UNIVERSITY OF LA VERNE

La Verne, California

A MIXED METHODS CASE STUDY OF EARLY CHILDHOOD PROFESSIONALS' PERCEPTION AND MOTIVATIONS OF CHOOSING SELF-DIRECTED LEARNING

A Dissertation Submitted in Partial Fulfillment of the
Requirements for the Degree
Doctoral of Education
in
Organizational Leadership

Susan Walsh

School of Education and Organizational Leadership

Organizational Leadership Department

September 2014

ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 - 1346

DISSERTATION BY

Susan R. Walsh _____

RESEARCH AND EXAMINING COMMITTEE

_____, Study Advisor/Chair
Lawrence Machi, EdD

_____, Committee Member
Denise Kennedy, PhD

_____, Committee Member
Patrick Ainsworth, EdD

_____ Date Sept. 2, 2014
Dean's Signature

ABSTRACT

A Mixed Methods Case Study of Early Childhood Professionals' Perception and Motivations of Choosing Self-Directed Learning

By Susan Walsh, EdD

Purpose. The purpose of this sequential, mixed-methods exploratory case study of early childhood professionals was threefold. First, determine if a relationship exists between a learner's readiness toward directed (DL) and self-directed learning (SDL) style and the perception of their inclination toward directed or self-directed learning, when given a choice of the two. Second, examine how self-selection of DL or SDL relates to learning achievement. Third, detect motivation of individual's selection in directed or self-directed learning.

Methodology. Quantitative methods in the form of survey assessment were employed to determine 52 participants' perceived inclination for SDL compared to their diagnosed readiness for SDL using the Self-Directed Learning Readiness Scale (SDLRS). A pretest/posttest assessment determined achievement of skill in identifying content presented in training. Qualitative data were gathered through semistructured interviews of 24 participants representing all directed and a purposeful sample of self-directed learners.

Findings. Quantitative data showed that most participants could positively identify if they were ready for SDL, when looking at the readiness level for SDLRS. However, there was no significant relationship between their readiness for SDL and content growth of the training material. Content growth was measured using pretests/posttests. Qualitative data showed that those choosing SDL were motivated by convenience, desire for schedule autonomy, and confidence in ability to complete training independently.

Conclusions. The study data support the conclusion that adult learners are capable of identifying their readiness for SDL. SDL can be situational, and perceived barriers will motivate choosing DL versus SDL when given a choice. When barriers are mitigated, directed learners' behavior may change and parallel self-directed learner behavior.

Recommendations. Further research is advised: (a) in applying quantitative survey to larger populations to determine more confidently the relationship between SDL and training growth; (b) in applying the research study to a more demographic diverse population that is better representative of the population; (c) applying the research study in various situations, as SDL is situational; (d) in seeking qualitative data from all participants including those not completing the study to discover the motivation and barriers to continue or withdraw from the learning experience.

TABLE OF CONTENTS

FIGURES

TABLES

ACKNOWLEDGMENTS

I wish to thank all those who have supported me. To my dissertation chair, Dr. Larry Machi, and committee members, Dr. Denise Kennedy and Dr. Patrick Ainsworth, thank you for your guidance and support, and for believing in me even when I doubted myself.

I am grateful for the support of faculty colleagues in my department and my institution's library: support both cerebral and motivating ("just keep writing!").

I am thankful to Dr. Larry Machi and Dr. Bill Bearley for the program they created to apply qualitative research in a practicum setting; it played an integral part in this study design.

To my family, here and far. . . . Thank you for all your love and encouragement. JPW—your support was the foundation that held me up and endless cups of tea "kept me up" through the seemingly endless process. To my children—I hope that I have inspired you as my parents and siblings inspired me.

DEDICATION

I dedicate this work to every early childhood professional who knows the value of intentionality and the positive influence it can make in a child's life.

CHAPTER I

INTRODUCTION

> The world in which we are born is not the world in which we will live, nor is that the world in which we will die.
>
> —Margaret Mead

Change is now so great, and so far reaching, that no amount of education received during their youth can prepare adults to meet the demands that will be made on them (Cross, 1981). Learning is now "lifelong," and lifelong learners access information in varying methods and for varying reasons, one of which is the knowledge explosion and technological access to knowledge. To that end, Cross (1981) contended that "if technological change and the knowledge explosion make lifelong learning increasingly necessary, they also make it increasingly possible" (p. 31).

The study of andragogical principles, defined as an understanding of how adults learn, intensified from 1945 to 1970. This period highlighted scientists and scholars such as Jean Piaget, B. F. Skinner, and Malcom Knowles. During this time, previous studies of knowledge acquisition and behaviorism were moving toward the study of information and how it is processed (Mueller & Mueller, 1995). It is equally important to know why adults do not participate and why they do (Merriam, Caffarella, & Baumgartner, 2007). To that end, researchers Carp, Peterson, and Roelfs (1974) determined that the barriers to accessing and processing information can be classified under three subheadings:

situational barriers (arising from one's situation in life at a given time; for example, lack of time due to job or child care), institutional barriers (practices and procedures that exclude or discourage participation due to inconvenient schedules or locations, inappropriate courses of study, etc.), and dispositional barriers (attitudes and self-perceptions about oneself as a learner). Following investigations of barriers, scholars (Brockett & Hiemstra, 1991; Houle, 1988; Long & Associates, 1990; Tough, 1971) started focusing on adults' self-direction of accessing and processing information. Personal attributes of the self-directed learner are central to this discussion, and two ideas received the greatest attention: readiness for self-directed learning and the concept of autonomy (Merriam et al., 2007). Merriam et al. (2007) stated,

> While certainly adults have always learned on their own, serious study of this phenomenon is relatively recent in comparison to other aspects of learning, such as memory, cognition, and intelligence. This lag is due in part to much of self-directed learning occurring outside of formal institutional settings. (p. 105)

This pioneering work on self-directed learners was descriptive, while later work (Candy, 1991; Garrison, 1997) began providing more in-depth conceptual models, including self-directed learning as a process (Grow, 1991).

The notion that self-directed learning is a process begged the question of knowing when one is ready to be a self-directed learner. Researchers tried to gain an understanding of a typical self-directed learner's attributes or characteristics. The notion of readiness for self-directed learning was studied in detail by Guglielmino (1978) in 1977, and led to the creation of the Self-Directed Learning Readiness Scale (SDLRS). While the SDLRS provides an indication of readiness for self-directed learning, others (Brookfield, 1993; Candy, 1991) argued that self-readiness might vary from situation to

situation, or change within a situation; for example, "orientation, support, and guidance may all be required in the first stages of a learning project" (Candy, 1991, p. 309) and then give way to self-directed learning in the remaining portion.

According to Merriam et al. (2007), "Recent research and writing in SDL [self-directed learning] demonstrate an interest in the concept's applicability to lifelong learning, human resource development, and online learning" (p. 124). Self-directed learning (SDL) as a method of human resource development within professions is gaining importance as a vehicle for practitioners to be lifelong learners. Williams (2001) noted that knowledge is accumulating at such a fast rate, that one must learn to be effective. SDL can serve the needs of an organization as a training design (Piskurich, 1993). This notion of a training designed for self-directed learning, which Smith (2002) advanced, can encourage employees to be self-directed learners, resulting in considerable commercial value, because the employees can then "contribute to competiveness without the need for all learning to occur when there is direct training by an instructor" (p. 111).

Another connection of self-directed learning and human resource development was examined by Ellinger (2004). This literature examination resulted in several suggestions for research. One of the suggestions was to examine the impact of technology on self-directed learning, in light of the prevalence of the Internet and Web-based instructional strategies.

Problem Statement

The problem identified for this study was as follows: What are the motivating factors in choosing directed (DL) or self-directed learning (SDL) and can learners correctly identify their readiness for SDL? Is there a relationship between a learner's readiness toward self-directed instruction related to his or her learning achievement?

Purpose Statement

The purpose of this sequential, mixed-methods exploratory case study of early childhood professionals was threefold. First, determine if a relationship exists between a learner's readiness toward directed and self-directed learning style and the perception of their inclination toward directed or self-directed learning, when given a choice of the two. Second, examine how self-selection of directed or self-directed learning relates to learning achievement. Third, detect motivation of individual's selection in directed or self-directed learning.

Research Questions

Following are the research questions; the first three are quantitative and the last three are qualitative:

1. Is there a relationship between a participant's self-selection of directed or self-directed learning style with his or her self-directed learning readiness as measured by the SDLRS?

2. How does one's level of readiness for self-direction (as measured by the SDLRS) relate to his/her change on the Video Assessment of Interactions and Learning (VAIL)?
3. How does one's correct identification as directed or SDL (based on the SDLRS category score) relate to his/her posttest-pretest VAIL scores?
4. What factors motivate the participant to initially self-select directed versus self-directed learning options?
5. Does the participant's motivation for choosing directed versus self-directed learning change upon completion of a directed or self-directed learning experience?
6. Did the factors that motivated participants to initially self-select directed versus self-directed change during their learning experience?

Significance of the Study

This study has a practical application for future training model designs used in businesses and industry. Many business professionals are mandated to continue learning in order to maintain their licenses or keep current with new information or emerging trends in their industry. Industries are recognizing that formal educational systems that "hand knowledge to the next generations" (Schrader-Naef, 2000, p. 144) are only a beginning; knowledge must be accumulated at a fast rate in order for professionals to be effective (Williams, 2001). By knowing which learners are ready to learn through SDL, industry and businesses can consider how SDL can enhance the workplace.

This study is also important in examining technology and SDL. While the amount of information available specific to industries is growing, the manner in which it is accessed is rapidly changing due to Internet and online delivery. According to "Internet Usage 3Q Update" (2005), about 14.6% of the world's population are Internet users. However, it is not only the digital divide of who has technology access to the Internet that divides learners, there is a secondary division among those with access. Page (2005) found that factors such as "uncertainty about change, fear of technology, need for guidance, inexperience, [and] relevance" (p. 334) are complex factors that may be barriers to learning among people with technology access. Thus, by expanding adult learners' perspectives of their motivation for self-selecting DL or SDL, adult learners can more intentionally choose one over the other.

Relevance of the Study

It was the intent of this study to expand the research on adult learning. Compared to the industrialization of the 20th century, the 21st century is more technologically savvy, with industries developing new knowledge that requires professionals to keep learning to maintain their skills. Adults find that they must continue their learning past formal schooling in order to function at work (Merriam et al., 2007). To that end, when designers are developing empowering learning environments, they first need to understand the factors that influence people's attitudes, intentions, and behaviors (Kop & Fournier, 2010).

Another goal of this study was to expand research on motivating factors in selecting DL and SDL. Previous research into the nature of SDL models was examined within a framework where instructors could apply the stages of SDL to various learning situations (Grow, 1991, 1994). Grow identified four stages of SDL and emphasized that "good teachers individualize their teaching strategies to match the learners' stage of self-direction and allow students to become more self-directed in their learning" (as cited in Merriam et al., 2007, p. 118). As such, Grow suggested that the learning experiences are situational in nature, and SDL may change within a particular learning experience (as cited in Merriam et al., 2007). Expanding this model to include technology as the mode of delivery is limited. Even further, research is extremely limited where the mode of content delivery is via technology, and learners have the option to move between DL and SDL. This study will add to the literature of motivational factors of adult learners in self-selecting DL and SDL.

Definitions of Terms

Adult learner. The U.S. Department of Education defines an adult as person 16 years old and older (National Center for Education Statistics [NCES], 2013).

Andragogy. Approach to education promoted by Knowles and based on assumptions about adult learning, including (a) adults need to know why they need to learn something, (b) adults need to learn experientially, (c) adults approach learning as problem solving, and (d) adults learn best when the topic is of immediate value. These

should be taken into consideration as one thinks about adult distant learners (Moore & Kearsley, 1996).

CLASS. The Classroom Assessment Scoring System (CLASS) designed at the Curry School Center for Advanced Study of Teaching and Learning, is a tool for observing and assessing the qualities of interactions among teachers and children in classrooms. It measures the emotional, organizational, and instructional supports provided by teachers. The tool is used to assess interactions between teachers and children for a variety of purposes, including teacher professional development, monitoring and evaluation, and research (Hamre, Goffin, & Kraft-Sayre, 2009).

Content expert. Person who usually holds a credential certifying mastery in a specific area of knowledge and who identifies and "decides what knowledge will be taught" (Moore & Kearsley, 1996, p. 8).

Early childhood education. "The National Association for the Education of Young Children (NAEYC) defines early childhood education to include any part- or full-day group program in a center, school, or home that serves children from birth through age eight" (National Association for the Education of Young Children [NAEYC], 1993. p. 2).

Early childhood professional. "Individuals working directly with young children and families as well as those working to support the provision of early childhood services to young children and their families" (NAEYC, 1993, p. 4).

Facilitator. A facilitator of online discussions provides support and guidance to learners. This support can be in the form of asking questions and providing feedback to

individual learners. The facilitator's role is to keep the discussion moving in order to assist learners in achieving higher levels of cognitive presence. The facilitator is to "monitor and manage discourse to ensure that it is productive and learners stay engaged" (Garrison, 2009, p. 354).

Human resource development (HRD). The framework for helping employees develop their personal and organizational skills, knowledge, and abilities. HRD includes such opportunities as employee training, employee career development, performance management, and development (Nadler, 1969, as cited on Human Resource Development, n.d.).

Learning experience. "An event or series of events for which learning is at least one of the intended consequences" (Tannenbaum, 1997, p. 438).

Directed learner. An individual involved in an instructional approach that is structured, sequenced, and led by teachers or content experts ("Direct Instruction," n.d.).

Directed learning. "Educational environments that are characterized by the teacher in the role of expert and authority figure, transmitted knowledge, standardized curriculum, and mastery of content" ("Directed Learning," n.d., para. 15).

E-learning. "Covers a wide set of applications and processes, such as Web-based learning, computer-based learning, virtual classrooms, and digital collaboration. It includes the delivery of content via Internet, intranet/extranet, audio- and videotape, satellite broadcast, interactive TV, and CD-ROM" (Kaplan-Leiserson, 2003, as cited in Harvey, 2004, Selected Glossary, para. 5)

Learning style. "Relatively stable and developed ways in which a person perceives, behaves, and interacts in a learning environment" (Moore & Shattuck, 2001, para. 48).

Lifelong learning. "Learning throughout the lifetime with emphasis on independent study determined by contextual personal needs" (Moore & Kearsley, 1996, pp. 238-239).

Online learning. A major subset of Distance Education, is a set of flexible teaching and learning tactics that seeks to provide greater access to learning for all students through the use of technology (University of Western Australia, 2010)

Self-directed learner. An individual involved in self-directed learning who diagnoses his or her learning needs, formulates his or her learning goals, identifies resources needed for learning, and chooses and implements appropriate resources (Knowles, 1975).

Self-Directed Learning Readiness Scale (SDLRS). A self-report questionnaire with Likert-type items designed to measure the complex of attitudes, skills, and characteristics that comprise an individual's current level of readiness to manage his or her own learning. Respondents are asked to read a statement and then indicate the degree to which that statement accurately describes their own attitudes, beliefs, actions, or skills (Guglielmino & Guglielmino, n.d.).

Self-directed learning (SDL). "A process of learning in which people take the *primary* initiative for planning, carrying out, and evaluating their own learning

experiences" (Merriam et al., 2007, p. 110). Knowles (1975) referred to SDL as the ability to learn on one's own.

Early self-directed learning. "A process of learning in which people take the primary initiative for planning, carrying out, and evaluating their own learning experiences" (Merriam et al., 2007, p. 110)

Professional development. "The development of competence or expertise in one's profession; the process of acquiring the skills needed to improve performance in a job" (American Library Association, n.d., para. 1).

Training. According to the NAEYC and National Association of Child Care Resource & Referral Agencies ([NACCRRA], 2011),

> A learning experience, or series of experiences, specific to an area of inquiry and related set of skills or dispositions, delivered by a professional(s) with subject matter and adult learning knowledge and skills. A planned sequence of training sessions comprises a training program. Training is a learning experience, or series of experiences, specific to an area of inquiry and related set of skills or dispositions, delivered by a professional(s) with subject matter and adult learning knowledge and skills. A planned sequence of training sessions comprises a training program. That can occur one time or in a series of sessions and may be delivered through h face-to-face, distance, technology-based, or hybrid methods. (p. 7)

Video Assessment of Interactions and Learning (VAIL). An assessment designed to examine teachers' understanding of quality teaching strategies and corresponding behavioral examples of each strategy, specific to CLASS dimensions. VAIL can be used as a performance assessment, related to a person's skill in detecting behavior/interactions that make teachers effective and promote student learning.

Assumptions

"***Professional development is an ongoing process.*** All early childhood professionals—no matter how qualified—need to continue to incorporate into their professional repertoire new knowledge and skills related to working with young children and their families" (NAEYC, 1993, p. 7).

The *early childhood field* is differentiated from the *early childhood profession*. The *field* includes anyone engaged in the provision of early childhood services; the *profession* denotes those who have acquired some professional knowledge and are on a professional path (NAEYC, 1993).

"Early childhood professionals enter the field through various paths. Some individuals have completed professional preparation programs prior to assuming a professional role; for many others, formal professional preparation follows their decision to work with young children" (NAEYC, 1993, p. 4).

The Study's Delimitations

There were two delimitations to this study. First, given the nature of the study, it is delimited to study a population of adult learners associated with one organization; thus, the results are not generalizable beyond the sample. Second, the SDLRS is a self-report instrument with the usual limits associated with type of instrumentation.

Organization

This dissertation was organized into five chapters: Chapter I provided the introduction, problem statement, research purpose statement, research questions,

significance, relevance, definitions of terms, assumptions, and delimitations of the study. Chapter II presents a review of the literature relevant to adult learning trends, adult learning theories, learning styles, and motivation of choosing SDL. Chapter III focuses on the methodology used to address the research questions of this study. Chapter IV presents results of the data analysis. Chapter V offers key findings, implications, commentary about weaknesses of the methodology used in this study, and suggestions for future studies.

CHAPTER II

LITERATURE REVIEW

The prevailing view of learning is that it is being delivered in contexts heretofore not seen historically. Within many industries and businesses, learners are now expected to be lifelong learners, available to learn salient, trending, or newly emergent information. Formal learning, one that takes place in an organized and structured environment, typically with an instructor or content expert, is no longer the only modality of instruction. Increasingly, new trends and technology are available, many of these designed for the learner to direct his or her learning pace and within his or her chosen environment. This shift requires the learner to consider when and if he or she is ready and motivated for self-directed learning (SDL), rather the directed learning (DL).

The literature in adult education is examined here within the concept of adult learners and learning theories as well as SDL.

Literature Review Organization

Chapter II reviews literature relevant to trends in adult learning followed by adult learning theories and motivation theories. Then literature concerning readiness for SDL is explored. Finally, studies that may suggest links between self-directed learners, readiness for SDL, and perception of readiness for SDL and motivation are examined.

