategy may be implemented by the responsible caregiver for the given environment where the behavior occurs.	S	Y	T, M, P, L	C	H	M
Choose a relationship sub strategy to implement in order to decrease the frequency, intensity or duration of the challenging behavior.	D	Y	T, M, P, L	C	M	M
Objective 6: The learner will demonstrate the application of the Environment strategy within A SECRET as depicted in a video simulation with a score of at least 70% on a multiple choice assessment measure.						
Identify the challenging behavior (sensory related) exhibited by the child/client.	D	Y	T, M, P, L	C	H	L
Determine what sensory processing category the behavior may be grounded in (SOR, SUR, SS/SC, or SBMD).	D	Y	T, M, P, L	C	M	M
Identify a list of possible sub strategies that may exist to modify the environment.	S	Y	T, M, P, L	C	M	M
Determine if sub strategy aligns with the environment where the challenging behavior occurs.	S	Y	T, M, P, L	C	M	M
Determine if the sub strategy may be implemented by the responsible caregiver for the given environment where the behavior occurs.	S	Y	T, M, P, L	C	H	M
Choose a sub strategy to implement through the modification of the environment that will reduce the intensity, duration or frequency of the challenging behavior.	D	Y	T, M, P, L	C	M	M
Objective 7: The learner will demonstrate the application of the Task strategy within A SECRET as depicted in a video simulation with a score of at least 70% on a multiple choice assessment measure.						
Identify the challenging behavior (sensory related) exhibited by the child/client.	D	Y	T, M, P, L	C	H	L
Determine what sensory processing category the behavior may be grounded in (SOR, SUR, SS/SC, or SBMD).	D	Y	T, M, P, L	C	M	M
Identify a list of possible sub strategies that may be used to modify the task in which the child/client is engaging in.	S	Y	T, M, P, L	C	M	M
Determine if sub strategy aligns with the environment where the challenging behavior occurs.	S	Y	T, M, P, L	C	M	M

Determine if the sub strategy may be implemented by the responsible caregiver for the given environment where the behavior occurs.	S	Y	T, M, P, L	C	H	M
Choose a sub strategy to implement that creates a new task or modifies an existing task to reduce the frequency, duration or intensity of a challenging behavior.	D	Y	T, M, P, L	C	M	M

Explanation of Terms (Legend):

Column 2: Knowledge Type (**D, P, S**)

Instructions: Mark the column with D, P, or S (choose only one knowledge type)

According to Jonassen (1999), there are three types of knowledge for an Instructional Designer to consider: (1) Declarative (**D**), (2) Procedural (**P**), and (3) Structural (**S**).

Declarative Knowledge is defined as factual knowledge (e, g., the capital of Florida is Tallahassee), and may be thought of in at least two ways: episodic (knowledge is organized by where, when, who) and semantic knowledge (knowledge of the meaning of words, facts, geography, and things that are classified). Declarative knowledge may also include information about concepts.

Procedural Knowledge is defined as a listing of "how" something is done (e.g., driving a car or preparing a recipe). This knowledge type details activities required to perform a specific task. Procedural Knowledge transforms detail tasks into a habitual process (e.g., fire drill instructions, pre-flight check list).

Structural Knowledge is defined as the linking of one concept to another in order to solve a problem, generate a plan or a strategy by setting conditions for a set of procedures.

Column 3: Prerequisite

Instructions: Mark the column with **Y** (yes) or **N** (no) (choose only one)

If prerequisite knowledge or skills are required in order to complete the task (e.g., A student cannot add 3+2 unless the concept of the number 3 and 2 exist prior to the act of addition), then this should be identified in the worksheet.

Column 4: Environmental Factors (**T, E, M, P, L**)

Instructions: Mark the column with **T** (**T**ime), **E** (**E**nvironment), **M** (**M**edia), **P** (**P**hysical condition), or **L** (**L**earning environment) (multiple factors may apply; choose accordingly)

Time is the estimated time to complete the task. (You will use this estimate to compare actual student time to complete the task. The difference between these two quantities (e.g., estimated time 23 min, actual time 36 min, difference 13 minutes) may result in instructional changes to improve performance.

Environment: Examine the literature to see what environmental concerns are related to the specific task requirements. You may also need to consult with one, or more, instructional experts to gain insight.

Media: What is the best media that will assist in the targeted learners in completing the task? You may need to consider your response to the Environment issue (see above) since this may impose conditions on the media that is best given any environmental constraints.

Physical Condition: These are not the same as Environmental issues (see Watson, 1997: *Task Analysis: An Occupational Performance Approach*. Bethesda, MD: The American Occupational Therapy Association). You may wish to examine Card, Moran, and Newell (1983) in relation to GOMS (Goals, Operators, Methods, Selection) in job task analysis for business, industry, and government.

Learning environment: Considerations should include connectivity, type of hardware/software and peripherals, user interface designs for computer assisted Instruction and distance learning interfaces.

Column 5: Domain (**C, M, A, MO**)

Instructions: Mark the column with **C** (**C**ognitive), **M** (**M**otor), **A** (**A**ffective), or **MO** (**Mo**tivation) (choose only one)

The terms Cognitive, Motor, and Affective are related to Gagne's taxonomy of learning outcomes and are somewhat similar to Bloom's taxonomies of cognitive, affective, and psychomotor outcomes.

Motivation refers to Maslow's Hierarchy of Needs:

Self-Actualization (reaching one's maximum potential)
Esteem (respect from others, self-respect, recognition)
Belonging (affiliation, acceptance, being part of something)
Safety (physical safety, psychological security)
Physiological (hunger, thirst, rest)

Column 6: Importance (**H, M, L**)

Instructions: Mark the column with **H** (**H**igh), **M** (**M**edium), or **L** (**L**ow) (choose only one)

As an instructional designer you will want to determine if a specific task (or subtask) is highly important, of medium importance, or would actually be considered as being at a low level of importance.

Column 7: Difficulty (**H, M, L**)

Instructions: Mark the column with **H** (**H**igh), **M** (**M**edium), or **L** (**L**ow) (choose only one)

Similar to Importance, the instructional designer will want to determine the "weight" of the level of difficulty for the specific task. This my impact the amount of time, or placement, or degree of support needed within the instructional project in order to accomplish this task.

APPENDIX G - 2
ADDIE Design Phase
Task D01: Task analysis
Delphi Survey 05

A SECRET Delphi Survey 05

Project Tasks

Delphi Survey 5 of 8

In order to best represent your feedback on the A SECRET instructional module project, I ask that you proceed as follows:
1. Carefully and thoroughly review the documents attached related to task analysis.
2. Mark the rating that most represents your expert evaluation for each item in the survey.
3. Please complete the survey no later than June 20th, 2014.

Feel free to contact Bryan Gee with any additional questions or concerns (geebrya@isu.edu or 208-282-3629).

1. The objectives for the tasks are clearly stated.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

2. The listed tasks are aligned with each objective.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

3. The knowledge identification types are aligned with each task.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

4. The prerequisite decisions (Y/N) are aligned with each task.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

A SECRET Delphi Survey 05

5. The environmental factors identified are aligned with each task.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

6. The domain types are aligned with each task.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

7. The importance levels are aligned with each task.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

8. The difficulty levels are aligned with each task.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

9. Please feel free add any other comments or concerns that you might have regarding the specific materials you reviewed.

APPENDIX G-3
ADDIE Design Phase
Task D01: Task analysis
Delphi Survey 05

Raw Data

Delphi Survey 05	SME Rating
DS_5_1	4
DS_5_2	4
DS_5_3	4
DS_5_4	3
DS_5_5	4
DS_5_6	4
DS_5_7	4
DS_5_8	4

APPENDIX G-4
ADDIE Design Phase
Task D01: Task analysis
Delphi Survey 05

Summary Data

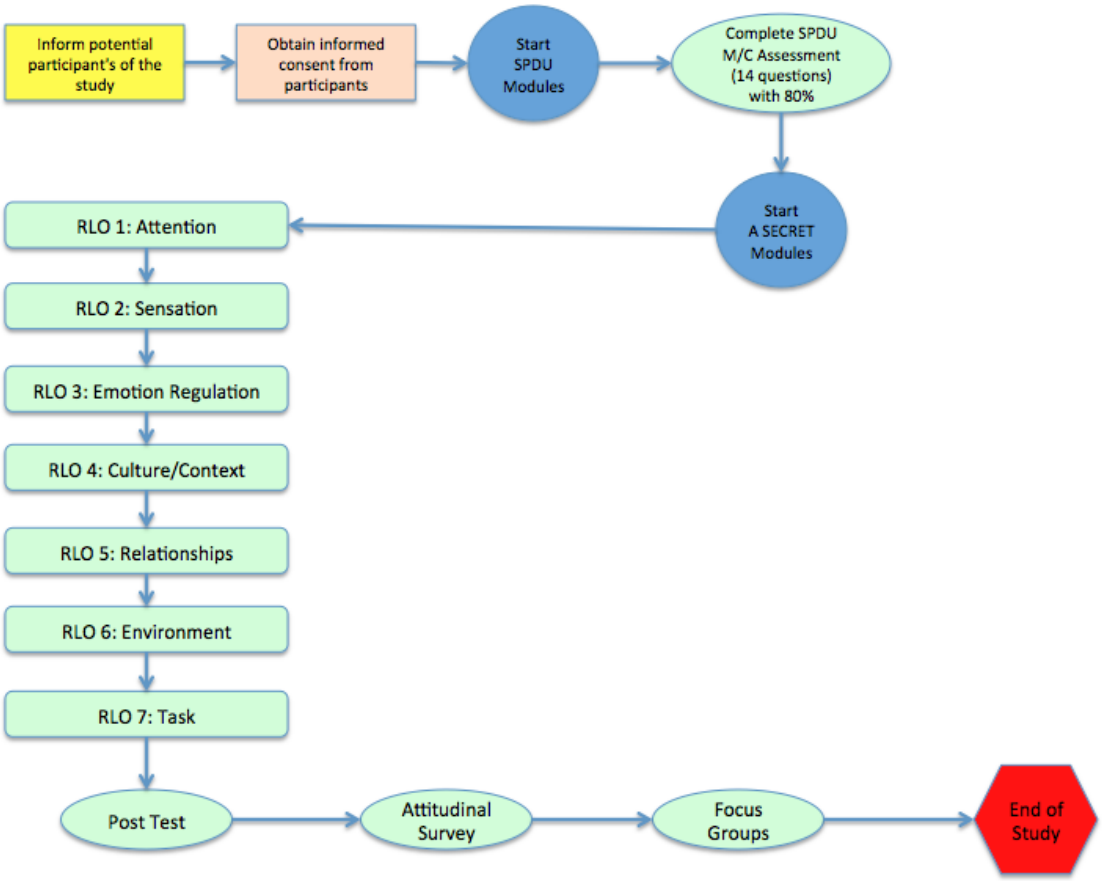
Survey	Number of Items	*M*	*SD*	*Mdn*
Delphi 05: Design Phase (Task D01)	8	3.90	0.29	4

APPENDIX G-5

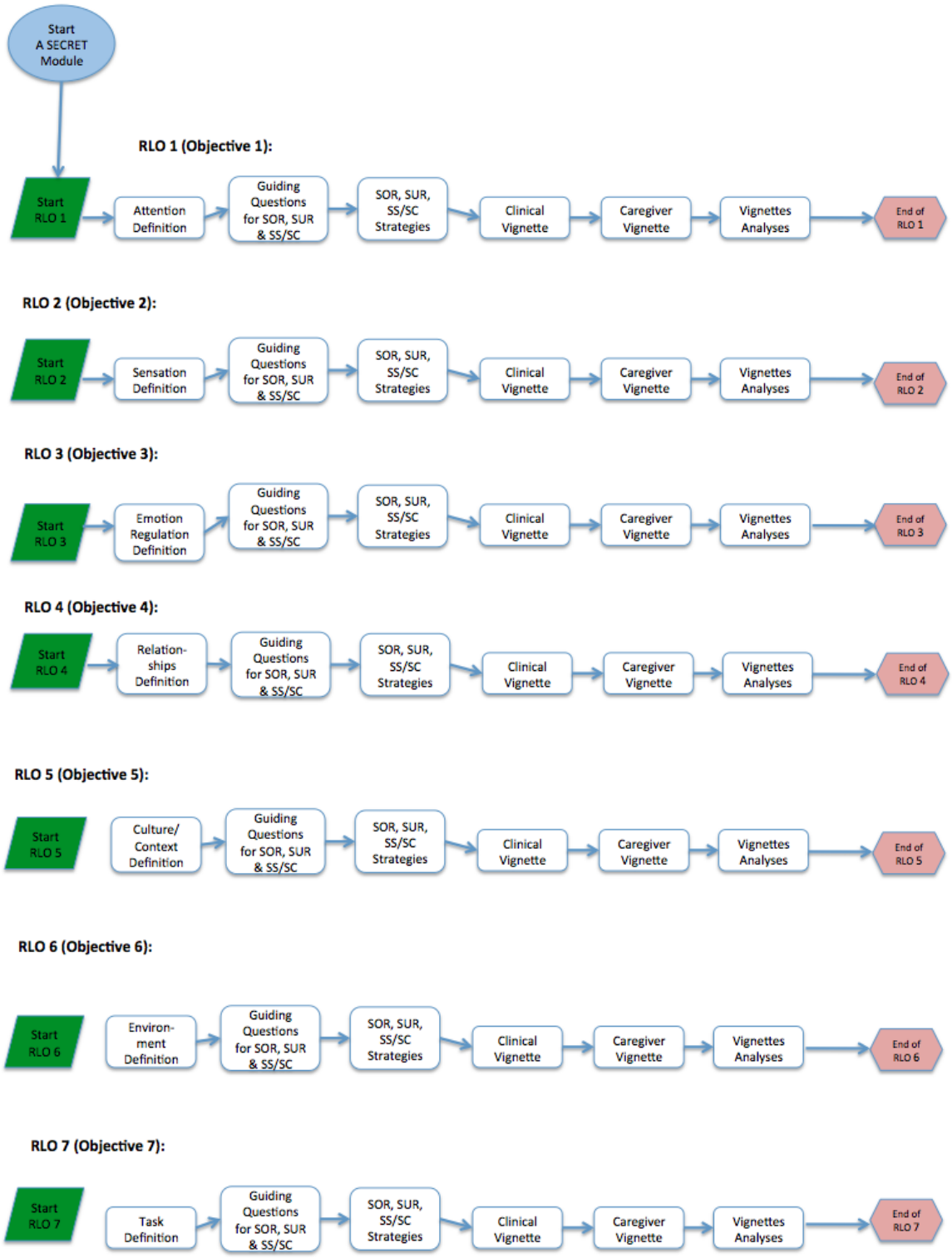
TASK D02: FLOWCHARTS WITH CONTENT

Overall Project Flowchart

Task D02



Flowcharts with Content



APPENDIX G - 6
ADDIE Design Phase
Task D02: Flowcharts with Content
Delphi Survey 06

A SECRET Delphi Survey 06_Iteration 2

In order to best represent your feedback on the project, I ask that you proceed as follows:
1. Carefully and thoroughly review the documents attached to the email containing the link to this survey
2. Mark the rating that most represents your expert evaluation for each item in the survey.
3. Return your completed instrument via reply email as an attachment no July 24th, 2014.

Flowcharts with Content

1. Each objective for the module is represented in the flowchart.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

2. Appropriate content in support of each objective is represented in the flowchart.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

3. Assessments for each objective are represented in the flowchart.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

4. Appropriate decision points are represented in the flowchart.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

A SECRET Delphi Survey 06_Iteration 2

5. The content within the flowchart is appropriately sequenced for the module.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

6. Please feel free add any other comments or concerns that you might have regarding the specific materials you reviewed.

APPENDIX G-7
Delphi Survey 06
Flow Charts
Raw Data

Delphi Survey 06	SME Rating	IDE Rating	IDE Rating	IDE Rating
DS_6_1	4	4	4	4
DS_6_2	4	4	4	2
DS_6_3	4	4	4	3
DS_6_4	4	4	3	2
DS_6_5	4	4	3	3

APPENDIX G - 8
Delphi Survey 06
Flow Charts
Summary Data

Survey	Number of Items	*M*	*SD*	*Mdn*
Delphi 06: Design Phase (Task D02)	5	3.89	0.30	4

APPENDIX G-9

TASK D03: STORYBOARDS

Storyboards
Task D03

RLO 1 (Objective 1): Attention

Title Slide: A SECRET: Introduction to Attention

A SECRET: Introduction to Attention

Notes: This slide introduces the learner to the topic as well as how they will navigate through the lesson e.g. the navigation buttons and how to exit or re enter the lesson at a later time.

Page design features:

Number of lines: 2

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 45 point

Font Style: Calibri

Font Placement: Centered

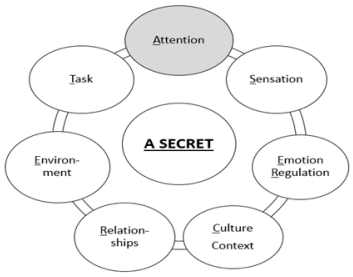
Video: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Overview of the Elements of A SECRET



Notes: This slide is an both an advanced organizer which reminds the learner of the several elements of the process in which they will cover as well as which topic they are currently interacting with. There will be narration presenting this to the learner.

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 18-24 point

Font Style: Calibri

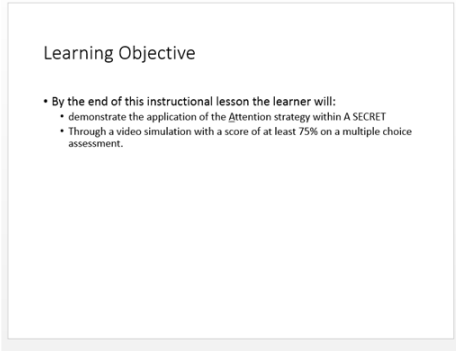
Font Placement: Centered

Video: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.



Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 18-33 point

Font Style: Calibri

Font Placement: Left justified bullets

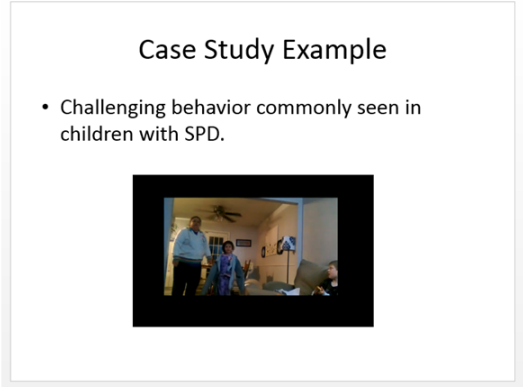
Video: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide presents the learning objective to the learner for the Attention RLO. This slide will be narrated reviewing the basic point of the learning objective.



Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32-44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: Centered

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present a case study of a child who is experiencing a challenging behavior commonly seen in children with SPD. An overview of the child's type of SPD, age, functional difficulties related to self care, socialization, play and leisure, etc.

A SECRET Definitions

Attention

"The ability to focus selectively on a desired stimulus or task" (Williamson & Anzalone, 2001, p. 20).

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32-44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: Right Hand Corner

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: The definition of the Attention element will be presented as an operationalized term to be consistently used through out the RLO and referenced in other RLOs and the assessment measure. The definition of Attention will be narrated.

A SECRET Process

- Identify the challenging behavior
- Ask reflective questions
- Implement strategies
- Assess the outcomes
- Modify strategies to enhance outcomes
- Repeat for the majority of the elements of
- A SECRET

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 – 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

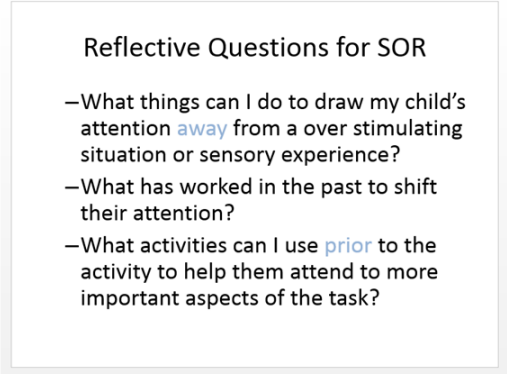
Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will cover the general sequence of the A SECRET process. The content will be narrated expounding upon each of the six steps.



Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 -44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

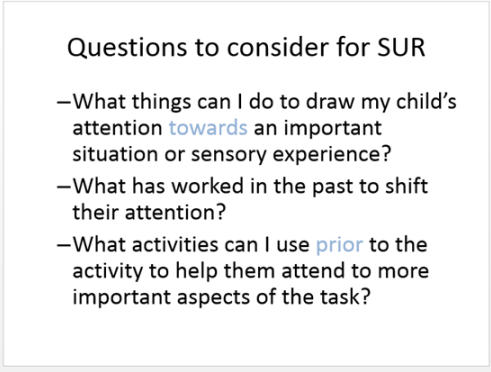
Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present three reflective questions that the learner should use to begin to the A SECRET process of problem solving through a challenging behavior for children who are experiencing Sensory Over Responsiveness. This information will be narrated.



Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 - 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present three reflective questions that the learner should use to begin to the A SECRET process of problem solving through a challenging behavior for children who are experiencing Sensory Under Responsiveness. This information will be narrated.

Analysis of Attention

- Clinical Setting – During Therapy
  - Client background – SOR
  - Intervention context

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32-44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will set up the background of a client and therapists interaction in the clinic in order to exemplify Attention strategy(ies) used. This information will be narrated to set up the vignette on the next slide.

Analysis of Attention

- Parent interview to develop Attention strategies
  - Vignette set up
  - Background info – SOR/SUR

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 - 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: Centered on page with

Image:

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will set up the background of a caregiver and a therapist discussion in order to exemplify Attention strategy(ies) used. This information will be narrated to set up the vignette on the next slide.

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: Centered on page.

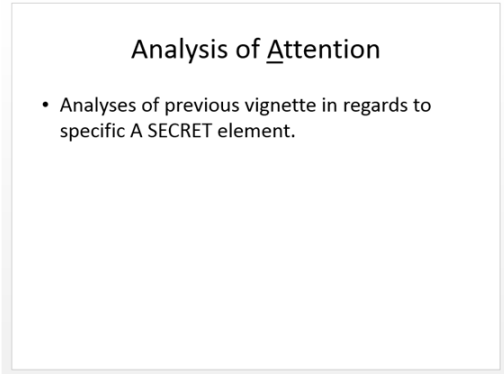
Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: The learner will view the video and then informed to move to the next side for further analysis of the strategies presented.



Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 - 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will review with the learner the strategies developed by the caregiver in the video. This information will be narrated with more specific yet brief bullet points.

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 – 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

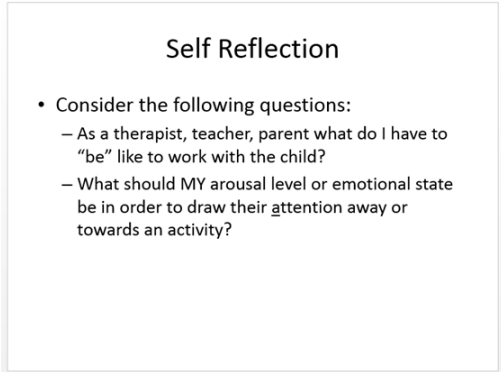
Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present key questions and strategies for the learner to remember as the proceed with the other RLOs and the future application of the element and the overall process. This information will be generated by the SME.



Page design features:

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Number of words per line: no more than six words

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Background: light color to facilitate contrast with text color

Text Size: 32 - 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will highlight some self reflection questions regarding how the learner is interacting wit the child who his having a challenging behavior. The intent is to focus less on the child and ore upon how the learner is interacting with the child. This information will be narrated.

References

Bialer, D. S., & Miller, L. J. (2011). No Longer A SECRET: Unique Common Sense Strategies for Children with Sensory or Motor Difficulties. United States: Sensory World.

Miller, L. (2006). Sensational kids: Hope and help for children with sensory processing disorder (SPD). United States: Books.

Notes: This slide will direct the learner to the resources listed on the slide (these will be expanded to include websites and other resources).

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 - 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Objective 2: Sensation

Title Slide: A SECRET: Introduction to Sensation

Page design features:

Number of lines: 2

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 45 point

Font Style: Calibri

Font Placement: Centered

Video: None

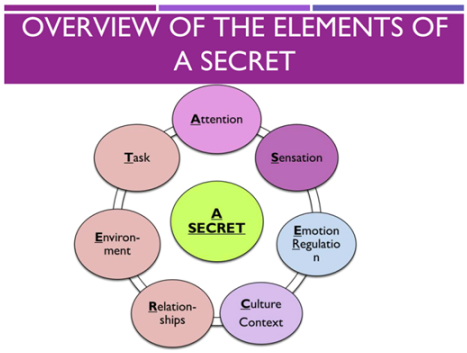
Image: 1

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide introduces the learner to the topic as well as how they will navigate through the lesson e.g. the navigation buttons and how to exit or re enter the lesson at a later time.



Page design features:

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Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 18-24 point

Font Style: Calibri

Font Placement: Centered

Video: None

Images: 1

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide is an both an advanced organizer which reminds the learner of the several elements of the process in which they will cover as well as which topic they are currently interacting with. There will be narration presenting this to the learner.

GOAL

- By the end of this lesson you will demonstrate the ability to apply the element of Sensation within the A SECRET reasoning approach.

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 18-33 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide presents the learning objective to the learner for the Sensation RLO. This slide will be narrated reviewing the basic point of the learning objective.

EXAMPLE

- Overview

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 18-33 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide provides an overview of the upcoming video vignette that the learners will view. Helps prime them to know what to look for in their observations

EXAMPLE

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32-44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: Centered

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present a case study of a child who is experiencing a challenging behavior commonly seen in children with SPD. An overview of the child's type of SPD, age, functional difficulties related to self care, socialization, play and leisure, etc.

A SECRET PROCESS

- Identify the challenged area
- Ask reflective questions to identify strategies
- Implement strategies
- Assess the outcomes
- Modify strategies to enhance outcomes
- Repeat for the majority of the elements of A SECRET*

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 – 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will cover the general sequence of the A SECRET process. The content will be narrated expounding upon each of the seven steps.

EXAMPLE

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32-44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: Centered

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present a case study of a child who is experiencing a challenging behavior commonly seen in children with SPD. An overview of the child's type of SPD, age, functional difficulties related to self care, socialization, play and leisure, etc.

A SECRET PROCESS

- Identify the challenged area
- Ask reflective questions to identify strategies
- Implement strategies
- Assess the outcomes
- Modify strategies to enhance outcomes
- Repeat for the majority of the elements of A SECRET*

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 – 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will cover the general sequence of the A SECRET process. The content will be narrated expounding upon each of the seven steps.

A SECRET: THINGS TO CONSIDER

- You already have some of the secrets
- No set list of strategies
- No prescribed order
- Based upon your reflective questioning
- Collaborate with your child's occupational therapist
- Observe a therapy session

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 – 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will cover the general strategies of the A SECRET process. The content will be narrated expounding upon each of the seven steps.

A SECRET

SENSATION

"The operation or function of the senses; perception or awareness of stimuli through the senses." (Webster's Dictionary, 2012)

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32-44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: Right Hand Corner

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: The definition of the Sensation element will be presented as an operationalized term to be consistently used through out the RLO and referenced in other RLOs and the assessment measure. The definition of Attention will be narrated.

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 -44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

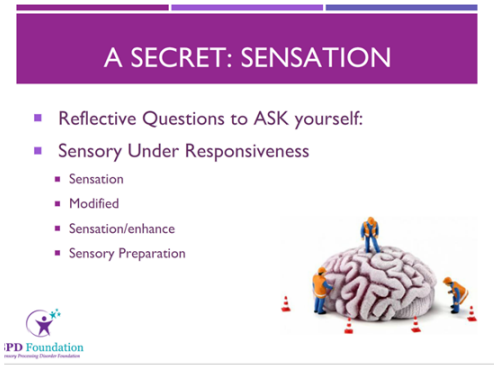
Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present reflective questions that the learner should use to begin to the A SECRET process of problem solving through a challenging behavior for children who are experiencing Sensory Over Responsiveness. This information will be narrated.



Page design features:

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Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 - 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: 2

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present reflective questions that the learner should use to begin to the A SECRET process of problem solving through a challenging behavior for children who are experiencing Sensory Under Responsiveness. This information will be narrated.

ANALYSIS OF SENSATION

- Parent interview to develop Sensation strategies
  - Vignette set up
  - Background info – SOR/SUR

Challenged Area	Attention	Sensation	Emotion Regulation	Culture	Relationships	Environ-ment	Task
Challenged Area - Difficulty with attending during structured homework time.							

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Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 - 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: 1 Table

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will set up the background of a caregiver and a therapist discussion in order to exemplify Sensation strategy(ies) used. This information will be narrated to set up the vignette on the next slide.

Analysis of Attention

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: Centered on page.

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: The learner will view the video and then informed to move to the next side for further analysis of the strategies presented.

ANALYSIS OF SENSATION

- Analyses of previous vignette in regards to specific A SECRET element.