Definition of Adult Learning

Prior to the 1970s, psychological perspectives were the basis of information about adults as learners (Merriam & Cafarella, 1999). There is no operational definition of "adult learning." Rather, there is a differentiation of adult learning from childhood or adolescent learning. According to Brookfield (1995), "Adult learning is frequently spoken of by adult educators as if it were a discretely separate domain, having little connection to learning in childhood or adolescence" (p. 1).

Knowles (1970) delineated pedagogy, the science or profession of teaching children, from andragogy, which he defined as "the art and science of helping adults learn" (p. 38). He noted that the term is more pertinent when discussing adult learning. Within the discussion of andragogy, Knowles (1980) listed adult learning as a process embedded in adult education. While Knowles' influential work focused discussions on attempting to understand the unique learning processes and characteristics of adults as learners, he offered no distinct definition of adult learning (Booth & Schwartz, 2012).

Adult Training Versus Adult Education

When examining the definitions of adult training and adult education, the usual distinction is based on the institution offering the instruction (de Moura Castro & de Oliveira, 1996). Historically, education and training have often been considered distant concepts: training considered an "intellectually shallow" practical application of a specific task whereas education is viewed as having high theoretical and conceptual content that sharpens the mind.

Johnstone and Rivera (1965) suggested that it is important to narrow the broad interpretation of "adult education." They defined adult education as an activity that has as its main purpose "desire to acquire some type of knowledge; information, or skill and that it would include some form of instruction (including self-instruction)" (Johnstone & Rivera, 1965, p. 26). In their landmark study funded by the Carnegie Corporation, they further refined the activity to include part-time, full-time, and independent education. Johnstone and Rivera defined an adult as being over 21 years of age. Their criteria of age differed from that of the U.S. Department of Education, which defined adults as 16 years old and older (NCES, 2013).

The distinction between education and training is blurring as work organizations and recent technology influence how adults are learning (Elan, 1989; Eliasson, 1988). Specific to learning, Elan (1989) stated, "There are no good reasons to be concerned with the differences between education and training instead of offering learning opportunities that have both" (p. 1).

Characteristics of Adult Learners

While the U.S. Department of Education defines an adult as a person 16 years old and older (NCES, 2013), Mackenzie (1991) noted that there is a wide range of individual differences, rather than research, to support mental abilities, which reach a peak of development and then decline. Pratt (1988) suggested that adult learners are best characterized by looking at four categories of the support and direction they require: (a) adult learners who need substantial direction and support, (b) adult learners who need

direction, (c) adult learners who are self-directing, but need support, and (d) adult learners who are self-directing, but need little support. Pratt cautioned that these categories are situational and adults' self-direction is more a function of a learner's sense of competence, commitment, and confidence in a specific situation and the learner's confidence in his or her ability to reach a specific goal, rather than being a general trait of adulthood. As such, adults are capable of self-directness in some, but not all, tasks.

This section of the literature review defined adult learning, the distinction between adult training and education, and provided a brief characterization of adult learners and four levels of direction and support they require. The following section examines adult learning theories.

Adult Learning Theories

Moving beyond the trends of adult learning, the next avenue of discussion involves identification of adult learning theories. While a number of theories, models, and frameworks address and capture some aspects of adult learning, there is no single theory of adult learning. This section provides the reader with a definition of adult learning and conceptual understanding of adult learning theory models.

Merriam et al. (2007) authored *Learning in Adulthood: A Comprehensive Guide,* which gathered seminal work and current thinking on adult learning. In considering their search for a single theory of adult learning, they concluded that there was no single theory of human learning in general and no single theory of adult learning has emerged to unify the field.

Andragogical Model

According to Knowles (1979), the goal of andragogy is "attempting to meet a legitimate need—the need to provide a viable alternative to 'school-like' education" (p. 53). Knowles (1984) developed the andragogical model, which includes the following four assumptions:

1. Adults need to be involved in the planning and evaluation of their instruction.
2. Experience (including mistakes) provides the basis for learning activities.
3. Adults are most interested in learning subjects that have immediate relevance to their job or personal life.
4. Adult learning is problem-centered rather than content-oriented. (Culatta, 2013a, para. Principles)

The assumptions underlying the andragogical model address how adults learn. It follows then, that adults should be taught differently than children (Beder & Darkenwald, 1982; Feuer & Geber, 1988). Yet, these assumptions were not necessarily true of all adults, which led Knowles to reconsider the strict distinction of pedagogy and andragogy and acknowledge that learning is instead on a

> continuum ranging from teacher-directed to student-directed learning. For example, an adult who knows little or nothing about a topic will be more dependent on the teacher for direction. . . . This acknowledgement by Knowles resulted in andragogy being defined more by the learning situation than by the learner. (Merriam, 2001, p. 6)

While the andragogical model was widely accepted, Elias (1979) argued that there is little or no empirical support to substantiate the tenets. Others also critiqued the empirical soundness and validity from an epistemological position (Hartree, 1984; Nottingham Andragogy Group, 1983; Tennant, 1986).

A further critique of andragogy was suggested by Lee (2003), who suggested that the findings of andragogy and its application to foreign-born learners do not hold to

andragogical assumptions. Lee's (2003) work cited several studies of various immigrant groups and discerned that Knowles "effectively silenced and marginalized various social groups, including the adult immigrant learners whose values, experience, and realities do not likely resemble the discourse of the dominant population" (p. 15).

Andragogues

Andragogy delineates teaching to adults from teaching to children. The four assumptions of the andragogical model address how adults learn. Important to this discussion is the role of the teacher in relationship to the student. Moving away from a traditional teacher-student relationship, Knowles (1984) described "andragogues" as facilitators who treat adult learners in ways very different from the ways they would treat children. According to Brookfield (1989), "Facilitators usually are described in terms that imply they will assist rather than direct learners" (p. 201). Brookfield asserted that there is contrast of the role of traditional teachers whose charge is to emphasize an instructional role or transmit information from the role of a facilitator. Facilitators are viewed as resource persons or helpers rather than teachers. Extending this view, Tough (1979) stated that those viewing facilitators as helpers see the facilitators as having the following characteristics: having a high regard for learners' self-planning abilities, being engaged in an equal dialogue with learners, and having high regard for learners' self-planning ability.

The purpose of facilitation in the practice of andragogy is to foster an adult's capacity for self-direction (Brookfield, 1985; Knowles, 1975; Long & Associates, 1988).

While controversy surrounds andragogy, it has been the primary model of learning for over 4 decades even though the validity of its assumptions or usefulness in predicting adult learning behavior is scant. Merriam et al. (2007) countered the debate of usefulness in their following position:

> Although assessing the validity of andragogy directly may prove difficult to do, one could consider the extent to which a broader range of research in adult learning may or may not support the assumptions underlying andragogy. For example, the research on self-directed learning that finds upwards of 90% of adults are engaged in self-directed learning projects and that 70% of projects are planned by the learner. (p. 92)

Humanistic Theory

Humanistic theory holds that it is a natural tendency for adults to learn (Cross, 1981). Developmental theorists hold four basic presuppositions around learning:

> 1. Each stage of development is an integrated whole . . . .
> 2. A particular stage is integrated into the next stage and finally replaced by it.
> 3. Each individual acts out his own syntheses; he does not merely adopt a synthesis provided by family or society.
> 4. The individual must pass through all previous stages before he can move on to the next stage. (Craig, 1974, p. 121)

Tough (1971), drawing on humanistic theory, stated that there is a natural tendency for adults to learn. Along those lines, *Learning to Be,* a UNESCO report, suggested a strong humanistic influence in adult education and

> recommend[ed] that educational activities should be centered on the learner in order to allow him greater and greater freedom, as he matures, to decide for himself what he wants to learn and how and where he wants to learn it. (p. 220)

Where and when an adult learner is receptive to new learning is a notion closely held by developmental theorists. Aslanian and Brickell (1980) found that environmental challenges and life transitions (marriage, job changes, retirement, etc.) account for most

adult learning. It holds then, rather than adults being internally motivated they are mandated to participate in continuing education and training (Merriam et al., 2007).

Behaviorist Theory

While humanistic theory holds that life transitions account for most adult learning, behaviorism is frequently the foundation for jobs and skills training, considered one of the largest segments of adult education (Cross, 1981). Brookfield (1989) stated that the general principal of behaviorism "is drawn down from Skinner, and, in adult education, it has been influential in the development of competency based adult education" (p. 202). Utilizing the general principal where most skills are broken into smaller segments, the learner is rewarded for correct responses. Behaviorist theory historically held that correct responses are typically observable behavior tied to environmental stimuli (Lowyck, 1996). Currently, there is an evolution of behavorist theory, according to Lowyck (1996), particular to its application in training and development: "Two main observations are the shift from the training of observable behavior to more encompassing, cognitive activities, and the gradual integration of (re-) training efforts in the organization as a whole" (p. 416).

A major tenet of behaviorism is that rewards ensure learning and repetition of the desired behavior. Srinivasan (1977, as cited in Cross, 1981) suggested that learning materials not only be broken into smaller segments, but the learning tasks be "analytically designed in relation to desired end behaviors" and "the responsibility for ensuring that learning takes place must rest with the materials themselves as learning instruments and

not with any instructor, leader, or helper" (p. 12). Srinivasan addressed learning material at a time when the delivery vehicle of materials was at the precipice of a major breakthrough. Computer technology was trending to the forefront as a method through which learning materials could be delivered. Learning materials and presentation styles are not static as they respond to trends and technology. For example, in 1976 when programmed computer-assisted instruction applications based on behaviorism were first being rolled out, Cross (1981) expressed the following: "Their convenience for off-campus learners plus their general effectiveness with well-motivated, self-disciplined adults makes them likely candidates for growth in adult education" (p. 232). Cross's "off-campus" implies instruction that is not directed in a traditional classroom setting.

Stimulus-Response (S-R) Theory

Essential to S-R theory are three underlying assumptions about the process of learning. According to Thorndike (1898), his studies with animals concluded that there must be a connection to what is learned, there must be repetition of a meaningful connection, and the learner must be ready for the connection. Absent those three factors, learning is inhibited. Hilgard (as cited in Knowles, 1973) furthered Thorndike's principles to specifically state that "*drive* is important in learning, but all personal-social motives do not conform to the drive-reduction principles based on food-deprivation experiments" (p. 51). Further, Hilgard held that conflicts and frustrations inevitably arise in the learning process. To mitigate these, conflicts must be recognized and resolution or accommodation provisions considered. Consideration of conditions under which learning

occurs, according to Spence (1950), is the distinguishing factor between cognitive learning and conditional learning. Environmental variables, according to Spence, heavily influence learning content.

The environment must be constructed to include the learner as an active rather than a passive processor listener or viewer (Knowles, 1973; Spence, 1950; Tolman, 1948). Classic S-R theory utilized clinical methodology using animals as subjects and food as rewards. Modern research of S-R has moved beyond this to consider the idea that conditions, including a learner's perception and motivation are environmental variables that may influence learning content:

> In modern learning research, our choices of *stimulus variables* are much more eclectic than in Spence's day, with the same laboratories often investigating perceptual, motivational and other variables, and delving equally into determining the *contents* and *conditions* of learning. We are at least more receptive to the idea that the conditions and contents of learning are not independent, and are more likely to pursue programs that examine, for example, the conditions that favor the formation of . . . S-R. (Holland, 2008, p. 239)

Constructivist Theory

Constructivism has its roots in philosophy. The constructivist theory of learning considers the readiness, organization, and expansive purpose of instruction. Adult learning often draws on the constructivist theory (Bruner, 1966), which holds the following tenets:

1. Instruction must be concerned with the experiences and contexts that make the student willing and able to learn (readiness).
2. Instruction must be structured so that it can be easily grasped by the student (spiral organization).
3. Instruction should be designed to facilitate extrapolation and or fill in the gaps (going beyond the information given). (Culatta, 2013b, para. Principles)

The constructivist orientation includes several perspectives labeled constructivist and debates the influence of individual versus social learning. The current debate in education, according to DeVries (1997), is the roles individual and social factors play in development of knowledge construction. The issue is framed by some theorists (Driver, Asoko, Leach, Mortimer, & Scott, 1994) that learning is an adaptation of an individual's cognitive scheme to his or her environment. Therefore, the individual's current and previous knowledge drive learning. In this perspective, learning is considered an internal cognitive activity (Piaget, 1972).

Phillips (1995) suggested that the educational literature on constructivism is enormous and growing rapidly as many varieties of constructivism exist because "human knowledge—whether it is the bodies of public knowledge known as the various disciplines, or the cognitive structures of individual knowers or learners—is *constructed*" (p. 5). Constructivist authors (for example, "Fleck, Kant, Kuhn, Piaget, James, von Glasersfeld") present the broad range of authors that span a broad philosophical theoretical spectrum; yet all hold constructivist ideas, according to Phillips (1995, p. 5).

Merriam et al. (2007) advanced that "all forms of constructivism understand learning to be an active rather than passive endeavor. Consequently, learning occurs through dialogue, collaborative learning, and cooperative learning" (p. 292). Gergen (1995) commented that adult learning is constructed actively through engaging, incorporating, and critically exploring the views of others as these open possibilities of interpretation through interaction.

Force Field Analysis

Lewin (1943) proposed that the force field analysis model influences adult learning in that the learner views his experiences as motivation to learn. Unlike Bruner who espoused experiences and contexts as a motivating factor of learning, Lewin held that the strength of motivation to participate in adult education is the result of the individual's perception of positive and negative forces in the learning situation.

Learning and Motivation

In addition to a sweeping change of adult learning opportunities due to computers, the 1980s considered new directions of learning and motivation in adult learning. Svinicki (2004) emphasized that "the shift was from a behavioral perspective on learning to a cognitive perspective and its successors in constructivist and personal responsibility models of learning" (p. 5). Instructional implications were explored around self-paced instruction, a shift away from previously traditional instructional approaches where the teacher or content expert drives the content and pace, to self-paced constructivist learning where the learner holds personal responsibility.

Summary Analysis of Adult Learning Theories

As noted in the beginning of this section, there has been considerable debate around the topic of adult learning theories, yet there is no single adult learning theory that has merged to unify the field. This section of the literature review examined several adult learning theories: Knowles' andragogical model; humanistic and behaviorist theory

within the context of adult learning; stimulus-response (S-R) theory as it relates to adult learning where the "drive-reduction principle" is changed from the classic S-R definition (of food-deprivation) and is instead viewed as conflict mitigation; constructivist theory, where previous knowledge drives adults to actively (rather than passively) engage in learning; Lewin's Force Field Analysis where the adult is motivated by his or her perception of positive and negative forces in the learning situation.

A purpose of this research was to discover the motivation of adults in a learning situation before, during, and after a learning experience. The theories presented in this section offer varying viewpoints, yet a unifying theme appears to be how "situation" factors influence and motivate adults in learning experiences. Specific situational factors listed in the theories vary widely, and will be considered in exploration of participants' perceptions of situational learning factors in this study.

Emerging Models

Relatively new to the discussion of adult learning, Cross (1981) synthesized much of the information about adult learning theories and created two conceptual frameworks to describe adults learner. The first, chain of response (COR), pertains to adult participation in learning and shows one- or two-way relationships among seven elements: (a) self-evaluation, (b) attitudes about education, (c) importance of making and meeting goals, (d) life transactions, (e) opportunities and barriers, (f) information about the environment, and (g) participation (which impacts item "c" listed above—importance of making and meeting goals).

The COR model, Cross (1981) stated, could be useful to educators, particularly if they considered the psychological aspects: "If adult educators wish to understand why some adults fail to participate in learning opportunities, they need to begin at the beginning of the COR model – with an understanding of attitudes toward self and education" (p. 130).

Cross's second conceptual framework was named characteristics of adults as learners (CAL) model. The emphasis of the model was to move beyond "what" adult learners were learning, to "who" the adult learners are by considering the context in which learning takes place and the characteristics special to adult learners. Nodding to andragogy, Cross (1981) stated, "The explicit purpose of CAL is to elucidate differences between adults and children as learners and ultimately to suggest how teaching adults should differ from teaching children—basically, the position of andragogy" (p. 234). The special personal characteristics considered in this model are personal (physical/aging, sociocultural/life phases, psychological/developmental stages). The situational characteristics considered are part-time versus full-time learning and voluntary versus compulsory learning.

Another contemporary approach to adult learning, personal responsibility orientation (PRO) model created by Brockett and Hiemstra (1991), also considers "who" the learner is.

> Personal responsibility in the teaching-learning process and in one's own thoughts and actions. Self-direction in learning is a term used as [an] umbrella concept to recognize both external factors that facilitate the learner taking primary responsibility for planning, implementing, and evaluating learning, and internal

> factors or personality characteristics that predispose one toward accepting responsibility for one's thoughts and actions as a learner. (p. 26)

Learning Styles

Directed Learning

DL is defined as an educational environment that is characterized by the teacher in the role of expert and authority figure. The knowledge is transmitted to participants in a passive learning style where the teacher directs the content and pace of delivery. Related terms of DL also include passive learning and teacher-centered learning (Herod, 2002). A directed learner is a participant engaged in DL.

Self-Directed Learning (SDL)

As previously mentioned, for the purpose of this study SDL is defined as a process of "learning in which people take the *primary* initiative for planning, carrying out, and evaluating their own learning experiences" (Merriam et al., 2007, p. 110) and Knowles (1975) referred to SDL as the ability to learn on one's own. The following serves as a brief overview of SDL from a historical, operational, and typically described vantage point:

Historical definition of SDL. SDL has existed from classical antiquity to the present (Kulich, 1970). Although it emerged as a major topic when Houle (1971) published work highlighting SDL, it dates back to Socrates. Kulich (1970) noted that SDL, or self-education as he labeled it, was the primary way individuals dealt with issues and information around them, prior to widespread development of schools. Newsome (1977) investigated the role of self-selected lifelong learning in London between the

years of 1558-1640. His findings revealed that people who had the time and money had many opportunities for SDL through private tutors, lectures, books, libraries, and schools. In America, libraries were accessible to a greater amount of people, thereby allowing those without wealth or social standing access to printed materials (Long, 1976).

Operational definition of SDL. Knowles's (1975) definition of SDL is the best-known and most cited:

> In its broadest meaning, "self-directed learning" describes a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes. (p. 18)

Like many sociological and psychological constructs, SDL lacks a unified definition, instead SDL is often defined by the key elements that constitute SDL. O'Shea (2003), in his research. found that the following key elements are generally agreed as characteristics of SDL: (a) self-directed learning is a process of learning based on adult educational principles and (b) that there is some element of

> personal control by the learner over the planning, monitoring, and management of the learning. Furthermore, what also appears common to most definitions is the notion of some personal control by the learner over the planning and management of the learning. (p. 63)

The most often used operational definition of SDL is attributed to Guglielmino (1978), who stated that SDL consists of a complex of attitudes, values, and abilities that create the likelihood that an individual is capable of SDL. Interesting, Guglielmino (1978) quoted Knowles (1975) in her work holding the most commonly cited description of the process of SDL:

> In its broadest meaning, "self-directed learning" describes a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing strategies, and evaluating learning outcomes. (p. 18)

Foundational studies of SDL. During the 1960s, two foundational studies laid the groundwork for much of the modern research on self-directed learning. One of the most influential research studies identified with self-direction in learning in the United States was reported in 1961 by Cyril Houle, founder of the first doctoral program in adult education in the country at the University of Chicago. In *The Inquiring Mind*, Houle (1961) reported on a qualitative study based on in-depth interviews with adult learners. He concluded that there are three types of adult learners: goal oriented, activity oriented, and learning oriented. His "learning-oriented learners" have been identified with self-directed learners by later researchers, and in a 1988 afterword, he identified investigations of "self-directed study, in which an individual or a group accepts responsibility for designing and pursuing an educative activity" (p. 92), as the best-known sequence of investigations flowing from his focus on examining the adults who continue to learn.

Malcolm Knowles, a student of Cyril Houle, introduced the concept of andragogy in the United States (the term was already in use in Germany at that time; Mezirow, 1981). In his 1970 *The Modern Practice of Adult Education*, the first of the major assumptions he presented was that adults are self-directed in other aspects of their lives and therefore prefer to be self-directed in their learning. In 1975, he offered a practical manual of the hows and whys of SDL for learners and learning facilitators, *Self-Directed*

Learning: A Guide for Learners and Teachers. When adult learning is self-directed, adults still have a few occasions when they require the help of an adult educator. In those situations, the learning facilitator's "professional perspective needs to be unequivocal: We must respond to the learner's educational need in a way which improves the quality of his or her self-directedness as a learner" (Mezirow, 1981, p. 9).

Although certain learning situations are more conducive to self-direction in learning than are others, it is the personal characteristics of the learner—including his or her qualities of mind and behavior (personality) as well as acquired skills and abilities—that ultimately determine whether SDL will take place in a given learning situation. The self-directed learner assumes responsibility for his or her own learning and more often chooses or influences the learning objectives, activities, resources, priorities, and levels of energy expenditure than does the other-directed learner (Guglielmino, 1978).

Choice in topics available for SDL in the United States historically trace back to 1731, when Benjamin Franklin formed the Library Association of Philadelphia, generally acknowledged to be the first of the subscription libraries, voluntary associations of individuals contributing toward the common purchase of books available for use by all members (Knowles, 1962). Wright (1957) noted that many of the books collected by early Americans were primarily utilitarian, dealing with topics such as agriculture, medicine, law, and government; but others were sought after simply because of the "zeal to perpetuate learning, to keep alive the desire for knowledge, and to provide the instruments of self-instruction" (p. 129).

Choosing SDL Versus DL

Tough (1979), notable for his work on adult learning projects, found that, when given a choice, learners prefer to assume considerable responsibility for planning and directing their learning activities. This is in stark contrast to Knowles's (1975) assertion that SDL is not a choice, but rather a requirement for survival:

> The "why" of self-directed learning is survival—your own survival as an individual, and also the survival of the human race. Clearly, we are not talking here about something that would be nice or desirable; neither are we talking about some new educational fad. We are talking about a basic human competence—the ability to learn on one's own—that has suddenly become a prerequisite for living in this new world. (pp. 16-17)

Alternately, Brockett and Hiemstra (1991) suggested that rather than self-directness be considered a dichotomous model, it is best viewed as a continuum. They argued that self-direction should be viewed as a characteristic within individuals. That characteristic exists to a lesser or greater degree—and it is present in all people and in all learning situations. Considering the implication of self-directedness in learning as a continuum will, according to Brockett and Hiemstra, be salient for facilitators and for learners in planning and carrying out educational efforts.

SDL Within Educational Setting and Stages

Debate exists around SDL and its relationship to formal organizations. Some define "true" adult SDL as being limited to learning that occurs outside of educational institutional settings or in isolation from a content specialist (Little, 1979; Penland, 1981).

Brockett and Hiemstra (1991) argued the assumption that "true" adult SDL must occur outside of educational institutional settings or in isolation from an adult education specialist is "rooted in philosophical models that place teachers or authorities in positions of control or leadership" (p. 148). They contended that self-direction in learning is possible within almost any type of setting and at any stage of a person's development. Other researchers (Brookfield, 1986; Kasworm, 1988) supported the notion of SDL being viewed as a continuum where involvement is possible both inside and outside institutionally based learning programs and throughout various modalities, including distance learning.

This section of the literature review examined available literature on directed and self-directed learners and DL and SDL within various contexts. As previously mentioned, a self-directed learner is autonomous in defining, planning, and implementing their learning. Specific to this study, a self-directed learner is one who self-selected SDL to access 21 hours of Looking at CLASSrooms (LAC) training video in a location and schedule of their choosing. Self-directed learners have, as Knowles (1975) noted, an ability to learn on their own. This is in contrast to a directed learner, who participates in learning experiences where the instructional approach is structured, sequenced, and led by teachers or other content experts ("Directed Learner," n.d.). Specific to this study, a directed learner is one who self-selected DL and is scheduled to attend four face-to-face sessions with a content expert in a room equipped with computers used to access the 21 hours of LAC training video.

SDL and Training

"Training" is distinguished from "education," according to Nadler (1984); training is aimed at creating learning processes that are relevant to a job presently held. Whereas "development" is not so much centered on information for a specific job, rather it is aimed at individual growth, which provides flexibility of that individual, essentially, training is delineated from education as training creates an intentional learning process that contributes to the performance of a worker in his or her present job (Mulder, 1992, as cited in Van Velsor, McCauley, & Ruderman, 1992).

Training is on ongoing, according to Williams (2001), as professions accumulate knowledge at a fast rate. Where educational systems hand on knowledge to the next generation (Schrader-Naef, 2000), developing practitioners in most fields require that professions mandate their members to continue learning in order to be current.

Training for professionals, as described above is ongoing, thereby allowing a professional to keep current in his/her job. More generally, training can be an instance or period of instruction or practice (Stevenson, 2012). Specific to this study, training is defined as access to 21 hours of LAC video training by early childhood education professionals.

Ellinger (2004) researched the linkages between training, SDL and workplace-related learning. One of Ellinger's suggestions for research was to examine the impact of technology on SDL as a result of growing interest with the prevalence of the Internet and Web-based instructional strategies.

Studies have been conducted on the need for students to be self-directed in online studies (Freed, 2003). It has been suggested that self-direction may have a temporal component. Kerka (1999) explored younger generations of students and workers "for whom the Web is becoming a natural habit and may already be adapting to change by developing a self-directed learning orientation" (p. 2).

SDL as a Process and Stages

SDL as a Process

When considering SDL as the learning process where the learner takes control of planning, carrying out, and evaluating his or her own learning experiences, Merriam et al. (2007) contended that this form of learning can take place both inside and outside of institutionally based learning programs. The literature review includes descriptions and critiques of the most prominent and promising models of SDL, representing a mixture of conceptual, empirical, and experiential views.

Stage Model (SSDL)

Grow (1991) held that learners advance through stages of increasing SDL and teachers hinder or help that development. His model staged self-directed learning (SSDL) suggested that readiness for SDL is situational. He said, "The ability to be self-directed is situational in that one may be self-directed in one subject, a dependent learner in another" (Grow, 1991, p. 127). Contributing to situational readiness is not just the subject or task, as he also contended, "Self-direction is partly a personal trait analogous to maturity. Once developed, certain aspects of self-direction are transferable to new

situations" (Grow, 1991, p. 127). The SSDL model defines learners in one of four stages: Stage 1 is the dependent learner; Stage 2 is the interested learner; Stage 3 is the involved learner; Stage 4 is the fully self-directed learner.

The SSDL model also suggests a matching response by a teacher to each stage. For example, the learner in Stage 1 needs a teacher who serves as an authority or coach; the Stage 2 learner is interested and needs a teacher who is a motivator or guide; the Stage 3 learner is involved and needs a teacher who is a facilitator. Grow (1991) stated, "Just as dependency and helplessness can be learned, self-direction can be learned—and it can be taught" (p. 127).

In response to the SSDL model, Tennant (1992) took issue with "how the diagnosis of the stage of readiness for self-directed learning is made" (p. 165). He questioned who the judge of the ability and willingness to carry out a task or engage in particular learning stage is. Further, Tennant (1992) queried how a teacher would know when to shift his or her teaching style if the teacher was promoting the topic in a way designed to be move SDL in a gradual staged manner. Finally, he expressed concern that in its zeal to move all learners to become self-directed learners, SSDL stereotypes teachers of Stage 1 as "authoritarian in a punitive, controlling way that stifles initiative and creates resistance and dependency" (p. 164) by placing a barrage of low-level demands on the learners.

In defense of his SSDL model, Grow (1994) responded that there are times learners are deficient in basic skills and the teacher may need to drill and practice when a learner is in Stage 1. Further, it is up to the teacher to decide when to shift teaching

modes; however, Grow (1994) added, “The question of when to change teaching style is not addressed, because the article [his 1991 article] does not include such level of detail in the short section on applying the model” (p. 110).

Linear Model

Earlier models of SDL were linear in nature. Specific to the body of literature, Knowles (1975) and Tough (1971) identified a framework where SDL was considered linear in nature because a series of learning sessions or major steps were integral to the learning process. SDL as described by Knowles (1975) consisted of the following major steps: (a) climate setting, (b) diagnosing learning needs, (c) formulating learning goals, (d) identifying human and material resources for learning, (e) choosing and implementing appropriate learning strategies, and (f) evaluating learning outcomes. This somewhat parallels Tough’s research (1979) in which he found that “learners used thirteen steps in self-planned learning projects, representing key decision-making points about choosing what, where, and when to learn along with deciding on resources for learning, detecting possible barriers to learning, and so on” (as cited in Merriam et al., 2007, p. 111).

While Knowles may be considered the authority on andragogy, Tough’s (1971) research on SDL spanned more than 4 decades, and he firmly contended that andragogy is a situation where “learners advance through stages of increasing self-direction and that teachers can help or hinder that development” (p. 125).

Interactive Models

The interactive model of SDL places an emphasis on two or more factors, rather than being well planned or linear. For example, Spear (1988) presented a model in which SDL involves three elements: opportunities people find in their own environment, past or new knowledge, and chance occurrences. Rather than a linear progress, the Spear model proposed that information is gathered through a set of activities that he called "clusters." The self-directed learner stores and fits the information with other clusters to create a whole level of understanding. Spear (1988) summarized, "The learner is perhaps in greatest control when the assembling of the clusters begins and decisions are made regarding what knowledge is of most and least importance" (p. 112).

Berger (1990) built on Spear's model and concluded that the three elements in Spear's model drove participants in a study to constantly redefine and change course in their SDL as they followed new paths of interest after mastering an old goal of SDL.

Brockett and Hiemstra's Model

Perhaps one of the more contemporary models, Brockett and Hiemstra (1991) provided a framework of self-direction in learning, which includes both instructional method processes and personality characteristics of the individual learner. They emphasized, "In our view, learner self-direction refers to characteristics of an individual that predispose one toward taking primary responsibility for personal learning endeavors" (p. 29). Further, their model strongly emphasized that "self-direction is viewed as a characteristic that exists, to a greater or lesser degree, in all persons and in all learning

situations" (p. 11). A caution to that statement appeared in an earlier work (1985) where they noted, "Perhaps it is more appropriate to think of self-directed learning as an ideal mode of learning for certain individual and for certain situations (Brockett & Heimstra, 1991, p. 33). Previously mentioned, the instructional method plays a process in SDL and might be considered situational. To this point, Brockett and Hiemstra (1991) stressed that individuals will vary in their readiness for self-direction, thereby requiring varying degrees of assistance by facilitators, especially as SDL skills are developing.

Summary of SDL as a Process and Stages

Previously, this literature review presented several theories. This section presents models to be considered as a manifestation of the theoretical viability. The models discussed are the stage model (Grow, 1991); the linear model (as described by Knowles [1975] and Tough [1971]), the interactive model (Spear, 1988), and Brockett and Hiemstra's (1991) model. Taken together, they all are models of SDL as either a process or a stage and this researcher sees them connecting to the following theories as follows:

The stage model draws from behaviorist theory where learning is broken into smaller segments and the instructor shifts his or her teaching style based on learner need (Grow, 1991).

The linear model draws on humanistic theory, where the learner goes through a series of well-planned steps, and there is a natural tendency to learn individuals' current and previous knowledge that drives learning, leading to constructivist theory where the

individual's current and previous knowledge drive learning (Knowles, 1975; Tough, 1971).

The interactive model has the learner gathering "clusters" of what is known and then "fits" them into new clusters to control decisions about what knowledge is important and least important, and this draws on force field analysis where a learner's perceptions of positive and negative forces in a learning situation will motivate their participation (Spear, 1988). This connects also to the S-R theory, where conflicts must be recognized and resolved or accommodated for SDL to occur.

Brockett and Hiemstra's (1991) model details the importance of instructional methods and personality characteristics, which must be met by differentiated levels of support from facilitators as SDL skills are developing. This model connects to the humanistic theory.

The researcher sees these models as valuable in seeking to understand the motivation of learners to select directed versus SDL before, during, and after a learning experience.

Characteristics of Self-Directed Learners

Self-Discipline and Motivation

As previously mentioned, Cross (1981) contends that off-campus programs are convenient and can be generally effective for well-motivated, self-disciplined adults, which makes them likely candidates for growth in adult education. Self-discipline and motivation, according to Gong, Rai, Beck, and Hefferman (2009), are nonintellectual

attributes that contribute to academic performance. These contrast with intellectual attributes such as long-term memory or ability to think abstractly. Gong et al.'s (2009) research concluded that "self-discipline can influence both learning rate as well as knowledge accumulation over time" (p. 61). Their research utilized the Brief Self-Control Scale (BSCS) questionnaire, which was designed to measure individual differences in self-discipline as they relate to four domains self-regulatory behavior: thoughts, emotions, impulses, and performance. Specific to academic performance, their findings indicate that highly self-disciplined students make more correct guesses when unsure of an answer. They suggested that there is a relationship; that "students with higher self-discipline have more incoming knowledge than their lower self-discipline classmates" (Gong et al., 2009, p. 66). While this may be of special importance in a pretest of knowledge, it does not necessarily translate to learning when considering an additional finding of their study, which states, "However, self-discipline seems not to contribute to a student's ability to learn more in each learning opportunity" (Gong et al., 2009, p. 65).

Utilizing a model grounded in the "collaborative constructivist" perspective, Garrison (1997) stated that "self-monitoring and motivation represent the cognitive dimensions of self-directed learning" (p. 24). That motivation, he suggested, is the dimension that influences the participation of people and keeps them actively participating in the activity or task. He was of the opinion that the study of SDL needs to be explored in much greater detail, specific to self-monitoring and motivation.

What motivates adults to participate in learning activities, according to Cross (1981), will probably never be answered by any simple formula. Different groups of learners are motivated by different motives, are at different stages of life, and desire opportunities to grow personally and vocationally, which are all areas worthy of further study. It is as important, Cross contended, to understand the barriers. This is of particular interest to researchers and policymakers.

In-depth interviews are used as a methodology (Houle, 1961; Tough, 1968) to help a researcher to understand what motivates people to start and continue SDL projects. Tough's (1968) interviews sought to understand patterns of motivations, and led to a finding that initial motives often change from the start to the finish of a learning project.

Readiness for SDL

While theories provide a conceptual framework around the process of autonomy in SDL, and models propose characteristics of self-directed learners, little research has been done on the readiness of an individual for SDL. Merriam et al. (2007) indicated that the notion of readiness and autonomy are receiving a great amount of attention. Readiness and autonomy are issues researchers need to address in future research as they are important to SDL.

Malcolm Knowles was one of 14 authorities participating in Guglielmino's (1978) three-round Delphi survey conducted to determine the content of the Self-Directed Learning Readiness Scale (SDLRS), a Likert-type assessment used worldwide over the last 3 decades. In 1977, Guglielmino (1978) designed the SDLRS to measure attitudes,

skills, and characteristics based on the psychological qualities that comprised readiness for SDL, in part, a complex of initiative, independence, persistence in learning, and a tendency to view problems as challenges rather than obstacles. Her work was driven in an attempt to understand the dynamics of SDL in various environments and operationalize the concept of SDL. The SDLRS comprises 58 questions; respondents are asked to read a statement and then indicate the degree to which that statement accurately describes their own attitudes, beliefs, actions, or skills. The SDLRS was designed to illustrate how an individual's self-management, self-control, and overall desire place him or her on a scale of readiness for SDL. The SDLRS result is displayed on a scale of 1-5, where 3 is considered minimally ready for SDL. For the purpose of this research, readiness for SDL is defined as receiving a 3, 4, 5 on the 5-point SDLRS.

While SDLRS has been used as a quantitative measure for many years, scant research exists to further an understanding of other factors that may help researchers understand self-direction of adult learning. Brookfield (1995) speculated that researchers are still struggling to understand how various factors such as an adult's previous experiences and the learning task, learning domain, and social networks might affect readiness for SDL. This data collection, Brookfield suggested, is best researched through greater emphasis on qualitative studies compared to survey questionnaires or research through experimental design.

Summary

This chapter reviewed literature around several theories holding tenets specific to the topic of adult learning, models of SDL, and an interpretation of the interrelationship between them. Further, this chapter reviewed literature on the topic of SDL as a process or stage, and the characteristics, readiness, and motivation for SDL. This information will be considered when analyzing and discussing data generated through study.

Concluding Remarks

SDL has emerged as a significant learning modality in the 21st century workplace and classroom. Theoretically, successful self-direction is present in all learners to one degree or another, and the rate at which it presents itself can be affected by the context in which the learner is engaging in learning. Research demonstrates that there are dispositions and proclivity toward SDL. Yet the question arises: Can the participant discern his or her proclivity toward SDL in a particular training? Further, how can one measure achievement of SDL learning through the training?

The literature review provides insight into adult learning theory and research as it relates to DL and SDL. The research established that there are varying approaches to SDL. While SDL may be appropriate for all people in some situations and for some people in all situations, research has not provided close examination of self-selection into DL or SDL. Research has not identified if participants can accurately predict, when given a choice of self-selection into a DL or SDL modality, which is a better match to

their capabilities, nor their motivation to choose DL or SDL, when offered the ability to self-select.

While this literature reviewed focused on adult learners, there is a lack of research specific to adult learners as it relates specifically to SDL and early childhood professionals. A research study focused on adult learners who were early childhood educators receiving professional development, where Sheridan, Edwards, Marvin, and Knoche (2009) stated,

> In light of the current policy context, early childhood educators are being asked to have a complex understanding of child development and early education issues and provide rich, meaningful educational experiences for all children and families in their care. Accountability for outcomes is high and resources for professional supports are limited. (p. 377)

Sheridan et al. suggested that research on professional preparation and support must move beyond basic questions around credentials and consider establishing a scientific endeavor of early childhood professional development that requires building a body of theories and evidence about not only its forms but also the processes.