Challenged Area	Attention	Sensation	Emotion Regulation	Culture/context	Relationships	Environment	Task
Challenged Area - Difficulty with attending during structured home work time.		Allow him to use small fidget objects; firm hugs during breaks.					

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 - 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: 1 table

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will review with the learner the strategies developed by the caregiver in the video. This information will be narrated with more specific yet brief bullet points.

CHECK YOUR KNOWLEDGE

- Let's see what you know!
  - A SECRET
  - Definition
  - Reflective Questions

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 – 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: one

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will presents the beginning of four quiz questions related to the content of this RLO.

LESSON REVIEW

- Things to remember
  - Attention
  - ART of Therapy
  - Reflective Questions related to Attention

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 – 44 point

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Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present key questions and strategies for the learner to remember as the proceed with the other RLOs and the future application of the element and the overall process. This information will be generated by the SME.

SELF REFLECTION

- Consider the following questions:
  - Ask "what do I have to "be" like to work with this child?"
  - What should MY arousal level or emotional state be in order to draw their attention away or towards the activity in question?

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 - 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will highlight some self reflection questions regarding how the learner is interacting wit the child who his having a challenging behavior. The intent is to focus less on the child and ore upon how the learner is interacting with the child. This information will be narrated.

RESOURCES

No Longer A SECRET: Unique Common Sense Strategies for Children with Sensory or Motor Difficulties.
By
Doriet Bialer, OTR/L & Lucy Jane Miller, PhD, OTR/L

Sensational kids: Hope and help for children with sensory processing disorder (SPD).
By
Lucy Jane Miller, PhD, OTR/L

Sensory Processing Disorder Foundation
www.spdfoundation.net

Page design features:

Number of lines: No more than six lines of text
Number of words per line: no more than six words
Text: Darker to facilitate contrast with background
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Text Size: 32 - 44 point
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Font Placement: Left justified bullets
Video: None
Image: None
Narration: Yes
Format: Microsoft PowerPoint 2013, Adobe Captivate 8
Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will highlight resources available related to the A SECRET process. This information will be narrated.

CREDITS

Designed and developed by Bryan Gee, PhD(c), OTD, OTR/L, BCP
Idaho State University
Department of Educational Leadership and Instructional Design
Do not use or share this without the express permission of the author (Gee, B., 2014)

SPD Foundation
Sensory Processing Disorder Foundation

Page design features:

Number of lines: No more than six lines of text
Number of words per line: no more than six words
Text: Darker to facilitate contrast with background
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Font Style: Calibri

Font Placement: Left justified bullets
Video: None
Image: None
Narration: Yes
Format: Microsoft PowerPoint 2013, Adobe Captivate 8
Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide highlights the author of the RLO

Objective 3: Emotion Regulation

Title Slide: A SECRET: Introduction to Emotion Regulation

Page design features:

Number of lines: 2

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 45 point

Font Style: Calibri

Font Placement: Centered

Video: None

Image: 2

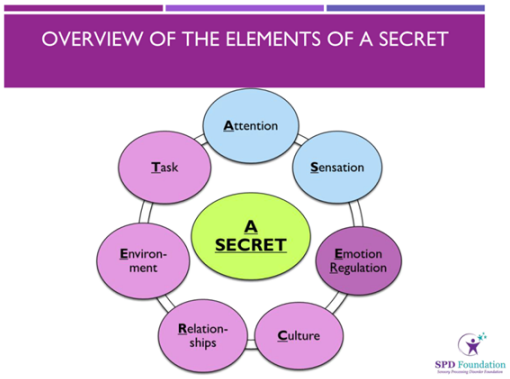
Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide introduces the learner to the topic as well as how they will navigate through the lesson e.g. the navigation buttons and how to exit or re enter the lesson at a later time.



Page design features:

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Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 18-24 point

Font Style: Calibri

Font Placement: Centered

Video: None

Images: 1

Narration Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide is an both an advanced organizer which reminds the learner of the several elements of the process in which they will cover as well as which topic they are currently interacting with. There will be narration presenting this to the learner.

GOAL

- By the end of this lesson you will demonstrate the ability to apply the element of Emotion Regulation within the A SECRET reasoning approach.

SPD Foundation

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 18-33 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide presents the learning objective to the learner for the Emotion Regulation RLO. This slide will be narrated reviewing the basic point of the learning objective.

A SECRET PROCESS

- Identify the challenged area
- Ask reflective questions to identify strategies
- Implement strategies
- Assess the outcomes
- Modify strategies to enhance outcomes
- Repeat for the majority of the elements of A SECRET*

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 – 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will cover the general sequence of the A SECRET process. The content will be narrated expounding upon each of the seven steps.

A SECRET: THINGS TO CONSIDER

- You already have some of the secrets
- No set list of strategies
- No prescribed order
- Based upon your reflective questioning
- Collaborate with your child's occupational therapist
- Observe a therapy session

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 – 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will cover the general strategies of the A SECRET process. The content will be narrated expounding upon each of the seven steps.

EXAMPLE

- Overview

SPD Foundation

Page design features:

Number of lines: No more than six lines of text

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Text: Darker to facilitate contrast with background

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Text Size: 18-33 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide provides an overview of the upcoming video vignette that the learners will view. Helps prime them to know what to look for in their observations

CASE STUDY

SPD Foundation

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

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Text Size: 32-44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: Centered

Narration: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present a case study of a child who is experiencing a challenging behavior commonly seen in children with SPD. An overview of the child's type of SPD, age, functional difficulties related to self care, socialization, play and leisure, etc.

A SECRET

EMOTION REGULATION

"The process used to manage and cope with emotional related states that occur on a moment to moment basis" (Eisenberg, Hofer, Vaughn, 2007).

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32-44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: Right Hand Corner

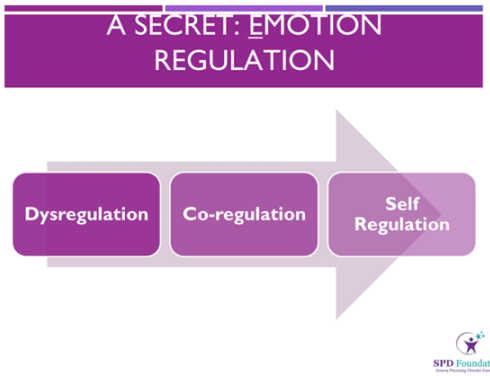
Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: The definition of the Emotion Regulation element will be presented as an operationalized term to be consistently used through out the RLO and referenced in other RLOs and the assessment measure. The definition of Attention will be narrated.



Page design features:

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Background: light color to facilitate contrast with text color

Text Size: 32-44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: Centered

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: The explanation of the process of of the Emotion Regulation will be presented as an operationalized term to be consistently used through out the RLO and referenced in other RLOs and the assessment measure.

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 -44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present reflective questions that the learner should use to begin to the A SECRET process of problem solving through a challenging behavior for children who are experiencing sensory processing difficulties.

A SECRET: EMOTIONAL REGULATION

- General strategies to consider:
  - Recognize emotional states
  - Understand strategies
  - Practice strategies
  - Use play to practice
  - Body focused self regulation
  - Develop new strategies

SPD Foundation

Page design features:

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Text: Darker to facilitate contrast with background

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Text Size: 32 - 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: no

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present general strategies related to emotion regulation

ANALYSIS OF EMOTION REGULATION

- Parent interview to develop Emotion Regulation strategies

Challenged Area	Attention	Sensation	Emotion Regulation	Culture	Relation-ships	Environ-ment	Task
Emotionally organizing and focusing during cheer leading practice							

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 - 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: 1 Table

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will set up the background of a caregiver and a therapist discussion in order to exemplify Emotion Regulation strategy(ies) used. This information will be narrated to set up the vignette on the next slide.

VIDEO EMOTION REGULATION

SPD Foundation

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: Centered on page.

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: The learner will view the video and then informed to move to the next side for further analysis of the strategies presented.

ANALYSIS OF EMOTION REGULATION

Challenged Area	Attention	Sensation	Emotion Regulation	Culture	Relation-ships	Environ-ment	Task
Emotionally organizing and focusing during cheer leading practice			-Listen to favorite music. -Self talk. -Music with positive phrases				

SPD Foundation

Page design features:

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Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

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Text Size: 32 - 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: 1 table

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will review with the learner the strategies developed by the caregiver in the video. This information will be narrated with more specific yet brief bullet points.

CHECK YOUR KNOWLEDGE

- Let's see what you know!
  - A SECRET
  - Definition
  - Reflective Questions

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 – 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: one

Narrated: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will presents the beginning of four quiz questions related to the content of this RLO.

LESSON REVIEW

- Lesson Review
  - Emotion Regulation
  - Art of Therapy

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

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Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Platform: Microsoft PowerPoint 2013, Adobe Captivate 8

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present key questions and strategies for the learner to remember as the proceed with the other RLOs and the future application of the element and the overall process. This information will be generated by the SME.

SELF REFLECTION

- Consider the following question:
  - Ask "what do I have to "be" like to work with this child?"

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Page design features:

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Video: None

Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will highlight some self reflection questions regarding how the learner is interacting wit the child who his having a challenging behavior. The intent is to focus less on the child and ore upon how the learner is interacting with the child. This information will be narrated.

RESOURCES

No Longer A SECRET: Unique Common Sense Strategies for Children with Sensory or Motor Difficulties.

By

Doriet Bialer, OTR/L & Lucy Jane Miller, PhD, OTR/L

Sensational kids: Hope and help for children with sensory processing disorder (SPD).

By

Lucy Jane Miller, PhD, OTR/L

Sensory Processing Disorder Foundation

www.spdfoundation.net

Page design features:

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Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will highlight resources available related to the A SECRET process. This information will be narrated.

CREDITS

Designed and developed by Bryan Gee, PhD(c), OTD, OTR/L, BCP

Idaho State University

Department of Educational Leadership and Instructional Design

SPD Foundation

Page design features:

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Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide highlights the author of the RLO

Objective 4: Culture

Title Slide: A SECRET: Introduction to Culture

Page design features:

Number of lines: 2

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 45 point

Font Style: Calibri

Font Placement: Centered

Video: None

Image: 2

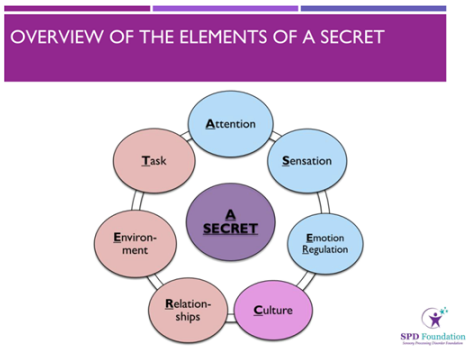
Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide introduces the learner to the topic as well as how they will navigate through the lesson e.g. the navigation buttons and how to exit or re enter the lesson at a later time.



Page design features:

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Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 18-24 point

Font Style: Calibri

Font Placement: Centered

Video: None

Images: 1

Narration Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide is an both an advanced organizer which reminds the learner of the several elements of the process in which they will cover as well as which topic they are currently interacting with. There will be narration presenting this to the learner.

GOAL

- By the end of this lesson you will demonstrate the ability to apply the element of Culture within the A SECRET reasoning approach.

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 18-33 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide presents the learning objective to the learner for the Culture RLO. This slide will be narrated reviewing the basic point of the learning objective.

A SECRET PROCESS

- Identify the challenged area
- Ask reflective questions to identify strategies
- Implement strategies
- Assess the outcomes
- Modify strategies to enhance outcomes
- Repeat for the majority of the elements of A SECRET*

Page design features:

Number of lines: No more than six lines of text

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Text Size: 32 – 44 point

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Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will cover the general sequence of the A SECRET process. The content will be narrated expounding upon each of the seven steps.

A SECRET: THINGS TO CONSIDER

- You already have some of the secrets
- No set list of strategies
- No prescribed order
- Based upon your reflective questioning
- Collaborate with your child's occupational therapist
- Observe a therapy session

Page design features:

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Text Size: 32 – 44 point

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Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will cover the general strategies of the A SECRET process. The content will be narrated expounding upon each of the seven steps.

A SECRET

CULTURE

Culture - The rules, customs, habits, routines and norms of a family, group of friends, classroom, etc.

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Number of lines: No more than six lines of text

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Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32-44 point

Font Style: Calibri

Font Placement: Left justified bullets

Image: Right Hand Corner

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: The definition of the Culture element will be presented as an operationalized term to be consistently used through out the RLO and referenced in other RLOs and the assessment measure. The definition of Attention will be narrated.

A SECRET: CULTURE

- Reflective Questions to ASK yourself:
  - Culture (family, classroom or community)
  - Routine

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Page design features:

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Video: None

Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present reflective questions that the learner should use to begin to the A SECRET process of problem solving through a challenging behavior for children who are experiencing sensory processing difficulties.

ANALYSIS OF CULTURE

- Parent interview to develop strategies

Challenged Area	Attention	Sensation	Emotion Regulation	Culture	Relation -ships	Environ- ment	Task
Getting ready to go to practice cheer leading							

SPD Foundation

Page design features:

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Video: None

Image: 1 Table

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will set up the background of a caregiver and a therapist discussion in order to exemplify Culture strategy(ies) used. This information will be narrated to set up the vignette on the next slide.

ANALYSIS OF CULTURE

SPD Foundation

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Text Size: 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: Centered on page.

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: The learner will view the video and then informed to move to the next side for further analysis of the strategies presented.

ANALYSIS OF CULTURE

- Analyses of previous vignette in regards to specific A SECRET element.

Challenged Area	Attention	Sensation	Emotion Regulation	Culture	Relation-ships	Environ ment	Task
Getting ready to go to practice drums				Using dad's playfulness to help her prepare to get ready and go practice			

SPD Foundation

Page design features:

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Video: None

Image: 1 table

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will review with the learner the strategies developed by the caregiver in the video. This information will be narrated with more specific yet brief bullet points.

CHECK YOUR KNOWLEDGE

- Let's see what you know!
  - A SECRET
  - Definition
  - Reflective Questions

Page design features:

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Video: None

Image: one

Narrated: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will presents the beginning of four quiz questions related to the content of this RLO.

LESSON REVIEW

- Things to remember
  - Culture
  - ART of Therapy
  - Reflective Questions related to Attention

Page design features:

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Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present key questions and strategies for the learner to remember as the proceed with the other RLOs and the future application of the element and the overall process. This information will be generated by the SME.

RESOURCES

No Longer A SECRET: Unique Common Sense Strategies for Children with Sensory or Motor Difficulties.
By
Doriet Bialer, OTR/L & Lucy Jane Miller, PhD, OTR/L

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Video: None
Image: None
Narration: Yes
Format: Microsoft PowerPoint 2013, Adobe Captivate 8
Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will highlight resources available related to the A SECRET process. This information will be narrated.