Professional development of early childhood education takes place to accomplish two primary objectives: (a) advancing knowledge, skills, and dispositions; and (b) promoting a culture for ongoing professional growth in individuals and systems (Candy, 1991; Johnson & Johnson, 1989). This second objective involves high-quality professional practices by enhancing systems and motivating individuals to engage in activities that are self-sustaining and growth producing. Yet, according to Sheridan et al. (2009), "We need to know more about the dynamic and transactional teaching and

learning processes underlying these effects as they function in real-world early childhood settings" (p. 378).

Important to any discussion about adult learners is the participant trend behind the learning. The U.S. Department of Education conducted a series of surveys starting in 1969 followed by three studies in 1991, 1995, and 1999 to reveal adult participation trends in education (Merriam et al., 2007). The findings of these surveys and studies revealed an increase each year in the number of adults reporting their participation in adult learning. A 2001 National Center for Education Statistics (NCES) survey reported that there were multiple reasons participants identified for involvement in adult learning; the main reason reported was job-related motives. The 2001 study was the first time the NCES included informal learning in the workplace as a form of participation in adult learning . The study concluded that participation rates increased steadily from 1969 to 2001 with a high of 46% of adults participating in adult learning through formal education, instructor-led education, or training activities. Alternately, there are much less data on participation in SDL. According to Kim, Hagedorn, Williamson, and Chapman (2004), "Work-related informal learning activities included supervised training or mentoring, self-paced study using books or videotapes, self-paced study using computers, attending 'brown-bag' or informal presentations, attending conferences or conventions and reading professional journals or magazines" (p. vi).

The accumulation of information around the trend of adult participation in learning is an important question having implications for both theory and practice. Merriam et al. (2007) acknowledged the work of Houle in 1988 and Boshier in 1991, as

their explanation of adult participation in learning has been advanced “from a sociological rather than a psychological perspective” (p. 78).

CHAPTER III

METHODOLOGY

Outline of the Chapter

How does an individual's disposition and perception about his or her mode of learning relate to the actual achievement in his or her self-selected directed or self-directed learning activity? Are there patterns that might predict and favor one modality over the other? What motivates individuals to select DL or SDL? These are the questions this study sought to answer. Chapter III provides the research design and the methodology used to conduct this study. The chapter includes the problem statement, purpose statement, research questions, research methodology, instrumentation, research population, procedure, data collection, and data analysis.

Problem Statement

The problem identified for this study was as follows: What are the motivating factors in choosing DL or SDL and can learners correctly identify their readiness for SDL? Is there a relationship between a learner's readiness toward self-directed instruction related to his or her learning achievement?

Purpose Statement

The purpose of this sequential, mixed-methods exploratory case study of early childhood professionals was threefold. First, determine if a relationship exists between a

learner's readiness toward directed and self-directed learning style and the perception of their inclination toward directed or self-directed learning, when given a choice of the two. Second, examine how self-selection of directed or self-directed learning relates to learning achievement. Third, detect motivation of individual's selection in directed or self-directed learning.

Research Questions

Following are the research questions; the first three are quantitative and the last three are qualitative:

1. Is there a relationship between a participant's self-selection of directed or self-directed learning style with his or her self-directed learning readiness as measured by the SDLRS?
2. How does one's level of readiness for self-direction (as measured by the SDLRS) relate to his/her change on the Video Assessment of Interactions and Learning (VAIL)?
3. How does one's correct identification as directed or SDL (based on the SDLRS category score) relate to his/her posttest-pretest VAIL scores?
4. What factors motivate the participant to initially self-select directed versus self-directed learning options?
5. Does the participant's motivation for choosing directed versus self-directed learning change upon completion of a directed or self-directed learning experience?
6. Did the factors that motivated participants to initially self-select directed versus self-directed change during their learning experience?"

Research Design

The following section describes the research design selected for this study.

Mixed-Methods Design

The research design selected for this study was sequential mixed-methods exploratory case study. In a mixed-methods design, the researcher collects and analyzes persuasively both qualitative and quantitative data based on research questions (Creswell & Plano Clark, 2011), the first being correlative research, and the second being case study research, combining correlation research and case study research design.

Mixing quantitative and qualitative methods can answer research questions that neither quantitative nor qualitative methods can answer alone (Creswell, 2003). Whereas a quantitative approach supports data collected on a predetermined instrument that yields statistical data, qualitative strategies of data collection are useful to explore the depth and breadth of a phenomenon. Bryman (2006) coined the reason for mixing methods by referring to "illustration" as "the use of qualitative data to illustrate quantitative findings, often referred to putting 'meat on the bones' of 'dry' quantitative findings" (p. 106). Sequential procedures supported research to elaborate on or expand the finding of one method with another method (Bryman, 2006; Creswell, 2003; Creswell & Plano Clark, 2011). This approach allows a richer study of the "why" behind the "what" data generated in the previous sequence. Typically, sequential explanatory design is used to determine qualitative results to assist in the explanation and interpretation of a primarily quantitative study. This approach can be especially useful when unexpected results arise from a quantitative study (Morse, 1991). For the purposes of this study, the sequential

explanatory study is as follows: The quantitative side will be correlation and predictive research, which investigates the relationship between the participant's perception of readiness and inclination of readiness for SDL. The second phase investigates a learner's readiness for SDL related to his or her learning achievement.

This study utilized a quantitative priority where a greater emphasis was placed on the quantitative methods, and the qualitative method was used in a secondary role as illustrated by Creswell (2003; see Figure 1).

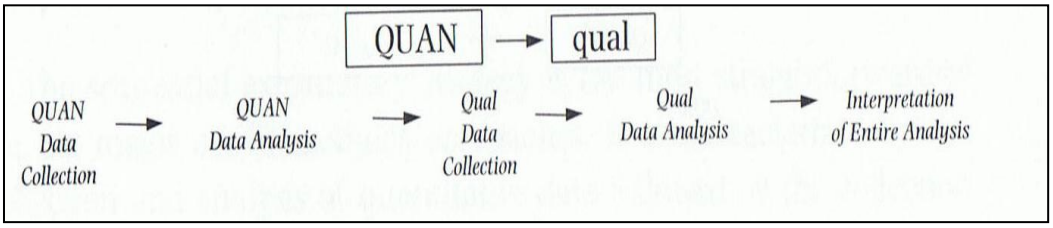


Figure 1. Big QUAN/little qual sequential explanatory design. From *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (2nd ed.), by J. Creswell, 2003, p. 213. Copyright Sage, Thousand Oaks, CA.

A potential disadvantage of a sequential mixed-methods design is that the duration of the evaluation is likely to increase if one stage cannot begin until the previous stage is completed and analyzed (Bamgerher, Rugh, & Mabry, 2011). This may be problematic in a case study as the participants are bound by time and activity (Stake, 1955, as cited in Creswell, 2003). The step in this particular research design taken to address this potential disadvantage was to conduct a preliminary study to assess if the timeline is adequate for completion and analysis of Phase 1 prior to anticipated timeline for starting Phase 2.

Mortality, or attrition of participants, is an inherent issue in most research and is particularly germane to a two-phased study. At issue is the decline of participants leading to a less-than-adequate sample size. To address this issue, the group size was large enough to accommodate mortality rate; classroom support sessions were held at convenient locations and times, and participants were sent classroom support session meeting requirements to minimize the amount of attrition.

Phase 1 was used in this study as the correlative research utilizing quantitative data collection and analysis. Phase 2 is the case study using qualitative data collection and analysis. Taken together, these sequential phases will lead to explanatory interpretation of the entire analysis. Following is a discussion of each phase along with the advantages and disadvantages of each.

Phase 1—Quantitative Research
Correlative Design

Phase 1 answered Research Questions 1 through 2 using correlational research. Research Question 3 was answered using predictive research.

The purpose of Phase 1 was to investigate the extent to which variations in one factor correspond with variations in one or more other factors based on correlation coefficients (Isaac & Michael, 1995). Correlational research "permits the measurement of several variables and their interrelationships in a realistic setting" (Isaac & Michael, 1995, p. 53). Further, correlational research allows a degree of relationship analysis rather than an all-or-nothing presence of effect. For the purpose of this study, the variables are choice, inclination, and achievement.

The quantitative research correlative design includes defining the problem, reviewing the literature, identifying the relevant variables, identifying appropriate participants, selecting appropriate instruments, selecting the correlational approach that fits the problem, collecting the data, and analyzing and interpreting the results.

The advantages of quantitative research include having a platform where each participant is identically studied and there is little room for human bias to create problems with the data (Best & Kahn, 2003).

While this description signals the utility of quantitative data in research to aggregate data from multiple cases toward a numerical summarization and statistical analysis, it portends potential disadvantages inherent in the process. A weakness of quantitative research is its sensitivity to sample size. Further, Creswell and Plano Clark (2011) argued that "quantitative research is weak in understanding the context or setting in which people talk" (p. 12). They continued their argument by noting that the voices of the participants are not directly heard. To this end, they suggest that a mixed-methods research approach provides a bridge of understanding.

Phase 2—Qualitative Research
Case Study Design

In the second phase, a case study design was utilized to do qualitative research. Qualitative research, according to Krathwohl (1998), is an approach that provides descriptions of a case, a group, a situation, or an event, which is often called a "case study." This qualitative phase was conducted as a follow up to the quantitative results in

Phase 1 to help explain the quantitative results and answer Research Questions 4, 5, and 6 pertaining to motivation.

Qualitative research is more open and responsive to its subject and holds the advantage of the possibility of change, of asking different questions, and of affording the researcher latitude to change directions in observation (Best & Kahn, 2003). Merriam (1988) pointed out that qualitative research is a form often selected to examine a specific phenomenon when there is sparse theory in that area. While research in the area of SDL is plentiful, little research exists on how and why learners choose SDL and whether or not they were efficient in learning.

While qualitative research design has its advantages, it also has potential weaknesses to be mitigated. Creswell and Plano Clark (2011) stated, "Qualitative research is seen as deficient because of the personal interpretations made by the researcher, the ensuing bias created by this, and the difficulty of generalizing findings to a large group because of the limited number of participants studied" (p. 12). An additional concern around qualitative research design is reliability and validity, particularly with open-ended questions (Fraenkel & Wallen, 2003). Beyond findings, the process of qualitative data might be considered problematic. Qualitative data are not usually accessible for analysis, as "processing" is required (Miles & Huberman, 1994), raw field notes need to be corrected and edited, and tape recordings need to be transcribed and corrected.

Integration of Designs

Integration of the two types of data occurred at two points. First, questions asked of participants in the qualitative phase were influenced by the data analysis of Phase 1—Quantitative Research Correlative Design. Second, as noted by Creswell and Plano Clark (2011), data were mixed "at the stage of data analysis and interpretative [to] transform qualitative themes or codes into quantitative numbers and comparing that information with quantitative results in an 'interpretation' section of the study" (p. 212).

Case Study Design

Case study is not, according to Stake (1994), "a methodological choice, but a choice of object to be studied" (p. 236). The methods of inquiry in research do not define the study to be a case study. Rather, Stake contended, a case study is defined by interest in individual cases. Further, the "individual case" need not be construed as limited to an individual. For example, a case study may be simple or complex; it could be inquiry of several people or issues, or even an entire agency. To that end, a case study could investigate the features of working parts within the system of an entire agency. Yet, there are complexities of these working parts, and the research needs to recognize the "certain features are within the system, within the boundaries of the case, and other features are outside" (Stake, 1994, p. 237). The boundaries and behavior patterns within the system are key factors in understanding the case. The issue of study is chosen by the researcher partly in terms of the uniqueness of opportunities present and what can be learned through researching them. At a minimum, a case is a phenomenon specific to time and space (Johansson, 2003). Yet, Johansson maintained it "is characteristic of case study

methodology that the boundaries, and often even the focus of the case, change through the research process" (p. 5).

The purpose of case studies can be identified into different types of case studies (Stake, 1994). Specifically, an intrinsic case study is not designed to build theory, but is undertaken to get better understanding of a particular case. Another type of case study, called instrumental case study is where

> a particular case is examined to provide insight into an issue or refinement of theory. The case is of secondary interest; it plays a supportive role, facilitating our understanding of something else. The case is often looked at in depth, its contexts scrutinized, its ordinary activities detailed, but because this helps us pursue the external interest. (p. 237)

Moreover, while Stake (1994) discussed the two types of case study, intrinsic and instrumental, he argued that researchers often have simultaneous interests, and in some instances, there is no line distinguishing one from other. Rather, "a zone of combined purpose separates them" (Stake, 1994, p. 237).

The case study in this research involved investigation of a 6-week training program coordinated by an agency: the 21-hour video training program, Looking at CLASSrooms (LAC), was available to early childhood professionals meeting the requirements to be part of the First 5 Santa Barbara County STAR project. The mission of the STAR project was building an effective early care workforce for Santa Barbara County. The intrinsic focus of the case study was to get a better understanding of a participant's choice and readiness of learning style and achievement as a directed or self-directed learner. The instrumental focus of the case study centered on external forces that influenced the choice, motivation, and achievement of the training program during the

study; including, but not limited to, the details and logistics of the training material and schedule. Further, participants were asked to explain, after completion of the study, if they considered if they would choose DL or SDL in future experiences.

Research Methodology

This section provides a brief discussion of the use of two distinct methods employed in separate phases to address the research questions.

This study did not include a control group. Rather, it served as it compares a situation of alternatives, the alternatives being self-selection into a directed or self-directed group.

Phase 1—Quantitative Research
Correlative Design

Quantitative methods in the form of survey assessment were employed to better inform the researcher of the participants' perceived inclination for SDL compared to their diagnosed readiness for SDL using the Self-Directed Learning Readiness Scale (SDLRS). Also, data were gathered quantitatively through a Video Assessment of Interactions and Learning (VAIL) pre- and posttest to determine achievement of skill in identifying content presented in training. These methods were employed to correlate relationships between all study variables and answer the following research questions:

1. Is there a relationship between a participant's self-selection of directed or self-directed learning style with his or her self-directed learning readiness as measured by the SDLRS?

2. How does one's level of readiness for self-direction (as measured by the SDLRS) relate to his/her change on the Video Assessment of Interactions and Learning (VAIL)?
3. How does one's correct identification as directed or SDL (based on the SDLRS category score) relate to his/her posttest-pretest VAIL scores?

This research methodology sought to eliminate common control problems. Krathwohl (1998) reported local history as a common problem. To address this issue, content exposure was equalized for all participants by having them watch a 2-hour content material overview at the research orientation.

Creswell (2003) argued that quantitative method utilization is an effective approach to collect data on predetermined instruments that yield statistical data. Predetermined instruments utilized in this study were the SDLRS and VAIL.

Self-selection of learning groups is, for the purpose of this study, considered an independent control variable. At the beginning of the study, participants self-selected to be in the DL or SDL group.

The SDLRS is a survey assessment designed to collect data on the independent variable of inclination. Specifically, SDLRS measures the participant's readiness for SDL. The VAIL assessment measures the participant's skill to detect effective teacher interactions and identify up to five strategies teachers are using to engage students in a lesson and hold their attention. The VAIL assessment was administered as both a pretest and posttest.

Table 1 illustrates the steps in Phase 1 used to correlate the independent control variable, the independent variable, and the dependent variable. The first phase of the mixed-methods design, quantitative research, allowed each participant to self-select either a DL or SDL group. Participants expressed their self-selection by completing a form (see Appendix A) stating their preference of DL or SDL. For the purpose of this study, this action was considered an independent choice variable.

In the next step, all participants completed the SDLRS, a diagnostic assessment of inclination toward "readiness" for SDL. For the purpose of this study, this action was considered an independent variable.

For the next step, the VAIL assessment was completed by all participants to serve as a quantitative pretest assessment of content material knowledge specific to the upcoming training. The results of the VAIL pretest compared to the VAIL posttest assessed at a later date constituted the dependent variable, achievement.

Ten weeks elapsed between the VAIL pretest and VAIL posttest. In that period of time, participants were provided access to a 2-hour video orientation and 21 hours of Looking at CLASSrooms (LAC) video training. Orientation and LAC video training were accessed via the Internet using a unique passcode. The computer system logged the number of hours each participant accessed the orientation and LAC video training.

All participants logged onto the Internet to view the orientation and LAC video training using unique access codes; they viewed it in one of two ways. Participants were either in "directed" learning groups that met at specified times and locations with the presence of a content specialist to facilitate the learning, or they accessed the LAC video

training independently in a self-directed manner. While Table 1 summarizes the process of Phase 1, quantitative correlation research, the instruments, SDLRS and VAIL, are discussed in the instrumentation section.

Table 1

Phase 1, Quantitative Design of Variables (V): Independent Control (ICV) Self-Selection of Learning Group; Independent (IV) Readiness for Self-Directed Learning; Dependent (DV) Achievement

Self-selection (ICV)**:** Individual chooses DL or SDL	Inclination (IV): Individual's readiness for SDL as measured by SDLRS	Achievement (DV) on pre- and posttest as measured by VAIL
Perception of participant's inclination for SDL	Actual readiness of participant's readiness for SDL	Skill of participant to detect effective teacher interactions and identify up to 5 strategies teachers are using to engage students in a lesson and hold their attention Pretest/posttest administered prior/after viewing LAC video
Measurement method: Self-selection of learning style (directed or self-directed)	Measurement method**:** SDLRS	Measurement method: VAIL
IC data collected:	IV data collected:	DV data collected:
Directed (D)	58-176 Low 177-201 Below average 202-226 Average 227-251 Above average 152-290 High	+/- on pre/post assessment
Self-directed (SD)	58-176 Low 177-201 Below average 202-226 Average 227-251 Above average 152-290 High	+/- on pre/post assessment

Correlation analysis was utilized in this phase to examine data generated to address the first two research questions:

1. Is there a relationship between a participant's self-selection of directed or self-directed learning style with his or her self-directed learning readiness as measured by the SDLRS?
2. How does one's level of readiness for self-direction (as measured by the SDLRS) relate to his/her change on the Video Assessment of Interactions and Learning (VAIL)?

Data generated for Research Question 3 (How does one's correct identification as directed or SDL [based on the SDLRS category score] relate to his/her posttest-pretest VAIL scores?) utilized regression analysis. Application of regression analysis is appropriate where two or more independent variables or more than two levels of a single independent variable are present (Huck, Cormier, & Bounds, 1974). Further, data from this phase were used to consider additional questions for Phase 2, case study design.

Phase 2—Qualitative Research
Case Study Design

While research in the area of SDL is plentiful, little research exists on how and why learners choose SDL and their perceptions around whether or not they were efficient in learning. Qualitative methods were used to answer Research Question 4 (What factors motivate the participant to initially self-select directed versus self-directed learning options?), Research Question 5 (Does the participant's motivation for choosing directed versus self-directed learning change upon completion of a directed or self-directed learning experience?), and Research Question 6 (Did the factors that motivated participants to initially self-select directed versus self-directed change during their

learning experience?). The purpose of this methodology was to better inform the researcher of participants' motivation for initially self-selecting DL or SDL and their motivation for self-selecting DL or SDL in the future.