CREDITS

Designed and developed by Bryan Gee, PhD(c), OTD, OTR/L, BCP
Idaho State University
Department of Educational Leadership and Instructional Design
Do not use or share this without the express permission of the author (Gee, B., 2014)

SPD Foundation
Sensory Processing Disorder Foundation

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Narration: Yes
Format: Microsoft PowerPoint 2013, Adobe Captivate 8
Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide highlights the author of the RLO

Objective 5: Relationship

Title Slide: A SECRET: Introduction to Relationships

Page design features:

Number of lines: 2

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 45 point

Font Style: Calibri

Font Placement: Centered

Video: None

Image: 2

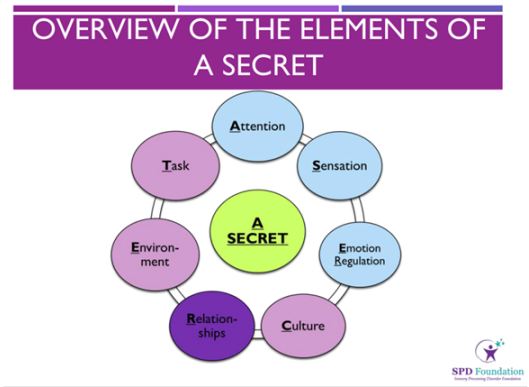
Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide introduces the learner to the topic as well as how they will navigate through the lesson e.g. the navigation buttons and how to exit or re enter the lesson at a later time.



Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 18-24 point

Font Style: Calibri

Font Placement: Centered

Video: None

Images: 2

Narration Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide is an both an advanced organizer which reminds the learner of the several elements of the process in which they will cover as well as which topic they are currently interacting with. There will be narration presenting this to the learner.

GOAL

- By the end of this lesson you will demonstrate the ability to apply the element of Relationships within the A SECRET reasoning approach.

Page design features:

Number of lines: No more than six lines of text

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Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

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Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide presents the learning objective to the learner for the Relationship RLO. This slide will be narrated reviewing the basic point of the learning objective.

A SECRET PROCESS

- Identify the challenged area
- Ask reflective questions to identify strategies
- Implement strategies
- Assess the outcomes
- Modify strategies to enhance outcomes
- Repeat for the majority of the elements of A SECRET*

Page design features:

Number of lines: No more than six lines of text

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Video: None

Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will cover the general sequence of the A SECRET process. The content will be narrated expounding upon each of the seven steps.

A SECRET: THINGS TO CONSIDER

- You already have some of the secrets
- No set list of strategies
- No prescribed order
- Based upon your reflective questioning
- Collaborate with your child's occupational therapist
- Observe a therapy session

Page design features:

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Video: None

Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will cover the general strategies of the A SECRET process. The content will be narrated expounding upon each of the seven steps.

EXAMPLE

- Overview

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Page design features:

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Video: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide provides an overview of the upcoming video vignette that the learners will view. Helps prime them to know what to look for in their observations

Page design features:

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Text Size: 32-44 point

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Video: Centered

Narration: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present a case study of a child who is experiencing a challenging behavior commonly seen in children with SPD. An overview of the child's type of SPD, age, functional difficulties related to self care, socialization, play and leisure, etc.

Page design features:

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Text Size: 32-44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: Right Hand Corner

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: The definition of the Relationships element will be presented as an operationalized term to be consistently used through out the RLO and referenced in other RLOs and the assessment measure. The definition of Attention will be narrated.

A SECRET: RELATIONSHIPS

- Reflective Questions:
  - My relationship and the child's challenging behavior
  - Easy vs. difficult relationships
  - Maximize qualities of a positive relationship
  - Minimize difficulties
  - Help others to understand sensory processing and relationships
  - Identify barriers

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Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present reflective questions that the learner should use to begin to the A SECRET process of problem solving through a challenging behavior for children who are experiencing sensory processing difficulties.

A SECRET: RELATIONSHIPS

- Reflective Questions:
  - Identify playmates who are less tactile, noisy and physical.
  - Be proactive about setting play dates with selected children.
  - Teach family members to respect the child's sensitivities and boundaries.
  - Develop a script and use it to explain the child's sensitivities and resulting behaviors.

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Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present reflective questions that the learner should use to begin to the A SECRET process of problem solving through a challenging behavior for children who are experiencing sensory processing difficulties.

A SECRET: RELATIONSHIPS

- Reflective questions to consider:
  - What kind of people encourage my child to be more social?
  - How can I encourage relationships that encourage my child social participation?

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Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present reflective questions that the learner should use to begin to the A SECRET process of problem solving through a challenging behavior for children who are experiencing sensory processing difficulties.

ANALYSIS OF RELATIONSHIPS

- A SECRET: Relationship example

Challenged Area	Attention	Sensation	Emotion Regulation	Culture	Relationships	Environment	Task
Difficulty with participating in meal time activities with the family.							

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Video: None

Image: 1 Table

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will set up the background of a caregiver and a therapist discussion in order to exemplify Relationship strategy(ies) used. This information will be narrated to set up the vignette on the next slide.

ANALYSIS OF RELATIONSHIPS

SPD Foundation

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Video: Centered on page.

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: The learner will view the video and then informed to move to the next side for further analysis of the strategies presented.

ANALYSIS OF RELATIONSHIPS

Challenged Area	Attention	Sensation	Emotion Regulation	Culture	Relationships	Environment	Task
Difficulty with participating in meal time activities with the family.					Using the child's siblings to provide peer pressure to try and eat different foods. Use special napkins that were made with or by an important adult.		

SPD Foundation

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 - 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: 1 table

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will review with the learner the strategies developed by the caregiver in the video. This information will be narrated with more specific yet brief bullet points.

CHECK YOUR KNOWLEDGE

- Let's see what you know!
  - A SECRET
  - Definition
  - Reflective Questions

Page design features:

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Text Size: 32 – 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: one

Narrated: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will presents the beginning of four quiz questions related to the content of this RLO.

LESSON REVIEW

- Things to remember
  - Relationships
  - ART of Therapy

Page design features:

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Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present key questions and strategies for the learner to remember as the proceed with the other RLOs and the future application of the element and the overall process. This information will be generated by the SME.

RESOURCES

No Longer A SECRET: Unique Common Sense Strategies for Children with Sensory or Motor Difficulties.
By
Doriet Bialer, OTR/L & Lucy Jane Miller, PhD, OTR/L

Sensational kids: Hope and help for children with sensory processing disorder (SPD).
By
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Sensory Processing Disorder Foundation
www.spdfoundation.net

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Font Placement: Left justified bullets
Video: None
Image: None
Narration: Yes
Format: Microsoft PowerPoint 2013, Adobe Captivate 8
Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will highlight resources available related to the A SECRET process. This information will be narrated.

CREDITS

Designed and developed by Bryan Gee, PhD(c), OTD, OTR/L, BCP
Idaho State University
Department of Educational Leadership and Instructional Design
Do not use or share this without the express permission of the author (Gee, B., 2014)

SPD Foundation
Sensory Processing Disorder Foundation

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Font Placement: Left justified bullets
Video: None
Image: None
Narration: Yes
Format: Microsoft PowerPoint 2013, Adobe Captivate 8
Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide highlights the author of the RLO

Objective 6: Environment

Title Slide: A SECRET: Introduction to Environment

Page design features:

Number of lines: 2

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 45 point

Font Style: Calibri

Font Placement: Centered

Video: None

Image: 2

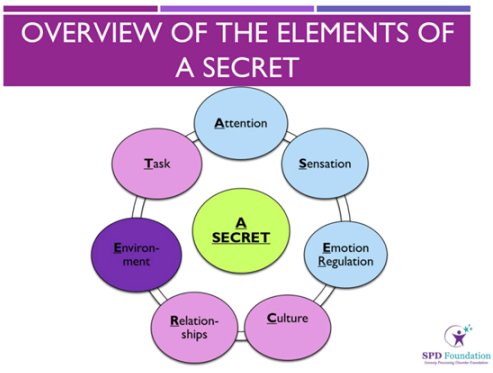
Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide introduces the learner to the topic as well as how they will navigate through the lesson e.g. the navigation buttons and how to exit or re enter the lesson at a later time.



Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 18-24 point

Font Style: Calibri

Font Placement: Centered

Video: None

Images: 2

Narration Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide is an both an advanced organizer which reminds the learner of the several elements of the process in which they will cover as well as which topic they are currently interacting with. There will be narration presenting this to the learner.

GOAL

- By the end of this lesson you will demonstrate the ability to apply the element of Environment within the A SECRET reasoning approach.

Page design features:

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Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 18-33 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide presents the learning objective to the learner for the Environment RLO. This slide will be narrated reviewing the basic point of the learning objective.

A SECRET PROCESS

- Identify the challenged area
- Ask reflective questions to identify strategies
- Implement strategies
- Assess the outcomes
- Modify strategies to enhance outcomes
- Repeat for the majority of the elements of A SECRET*

Page design features:

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Background: light color to facilitate contrast with text color

Text Size: 32 – 44 point

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Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will cover the general sequence of the A SECRET process. The content will be narrated expounding upon each of the seven steps.

A SECRET: THINGS TO CONSIDER

- You already have some of the secrets
- No set list of strategies
- No prescribed order
- Based upon your reflective questioning
- Collaborate with your child's occupational therapist
- Observe a therapy session

Page design features:

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Text Size: 32 – 44 point

Font Style: Calibri

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Video: None

Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will cover the general strategies of the A SECRET process. The content will be narrated expounding upon each of the seven steps.

EXAMPLE

- Overview

SPD Foundation

Page design features:

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Text Size: 18-33 point

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Video: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide provides an overview of the upcoming video vignette that the learners will view. Helps prime them to know what to look for in their observations

CASE STUDY

SPD Foundation

Page design features:

Number of lines: No more than six lines of text

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Background: light color to facilitate contrast with text color

Text Size: 32-44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: Centered

Narration: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present a case study of a child who is experiencing a challenging behavior commonly seen in children with SPD. An overview of the child's type of SPD, age, functional difficulties related to self care, socialization, play and leisure, etc.

ENVIRONMENT

"The external social, and physical conditions or factors which have the potential to influence an individual" (Christiansen & Baum, 1997, p. 595).

SPD Foundation

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Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: Right Hand Corner

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: The definition of the Environment element will be presented as an operationalized term to be consistently used through out the RLO and referenced in other RLOs and the assessment measure. The definition of Attention will be narrated.

A SECRET: ENVIRONMENT

- Reflective questions for sensory over-responsivity:
  - Identify sensations
  - Modify the surroundings

SPD Foundation

Page design features:

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Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

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Text Size: 32 -44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present reflective questions that the learner should use to begin to the A SECRET process of problem solving through a challenging behavior for children who are experiencing sensory over responsiveness.

A SECRET: ENVIRONMENT

- Reflective questions for sensory under-responsivity:
  - Identify meaningful sensations
  - Modify the environment

SPD Foundation

Page design features:

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Video: None

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Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present reflective questions that the learner should use to begin to the A SECRET process of problem solving through a challenging behavior for children who are experiencing sensory processing difficulties.

ANALYSIS OF ENVIRONMENT

- Parent interview to develop Environment strategies

Challenged Area	Attention	Sensation	Emotion Regulation	Culture	Relationships	Environ ment	Task
Attending to homework tasks.							

SPD Foundation

Page design features:

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Video: None

Image: 1 Table

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will set up the background of a caregiver and a therapist discussion in order to exemplify Environment strategy(ies) used. This information will be narrated to set up the vignette on the next slide.

ANALYSIS OF ENVIRONMENT

SPD Foundation

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Text Size: 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: Centered on page.

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: The learner will view the video and then informed to move to the next side for further analysis of the strategies presented.

ANALYSIS OF ENVIRONMENT

- Analyses of previous vignette in regards to specific A SECRET element.

Challenged Area	Attention	Sensation	Emotion Regulation	Culture	Relationships	Environment	Task
Attending to home-work tasks						-use white noise during home work -homework in a quiet secluded space - create a special place	

SPD Foundation

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Video: None

Image: 1 table

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will review with the learner the strategies developed by the caregiver in the video. This information will be narrated with more specific yet brief bullet points.

CHECK YOUR KNOWLEDGE

- Let's see what you know!
  - A SECRET
  - Definition
  - Reflective Questions

SPD Foundation

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Video: None

Image: one

Narrated: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will presents the beginning of four quiz questions related to the content of this RLO.

LESSON REVIEW

- Things to remember
  - Environment
  - ART of Therapy
  - Reflective Questions related to Environment

SPD Foundation

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Video: None

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Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present key questions and strategies for the learner to remember as the proceed with the other RLOs and the future application of the element and the overall process. This information will be generated by the SME.

RESOURCES

No Longer A SECRET: Unique Common Sense Strategies for Children with Sensory or Motor Difficulties.

By

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Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will highlight resources available related to the A SECRET process. This information will be narrated.

CREDITS

Designed and developed by Bryan Gee, PhD(c), OTD, OTR/L, BCP

Idaho State University

Department of Educational Leadership and Instructional Design

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Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide highlights the author of the RLO

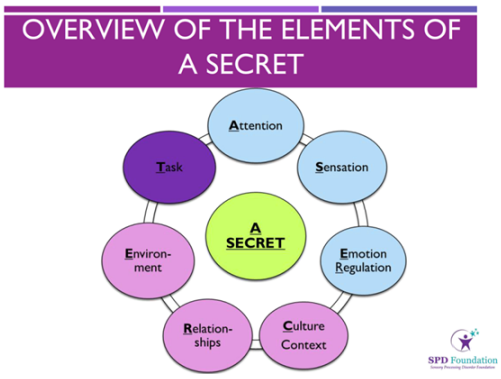
Objective 7: Task

Title Slide: A SECRET: Introduction to Task

Number of lines: 2
Number of words per line: no more than six words
Text: Darker to facilitate contrast with background
Background: light color to facilitate contrast with text color
Text Size: 45 point
Font Style: Calibri
Font Placement: Centered

Image: 2
Narration: Yes
Narration: Yes
Format: Microsoft PowerPoint 2013, Adobe Captivate 8
Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide introduces the learner to the topic as well as how they will navigate through the lesson e.g. the navigation buttons and how to exit or re enter the lesson at a later time.



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Text Size: 18-24 point
Font Style: Calibri
Font Placement: Centered

Video: None
Images: 2
Narration Yes
Narration: Yes
Format: Microsoft PowerPoint 2013, Adobe Captivate 8
Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide is an both an advanced organizer which reminds the learner of the several elements of the process in which they will cover as well as which topic they are currently interacting with. There will be narration presenting this to the learner.

GOAL

- By the end of this lesson you will demonstrate the ability to apply the element of Task within the A SECRET reasoning approach.