A purposeful sample of participants drawn from Phase 1 was interviewed either face to face or by telephone to explore and deepen findings from Phase 1. Inclusion criteria of participants in this phase considered intentional selection of individuals who experienced the central phenomenon as well as individuals who were expected to hold different perspectives on the central phenomenon (Creswell & Plano Clark, 2011). In this study, a normal bell-shaped frequency was presented. For the purposeful sample, 24 participants were selected: all 13 participants who self-selected the DL style and 11 participants who self-selected the SDL style. Self-directed participants were selected to represent the central tendency, +/-1 *SD* from the mean, and +/- 2 *SD* from the mean. The participants were asked open-ended questions in individual interviews lasting approximately 30-45 minutes. Prior to the interview, permission was obtained to record the interview, and a convenient time was established to conduct the interview. Had the frequency presented as a bimodal distribution, the purposeful sample would have been configured differently to include both distributions.

Unlike quantitative design where instrumentation is used at the outset, qualitative data collection uses little standardized instrumentation. Rather, according to Miles and Huberman (1994), the researcher is essentially the "measurement device," and the analysis is done with words. A design for doing qualitative research within the data collection and data analysis phase was developed following those outlined by Creswell

and Plano Clark (2011). A qualitative case study design utilizes data management from a purposeful sample; this is followed by data collection, and the chapter concludes with data analysis.

In summary, this mixed-methods sequential explanatory case study design researched the interrelationships between choice, inclination, and achievement. The intrinsic focus of the case study was to get a better understanding of participants' choice and readiness of learning style and achievement as a directed or self-directed learner. The instrumental focus of the case study centered on the external forces that influence the choice, motivation, for achievement in a training program during and upon completion of the study. In Phase 1, participants self-selected their learning group (DL or SDL); that choice was compared to their inclination toward SDL. In addition, this researcher asked the question, "Is there a predictive relationship" between that choice and their achievement. Participant's achievement of treatment was assessed through a pretest and posttest.

Based on the analysis of data from Phase 1, a purposeful sample was selected for Phase 2. Phase 2 was an investigation of the motivation of participants in self-selection of a learning group; this was achieved qualitatively through individual interviews. Further, the interviews were an exploration of participants' motivation for future choice of DL or SDL.

Instrumentation

This section contains a description of the instrumentation used in the study (including administration) and rationale for appropriateness. This section also contains an explanation of the validity and reliability procedures and results.

Phase 1—Quantitative Research
Correlative Design

In Phase 1, SDLRS and VAIL were used. The SDLRS captured data of inclination (independent variable), defined as readiness for SDL. VAIL was used as both a pretest and a posttest to assess achievement (independent variable), defined as participants' skill to detect effective teacher interactions and specific strategies.

SDLRS. Knowles (1970) indicated that people have a need to be self-directed in their learning, and the research of Brockett and Hiemstra (1991) aligned with that position. Both considered the element of environment, personal attribute, and context as a consideration in the readiness for SDL. Researchers (Guglielmino, 1978; Oddi, 1986) focused on the use of instruments to assess the presence of self-direction as a trait, and the concept of readiness to be a self-directed learner. Guglielmino created the SDLRS, a 58-item Likert scale that yields a measurement of readiness for SDL. The assessment has been used worldwide and within many research studies. For the purpose of this study, the SDLRS captured data of inclination (independent variable), defined as readiness for SDL.

Guglielmino (1978) identified several psychological qualities involved in readiness for SDL and utilized them as the basis for the SDLRS. The instrument utilizes

a self-reporting format via online administration and typically takes 15-20 minutes to complete. The SDLRS is an instrument composed of 58 items using a 5-point Likert scale (*almost always true, usually true, sometimes true, usually not true, almost never true*). Forty-one of the items are positively framed and 17 negatively framed. The instrument measures the attitudes, values, and abilities of learners relating to their readiness to engage in SDL at the time of response, and readiness is measured as a total score, which is then converted into bands of readiness (average score is 214, *SD* is 25.29).

Guglielmino (1978) stated that most people who initially score low or average levels of SDL readiness can increase their readiness, over time, with awareness and practice. Table 2 contains an explanation of SDLRS range and scores from Sample Score Report Letter.

Maltby, Lewis, and Hill (2000), in *The Commissioned Reviews of 250 Psychological Tests,* reported that the validity of the instrument was established through a sequence of studies. The content validity of the instrument was established as follows:

> **VALIDITY**. **Content:** The content validity of the instrument was established by Guglielmino (1977) by using a modified Delphi technique, with a panel of experts, with three round of surveys. Finestone (1984) found a clear congruence between Guglielmino's original Delphi results and an extensive review of available literature on self-directed learning.
> **Construct.** As only a total score is used in the instrument, convergent validity has been found with androgyny in the Student's Orientation Questionnaire (Christian, 1982) with a value of .35 (p = .01) (Delahaye & Smith, 1995). Long and Agyekum (1984) also found support for divergent validity. Posner (1989) reported convergent validity (p<.01) with several constructs, including*: preference for challenge (.81), curiosity for learning (.79), perceived scholastic competence (.69), use of internal criteria for evaluation (.64), independent mastery (.56), and independent judgement (.54)*. Russell (1988) provides support for **divergent validity** with an inverse linear relationship on preference for

structure (r = .31, p = <.03). McCune, Guglielmino, and Garcia (1990) also found support for both convergent and divergent validity. (Maltby et al., 2000, p. 858)

Table 2

Readiness for Self-Directed Learning

	Readiness for SDL is	Explanation:
58-176	Low	Some people have a low level of readiness because they have consistently been exposed to other-directed instruction.
177-201	Below average	Persons with below average SDLRS scores usually prefer very structured learning options such as lecture and traditional classroom settings.
202-226	Average	Persons with average SDLRS scores are more likely to be successful in more independent situations, but are not fully comfortable with handling the entire process of identifying their learning needs and planning and implementing the learning.
227-251	Above average	
252-290	High	Persons with high SDLRS scores usually prefer to determine their learning needs and plan and implement their own learning. This does not mean that they will never choose to be in a structured learning situation. They may well choose traditional courses or workshops as a part of a learning plan.

Note. SDLRS assesses self-directed learning readiness based on a 58-question survey. Numerical score range of 58-290 aligns on a continuum of low to high readiness. Explanation of points along the continuum is included in this table. Adapted from *Learning Preference Assessment,* by L. M. Guglielmino & P. J. Guglielmino, n.d. Retrieved from Guglielmino & Associates website: http://www.lpasdlrs.com/.

Validity studies included in *Commissioned Reviews of 250 Psychological Tests* reported that SDLRS has demonstrated satisfactory to excellent levels with coefficient alpha and split-half between .67 and .96 ("Brockett 1985; Delahaye & Smith 1995; Finestone 1984; Graeve 1987; Guglielmino 1977, 1989; Hall-Johnsen 1981; Hassan 1981; Skaggs 1981," as cited in Maltby et al., 2000, p. 859) and finalized the review of

the instrument: "can be used with acceptable confidence to provide accurate measurement of readiness for self-directed learning" (Maltby et al., 2000, p. 859).

The disadvantage of the instrument (Brockett, 1985) might be that it was more appropriate for college students and adults who had completed high school. Guglielmino revised the readability level of the SDLRS to accommodate adults with less than college-level reading skills and lower English proficiency; this modified instrument is labeled SDLRS-ABE. All participants in this study have successfully completed at least 12 units of college credit. As such, administration of SDLRS was appropriate.

Guglielmino (1978) identified several psychological qualities involved in readiness for SDL and utilized them as the basis for the SDLRS. There has been spirited debate (Brookfield, 1984; Field, 1991) around the reliability and validity of SDLRS. Field (1991) stated that he is "justified in maintaining that there are serious flaws in the SDLRS" (p. 102), and calls for the stoppage of SDLRS as it is not a stable measure of SDL. Over the years, there have been claims and counterclaims on this debate. To that end, Merriam et al. (2007) concurred with Brockett and Hiemstra (1991), who addressed the issue as follows:

> We believe that despite several apparent substantive and methodological concerns, the SDLRS has made a most important contribution to the present understanding of the self-directed learning phenomenon by generating considerable research, controversy and dialogue. We think this contribution ultimately outweighs the limitations that seem to be inherent within the instrument. At the same time, we believe that the criticisms raised cannot be overlooked. There remain too many questions, particularly relative to the scale. We are unwilling to dismiss the scale. However, we do recommend that the SDLRS be used with the same discretion as any other standardized instrument. (p. 122)

VAIL. The VAIL was used in Phase 1 to assess achievement of treatment. Created by the National Center for Research on Early Childhood Education through University of Virginia, Curry School of Education, VAIL is currently in the process of being prepared for publication. For the purpose of this study, VAIL served as both a pretest and posttest to measure the dependent variable, achievement. Achievement is operationally defined in this study as the skill to detect effective classroom interactions and specific behavioral examples exhibited in two short videos.

VAIL is a new measure that assesses teachers' skills in detecting effective classroom interactions. This measure consists of watching two short videos (2-3 minutes each) and identifying up to five strategies the teacher in the video is using to facilitate effective interactions in the classroom, as well as specific behavioral examples of each strategy.

The VAIL finds its basis in the Classroom Assessment Scoring System (CLASS) framework (F. M. Jamil, personal communication, October 14, 2011). CLASS research provides evidence about the types of teacher-student interactions that promote positive social and academic development. CLASS provides a reliable, valid assessment (Pianta, La Paro, & Hamre, 2008) of high-quality teacher-child interaction. CLASS was researched for over 10 years as part of the National Center for Early Development and Learning (NCEDL) Multistate and Sweep Studies and the National Institute of Child Health and Human Development (NICHD) Study of the Early Child Care and Youth Development. The CLASS instrument assesses three broad domains of effective interactions—emotional support, classroom organization, and instructional support—that

characterize students' classroom experiences in Grades Prekindergarten through 3. Each domain is composed of multiple dimensions of effective interactions known to contribute to students' success in school, such as teacher sensitivity, behavior management, and quality of feedback.

VAIL is an appropriate assessment tool as it aligns with the 21-hour LAC video training designed to train participants to identify and analyze effective teacher-child interactions. The strategies that participants are asked to identify from the VAIL videos are specific indicators of the types of interactions that the CLASS framework sees as being important for children's development and learning, and in this way, the CLASS framework provides the content on which teachers taking the VAIL are assessed.

The purpose of the VAIL assessment in this study was to determine changes in participants' skill to identify quality teacher-student interactions using a pre- and posttest design. The treatment between the pre- and posttest is training on the CLASS framework delivered through a 21-hour video training. F. M. Jamil (personal communication, October 14, 2011) reported preliminary validation data show VAIL scores to respond well to intervention. At issue in this study were Research Questions 1-3 which are specific to participants' self-selecting to undergo the training in a directed group, with a content specialist to facilitate the training versus self-directed where the participant independently completed the training.

Phase 2—Qualitative Research
Case Study Design

Phase 2 utilized individual face-to-face semistructured oral questions (Appendix B) during the interviews to collect qualitative data to answer the research questions about motivation in choosing DL or SDL. Semistructured interviews are built around a core of structured questions that the interviewer can use to branch off to explore the topic in depth (Isaac & Michael, 1971).

The purpose of the first question was to obtain qualitative data regarding motivation factors when initially self-selecting a learning group. The purpose of the second question was to obtain data regarding participants' motivation factor in considering future self-selection of learning groups.

In Phase 2, qualitative data were gathered from a purposeful sample in the DL and SDL groups. This phase was designed to answer Research Questions 4, 5, and 6 using the following steps: (a) 24 selected participants met one of the following relationships of SDLRS readiness and achievement as measured by the VAIL assessment and were selected for interviews to gather qualitative data: (i) highly positively correlated, (ii) inversely correlated, (iii) not correlated; (b) participants were interviewed face to face or by telephone for approximately 30-45 minutes, and (c) each interview was recorded and transcribed.

Participants

This study was part of a First 5 Santa Barbara County STAR project. The STAR project is funded by CARES PLUS, a professional development program funded by the state of California and designed to outreach to early childhood professionals.

In 2011-2012, First 5 Santa Barbara County STAR project enrolled 300 early childhood professionals working in Santa Barbara County. Of the 300 early childhood professionals enrolled in the First 5 Santa Barbara County STAR project, 120 resided in northern Santa Barbara County. The study population was a study of the whole of northern Santa Barbara County early childhood professionals enrolled in the First 5 Santa Barbara County STAR professionals who were easily accessible and within close proximity to the training rooms. While this case study extended its findings to the First 5 Santa Barbara County STAR participants, there is no claim it is representative of the larger population of early childhood educators in California.

The research population for this study included participants enrolled in First 5 Santa Barbara County STAR Project. Eligibility requirements for enrollment were that the participant must

1. Be at least 18 years of age
2. Provide direct service to at least two nonrelated children ages 0-5; for a minimum of 15 hours per week; for a minimum of 9 months by June 30, 2012
3. Be employed by a licensed childcare facility center or family childcare in Santa Barbara County. Acceptable license-exempt include CALSAFE/TRIBAL/VAFB
4. Be classified as teaching staff, site supervisor, or on-site director

5. Earn less than 60k from a childcare salary
6. Hold a current and valid child development permit
7. Cleared from Administrative Action with Community Care Licensing (both program and provider)
8. Have regular access to a specific e-mail address

Demographics of the Population Samples

Demographics for all enrollees were gathered by First 5 Santa Barbara County (see Appendix C). In Phase 1 (Quantitative Research Correlative Design), 120 north Santa Barbara County STAR participants were enrolled in the program. The study population was representative of a whole, as it included all First 5 Santa Barbara County STAR project participants working in northern section of Santa Barbara County.

In Phase 2 (Qualitative Research Case Study Design), a purposeful sample of 24 participants was chosen from the Phase 1 participants. This purposeful sample was intentionally selected to qualitatively interview participants representing a maximal variation sampling (Creswell & Plano Clark, 2011) based on the demographics. According to Creswell and Plano Clark (2011), "The criteria for maximizing differences depends on the study, but it might be race, gender, level of schooling, or any number of factors that would differentiate participants" (p. 174).

A purposeful sample of 24 participants was interviewed in individual face-to-face or telephone interviews. Krathwohl (1998) stated that purposive sampling is most often used in qualitative research as a method to select individuals or behaviors that better inform the research. To that end, Krathwohl (1998) added, "Qualitative researchers often

test the robustness of those conclusions by deliberately choosing individuals who will put their ideas to the test" (p. 172). Moreover, Krathwohl suggested that when done properly, such sampling can serve as a stringent test of the findings.

Pilot Study

Local validity and reliability was established through a pilot study of both phases. The small-scale pilot study for Phase 1—Quantitative Data Correlation Design, administered the SDLRS and VAIL to early childhood professionals not involved in the study. Using a test-retest approach, individuals completed both assessments on one day and returned the next day to take the assessments again. After completing the assessments they were asked to provide feedback on access to and navigation within the assessments, any technical difficulties experienced, clarity of instructions, and general feedback. Based on the feedback, no changes were needed for Phase 1.

The pilot study for Phase 2, Qualitative Research Case Study Design, interviewed the four participants completing Phase 1. The purpose of this section of the pilot study was to test procedures for research protocol, data gathering, and data analysis (Samson, 2004). Following are the steps of pilot study in this phase:

1. Participants were contacted and advised of meeting time and location.
2. At specified meeting time and location, participants provided consent for interview and recording of conversation.
3. A discussion ensued specific to Research Questions 4 and 5.
4. Participants were asked for feedback to identify any ambiguity and identify difficult questions.

5. Participants were asked to provide feedback on interviewer demeanor and objectivity. Ways to improve technique were solicited.
6. The time it took to complete the interview was noted.
7. Recording was transcribed and coded. The time it took to complete this step was noted.
8. Data were stored and coded to keep participant data confidential.

Based on the feedback and time needed to complete each step, no changes were needed for Phase 2.

Data Collection Procedures

Following self-selection into a learning group, content growth was assessed quantitatively after the treatment application (content instruction) to discover correlations.

Phase 1—Quantitative Research
Correlative Design

Following self-selection into a learning group, all participants reported at a specified date and time to a computer room to complete the SDLRS and VAIL pretest. Both tests were administered with standard instructions provided by test authors and without time limitations. Assessments used in Phase 1 were designed to provide the researcher with data pertaining to inclination (independent variable) and achievement (dependent variable) for correlation to address Research Questions 1 and 2. Research Question 3 investigated regression of the dependent variable (achievement) to the independent variables (inclination and choice).

SLDRS. Computers were provided at the orientation for participants to complete the SDLRS, a 58-question 5-point Likert scale survey. Assessment was administered and answered via computer. The researcher was present in the room to monitor the procedure. Results were not disclosed to participants at that time; instead, they were provided at the conclusion of the study.

The researcher received the SDLRS results from Guglielmino and Associates:

- Individual scores listed by name and identification number
- Analytical data for the sample: mean, standard deviation, variance, range, standard error, kurtosis, minimum and maximum score, skewness, number of valid observations, missing observations
- A chart comparing individual scores with a national sample

VAIL. Immediately after completing SDLRS, participants completed the VAIL pretest by watching two short videos and answering question prompts (see Appendix D). Prompts were answered using paper and pencil to demonstrate knowledge of specified dimensions by listing five strategies and specific behavioral examples of a domain strategy in the video clip. Participants watched two videos. In the first video, titled *Morning Message*, participants identified up to five strategies and corresponding examples that the teacher in the clip used related to Instructional Learning Formats. Using the same video clip, participants then named five strategies and examples for Language and Literacy strategies. In the second video, titled *Letter Hunt*, participants named five strategy-example pairs the teacher in the clip uses related to Quality of Feedback. Using the same clip, participants named five strategy-example pairs related to Language and Literacy strategies. Summarized in Table 3 are VAIL video titles and the

domains participants are prompted to identify through strategy and specific behavioral interaction.

Table 3

VAIL Video Clips and Specified Domains Identified for Participant Response

	Video Clip: Morning Message	Video Clip: Letter Hunt
Specified domains	Instructional learning formats Language and literacy	Quality of feedback Language and literacy

Participants were not immediately informed of their score (pretest and posttest scores provided to participants at completion of the research). These responses were coded (coders trained to be reliable at 80%) using a Coding Manual Criteria and Score Sheet. See Appendix E for the VAIL sample score sheet. Coding is designed to capture when participants give one strategy and one corresponding example. A correct response to providing one strategy and one corresponding example was evidenced by the participant naming a valid strategy, a valid example, and whether the strategy and example fall under the same indicator. Raw scores were translated to standard score. See Appendix F for the sample.

Treatment. Upon completion of the VAIL pretest, all participants were issued an Internet access code used to access a 2-hour CLASS orientation and 21 hours of LAC video training.

Using the access code, self-directed learners could independently access and view the 2-hour CLASS orientation and 21 hours of LAC video training at the place and time of their choosing via the Internet over the next 10 weeks.

Directed learners used the access code to view the 2-hour CLASS orientation and 21 hours of LAC video training along with four training during sessions (see Appendix G) facilitated by a content expert over the next 10 weeks.

At the end of Phase 1**,** all participants returned to the computer room to complete a VAIL posttest, a video assessment using the same procedures as the pretest. The videos used in the posttest were same two videos used in the pretest.

Phase 2—Qualitative Research
Case Study Data Collection

Research Questions 4, 5, and 6 were researched qualitatively in Phase 2. Qualitative data were gathered from a purposeful sample taken from the DL and SDL groups.

A purposeful sample of 24 participants was gathered from the 52 participants in the SDL and DL groups. Participants met one of the following relationships of SDLRS readiness and achievement as measured by the VAIL assessment: highly positively correlated, inversely correlated, or not correlated. Participants were interviewed face to face for approximately 30-45 minutes. Krathwohl (1998) stated that purposive sampling is most often used in qualitative research as a method to select individuals or behaviors that better inform the research. To that end, Krathwohl (1998) added, "Qualitative researchers often test the robustness of those conclusions by deliberately choosing

individuals who will put their ideas to the test" (p. 172). Krathwohl suggested that when done properly, such sampling can serve as a stringent test of the findings.

Protocol utilized in the interview sessions followed those outlined by Creswell and Plano Clark (2011). The procedure for data collection in this phase was

1. Create a casebook to preserve participant anonymity.
2. Develop the questionnaire and interview instruments.
3. Select participants for qualitative interviews.
4. Contact participants selected for interviews.
5. Finalize visitation schedule.
6. Obtain permission to interview.
7. Obtain consent to record interview.
8. Record individual interview face to face.
9. Transcribe data into print.
10. Confirm fidelity of spoken word to print word using transcription recheck.

Data Analysis Measures

Using data analysis, results garnered from Research Questions 1 and 2 were examined for correlational patterns; Research Question 3 was examined for prediction patterns. Data generated from Research Questions 1-3 served as guidance to drive quantitative Research Questions 4, 5, and 6. The purpose of this case study was to explain particular phenomena and look for patterns among phenomena within or across cases.

Phase 1—Quantitative Research
Correlative Design

The Pearson *r* was used to determine the correlation between a criterion variable and a combination of two or more predictor variables (Gall, Gall, & Borg, 1999) and addressed correlative Research Questions 1 and 2. Regression analysis was used to determine predictive relationships in Research Question 3. In this study, self-selection of DL or SDL groups served as an independent control variable. The score on SDLRS assessed inclination of readiness for SDL and served as an independent variable. Achievement of content measured by pre/post VAIL assessment served as the dependent variable. As such, achievement is the criterion variable to which Gall, Gall, and Borg (1999) refer. The standardized coefficient of correlation range was -1 to 1.

VAIL. Achievement (dependent variable) was measured by comparing VAIL posttest and pretest responses. Achievement was expressed in increase/decrease of correct responses on the posttest minus pretest.

Phase 2—Qualitative Research
Case Study Design

Qualitative interviews were conducted and recorded from a purposeful selected sample. Coding and analysis was performed within and across the case using Miles and Huberman's (1994) system. The system develops qualitative procedures and protocols for data collection, transcription, development of findings, and analysis and reports the following:

1. Format data into data tables including participant ID.
2. Develop a theme codebook.

3. Determine face-sheet data categories on which retrieval was done and add column to the data table to accommodate coding for these.
4. Code by themes by clustering to define specific problems used in row headings (Miles & Huberman, 1994).
5. Sort data and look for patterns.
6. Validate the coding within a data table.
7. Merge appropriate data table.

Integration of Quantitative and Qualitative Results

The quantitative and qualitative statistical analyses were interpreted and explained. These led to discussion, implications, and suggestions for future research. See Figure 2 for a visual model of each phase, the procedure completed within the phase, and the procedural product. Figure 2 summarizes the procedure and product of each phase.

Limitations of the Study

There were several limitations to this study. First, given the nature of the study, it was delimited to a study population of early childhood educators in a limited geographical area. Second, it was limited to STAR participants within that geographical area that were made available to the researcher for inclusion in the study. While the original study design included all northern Santa Barbara County early childhood professionals enrolled in the First 5 Santa Barbara County STAR project, the STAR project did not follow the research request and controlled which early childhood

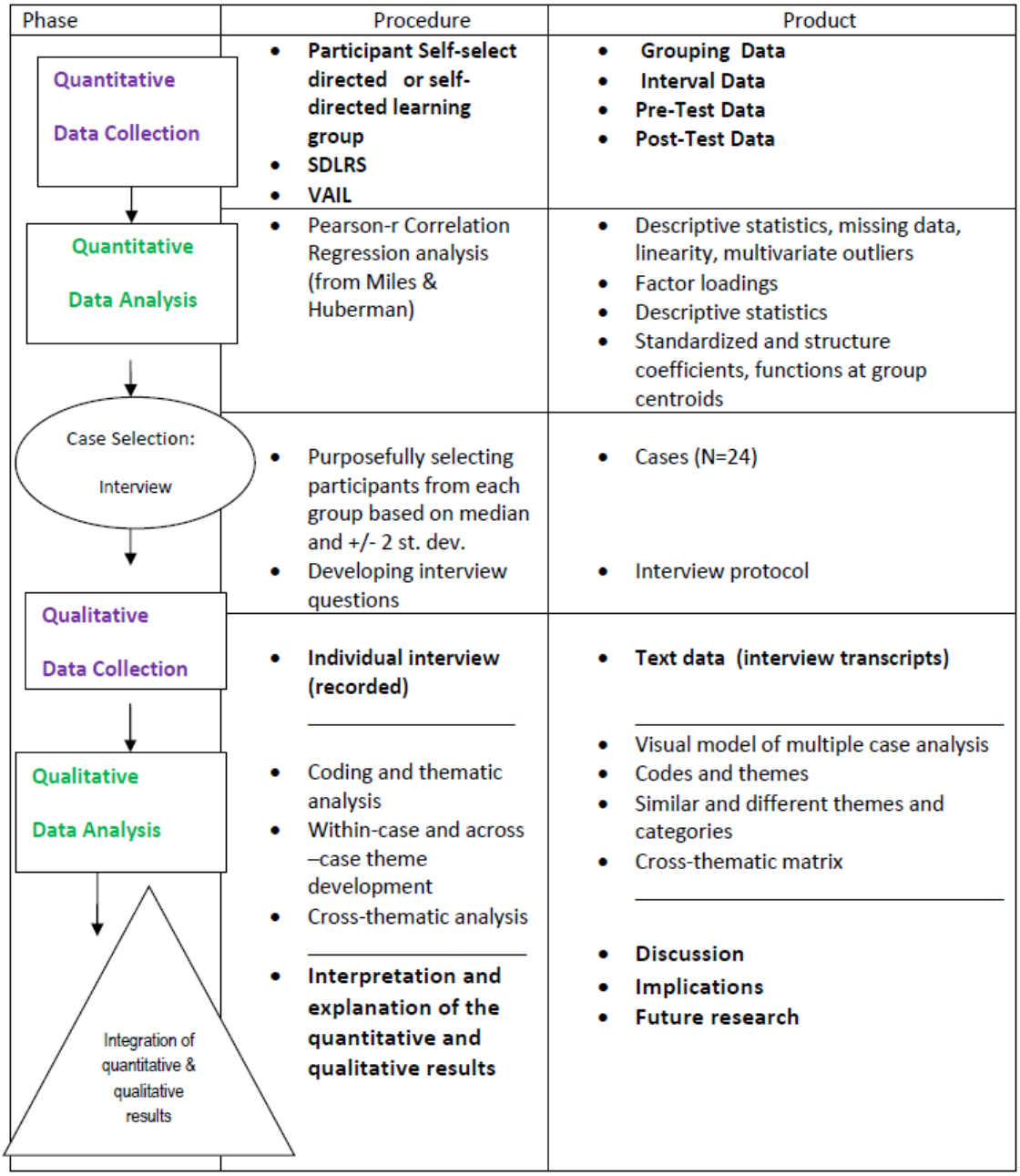


Figure 2. Summary of data collection: Procedure and product. From *Designing and Conducting Mixed Methods Research*, by J. W. Creswell & V. Plano Clark, 2011, Copyright Sage, Thousand Oaks, CA.

professionals would be available to the researcher for participation. Thus, the boundary and scope of this study is limited by convenience sampling (Huck et al., 1974) within a case study methodology and as such, may not generalize to a larger population.

Summary

Chapter III described the methodology used to address the research questions around participants' identifying their learning style, how it relates to achievement, and the motivation for choosing that learning style. The chapter also included a discussion of the purpose statement and the research questions and described the research design, methodology, instrumentation, study population, pilot study, validity and reliability of assessment instruments, data collection and analysis, and limitations of the study.

Chapter IV presents the analysis of the quantitative data, a discussion of the findings from follow-up interviews, and the interpretation and recommendations based on the results of both research methods.

CHAPTER IV

ANALYSIS OF THE DATA

Prior to this study, information was not available regarding perceived readiness of the self-directed learning (SDL) style as it relates to actual readiness of the SDL style and qualitative factors motivating people to choose SDL. This study considered six research questions to better inform the relationship between self-selection of directed study of early childhood professionals and motivation in and readiness for SDL and achievement. To address the research questions of this study, this chapter presents an analysis of data collected through the Self-Directed Learning Readiness Survey (SDLRS), the Video Assessment of Interactions and Learning (VAIL), and the personal interview.

This chapter is divided into two sections and presents the quantitative and qualitative analysis associated with each of the six research questions. The first section presents data and findings of quantitative data for Research Questions 1, 2, and 3. The second section presents data and findings of qualitative data for Research Questions 4, 5, and 6.

Section 1: Presentation of Data and Findings for Quantitative Research Questions

The study focused on three quantitative research questions:

1. Is there a relationship between a participant's self-selection of directed or self-directed learning style with his or her self-directed learning readiness as measured by the SDLRS?
2. How does one's level of readiness for self-direction (as measured by the SDLRS) relate to his/her change on the Video Assessment of Interactions and Learning (VAIL)?
3. How does one's correct identification as directed or SDL (based on the SDLRS category score) relate to his/her posttest-pretest VAIL scores?

Findings for Research Question 1

Initially, this study focused on whether participants' self-selection of directed (DL) or SDL related to SDL readiness. The tool of self-directed readiness measurement, SDLRS, is divided into five levels of "readiness" with Level 1 as low, Level 2 as below average, Level 3 as average, Level 4 as above average, and Level 5 as high. This section discusses the statistical data analysis of participants' self-selection match to the SDLRS category utilizing the cross-tabulation Pearson chi-square. A statistically significant relationship was found between participants' self-selection of SDL and their readiness for SDL. Also included is descriptive data specific to participants' self-selection and their match to the SDLRS readiness level.

Each of the 52 participants self-selected DL or SDL as their preferred learning style (see Table 4). All participants subsequently completed the SDLRS, and were assigned a level of readiness from 1 to 5 for SDL. Of the 13 participants who self-selected DL, four matched correctly as their SDLRS score was in Category 1 or 2 (low or

below average readiness) for SDL. The remaining nine individuals who self-selected DL mismatched their learning readiness, as SDLRS scores were in the 3, 4, 5 category of readiness (average, above average, high). For the 39 individuals self-selecting SDL, 37 matched their self-selection to the SDLRS result because they scored 3, 4, 5 categories (*average, above average, high*) of readiness for SDL. Only two of the 39 individuals self-selecting SDL mismatched and were not, according to SDLRS, ready for SDL.

Table 4

Number of Directed and Self-Directed Learners Scoring at Each Level of the SDLRS

	SDLRS category					
	1	2	3	4	5	Total
	Low	Below average	Average	Above average	High	
Self-selection as directed	1	3	4	4	1	13
Self-selection as self-directed	0	2	12	19	6	39

To see if there is relationship between self-selection and whether or not participants matched to the SDLRS readiness for SDL categories (Table 5 and Table 6), a statistical data analysis of participants' self-selection match to the SDLRS category utilizing cross-tabulation Pearson chi-square (Isaac & Michael, 1995) was conducted (see Table 7). Kline (2011) recommended always reporting the chi-square test. He cautioned, however, that the chi-square is influenced by sample size. When readiness for SDL is measured by a score of 3 (*average*), 4 (*above average*), or 5 (*high*) on the SDLRS, there is a statistically significant relationship between self-selection and actual readiness, $\chi^2(1) = 24.02$, $p < .001$.

Table 5

Did Self-Selection of Directed Match SDLRS Category of Low or Below Average Readiness for Self-Directed Learning?

Did self-selection match with SDLRS		SDLRS category Low 1	2	3	4	High readiness for self-directed 5	Total
No match	Count	0	0	4	4	1	9
	% within Did self-selection match with SDLRS	.0%	.0%	44.4%	44.4%	11.1%	100.0%
	% within SDLRS category	.0%	.0%	100.0%	100.0%	100.0%	69.2%
	% of total	.0%	.0%	30.8%	30.8%	7.7%	69.2%
Match	Count	1	3	0	0	0	4
	% within Did self-selection match with SDLRS	25.0%	75.0%	.0%	.0%	.0%	100.0%
	% within SDLRS category	100.0%	100.0%	.0%	.0%	.0%	30.8%
	% of Total	7.7%	23.1%	.0%	.0%	.0%	30.8%
Total	Count	1	3	4	4	1	13
	% within Did self-selection match with SDLRS	7.7%	23.1%	30.8%	30.8%	7.7%	100.0%
	% within SDLRS Category	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	7.7%	23.1%	30.8%	30.8%	7.7%	100.0%

Note. Self-selection of learning style = Directed (participants scoring 1 or 2 correctly matched their self-selection to SDLRS).

Additional tests were performed to see if there was a relationship between self-selection and matching SDLRS categories when readiness was considered to be 4 (*above average*), or 5 (*high*) on the SDLRS test, and not ready was a score of 1 (*low*), 2 (*below average*), or 3 (*average*). A statistical data analysis of participants' self-selection match to the SDLRS category utilizing cross-tabulation Pearson chi-square was conducted when readiness for SDL was measured by a score of 4 or 5 on the SDLRS. The results indicated that there is no statistically significant relationship between self-selection and actual readiness, $\chi^2(1) = 0.03$, $p = .87$.

Table 6

Did Self-Selection of Self-Directed Match SDLRS Category of Average, Above Average, or High Readiness for Self-Directed Learning?

		SDLRS category				
Did self-selection match with SDLRS		2	3	4	High readiness for self-directed 5	Total
No match	Count	2	0	0	0	2
	% within Did self-selection match with SDLRS	100.0%	.0%	.0%	.0%	100.0%
	% within SDLRS Category	100.0%	.0%	.0%	.0%	5.1%
	% of Total	5.1%	.0%	.0%	.0%	5.1%
Match	Count	0	12	19	6	37
	% within Did self-selection match with SDLRS	.0%	32.4%	51.4%	16.2%	100.0%
	% within SDLRS Category	.0%	100.0%	100.0%	100.0%	94.9%
	% of Total	.0%	30.8%	48.7%	15.4%	94.9%
Total	Count	2	12	19	6	39
	% within Did self-selection match with SDLRS	5.1%	30.8%	48.7%	15.4%	100.0%
	% within SDLRS Category	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	5.1%	30.8%	48.7%	15.4%	100.0%

Note. Self-selection of learning style = Self-directed (Participants scoring 3, 4, or 5 correctly matched their self-selection to SDLRS).

Table 7

Statistical Analysis: Relationship of Participants' Self-Selection of Learning Style and Their Readiness for Self-Directed Learning as Measured by the SDLRS

	Value	*df*	Asymp. sig. (2-sided)	Exact sig. (2-sided)	Exact sig. (1-sided)
Pearson chi-square	24.021[a]	1	.000		
Continuity correction[b]	20.331	1	.000		
Likelihood ratio	21.837	1	.000		
Fisher's exact test				.000	.000
Linear-by-linear association	23.559	1	.000		
N of valid cases	52				

Note. Results are significant. There is a relationship between self-selection and actual readiness.
[a]1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.75. [b]Computed only for a 2x2 table.

Although SDLRS defines readiness as Category 3, 4, 5, an additional analysis was performed to ignore those scoring 3, as it was of interest to parse out those strongly ready (Category 4 or 5) for SDL in the event those scoring 3 (*average*) could perhaps lean more toward directed or self-directed readiness. When excluding those who scored 3 on the SDLRS and when readiness was measured by a score of 4 or 5, there was a statistically significant relationship between self-selection and actual readiness, $\chi^2(1) = 9.99$, $p = .002$.

The SDLRS was employed to identify participants' readiness for DL or SDL. Data were further split into demographic data. Table 8 provides descriptive demographic data of the highest academic degree earned by participants and their SDLRS scoring level. Only the highest degree earned was utilized for this descriptive data. The following paragraphs present data descriptively because given the small sample size and the number of cells needing to be considered, it was not meaningful to run statistical analysis.

Table 8

Number of Directed and Self-Directed Learners Scoring at Each Level of the SDLRS Based on Their Highest Academic Degree Earned

	SDLRS category					
	1	2	3	4	5	Total
Directed						
Elementary school	0	0	2	1	0	3
High school	0	0	1	1	0	2
Associate's degree	1	3	1	0	0	5
Bachelor's degree	0	0	0	2	1	3
Total	1	3	4	4	1	13
Self-directed						
Elementary school	0	0	0	2	0	2
High school	0	0	5	5	1	11
Associate's degree	0	0	2	7	1	10
Bachelor's degree	0	2	5	4	4	15
Master's degree	0	0	0	1	0	1
Total	0	2	12	19	6	39

When a score of 3, 4, 5 was considered to be ready for SDL, none of the self-selected directed learners with an elementary school degree as their highest degree correctly identified themselves as directed learners. The SDLRS score indicated they were ready for SDL, but they misidentified themselves and chose DL. Specific to those choosing SDL, the two individuals completing elementary school as their highest degree did correctly identify themselves as self-directed learners. Both high school degree holders self-selecting DL misidentified themselves, as SDLRS indicated they were ready for SDL. All 11 high school degree holders choosing SDL correctly identified their readiness for SDL. Of the five people holding associate's degrees as their highest degree who chose DL, four people correctly identified as DL (those at SDLRS Category 1, 2) and one did not (SDLRS Category 3). Specific to participants holding associate's degrees and choosing SDL, all 10 participants matched SDLRS findings. The three bachelor's degree holders who self-selected DL misidentified themselves. For the most part, bachelor's degree holders choosing SDL correctly identified themselves as SDL: 13 correctly identified themselves as SDL and two did not correctly identify themselves.

When a score of 3 was ignored and a SDLR score of 4 or 5 was considered to be ready for SDL, all three high school degree holders self-selecting DL misidentified themselves and six out of 11 high school degree holders choosing SDL correctly identified their readiness for SDL. Of the bachelor's degree holders, all three DL misidentified themselves and eight of the 15 choosing SDL correctly identified themselves as SDL. It may be of interest to note that the COR model (Cross, 1981) posits that adults' participation in learning experiences arise from the learner's own past

experiences and "indirectly from the attitudes and experiences of friends and 'significant others'" (p. 125). As such, choosing SDL over DL may have a relationship to successful completion of academic degrees as well as perceptions of one's self as a successful learner within the context of other people's views.