Page design features:

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Text Size: 18-33 point

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Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide presents the learning objective to the learner for the Task RLO. This slide will be narrated reviewing the basic point of the learning objective.

A SECRET PROCESS

- Identify the challenged area
- Ask reflective questions to identify strategies
- Implement strategies
- Assess the outcomes
- Modify strategies to enhance outcomes
- Repeat for the majority of the elements of A SECRET*

Page design features:

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Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will cover the general sequence of the A SECRET process. The content will be narrated expounding upon each of the seven steps.

A SECRET: THINGS TO CONSIDER

- You already have some of the secrets
- No set list of strategies
- No prescribed order
- Based upon your reflective questioning
- Collaborate with your child's occupational therapist
- Observe a therapy session

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Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will cover the general strategies of the A SECRET process. The content will be narrated expounding upon each of the seven steps.

EXAMPLE

- Overview

SPD Foundation

Page design features:

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Video: None

Narration: Yes

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Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide provides an overview of the upcoming video vignette that the learners will view. Helps prime them to know what to look for in their observations

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Video: Centered

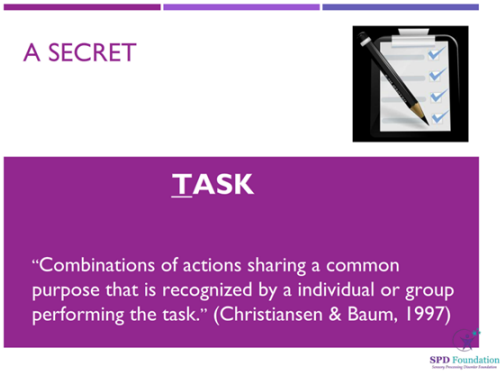
Narration: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present a case study of a child who is experiencing a challenging behavior commonly seen in children with SPD. An overview of the child's type of SPD, age, functional difficulties related to self care, socialization, play and leisure, etc.



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Video: None

Image: Right Hand Corner

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: The definition of the Task element will be presented as an operationalized term to be consistently used through out the RLO and referenced in other RLOs and the assessment measure. The definition of Attention will be narrated.

A SECRET: TASKS

- Sensory Over-Responsivity
  - Reflective questions:
    - Identify the issue
    - Modify that task
    - Substitute the task

Page design features:

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Image: None

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present reflective questions that the learner should use to begin to the A SECRET process of problem solving through a challenging behavior for children who are experiencing sensory over responsiveness.

A SECRET: TASKS

- Sensory Under-Responsivity:
  - Reflective Questions:
    - Increase interest and energy
    - Stimulating tasks out side of therapy

Page design features:

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Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present reflective questions that the learner should use to begin to the A SECRET process of problem solving through a challenging behavior for children who are experiencing sensory processing difficulties.

ANALYSIS OF TASK

- A SECRET: Attention example

Challenged Area	Attention	Sensation	Emotion Regulation	Culture	Relation-ships	Environ-ment	Task
Challenged Area - Difficulty with bath time.							

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Page design features:

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Video: None

Image: 1 Table

Narration: Yes

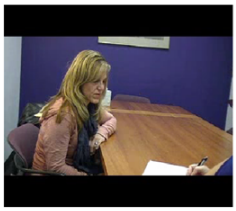
Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will set up the background of a caregiver and a therapist discussion in order to exemplify Task strategy(ies) used. This information will be narrated to set up the vignette on the next slide.

ANALYSIS OF TASK



SPD Foundation

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Font Placement: Left justified bullets

Video: Centered on page.

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: The learner will view the video and then informed to move to the next side for further analysis of the strategies presented.

ANALYSIS OF TASK

Challenged Area	Attention	Sensation	Emotion Regulation	Culture	Relation -ships	Environ- ment	Task
Challenged Area - Difficulty with bath time.							-make transitions fun -visual schedule

SPD Foundation

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 - 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: 1 table

Narration: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will review with the learner the strategies developed by the caregiver in the video. This information will be narrated with more specific yet brief bullet points.

CHECK YOUR KNOWLEDGE

- Let's see what you know!
  - A SECRET
  - Definition
  - Reflective Questions

SPD Foundation

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 – 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: one

Narrated: Yes

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will presents the beginning of four quiz questions related to the content of this RLO.

LESSON REVIEW

- Things to remember
  - Task
  - Reflective Questions related to Task
  - ART of Therapy

SPD Foundation

Page design features:

Number of lines: No more than six lines of text

Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 – 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will present key questions and strategies for the learner to remember as the proceed with the other RLOs and the future application of the element and the overall process. This information will be generated by the SME.

RESOURCES

No Longer A SECRET: Unique Common Sense Strategies for Children with Sensory or Motor Difficulties.

By

Doriet Bialer, OTR/L & Lucy Jane Miller, PhD, OTR/L

Sensational kids: Hope and help for children with sensory processing disorder (SPD).

By

Lucy Jane Miller, PhD, OTR/L

Sensory Processing Disorder Foundation

www.spdfoundation.net

Page design features:

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Number of words per line: no more than six words

Text: Darker to facilitate contrast with background

Background: light color to facilitate contrast with text color

Text Size: 32 - 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide will highlight resources available related to the A SECRET process. This information will be narrated.

CREDITS

Designed and developed by Bryan Gee, PhD(c), OTD, OTR/L, BCP

Idaho State University

Department of Educational Leadership and Instructional Design

SPD Foundation

Page design features:

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Background: light color to facilitate contrast with text color

Text Size: 32 - 44 point

Font Style: Calibri

Font Placement: Left justified bullets

Video: None

Image: None

Narration: Yes

Format: Microsoft PowerPoint 2013, Adobe Captivate 8

Navigation: Play, pause, forward, back, fast forward, slider bar all at the bottom of the screen.

Notes: This slide highlights the author of the RLO

APPENDIX G-10

ADDIE Design Phase
Task D03: Storyboards
Delphi Survey 07

A SECRET Delphi Survey 07

Introduction

In order to best represent your feedback on the project, I ask that you proceed as follows:
1. Carefully and thoroughly review the documents attached.
2. Mark the rating that most represents your expert evaluation for each item in the survey.
3. Please complete this survey no later than July 29th, 2014.

1. There is a series of storyboards aligned with the flowcharts (Task D02).

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

2. The placement for graphical elements is included in the storyboards.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

3. The type of graphical elements is identified in the storyboards.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

4. The size parameters of graphical elements are identified in the storyboards.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

A SECRET Delphi Survey 07

5. The placement for textual elements is included in the storyboards.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

6. The font style for textual elements is included in the storyboards.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

7. The font size for textual elements is included in the storyboards.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

8. Hypertext links (where needed) are indicated in the storyboards.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

9. The placement of hypertext links is indicated in the storyboards.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

A SECRET Delphi Survey 07

10. Navigation buttons (where needed) are indicated in the storyboards.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

11. The placement of navigation buttons is indicated in the storyboards.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

12. The style of navigation buttons is indicated in the storyboards.

- ◯ Strongly Agree
- ◯ Agree
- ◯ Disagree
- ◯ Strongly Disagree

13. Please feel free add any other comments or concerns that you might have regarding the specific materials you reviewed.

APPENDIX G-11
Delphi 07 Survey
Raw Data

Delphi Survey 07	IDE Rating	IDE Rating	IDE Rating
DS_7_1	4	4	4
DS_7_2	4	4	3
DS_7_3	4	3	3
DS_7_4	4	3	3
DS_7_5	4	4	3
DS_7_6	4	4	4
DS_7_7	4	4	4
DS_7_8	4	3	3
DS_7_9	4	3	3
DS_7_10	4	3	3
DS_7_11	4	3	3
DS_7_12	4	3	3

APPENDIX G-12
Delphi 07 Survey
Summary Data

Survey	Number of Items	*M*	*SD*	*Mdn*
Delphi 07: Design Phase (Task D03)	5	3.90	0.29	4

APPENDIX G-13

TASK D04: ASSESSMENT INSTRUMENT

Assessment Instrument

MoodleISU | ISU | Faculty Support | Student Support | Accessibility | English - United States (en_us) | You are logged in as Bryan Gee (Log out)

ISU Disability Services
Moodle Accessibility
Collaborate Accessibility

OT: A Secret: Sensory Processin[illegible]olving Approach (BGee)

QUIZ NAVIGATION

Bryan Gee

1 1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

Finish attempt ...

Time left 0:58:05

Start a new preview

NAVIGATION

- Home
- My home
- MoodleISU
- My profile
- Current course
  - OT-Secret-BGee
    - Participants
    - Badges
    - General
    - Introduction and Directions
    - Introduction to A SECRET
    - Attention
    - Sensation
    - Emotion Regulation
    - Culture
    - Relationships
    - Environment
    - Task
    - A SECRET Summary
    - A SECRET Resources
    - A SECRET Case Scenario and Assessment
      - A SECRET Case Scenario and Assessment
      - Case Study of Michael
      - Video of Michael
    - Student Attitudinal Survey
    - Focus Groups
- My courses

ADMINISTRATION

- Quiz administration
  - Edit settings
  - Group overrides
  - User overrides
  - Edit quiz
  - Preview
  - Results
  - Locally assigned roles
  - Permissions
  - Check permissions
  - Filters
  - Logs
  - Backup
  - Restore
  - Question bank
- Course administration
- Switch role to...
- My profile settings

Information
Flag question
Edit question

Directions: Please review the developmental history below and the associated video vignette. Upon reviewing those two forms of media you will then proceed to a series of multiple choice and essay questions that will ask you to reflect upon the developmental history and the experience of Michael in the video. As a part of that process you will be presented with a question related to each element of A SECRET (e.g. attention, sensation, emotion regulation) and rank six pre-determined A SECRET strategies for each of the elements. Then provide a rational for your rankings (most & least effective strategy) based upon the information you gathered from the developmental history and the video vignette. You will want to pay special attention to the appropriateness of each strategy given where they will be delivered (context) and how they will be delivered. Take your time reviewing each strategy and ranking them as well as why you chose the top two strategies (most effective) and the bottom two (least effective). Again you encouraged to review the developmental history as well as the video vignette multiple times if you need to.

Challenging Behavior for A SECRET: While taking part in the 50 minute holiday program at his preschool Michael is struggling with excessive rocking, covering his eyes and his ears which is distracting the other children and embarrassing to his parents. Michael's parents would like to have help on how to address these challenges; hence they have come to you to make recommendations using the A SECRET problem solving approach.

Description of Michael

Chronological Age: 5 years

Clinical Diagnosis: Attention Deficit Disorder, Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS) , and Sensory Processing Disorder

Developmental History: The client is a five-year-old male with a reported diagnosis of ADD, PDD-NOS, and Sensory Processing Disorder. He was born at 40 weeks gestation, 8 lbs. 9 oz. with vacuum extraction after 45 minutes in birth canal. The client obtained his motor milestones within normal limits (WNL) and was independent with toilet training at four years, six months. His first word occurred at 8 months, two words combined at 18 months, 3-4 word phrases occurred 36 months, sentences 40 months, and conversation language emerged at 42 months. The client has a history of ear infections with tubes placed at 24 months and there were no other issues related to ear infections after that. He had a hearing assessment obtained with results WNL. Additionally his visual skills are also WNL; he is right hand dominant for all tasks. He is the oldest of three and has a younger sister (3) and a brother (12 months). He lives at home with both of his parents. His favorite movies are Star Wars Episode 1 and Spiderman. He likes to play with Legos, action figures and toy cars/trains. He has a few friends from either his preschool or church classes that he likes to play with but only on a one on one basis.

The client previously attended a special education preschool in a public school district for one year and currently attends a private preschool for typically developing children, three days per week for three hours per day. The client started receiving speech and language services in 2011 for social skills training and occupational therapy services in December 2013. He currently is receiving occupational and speech therapy services from a pediatric outpatient rehabilitation center.

Parent/family objectives (based upon the Canadian Occupational Performance Measure):

- The client will decrease his excessive activity that occurs in the late afternoon/early evening in order to participate in meals and structured activities at home.
- The client will decrease his aggression when playing with siblings and peers at home.
- The client will tolerate a wide variety of wet/sticky/dry textures during play activities at home.

Occupational Therapy short-term objectives:

- The client will wait 30-60 seconds for an activity without impulsively engaging in a therapist or parent directed activity.
- The client will tolerate play in wet and sticky textures for up to 5 minutes given 1-2 verbal cues to remain engaged, 14 sessions.
- The client will participate in a sensory diet for twenty minutes or more to help modulate his sensory system at the end of the day, 5/7 days, per parent report.

Sensory Profile Results	Typical Performance	Probable Difference	Definite Difference
Auditory Processing			x
Visual Processing		x	
Vestibular Processing			x
Touch Processing			x
Multi-sensory Processing		x	
Oral Sensory Processing		x	
Sensory Processing related to endurance and tone	x		
Modulation related to body position and movement		x	
Modulation related to sensory input affect activity level	x		
Emotional/social responses			x
Behavioral outcomes of sensory processing			x
Items indicated threshold for responsivity		x	

Occupational Performance strengths and deficits:

Strengths

- Cognitive Skills
- Gross Motor Skills
- Self Help/Feeding and Eating

Deficits

- Expressive/Receptive Language Delays
- Social Skills
- Sensory processing difficulties [hyper sensitive to sound, touch, and multi-sensory processing (cumulative impact)]
- Attention/impulsivity

Information
Flag question
Edit question

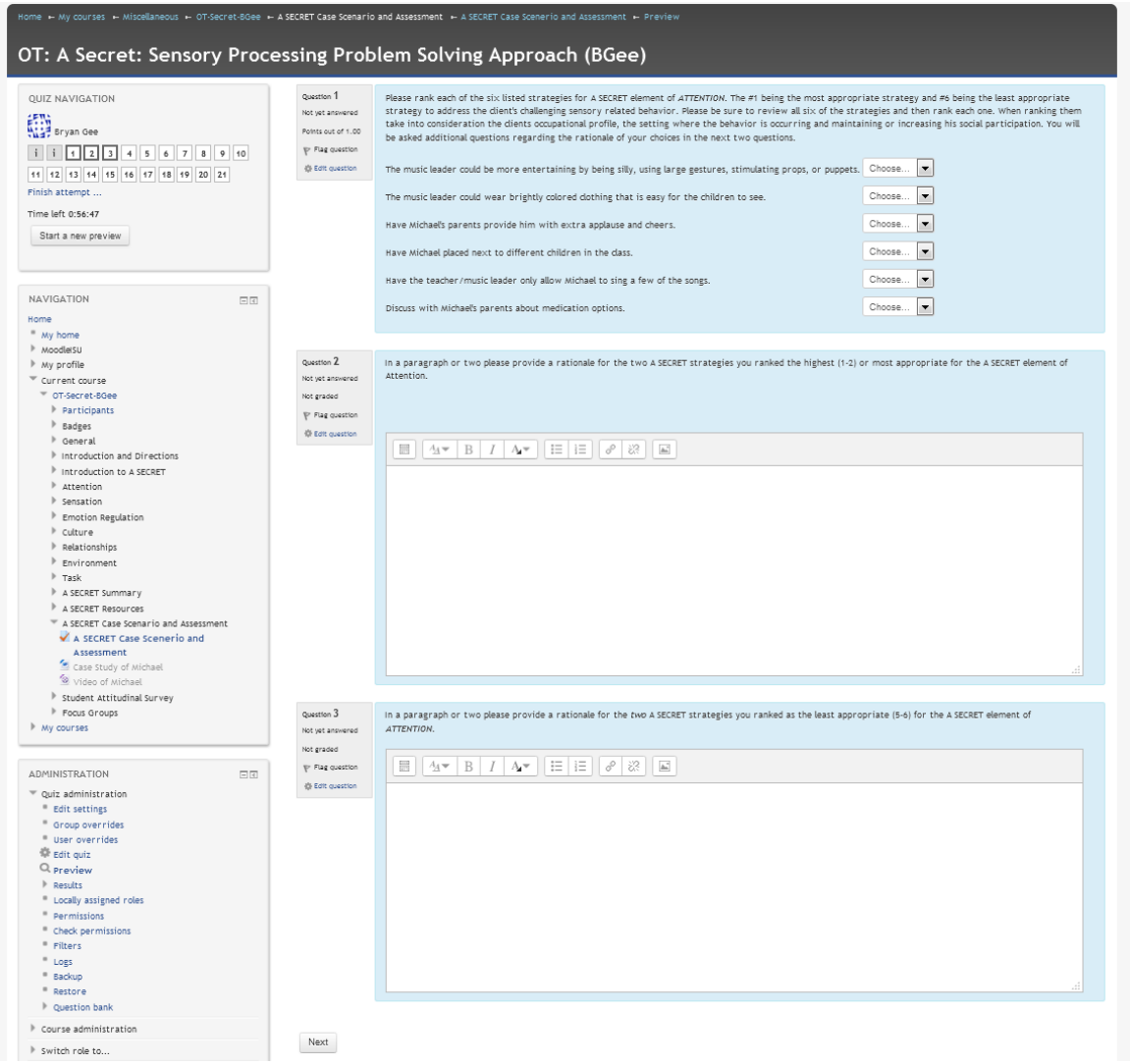
Directions: Please take several moments to review the video of Michael's holiday program. You may want to jot down some notes as you see fit to help you with the remaining questions in the quiz. The program lasted approximately 55 minutes in length. What you are viewing is the 1st, 4th and 8th within a total of 10 songs. However, this video clip is approximately 5 minutes.

Please click here to view the video case. You will want to look for the little boy with a white short sleeve shirt and is sitting in the front row of the group.

The video may take a few minutes to load so please be patient.

Please review the developmental history below and the associated video vignette. Upon reviewing those two forms of media you will then proceed to a series of questions that will ask you to reflect upon the developmental history and the experience of Michael in the video. As a part of that process you will be presented with a question related to each element of A SECRET (e.g. attention, sensation, emotion regulation) and rank six pre-determined A SECRET strategies for each of the element. Then provide a rational for your rankings (most & least effective strategy) based upon the information you gathered from the developmental history and the video vignette. You will want to pay special attention to the appropriateness of each strategy given where they will be delivered (context) and how they will be delivered. Take your time reviewing each strategy and ranking them as well as why you chose the top two strategies (most effective) and the bottom two (least effective). Again you encouraged to review the developmental history as well as the video vignette multiple times if you need to.

Next


Home ► My courses ► Miscellaneous ► OT-Secret-BGee ► A SECRET Case Scenario and Assessment ► A SECRET Case Scenario and Assessment ► Preview
OT: A Secret: Sensory Processing Problem Solving Approach (BGee)
QUIZ NAVIGATION
Bryan Gee
Finish attempt ...
Time left 0:56:47
Start a new preview
NAVIGATION
Home
My home
MoodleSU
My profile
Current course
OT-Secret-BGee
Participants
Badges
General
Introduction and Directions
Introduction to A SECRET
Attention
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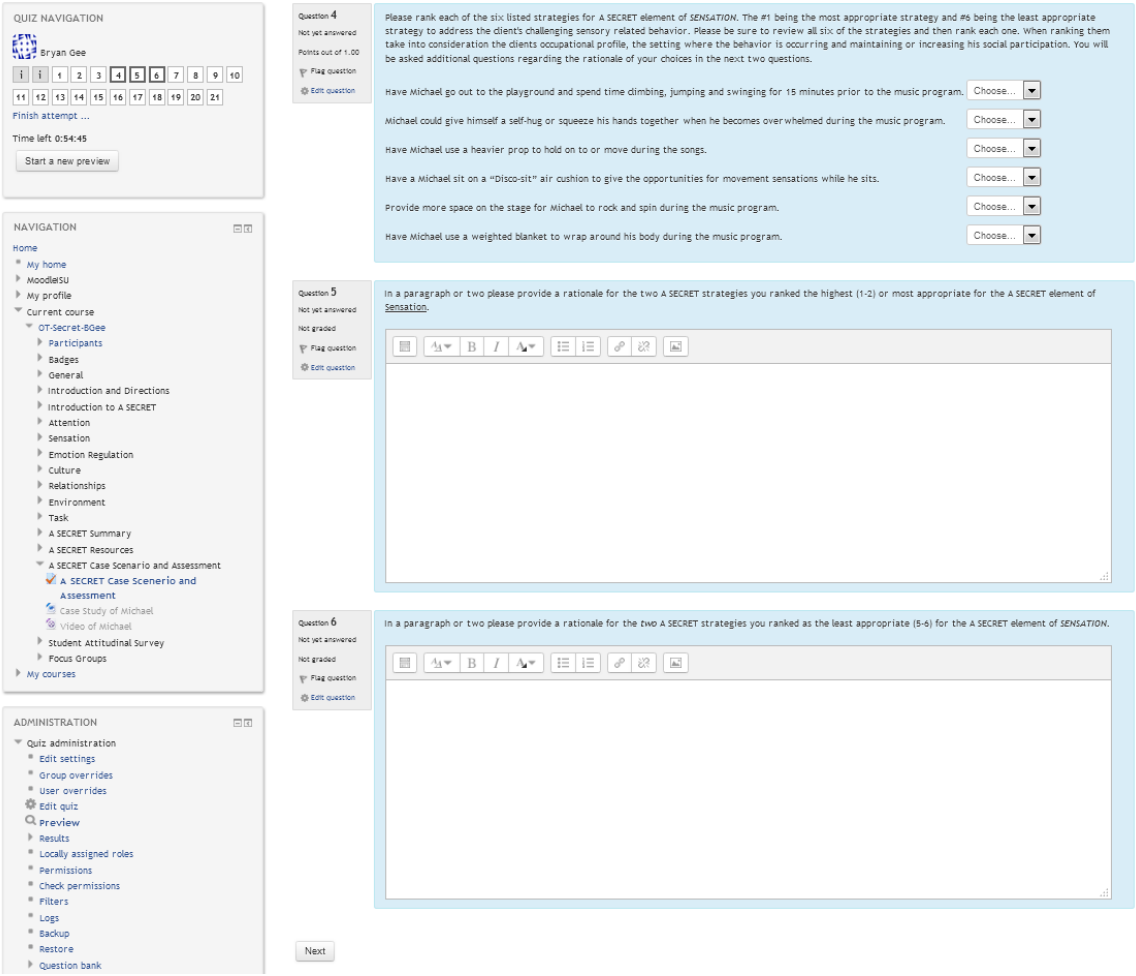
User overrides
Edit quiz
Preview
Results
Locally assigned roles
Permissions
Check permissions
Filters
Logs
Backup
Restore
Question bank
Course administration
Switch role to...
Question 1
Not yet answered
Points out of 1.00
Flag question
Edit question
Please rank each of the six listed strategies for A SECRET element of ATTENTION. The #1 being the most appropriate strategy and #6 being the least appropriate strategy to address the client's challenging sensory related behavior. Please be sure to review all six of the strategies and then rank each one. When ranking them take into consideration the clients occupational profile, the setting where the behavior is occurring and maintaining or increasing his social participation. You will be asked additional questions regarding the rationale of your choices in the next two questions.
The music leader could be more entertaining by being silly, using large gestures, stimulating props, or puppets.
Choose...
The music leader could wear brightly colored clothing that is easy for the children to see.
Choose...
Have Michael's parents provide him with extra applause and cheers.
Choose...
Have Michael placed next to different children in the class.
Choose...
Have the teacher/music leader only allow Michael to sing a few of the songs.
Choose...
Discuss with Michael's parents about medication options.
Choose...
Question 2
Not yet answered
Not graded
Flag question
Edit question
In a paragraph or two please provide a rationale for the two A SECRET strategies you ranked the highest (1-2) or most appropriate for the A SECRET element of Attention.
Question 3
Not yet answered
Not graded
Flag question
Edit question
In a paragraph or two please provide a rationale for the two A SECRET strategies you ranked as the least appropriate (5-6) for the A SECRET element of ATTENTION.
Next


QUIZ NAVIGATION
Bryan Gee
Finish attempt ...
Time left 0:54:45
Start a new preview
NAVIGATION
Home
My home
MoodleSU
My profile
Current course
OT-Secret-BGee
Participants
Badges
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Introduction and Directions
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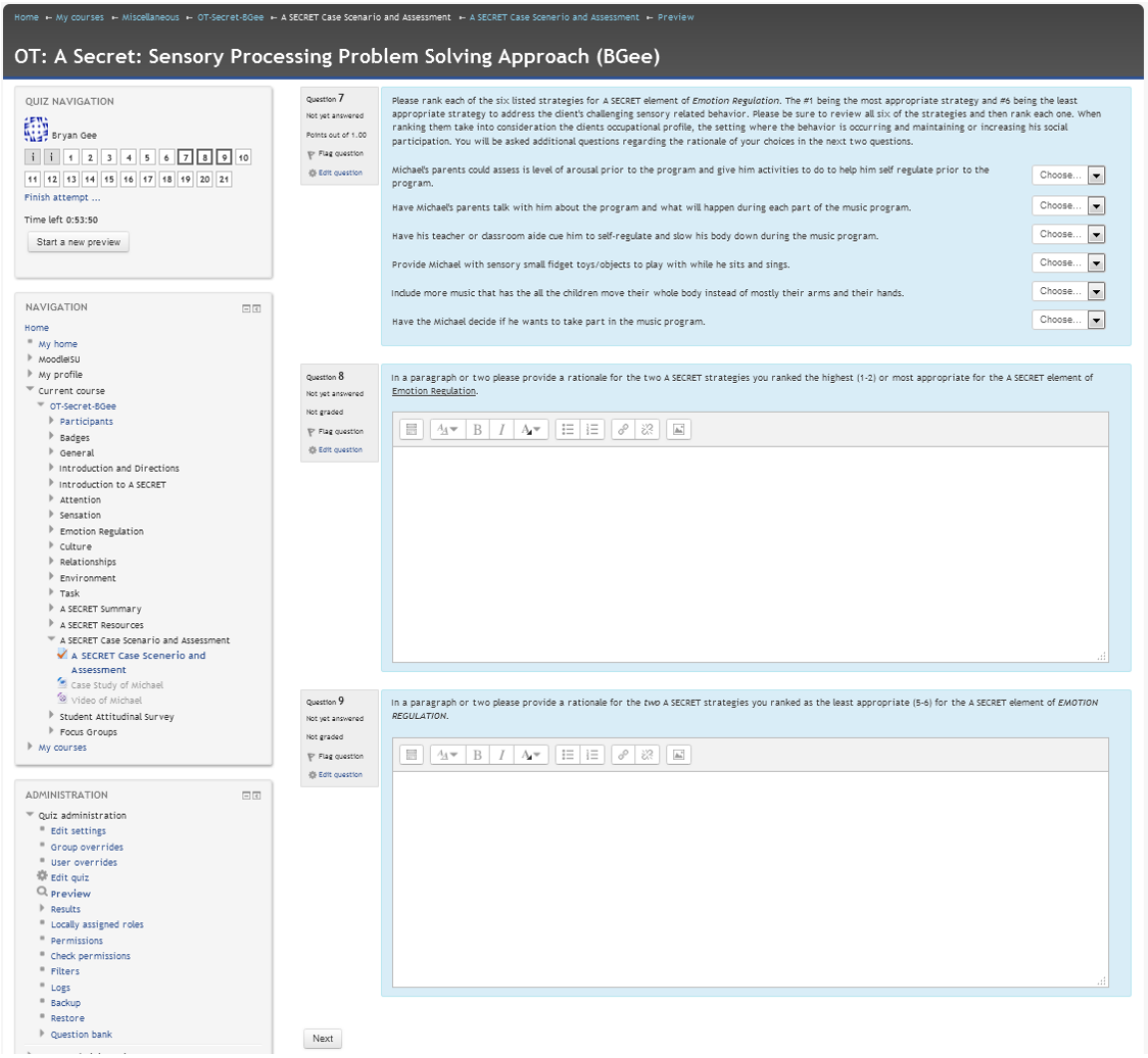
Quiz administration
Edit settings
Group overrides
User overrides
Edit quiz
Preview
Results
Locally assigned roles
Permissions
Check permissions
Filters
Logs
Backup
Restore
Question bank
Question 4
Not yet answered
Points out of 1.00
Flag question
Edit question
Please rank each of the six listed strategies for A SECRET element of SENSATION. The #1 being the most appropriate strategy and #6 being the least appropriate strategy to address the client's challenging sensory related behavior. Please be sure to review all six of the strategies and then rank each one. When ranking them take into consideration the clients occupational profile, the setting where the behavior is occurring and maintaining or increasing his social participation. You will be asked additional questions regarding the rationale of your choices in the next two questions.
Have Michael go out to the playground and spend time climbing, jumping and swinging for 15 minutes prior to the music program.
Michael could give himself a self-hug or squeeze his hands together when he becomes overwhelmed during the music program.
Have Michael use a heavier prop to hold on to or move during the songs.
Have a Michael sit on a "Disco-sit" air cushion to give the opportunities for movement sensations while he sits.
Provide more space on the stage for Michael to rock and spin during the music program.
Have Michael use a weighted blanket to wrap around his body during the music program.
Choose...
Question 5
Not yet answered
Not graded
Flag question
Edit question
In a paragraph or two please provide a rationale for the two A SECRET strategies you ranked the highest (1-2) or most appropriate for the A SECRET element of Sensation.
Question 6
Not yet answered
Not graded
Flag question
Edit question
In a paragraph or two please provide a rationale for the two A SECRET strategies you ranked as the least appropriate (5-6) for the A SECRET element of SENSATION.
Next