The SDLRS was employed to identify participants' readiness for DL or SDL. Data were further split into demographic data. Table 9 provides descriptive demographic data of participants' primary language and their SDLRS scoring level. The following paragraphs present the results descriptively because given the small sample size and the number of cells needing to be considered, it was not meaningful to run a statistical analysis.

Table 9

Number of Directed and Self-Directed Learners Scoring at Each Level of the SDLRS Based on Their Primary Language

	SDLRS category					
	1	2	3	4	5	Total
Directed						
English	1	2	1	2	1	7
Spanish	0	1	2	2	0	5
English/Spanish	0	0	1	0	0	1
Total	1	3	4	4	1	13
Self-directed						
English	0	0	5	11	5	21
Spanish	0	0	6	7	1	14
English/Spanish	0	2	1	1	0	4
Total	0	2	12	19	6	39

When a score of 3, 4, 5 was considered to be ready for SDL, specific to English self-selected directed learners, three correctly identified themselves as directed learners

and four misidentified themselves and chose directed, although SDLRS indicated they were ready for SDL. Specific to English primary language, choosing self-directed, all 21 participants correctly identify themselves as self-directed learners. Specific to Spanish-speaking primary language participants self-selecting DL, one correctly identified him/herself as a directed learner and four misidentified themselves and chose DL although SDLRS indicated they were ready for SDL. All 14 Spanish primary language participants choosing self-directed correctly identified their readiness for SDL. Only one participant listed English/Spanish as his or her primary language and self-selected DL; this participant, according to SDLRS, scored average and was ready for SDL. Four participants listed English/Spanish as their primary language and self-selected SDL. Of these, two participants were ready for SDL, but two misidentified by choosing SDL when SDLRS indicated they were not ready for SDL.

When a score of 3 was ignored and a SDLR score of 4 or 5 was considered to be ready for SDL, all three English primary language participants self-selecting DL misidentified themselves and 16 out of 21 English primary language participants choosing SDL correctly identified their readiness for SDL. Of the Spanish primary language participants, two of the five DL misidentified themselves and eight of the 14 choosing SDL correctly identified themselves as self-directed.

When considering English/Spanish as primary language, the DL participants correctly identified their readiness and only one out of four participants who self-selected SDL correctly identified him/herself.

The SDLRS was employed to identify participants' readiness for DL or SDL. Data were further split into demographic data. Table 10 provides descriptive demographic data of participants' child development permit level and their SDLRS scoring level. The following paragraphs present the results descriptively because given the small sample size and the number of cells needing to be considered, it was not meaningful to run a statistical analysis. It may be of interest to note that some research points (Lee, 2003) to application of andragogy, and by extension, SDL specific to foreign born learners. While this study did not collect data of participants' birthplace, it did collect participants' primary language. Of the 52 participants, 28 were monolingual English speakers. Specific to this study, the sample had nearly equal monolingual and nonmonolingual English speakers.

The California Commission on Teacher Credentialing issues Child Development Permits valid for 5 years. California offers six levels of Child Development Permits, each with its own set of issuance requirements and each authorizing the holder to perform different levels of service in child development programs (CCTC, 2013).

Table 10 lists data of the 43 participants who provided permit-level data. Of those, the majority held either associate teacher permits or site supervisor permits. When a score of 3, 4, 5 was considered to be ready for SDL, all four participants holding associate teacher permits who self-selected DL misidentified themselves, as SDLRS. Specific to the 10 associate teacher permit holders who self-selected SDL, nine correctly identified themselves as self-directed learners.

Table 10

Number of Directed and Self-Directed Learners Scoring at Each Level of the SDLRS Based on Their Child Development Permit

	SDLRS category					
	1	2	3	4	5	Total
Directed						
No permit/						
Lapsed permit	0	0	0	1	0	1
Associate teacher	0	0	3	1	0	4
Teacher	0	1	1	0	0	2
Master teacher	0	1	0	0	0	1
Site supervisor	0	0	0	2	0	2
Total	0	2	4	4	0	10
Self-directed						
No permit/						
Lapsed permit	0	0	0	3	0	3
Assistant teacher	0	1	1	1	0	3
Associate teacher	0	1	5	3	1	10
Teacher	0	1	1	1	0	3
Master teacher	0	0	0	1	1	2
Site supervisor	0	0	2	6	2	10
Program director	0	0	0	0	2	2
Total	0	3	9	15	6	33

Note. Three participants who self-identified as a directed learner did not provide their permit information. Six participants who self-identified as a self-directed learner did not provide their permit information.

Neither of the two participants holding site supervisor permits who self-selected DL correctly identified themselves in light of SDLRS, indicating both were ready for SDL. All 10 participants listing site supervisor child development permits correctly identified themselves as ready for SDL.

In ignoring those in the average range of 3 in the event they might lean more toward DL or SDL, and considering a SDLR score of 4 or 5 to be ready for SDL, four of 10 associate teacher permit holders correctly identified their readiness and eight of 10 site supervisor permit holders correctly identified their readiness.

As previously mentioned, the CCTC issues six levels of Child Development Permits, each with its own set of issuance requirements, and each authorizing the holder to perform different levels of service in child development programs. Site and program supervision is limited to holders of site supervisor permits and program director permits, respectively. The remaining four certificate levels are specific to teachers.

While the SDLRS was employed to identify participants' readiness for DL or SDL, data were further split into demographic data. Table 11 provides descriptive demographic data of the distinction between teaching and supervision level permits and

Table 11

Number of Directed and Self-Directed Learners Scoring at Each Level of the SDLRS Based on Their Child Development Permit as Teaching Permits and Site/Program Supervision Permits

	SDLRS category					
	1	2	3	4	5	Total
Directed						
Teaching permits						
Associate teacher Teacher	0	2	4	1	0	7
Master teacher						
Supervision permits						
Site supervisor	0	0	0	2	0	2
Program director						
Total	0	2	4	3	0	9
Self-directed						
Teaching permits						
Assistant teacher Associate teacher Teacher	0	3	7	6	2	18
Master teacher						
Supervision permits						
Site supervisor	0	0	2	6	4	12
Program director						
Total	0	3	9	12	6	30

Note. Three participants who self-identified as a directed learner did not provide their permit information. Six participants who self-identified as a self-directed learner did not provide their permit information. One participant who self-identified reported no permit/lapsed permit. Three participants who self-identified as a self-directed learner reported no permit/lapsed permit.

their SDLRS scoring level. The following paragraphs present the results descriptively because given the small sample size and the number of cells needing to be considered, it was not meaningful to run a statistical analysis.

When a score of 3, 4, 5 was considered to be ready for SDL, two holders of teaching level permits correctly identified themselves as directed learners and five misidentified themselves and chose directed although SDLRS indicated they were ready for SDL. Specific to supervision level permit holders choosing DL, both participants incorrectly identified themselves as directed learners. Within the participants self-selecting SDL, 15 out of 18 teaching level permit holders correctly identified themselves as self-directed learners. The remaining three chose self-directed; however, this was a mismatch to SDLRS, which indicated they were not ready for SDL. All 12 supervision permit holders choosing self-directed correctly identified their readiness for SDL. As such, taken as a total group, only the self-directed supervision permit holders correctly matched the SDLRS Categories 3, 4, 5 in readiness for SDL. This group, however, lost that distinction when a score of 3 was ignored and a SDLR score of 4 or 5 was considered for a participant to be ready for SDL.

The SDLRS was employed to identify participants' readiness for DL or SDL and data were further split into demographic data**.** Table 12 provides descriptive demographic data separating participants by those working directly with children aged 3 to 5 years old. The NAEYC (1993) defined early childhood as ages birth through 8 years. Previously, Tables 10 and 11 provided descriptive data about participants' CCTC permit levels, issued to teaching and supervisory personnel working with children in

childcare and development programs. To obtain a permit, higher education institution coursework is required to be "primarily related to children ages five years or younger completed at a regionally-accredited college or university. Twenty-five percent of required course work may cover children ages five through eight" (CCTC, 2013, p. 7). The researcher parsed out demographic data specific to participants working with children aged 3 to 5 years old as the information contained in the VAIL assessment, used as part of this study, is specific to children ages 3 to 5 years old. As with previous demographic data, the following paragraphs present the results descriptively because given the small sample size and the number of cells needing to be considered, it was not meaningful to run a statistical analysis.

Table 12

Number of Directed and Self-Directed Learners Scoring at Each Level of the SDLRS Based on Working With Children 3-5 Years Old

	SDLRS category					
	1	2	3	4	5	Total
Directed						
Does not work with children 3-5	0	0	2	2	0	4
Works with children 3-5	1	3	2	2	1	9
Total	1	3	4	4	1	13
Self-directed						
Does not work with children 3-5	0	0	2	6	1	9
Works with children 3-5	0	2	10	13	5	30
Total	0	2	12	19	6	39

Four participants who did not work with children ages 3-5 years old chose DL. They misidentified themselves, as SDLRS indicated they were ready for SDL. Of the nine participants choosing DL, who worked with 3 to 5 year-old children, four correctly matched their self-selection to SDLRS, and five incorrectly chose DL in contrast to the

SDLRS indication they were ready for SDL. When a score of 3, 4, 5 was considered for a participant to be ready for SDL, all nine participants who did not work with children ages 3 to 5 years old correctly self-selected SDL, according to SDLRS. Thirty participants who self-selected SDL worked with children ages 3 to 5 years old. Of those, only two misidentified themselves as self-directed; they scored in the DL category of SDLRS. When a score of 3 was ignored and a SDLR score of 4 or 5 was considered for a participant to be ready for SDL, 7 of 9 participants who did not work with children ages 3 to 5 years old and chose SDL were ready for SDL. Of the 30 participants who chose SDL and worked with children ages 3 to 5 years old, 18 were ready for SDL.

Summary for Research Question 1

The purpose of this study was to examine if a participant could correctly identify his or her readiness for SDL. A statistically significant relationship was found between participants' self-selection of SDL and their readiness for SDL, as measured by the SDLRS. The SDLRS is, a 5-point scale where a score of 1 (*low*) and 2 (*below average*) are not considered ready for SDL, and 3 (*average*), 4 (*above average*), and 5 (*high*) indicates readiness for SDL. At the beginning of the study, 52 participants self-selected either SDL or DL; 39 chose SDL and 13 chose DL. Of the 39 participants choosing SDL, the SDLRS confirmed they were ready for SDL; as such, only two participants incorrectly identified themselves are ready for SDL. Of the 13 participants choosing DL, four correctly matched the SDLRS category of directed learning; as such, the remaining nine participants who chose DL were, according to SDLRS, ready for SDL.

As previously mentioned, SDLRS defines readiness for SDL by scoring as at least a 3 on a 5-point scale. Further analysis was performed to examine if there is a statistical relationship between participants' self-selection match and SDLRS readiness if readiness is parsed down to only 4 (*above average*) or 5 (*high*). Using these parameters, there is no statistical relationship between self-selection and actual readiness.

Demographic data were presented descriptively, as the small sample size and number of cells to be considered could not be considered meaningful in a statistical analysis. The following demographic data of self-selected DL and SDL participants were employed to identify participants' readiness for DL or SDL: highest academic degree, primary language spoken, level of CCTC permit, teachers and supervisors, working or not working with 3- to 5-year-old children.

Findings for Research Question 2

The second research question was concerned with identifying how one's level of readiness for self-direction (as measured by the SDLRS) relates to their change on the VAIL. Using SDLRS raw score (continuous predictor) and posttest (continuous DV), 16 regressions, one for each task to be performed while watching videos, were calculated. Looking at 16 items on the VAIL, all subsequent tables refer to the posttest minus pretest score. For example, Item 1 is the post-prescore of the first video, first question. As previously mentioned, VAIL is a measure designed to examine understanding of quality teaching strategies and corresponding behavioral examples of each strategy (Wiens, Hessberg, LoCasale-Crouch, & DeCoster, 2013). It measures a person's skill in detecting

behaviors/interactions that make teachers effective and promote student learning (Video Assessment of Interactions and Learning: VAIL, 2010).

Utilizing VAIL, 16 items were measured. Participants watched a 3-minute video, and were prompted (see Appendix F) to write observed strategies and examples. A paper template was used by participants to provide their responses. Responses were coded for the following: 1. Strategy; 2. Example; 3. Strategy-example match; 4. Breadth. This provided data for Items 1 through 4 (Table 13). Participants viewed the same video again with a different prompt focus (see Table 13), and the coding of responses provided data for Items 5 through 8. The entire process was repeated using a different video and prompts, thereby providing data for Items 9 through 16.

Table 13

VAIL Items Described by Video Title, Prompt Focus, and Participant Task

	Description		
Item	Video title	Focus	Task
1	Morning message	Instructional learning formats	List correct strategy
2	Morning message	Instructional learning formats	List correct example
3	Morning message	Instructional learning formats	Strategy-example match
4	Morning message	Instructional learning formats	Breadth
5	Morning message	Language & literacy strategies	List correct strategy
6	Morning message	Language & literacy strategies	List correct example
7	Morning message	Language & literacy strategies	Strategy-example match
8	Morning message	Language & literacy strategies	Breadth
9	Letter hunt	Quality of feedback	List correct strategy
10	Letter hunt	Quality of feedback	List correct example
11	Letter hunt	Quality of feedback	Strategy-example match
12	Letter hunt	Quality of feedback	Breadth
13	Letter hunt	Language & literacy strategies	List correct strategy
14	Letter hunt	Language & literacy strategies	List correct example
15	Letter hunt	Language & literacy strategies	Strategy-example match
16	Letter hunt	Language & literacy strategies	Breadth

To answer Research Question 2, data from the participant's VAIL pre-postscore and their SDLRS score was used to conduct statistical analysis. This was run in two ways: utilizing the participant's SDLRS category score (1, 2, 3, 4, 5) and again using the participant's SDLRS raw score, to capture the true variability of the scores (Gall et al., 1999). First, the researcher separated the participants and looked at their choice of DL and how their categories' score reflected posttest minus pre-VAIL score (Table 14 top half). Then, participants' choice of SDL and how their categories' score reflected posttest minus pre-VAIL score (Table 14 bottom half) were examined. Overall, no items were significant for DL, and only two items, Item 7 and Item 9, were marginally significant for SDL. The task for Item 7 was to list a language and literacy strategy observed in the *Morning Message* video and articulate the example observed of that strategy. The task for Item 9 was to list a quality of feedback strategy observed in the *Letter Hunt* video.

Table 14 reports SDLRS category and relationship to VAIL assessment. Table 15 examines SDLRS raw score and relationship to VAIL assessment. A participant's performance on the SDLRS was measured by his or her raw score. When the participants watched the videos in the first video session, they were coded for strategies, example, strategy-example match, and breadth.

Later, after going through the VAIL training, they looked at the same video again and were coded for strategies, example, strategy-example match, and breadth. The SDLRS did not predict any change for each of the videos on each of the task items. Across all of the items, there were no significant differences. These findings were

consistent using SDLRS raw scores of DL (Table 15 top half) and SDL (Table 15 bottom half).

Table 14

Model Summaries for Predicting Post-Prescores on Each VAIL Item From SDLRS Categories for Directed and Self-Directed Learners

Post-pre for VAIL items	*SS* regression	*SS* residual	*df1*	*df2*	*MS* regression	*MS* residual	*F*
Directed							
1	0.08	20.85	1	11	0.08	1.90	0.04
2	2.23	20.08	1	11	2.23	1.83	1.22
3	0.27	11.73	1	11	0.27	1.07	0.25
4	0.00	10.92	1	11	0.00	0.99	0.00
5	0.54	13.15	1	11	0.54	1.20	0.45
6	2.41	41.59	1	11	2.41	3.78	0.64
7	2.23	4.08	1	11	2.23	0.37	6.02*[a]
8	0.00	14.30	1	11	0.00	1.30	0.00
9	8.92	24.31	1	11	8.92	2.21	4.04†
10	0.57	28.35	1	11	0.57	2.58	0.22
11	1.03	17.89	1	11	1.03	1.63	0.63
12	2.11	14.96	1	11	2.11	1.36	1.55
13	0.00	10.92	1	11	0.00	0.99	0.00
14	1.73	33.20	1	11	1.73	3.02	0.57
15	0.25	6.68	1	11	0.25	0.61	0.41
16	0.08	8.85	1	11	0.08	0.80	0.10
Self-directed							
1	0.03	117.71	1	37	0.03	3.18	0.01
2	5.31	119.92	1	37	5.31	3.24	1.64
3	1.24	84.46	1	37	1.24	2.28	0.54
4	0.84	70.60	1	37	0.84	1.91	0.44
5	0.00	56.77	1	37	0.00	1.53	0.00
6	0.26	109.63	1	37	0.26	2.96	0.09
7	0.00	59.59	1	37	0.00	1.61	0.00
8	0.53	41.37	1	37	0.53	1.12	0.47
9	2.03	97.41	1	37	2.03	2.63	0.77
10	2.11	91.48	1	37	2.11	2.47	0.85
11	0.35	106.89	1	37	0.35	2.89	0.12
12	0.25	69.18	1	37	0.25	1.87	0.14
13	0.01	117.89	1	37	0.01	3.19	0.00
14	9.54	84.82	1	37	9.54	2.29	4.16*[b]
15	2.43	48.65	1	37	2.43	1.32	1.84
16	0.02	62.34	1	37	0.02	1.69	0.01

[a] $B = 0.39$, $\beta = .60$, $t(11) = 2.45$, 95% CI [0.04, 0.73], $p = .03$. [b] $B = 0.64$, $\beta = .32$, $t(37) = 2.04$, 95% CI [0.00, 1.27], $p = .05$.

† $p < .10$, * $p < .05$.

Table 15

Model Summaries for Predicting Post-Prescores on Each VAIL Item From SDLRS Raw Scores for Directed and Self-Directed Learners

Post-pre for VAIL items	*SS* regression	*SS* residual	*df1*	*df2*	*MS* regression	*MS* residual	*F*
Directed							
1	0.18	20.74	1	11	0.18	1.89	0.10
2	2.05	20.26	1	11	2.05	1.84	1.11
3	0.24	11.76	1	11	0.24	1.07	0.22
4	0.00	10.92	1	11	0.00	0.99	0.00
5	0.38	13.31	1	11	0.38	1.21	0.32
6	3.24	40.76	1	11	3.24	3.71	0.87
7	1.68	4.63	1	11	1.68	0.42	4.00†
8	0.03	14.28	1	11	0.03	0.02	0.88
9	9.74	23.50	1	11	9.74	2.14	4.56†
10	0.22	28.70	1	11	0.22	2.61	0.08
11	1.93	17.00	1	11	1.93	1.55	1.25
12	3.58	13.50	1	11	3.58	1.23	2.92
13	0.01	10.92	1	11	0.01	0.99	0.01
14	1.40	33.52	1	11	1.40	3.05	0.46
15	0.14	6.79	1	11	0.14	0.62	0.22
16	0.10	8.82	1	11	0.10	0.80	0.12
Self-directed							
1	0.20	117.54	1	37	0.20	3.18	0.06
2	4.31	120.92	1	37	4.31	3.27	1.32
3	0.59	85.10	1	37	0.59	2.30	0.26
4	0.39	71.05	1	37	0.39	1.92	0.20
5	0.02	56.75	1	37	0.02	1.53	0.02
6	0.08	109.82	1	37	0.08	2.97	0.03
7	0.05	59.54	1	37	0.05	1.61	0.03
8	0.86	41.04	1	37	0.86	1.11	0.77
9	0.07	99.37	1	37	0.07	2.69	0.03
10	2.59	91.00	1	37	2.59	2.46	1.06
11	2.10	105.13	1	37	2.10	2.84	0.74
12	0.16	69.28	1	37	0.16	1.87	0.08
13	0.03	117.87	1	37	0.03	3.19	0.01
14	8.05	86.31	1	37	8.05	2.33	3.45†
15	2.26	48.82	1	37	2.26	1.32	1.71
16	0.05	62.31	1	37	0.05	1.68	0.03

†$p < .10$.