Home ► My courses ► Miscellaneous ► OT-Secret-BGee ► A SECRET Case Scenario and Assessment ► A SECRET Case Scenario and Assessment ► Preview
OT: A Secret: Sensory Processing Problem Solving Approach (BGee)
QUIZ NAVIGATION
Bryan Gee
Finish attempt ...
Time left 0:53:50
Start a new preview
NAVIGATION
Home
My home
MoodleSU
My profile
Current course
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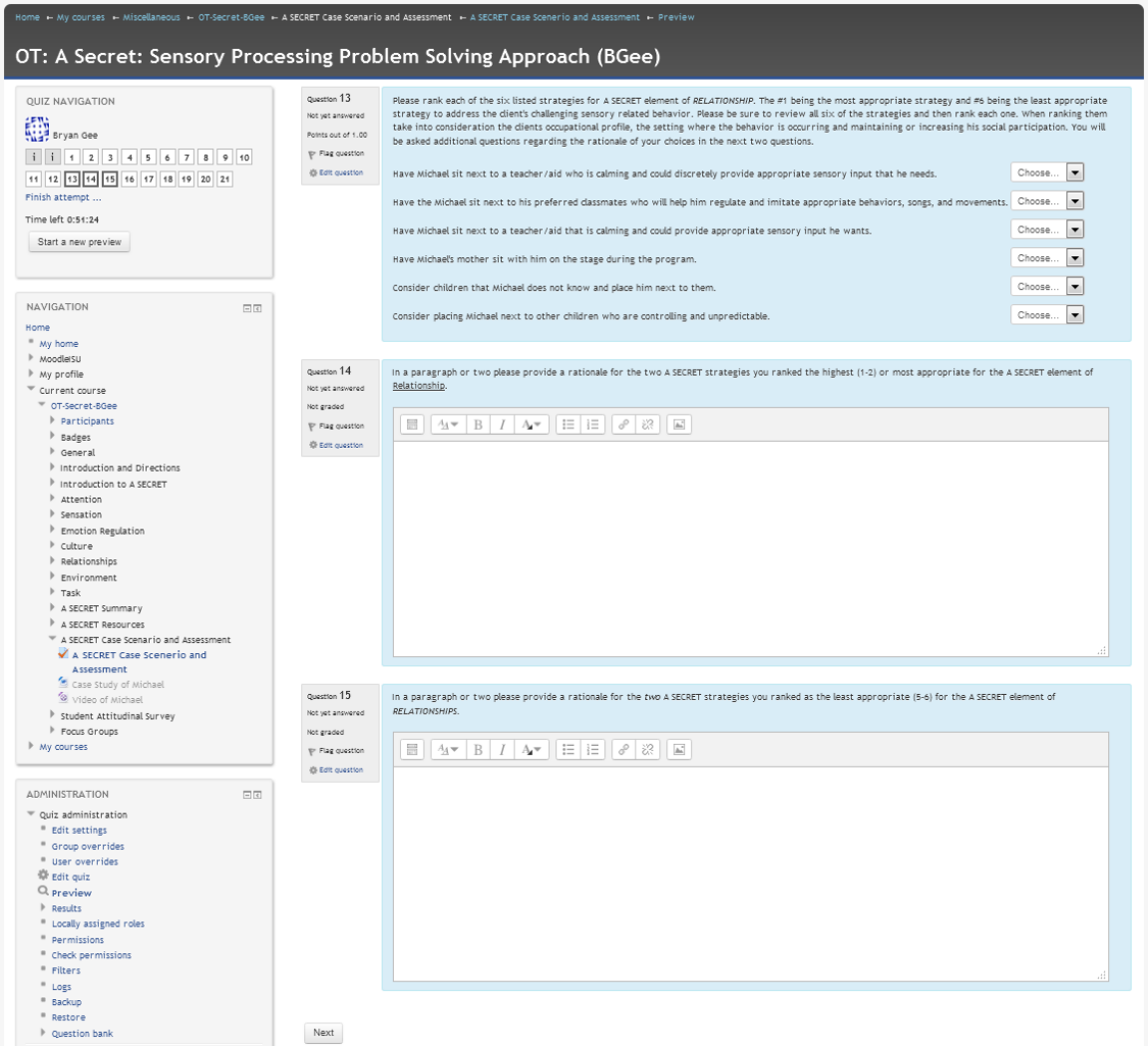
Group overrides
User overrides
Edit quiz
Preview
Results
Locally assigned roles
Permissions
Check permissions
Filters
Logs
Backup
Restore
Question bank
Question 7
Not yet answered
Points out of 1.00
Flag question
Edit question
Please rank each of the six listed strategies for A SECRET element of Emotion Regulation. The #1 being the most appropriate strategy and #6 being the least appropriate strategy to address the client's challenging sensory related behavior. Please be sure to review all six of the strategies and then rank each one. When ranking them take into consideration the clients occupational profile, the setting where the behavior is occurring and maintaining or increasing his social participation. You will be asked additional questions regarding the rationale of your choices in the next two questions.
Michael's parents could assess is level of arousal prior to the program and give him activities to do to help him self regulate prior to the program.
Have Michael's parents talk with him about the program and what will happen during each part of the music program.
Have his teacher or classroom aide cue him to self-regulate and slow his body down during the music program.
Provide Michael with sensory small fidget toys/objects to play with while he sits and sings.
Include more music that has the all the children move their whole body instead of mostly their arms and their hands.
Have the Michael decide if he wants to take part in the music program.
Choose...
Question 8
Not yet answered
Not graded
Flag question
Edit question
In a paragraph or two please provide a rationale for the two A SECRET strategies you ranked the highest (1-2) or most appropriate for the A SECRET element of Emotion Regulation.
Question 9
Not yet answered
Not graded
Flag question
Edit question
In a paragraph or two please provide a rationale for the two A SECRET strategies you ranked as the least appropriate (5-6) for the A SECRET element of EMOTION REGULATION.
Next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OT: A Secret: Sensory Processing Problem Solving Approach (BGee)
QUIZ NAVIGATION
Bryan Gee
Finish attempt ...
Time left 0:51:24
Start a new preview
NAVIGATION
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My home
MoodleISU
My profile
Current course
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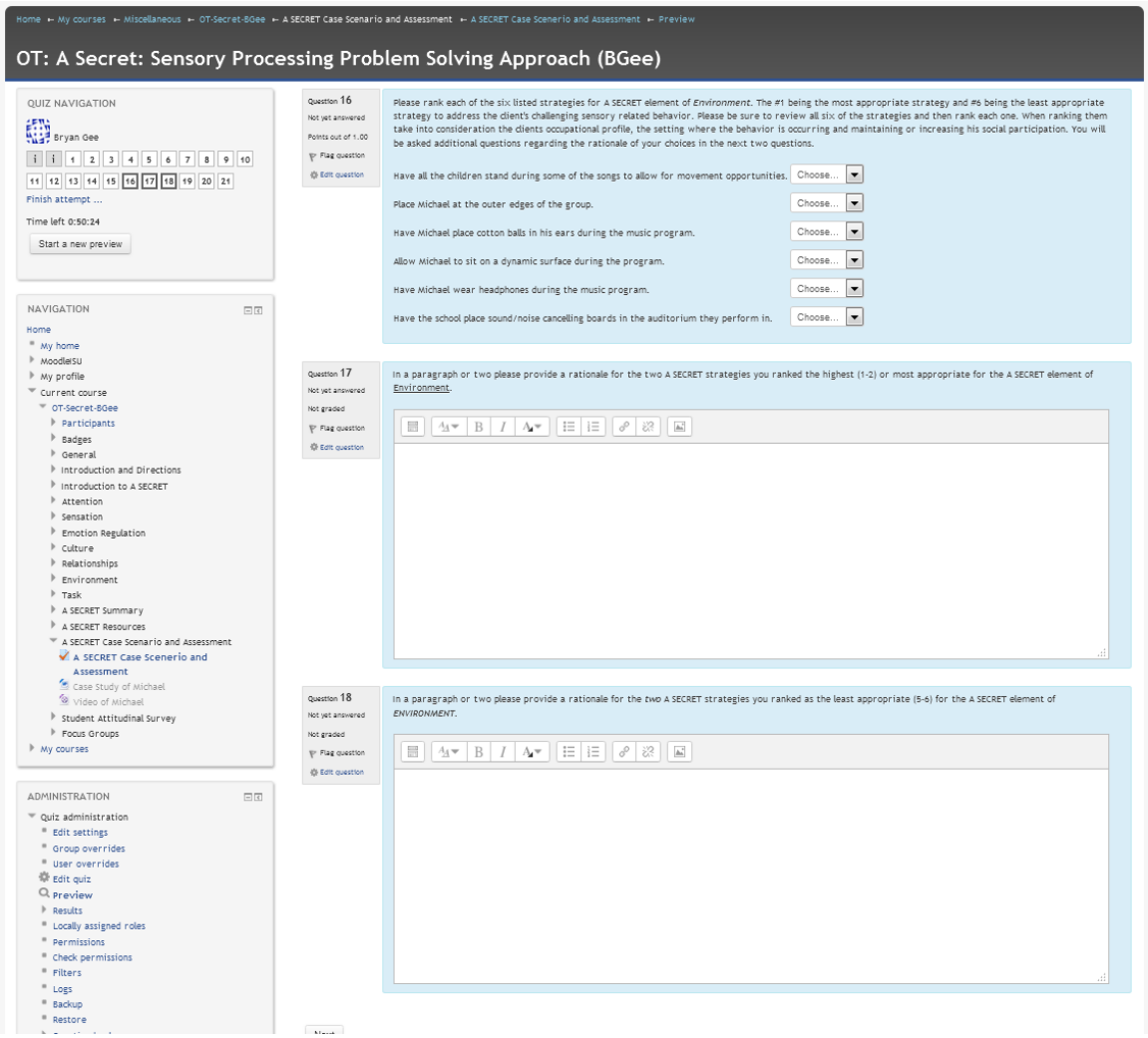
Edit settings
Group overrides
User overrides
Edit quiz
Preview
Results
Locally assigned roles
Permissions
Check permissions
Filters
Logs
Backup
Restore
Question bank
Question 13
Not yet answered
Points out of 1.00
Flag question
Edit question
Please rank each of the six listed strategies for A SECRET element of RELATIONSHIP. The #1 being the most appropriate strategy and #6 being the least appropriate strategy to address the client's challenging sensory related behavior. Please be sure to review all six of the strategies and then rank each one. When ranking them take into consideration the clients occupational profile, the setting where the behavior is occurring and maintaining or increasing his social participation. You will be asked additional questions regarding the rationale of your choices in the next two questions.
Have Michael sit next to a teacher/aid who is calming and could discretely provide appropriate sensory input that he needs.
Have the Michael sit next to his preferred classmates who will help him regulate and imitate appropriate behaviors, songs, and movements.
Have Michael sit next to a teacher/aid that is calming and could provide appropriate sensory input he wants.
Have Michael's mother sit with him on the stage during the program.
Consider children that Michael does not know and place him next to them.
Consider placing Michael next to other children who are controlling and unpredictable.
Choose...
Question 14
Not yet answered
Not graded
Flag question
Edit question
In a paragraph or two please provide a rationale for the two A SECRET strategies you ranked the highest (1-2) or most appropriate for the A SECRET element of Relationship.
Question 15
Not yet answered
Not graded
Flag question
Edit question
In a paragraph or two please provide a rationale for the two A SECRET strategies you ranked as the least appropriate (5-6) for the A SECRET element of RELATIONSHIPS.
Next


Home ► My courses ► Miscellaneous ► OT-Secret-BGee ► A SECRET Case Scenario and Assessment ► A SECRET Case Scenerio and Assessment ► Preview
OT: A Secret: Sensory Processing Problem Solving Approach (BGee)
QUIZ NAVIGATION
Bryan Gee
Finish attempt ...
Time left 0:50:24
Start a new preview
NAVIGATION
Home
My home
MoodleISU
My profile
Current course
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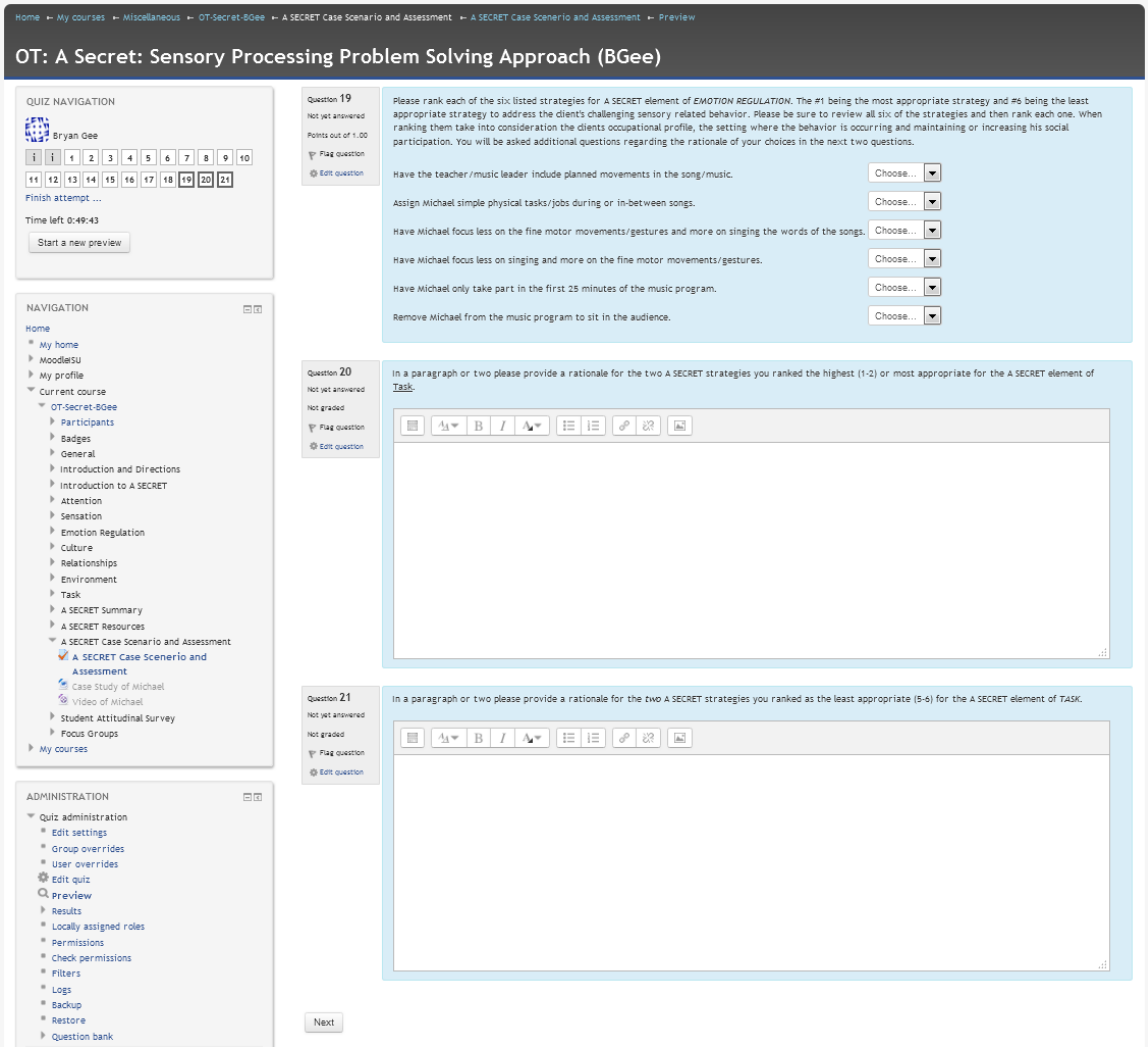
Edit settings
Group overrides
User overrides
Edit quiz
Preview
Results
Locally assigned roles
Permissions
Check permissions
Filters
Logs
Backup
Restore
Question 16
Not yet answered
Points out of 1.00
Flag question
Edit question
Please rank each of the six listed strategies for A SECRET element of Environment. The #1 being the most appropriate strategy and #6 being the least appropriate strategy to address the client's challenging sensory related behavior. Please be sure to review all six of the strategies and then rank each one. When ranking them take into consideration the clients occupational profile, the setting where the behavior is occurring and maintaining or increasing his social participation. You will be asked additional questions regarding the rationale of your choices in the next two questions.
Have all the children stand during some of the songs to allow for movement opportunities.
Place Michael at the outer edges of the group.
Have Michael place cotton balls in his ears during the music program.
Allow Michael to sit on a dynamic surface during the program.
Have Michael wear headphones during the music program.
Have the school place sound/noise cancelling boards in the auditorium they perform in.
Choose...
Question 17
Not yet answered
Not graded
Flag question
Edit question
In a paragraph or two please provide a rationale for the two A SECRET strategies you ranked the highest (1-2) or most appropriate for the A SECRET element of Environment.
Question 18
Not yet answered
Not graded
Flag question
Edit question
In a paragraph or two please provide a rationale for the two A SECRET strategies you ranked as the least appropriate (5-6) for the A SECRET element of ENVIRONMENT.


Home ► My courses ► Miscellaneous ► OT-Secret-BGee ► A SECRET Case Scenario and Assessment ► A SECRET Case Scenerio and Assessment ► Preview
OT: A Secret: Sensory Processing Problem Solving Approach (BGee)
QUIZ NAVIGATION
Bryan Gee
Finish attempt ...
Time left 0:49:43
Start a new preview
NAVIGATION
Home
My home
MoodleISU
My profile
Current course
OT-Secret-BGee
Participants
Badges
General
Introduction and Directions
Introduction to A SECRET
Attention
Sensation
Emotion Regulation
Culture
Relationships
Environment
Task
A SECRET Summary
A SECRET Resources
A SECRET Case Scenario and Assessment
A SECRET Case Scenerio and Assessment
Case Study of Michael
Video of Michael
Student Attitudinal Survey
Focus Groups
My courses
ADMINISTRATION
Quiz administration
Edit settings
Group overrides
User overrides
Edit quiz
Preview
Results
Locally assigned roles
Permissions
Check permissions
Filters
Logs
Backup
Restore
Question bank
Question 19
Not yet answered
Points out of 1.00
Flag question
Edit question
Please rank each of the six listed strategies for A SECRET element of EMOTION REGULATION. The #1 being the most appropriate strategy and #6 being the least appropriate strategy to address the client's challenging sensory related behavior. Please be sure to review all six of the strategies and then rank each one. When ranking them take into consideration the clients occupational profile, the setting where the behavior is occurring and maintaining or increasing his social participation. You will be asked additional questions regarding the rationale of your choices in the next two questions.
Have the teacher/music leader include planned movements in the song/music.
Assign Michael simple physical tasks/jobs during or in-between songs.
Have Michael focus less on the fine motor movements/gestures and more on singing the words of the songs.
Have Michael focus less on singing and more on the fine motor movements/gestures.
Have Michael only take part in the first 25 minutes of the music program.
Remove Michael from the music program to sit in the audience.
Choose...
Question 20
Not yet answered
Not graded
Flag question
Edit question
In a paragraph or two please provide a rationale for the two A SECRET strategies you ranked the highest (1-2) or most appropriate for the A SECRET element of Task.
Question 21
Not yet answered
Not graded
Flag question
Edit question
In a paragraph or two please provide a rationale for the two A SECRET strategies you ranked as the least appropriate (5-6) for the A SECRET element of TASK.
Next

APPENDIX G-14

ADDIE Design Phase
Task D04: Assessment Instruments
Delphi Survey 08

A SECRET Delphi Survey 08

Introduction

In order to best represent your feedback on the project, I ask that you proceed as follows:
1. Carefully and thoroughly review the documents attached.
2. Mark the rating that best represents your expert evaluation for each item in the survey.
3. Return your completed instrument via reply email as an attachment no later than July 23rd, 2014.

Next

A SECRET Delphi Survey 08

Assessment Instrument

1. The multiple-choice assessment Knowledge Posttest has item (question) stems related to the Objectives.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

2. The multiple-choice assessment Knowledge Posttest has logical distractors for each item related to the Objectives.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

3. The multiple-choice assessment Knowledge Posttest is formatted for readability.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

4. The assessment Knowledge Posttest includes a sufficient number of items related to each Objective.

- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

5. Please feel free add any other comments or concerns that you might have regarding the specific materials you reviewed.

Prev Done

APPENDIX G-15

ADDIE Design Phase
Task D04: Assessment Instruments
Delphi Survey 08
Raw Data

Delphi Survey 08	SME Rating
DS_8_1	3
DS_8_2	3
DS_8_3	4
DS_8_4	4

APPENDIX G-16

ADDIE Design Phase
Task D04: Assessment Instruments
Delphi Survey 08
Summary Data

Survey	Number of Items	*M*	*SD*	*Mdn*
Delphi 08: Design Phase (Task D04)	4	3.91	0.27	4

APPENDIX H

RAW Data for A SECRET Case Scenario Selected Response Assessment

	Part01	Part02	Part04	Part06	Part07	Part08	Part10	Part12
AQ1	1	1	1	0	0	1	1	1
AQ2	1	0	1	1	0	1	0	1
AQ3	1	0	1	0	1	1	1	1
AQ4	1	1	1	1	0	0	0	1
AQ5	1	0	1	0	0	0	0	1
AQ6	1	1	1	1	1	1	1	1
SQ1	1	0	0	0	0	0	0	0
SQ2	0	1	1	1	1	1	1	1
SQ3	0	1	1	1	0	1	0	1
SQ4	0	0	1	0	0	0	1	0
SQ5	1	0	1	1	1	1	1	1
SQ6	0	0	0	0	0	1	1	0
ER01	0	1	1	1	1	1	1	1
ER02	1	0	1	0	0	1	0	1
ER03	0	0	1	0	1	1	0	1
ER04	1	0	0	0	0	0	0	1
ER05	1	1	0	0	1	1	0	1
ER06	1	0	1	1	1	0	1	1
C01	0	1	1	0	1	0	0	1
C02	0	0	1	0	0	1	1	1
C03	0	0	1	0	0	1	1	0
C04	0	0	1	0	1	0	0	1
C05	1	0	1	0	1	1	0	1
C06	1	0	1	1	1	1	1	0
R01	1	1	1	1	1	1	1	1
R02	1	1	1	1	1	1	1	1
R03	1	1	1	1	1	1	1	1
R04	1	1	1	1	1	1	1	1
R05	1	1	1	1	1	1	1	1
R06	1	1	1	1	1	1	1	1
E01	0	0	1	0	0	0	1	0
E02	1	1	0	0	1	0	0	1
E03	0	0	0	0	0	1	0	1
E04	1	0	1	1	1	1	1	0
E05	0	0	0	0	1	0	0	1
E06	1	0	0	1	0	0	0	1
T01	1	0	1	1	0	1	0	1
T02	1	1	1	1	1	1	1	1
T03	1	1	0	1	0	0	0	1
T04	1	1	1	1	1	0	0	0
T05	1	0	0	1	1	0	0	0
T06	1	1	1	1	1	0	1	1

APPENDIX I
Raw Data Student Attitudinal Survey

Respondent ID		3377801732	3373924224	3372196429	3370754346	3370663367	3370197224	3367430435	3366652115
The use of still images (pictures) was helpful to me in understanding the content found in the A SECRET learning module.	Response	Agree	Agree	Agree	Agree	Agree	Agree	Strongly Agree	Agree
The use of video clips clarified concepts introduced in the A SECRET learning module.	Response	Strongly Agree	Strongly Agree	Agree	Agree	Strongly Agree	Agree	Strongly Agree	Strongly Agree
The use of the audio elements assisted me in understanding the content of the A SECRET learning module.	Response	Agree	Agree	Strongly Agree	Strongly Agree	Agree	Agree	Strongly Agree	Strongly Agree
The quality of the audio elements was appropriate for the A SECRET learning module.	Response	Agree	Agree	Agree	Agree	Strongly Agree	Agree	Strongly Agree	Strongly Agree
The learner controls (start, pause, slider) used to navigate through each presentation were effective.	Response	Strongly Agree	Agree	Strongly Agree	Agree	Strongly Agree	Agree	Strongly Agree	Strongly Agree
The navigation within the A SECRET module assisted me with the movement through the module.	Response	Strongly Agree	Disagree	Strongly Agree	Agree	Agree	Agree	Strongly Agree	Strongly Agree

The text-based information included within the module was important for learning the content of A SECRET.	Response	Agree	Agree	Strongly Agree	Agree	Agree	Agree	Strongly Agree	Strongly Agree
The placement of the text on each screen supported my understanding of A SECRET.	Response	Agree	Agree	Strongly Agree	Strongly Agree	Agree	Agree	Strongly Agree	Strongly Agree
The order of each lesson of A SECRET increased my understanding of the content presented in the A SECRET learning module.	Response	Strongly Agree	Agree	Strongly Agree	Agree	Strongly Agree	Agree	Strongly Agree	Strongly Agree
The process of logging into the ISU Moodle instructional site was not difficult.	Response	Agree	Agree	Strongly Agree	Agree	Strongly Agree	Agree	Strongly Agree	Strongly Agree
Moving from one A SECRET lesson to another was intuitive.	Response	Agree	Disagree	Agree	Disagree	Strongly Agree	Agree	Strongly Agree	Strongly Agree
Transitioning between the lessons contained in the A SECRET learning module to the A SECRET assessment (case scenario) was easy to navigate.	Response	Strongly Agree	Agree	Strongly Agree	Disagree	Strongly Agree	Agree	Strongly Agree	Strongly Agree
After completing the ISU "A SECRET module", I would prefer learning about sensory processing related topics through a face to face lecture.	Response	Agree	Agree	Agree	Disagree	Disagree	Strongly Agree	Agree	Agree

After completing the ISU "A SECRET module", I would prefer learning about additional sensory processing related topics through online instruction.	Response	Disagree	Disagree	Disagree	Agree	Agree	Disagree	Agree	Disagree
After completing the ISU "A SECRET" module, I prefer learning about sensory processing related topics through both a combination of face to face and online instruction.	Response	Strongly Agree	Agree	Agree	Strongly Agree	Agree	Disagree	Strongly Agree	Agree
Completing the sensory processing course (SPDU & ISU A SECRET Module) online allowed me to arrange my other commitments (other courses, work, family, etc.) more effectively.	Response	Agree	Agree	Agree	Disagree	Strongly Agree	Strongly Agree	Agree	Agree
After completing the "A SECRET module", I would prefer to learn about additional sensory processing topics and interventions through online delivery in the future.	Response	Agree	Disagree	Disagree	Agree	Strongly Agree	Disagree	Agree	Agree
After completing the A SECRET module, I would prefer	Response	Disagree	Disagree	Disagree	Strongly Agree	Strongly Agree	Agree	Disagree	Disagree

to have additional occupational therapy instruction in an online format.									
The quality of the content presented in the online instruction is more information that I have received from other sources including: courses, therapists, books, website, etc.	Response	Strongly Agree	Disagree	Disagree	Strongly Agree	Strongly Agree	Disagree	Agree	Agree
The Sensory Processing Disorder University (SPDU) modules supported my understanding of sensory processing disorders in children.	Response	Strongly Agree	Agree	Agree	Agree	Strongly Agree	Agree	Strongly Agree	Strongly Agree
After participating in the Sensory Processing Disorder University (SPDU) modules, I felt prepared to learn about A SECRET.	Response	Agree	Agree	Strongly Agree	Agree	Agree	Agree	Strongly Agree	Strongly Agree
After participating in the "ISU A SECRET module", I am confident in my abilities to generate strategies for the individual characteristics (attention, sensation & emotion regulation) of a child.	Response	Agree	Agree	Strongly Agree	Disagree	Agree	Disagree	Agree	Agree
After participating in the "ISU A SECRET module", I am confident in my ability to generate	Response	ee	Agree	Strongly Agree	Disagree	Agree	Disagree	Agree	Agree

strategies for the contextual elements (culture, relationships, environment, & task) of where a child functions.									
Participating in the "ISU A SECRET module" will provide me with therapeutic tools in preparation for a Level II fieldwork experience.	Response	Agree	Agree	Agree	Strongly Agree	Agree	Disagree	Agree	Agree
The information that was presented in the SPDU modules directly related to the questions on the SPDU assessment.	Response	Strongly Agree	Strongly Agree	Strongly Agree	Agree	Strongly Agree	Agree	Strongly Agree	Strongly Agree
The "ISU A SECRET" case scenario assessment directions were clear.	Response	Agree	Agree	Strongly Agree	Strongly Disagree	Agree	Agree	Strongly Agree	Agree
The "ISU A SECRET" case scenario assessment allowed me to apply what I had learned from the A SECRET instructional module.	Response	Agree	Agree	Strongly Agree	Agree	Agree	Agree	Strongly Agree	Agree
I prefer to demonstrate my understanding of the instructional content through the use of a case study, similar to the ISU A SECRET Case Study/Quiz.	Response	Agree	Disagree	Strongly Agree	Disagree	Agree	Agree	Strongly Agree	Agree