When observing degrees of readiness from low to high using a continuous variable of SDLRS raw scores, this researcher found that higher scores did not predict higher scores on any of the VAIL items. This was determined by running 16 regressions, one for each VAIL item. SDLR raw scores, rather than categories, were used to capture the true

variability of the categories (Gall et al., 1999). The analysis to predict change on VAIL scores from the participant's SDLRS score was conducted using linear aggression analysis.

Table 16 summarizes predicting post-prescores on each VAIL item from SDLRS categories for the overall sample and Table 17 summarizes predicting post-prescores on each VAIL item from SDLRS raw scores for the overall sample. On both summary models, only Item 14 is moderately significant.

Table 16

Model Summaries for Predicting Post-Prescores on Each VAIL Item From SDLRS Categories for the Overall Sample

Post-pre for VAIL items	*SS* regression	*SS* residual	*df1*	*df2*	*MS* regression	*MS* residual	*F*
1	0.14	140.17	1	50	0.14	2.80	0.05
2	0.45	147.32	1	50	0.45	2.95	0.15
3	1.11	99.41	1	50	1.11	1.99	0.56
4	0.26	82.41	1	50	0.26	1.65	0.16
5	0.11	70.41	1	50	0.11	1.41	0.07
6	0.35	153.58	1	50	0.35	3.07	0.11
7	0.58	65.48	1	50	0.58	1.31	0.44
8	0.11	56.41	1	50	0.11	1.13	0.09
9	0.44	132.26	1	50	0.44	2.65	0.16
10	0.65	122.18	1	50	0.65	2.44	0.27
11	1.80	125.28	1	50	1.80	2.51	0.72
12	0.13	86.54	1	50	0.13	1.73	0.07
13	0.05	129.93	1	50	0.05	2.58	0.02
14	8.63	120.81	1	50	8.63	2.42	3.57†
15	2.32	55.73	1	50	2.32	1.12	2.09
16	0.05	71.26	1	50	0.05	1.43	0.04

†$p < .10$.

Table 17

Model Summaries for Predicting Post-Prescores on Each VAIL Item From SDLRS Raw Scores for the Overall Sample

Post-pre for VAIL items	*SS* regression	*SS* residual	*df1*	*df2*	*MS* regression	*MS* residual	*F*
1	0.25	140.06	1	50	0.25	2.80	0.09
2	0.59	147.18	1	50	0.59	2.94	0.20
3	0.69	99.83	1	50	0.69	2.00	0.35
4	0.11	82.57	1	50	0.11	1.65	0.06
5	0.02	70.50	1	50	0.02	1.41	0.01
6	0.59	153.33	1	50	0.59	3.07	0.19
7	0.56	65.50	1	50	0.56	1.31	0.43
8	0.24	56.28	1	50	0.24	1.13	0.22
9	1.94	130.75	1	50	1.94	2.62	0.74
10	1.44	121.39	1	50	1.44	2.43	0.59
11	4.69	122.39	1	50	4.69	2.45	1.92
12	1.45	85.23	1	50	1.45	1.71	0.85
13	0.01	128.98	1	50	0.01	2.58	0.00
14	7.74	121.70	1	50	7.74	2.43	3.18†
15	2.15	55.91	1	50	2.15	1.12	1.92
16	0.09	71.22	1	50	0.09	1.42	0.06

†$p < .10$.

Summary for Research Question 2

The purpose of this study included examination of participants' correct match to readiness for SDL; that examination was reported in Research Question 1. Research Question 2 then investigated how participants' level of readiness (as measured by the SDLRS) relates to achievement. In this study, achievement was measured as a post-pretest score using the 16 items of VAIL assessment. The VAIL pretest score was assessed prior to training videos access, and VAIL posttest score provided after training videos access. The VAIL was designed to measure a person's skill in detecting behaviors/interactions that make teachers effective and promote student learning.

The major findings of Research Question 2 indicate that overall, when examining achievement by using 16 regressions (one for each item on the VAIL assessment) and

using SDLRS readiness categories (1, 2, 3, 4, 5), there were no significant items for DL. Specific to SDL, there were no significant items and only two marginally significant items (Item 7—language and literacy strategy in Morning Message video and Item 9—feedback strategy in Letter Hunt video).

When examining achievement by using 16 regressions (one for each item on the VAIL assessment) and using SDLRS raw scores (55-290), there was no significant difference in either DL or SDL.

A final examination utilized the overall sample, irrespective of DL or SDL, as it relates to SDLRS categorical score and VAIL achievement. Then the same analysis was run using SDLRS raw score. On both summary models, only Item 14 (Language and Literacy strategies in Letter Hunt video) was moderately significant.

Findings for Research Question 3

The third research question was concerned with exploring a correlation between positive identification of DL or SDL readiness and the post/pre-VAIL scores. Positive identification is defined as the correct identification of DL or SDL readiness based on SDLRS. A regression model was used to split the data into those who chose DL and those who chose SDL. Within each of the groups, all 16 VAIL scores (post minus pre) were regressed onto the positive ID variable. As such, this is a categorical variable. Thus, the data were correlated such that for those who chose DL, within that group those who incorrectly identified themselves as DL were compared to those who correctly identified themselves—and how they scored on the VAIL. The same process was repeated for those who chose SDL.

This regression analysis mirrors the initial analysis where DL was first defined as SDLRS 1 and 2 versus 3, 4, 5 for SDL. Then, the analysis was rerun using SDLRS 1, 2, 3 as DL versus 4 and 5 for SDL. Additionally, SDLRS 1, 2 versus 4, 5 was examined; this analysis ignored SDLRS 3. Finally, a one-way ANOVA was run on people scoring 3.

The data in Table 18 consist of individuals who initially chose SDL, and positively identified themselves as SDL (meaning they scored 3, 4, 5 on the SDLRS). When watching the first video and identifying the examples, the group who positively identified themselves tended to be able to identify two more strategies to Item 2 (specific to AMIXT) than the group who could not positively identify themselves.

When comparing those who could positively identify themselves as directed when scoring SDLRS 1-3 versus 4 and 5 as self-directed, Table 19 shows a significant result for directed learners specific to Item 7 (AMLMT).

Table 20 compares those who could positively identify themselves as directed when scoring SDLRS 1-2 versus 4 and 5 as self-directed; SDLRS 3 was ignored. This makes the sample very small. The results indicate that there is a marginally significant result in Item 7 (AMIMT). Those self-directed learners who could identify themselves, compared to those who could not, tended to identify two additional examples in the video, as evidenced by Item 2 (AMIXT).

Finally, Table 21 represents the mean comparisons of post/pre-VAIL scores among the low, medium, and high readiness groups. None of the groups differed on their mean post/pre-VAIL scores.

Table 18

Model Summaries for Predicting Post-Prescores on Each VAIL Item Based on Participants' Correct Identification of Learning Style for Those Who Identified as Directed and Self-Directed Learners

Post-pre for VAIL items	*SS* regression	*SS* residual	*df1*	*df2*	*MS* regression	*MS* residual	*F*
Directed							
1	1.92	19.00	1	11	1.92	1.73	1.11
2	0.31	22.00	1	11	0.31	2.00	0.15
3	0.36	11.64	1	11	0.36	1.06	0.34
4	0.62	10.31	1	11	0.62	0.94	0.66
5	0.14	13.56	1	11	0.14	1.23	0.11
6	3.25	40.75	1	11	3.25	3.71	0.88
7	1.34	4.97	1	11	1.34	0.45	2.95
8	0.42	13.89	1	11	0.42	1.26	0.33
9	5.34	27.89	1	11	5.34	2.54	2.11
10	0.17	28.75	1	11	0.17	2.61	0.07
11	3.95	14.97	1	11	3.95	1.36	2.90
12	0.86	16.22	1	11	0.86	1.48	0.58
13	0.17	10.75	1	11	0.17	0.98	0.18
14	2.62	32.31	1	11	2.62	2.94	0.89
15	0.03	6.89	1	11	0.03	0.63	0.06
16	0.03	8.89	1	11	0.03	0.81	0.04
Self-directed							
1	4.66	113.08	1	37	4.66	3.06	1.53
2	9.43	115.80	1	37	9.43	3.10	3.01†
3	4.99	80.70	1	37	4.99	2.18	2.29
4	3.33	68.11	1	37	3.33	1.84	1.81
5	0.70	56.07	1	37	0.70	1.52	0.46
6	5.07	104.82	1	37	5.07	2.83	1.79
7	0.77	58.82	1	37	0.77	1.59	0.48
8	2.33	39.57	1	37	2.33	1.07	2.18
9	0.73	98.70	1	37	0.73	2.67	0.60
10	2.56	91.03	1	37	2.56	2.46	1.04
11	0.80	106.43	1	37	0.80	2.88	0.28
12	1.17	68.27	1	37	1.17	1.85	0.63
13	0.01	117.89	1	37	0.01	3.19	0.00
14	3.54	90.82	1	37	3.54	2.46	1.44
15	0.05	51.03	1	37	0.05	1.38	0.04
16	0.04	62.32	1	37	0.04	1.68	0.02

Note. D = 1, 2; *SD* = 3-5.
†$p < .10$.

Table 19

Model Summaries for Predicting Post-Prescores on Each VAIL Item Based on Participants' Correct Identification of Learning Style for Those Who Identified as Directed and Self-Directed Learners

Post-pre for VAIL items	*SS* regression	*SS* residual	*df1*	*df2*	*MS* regression	*MS* residual	*F*
Directed							
1	1.85	19.08	1	11	1.85	1.73	1.07
2	1.11	21.2	1	11	1.11	1.93	0.58
3	0.33	11.68	1	11	0.33	1.06	0.31
4	0.05	10.88	1	11	0.05	0.99	0.05
5	1.62	12.08	1	11	1.62	1.10	1.47
6	0.33	43.68	1	11	0.33	3.97	0.08
7	2.63	3.68	1	11	2.63	0.33	7.88*[,a]
8	0.01	14.30	1	11	0.01	1.30	0.01
9	2.36	30.88	1	11	2.36	2.81	0.84
10	0.12	28.80	1	11	0.12	2.62	0.05
11	0.12	18.80	1	11	0.12	1.71	0.07
12	0.38	16.70	1	11	0.38	1.52	0.25
13	0.05	10.88	1	11	0.05	0.99	0.05
14	1.85	33.08	1	11	1.85	3.01	0.62
15	0.85	6.08	1	11	0.85	0.55	1.54
16	0.05	8.88	1	11	0.05	0.81	0.06
Self-directed							
1	0.08	117.67	1	37	0.08	3.18	0.02
2	1.46	123.77	1	37	1.46	3.35	0.44
3	0.24	85.45	1	37	0.24	2.31	0.10
4	1.30	70.14	1	37	1.30	1.90	0.68
5	0.95	55.82	1	37	0.95	1.51	0.63
6	0.06	109.84	1	37	0.06	2.97	0.02
7	0.04	59.55	1	37	0.04	1.61	0.02
8	0.06	41.84	1	37	0.06	1.13	0.05
9	3.08	96.36	1	37	3.08	2.60	0.28
10	0.66	92.93	1	37	0.66	2.51	0.26
11	0.02	107.21	1	37	0.02	2.90	0.01
12	0.22	69.21	1	37	0.22	1.87	0.12
13	0.06	117.84	1	37	0.06	3.19	0.02
14	5.66	88.70	1	37	5.66	2.40	2.36
15	0.52	50.56	1	37	0.52	1.37	0.38
16	0.01	62.35	1	37	0.01	1.69	0.00

Note. D = 1-3; *SD* = 4, 5.
[a]*B* = -0.93, β = -0.65, *t*(11) = -2.81, 95% CI [-1.65, -0.20], *p* = .02.
**p* < .05.

Table 20

Model Summaries for Predicting Post-Prescores on Each VAIL Item Based on Participants' Correct Identification of Learning Style for Those Who Identified as Directed and Self-Directed Learners

Post-pre for VAIL items	*SS* regression	*SS* residual	*df1*	*df2*	*MS* regression	*MS* residual	*F*
Directed							
1	0.02	4.20	1	7	0.02	0.60	0.04
2	0.80	11.2	1	7	0.80	1.60	0.50
3	0.01	5.55	1	7	0.01	0.79	0.01
4	0.14	4.75	1	7	0.14	0.68	0.21
5	0.80	9.20	1	7	0.80	1.31	0.61
6	2.01	29.55	1	7	2.01	4.22	0.48
7	2.45	3.55	1	7	2.45	0.51	4.83†
8	0.20	11.80	1	7	0.20	1.69	0.12
9	5.00	23.00	1	7	5.00	3.29	1.52
10	0.01	21.55	1	7	0.01	3.08	0.00
11	2.01	9.55	1	7	2.01	1.36	1.47
12	0.80	11.20	1	7	0.80	1.60	0.50
13	0.14	8.75	1	7	0.14	1.25	0.11
14	2.94	17.95	1	7	2.94	2.56	1.15
15	0.36	3.20	1	7	0.36	0.46	0.78
16	0.00	8.00	1	7	0.00	1.14	0.00
Self-directed							
1	4.28	78.24	1	25	4.28	3.13	1.37
2	9.46	79.06	1	25	9.46	3.16	2.99†
3	4.06	42.24	1	25	4.06	1.69	2.40
4	2.32	46.64	1	25	2.32	1.87	1.25
5	0.39	45.46	1	25	0.39	1.82	0.22
6	4.62	82.34	1	25	4.62	3.29	1.40
7	0.62	46.34	1	25	0.62	1.85	0.34
8	2.16	29.84	1	25	2.16	1.19	1.81
9	1.19	78.00	1	25	1.19	3.12	0.38
10	2.67	62.00	1	25	2.67	2.48	1.08
11	0.67	74.00	1	25	0.67	2.96	0.23
12	1.19	56.00	1	25	1.19	2.24	0.53
13	0.01	93.84	1	25	0.01	3.75	0.00
14	4.62	58.34	1	25	4.62	2.33	1.98
15	0.11	40.56	1	25	0.11	1.62	0.07
16	0.03	42.64	1	25	0.03	1.71	0.90

Note. D = 1, 2; *SD* = 4, 5 (3 ignored).
†$p < .10$.

Table 21

ANOVA Summaries for Comparing Mean Post-Prescores on Each VAIL Item Across Low (SDLRS = 1 or 2), Medium (SDLRS = 3), and High (SDLRS = 4 or 5) Self-Readiness Groups

Post-pre for VAIL items	*SS* regression	*SS* residual	*df1*	*df2*	*MS* regression	*MS* residual	*F*
Directed							
1	9.57	130.74	2	49	4.79	2.67	1.79
2	1.64	146.113	2	49	0.82	2.98	0.27
3	7.62	92.90	2	49	3.81	1.90	2.01
4	7.04	75.64	2	49	3.52	1.54	2.28
5	0.82	69.70	2	49	0.41	1.42	0.29
6	7.79	146.14	2	49	3.89	2.98	1.31
7	1.49	64.57	2	49	0.74	1.32	0.56
8	0.07	56.45	2	49	0.03	1.15	0.03
9	3.03	129.67	2	49	1.51	2.65	0.57
10	2.11	120.72	2	49	1.06	2.46	0.43
11	1.53	125.55	2	49	0.76	2.56	0.30
12	0.04	86.64	2	49	0.02	1.77	0.01
13	0.28	128.70	2	49	0.14	2.63	0.05
14	8.04	121.40	2	49	4.02	2.48	1.62
15	1.25	56.80	2	49	0.63	1.16	0.54
16	0.17	71.14	2	49	0.09	1.45	0.06

Summary for Research Question 3

The purpose of this study included examination of participants' correct match to readiness for SDL; that examination was reported in Research Question 1. Research Question 2 then investigated how their level of readiness (as measured by the SDLRS) related to achievement. Research Question 3 is qualitative and sought to discover if there was a relationship between a participant correctly identifying themselves as ready for SDL, as defined by the SDLRS, and their achievement on the VAIL assessment. These are categorical data: Either the participant did or did not correctly identify themselves.

For example, a model summary for DL was divided into those who did correctly identify themselves as DL and those who did correctly identify themselves as DL. When

a participant correctly matched his or her choice to the SDLRS result, this correct identification was referred to as "positively identifying."

Using a regression analysis, and defining DL as 1, 2 and SDL as 3, 4, 5 on the SDLRS, data indicated that those positively identifying themselves as SDL tended to be able to identify two more strategies than those SDL who did not positively identify themselves. Mirroring that analysis, but instead defining DL as 1, 2, 3 and SDL as 4 or 5, there is a significant result for directed learners on VAIL Item 7. Parsing of SDLRS Level 3, considered average readiness for SDLRS, was done as the researcher was interested to see if the average scores, if redefined to DL rather than SDL, influenced the relationship of achievement. It appears so, as evidenced by the additional strategies identified.

The final analysis ignored those who scored 3 (*average*) on the SDLRS. Therefore, only participants scoring 1 or 2 (*low* and *below average*) and 4 or 5 (*above average* or *high*) were considered. This made the sample very small, although results indicated that there was marginal significance in VAIL Items 2 and 7 for SDL who positively identified themselves.

Summary of Quantitative Research Questions

The quantitative research questions in the study sought to examine the ability of participants to correctly self-select their learning style. Following that, statistical data were applied to determine if there was a relationship between self-selection, actual readiness for SDL, and achievement. This study also offered descriptive demographic

data specific to the first question: participant's self-selection of DL or SDL and SDLRS result.

Section 2: Presentation of Data and Findings for Qualitative Research Questions

The final three research questions were qualitative:

4. What factors motivate the participant to initially self-select directed versus self-directed learning options?
5. Does the participant's motivation for choosing directed versus self-directed learning change upon completion of a directed or self-directed learning experience?
6. Did the factors that motivated participants to initially self-select directed versus self-directed change during their learning experience?"

The objective of this study was to identify themes relevant to three qualitative research questions. Data from each participant were viewed as a single incident in the analysis. Common themes were identified across the data with regard to the research questions (Miles & Huberman, 1994). The researcher searched for patterns, themes, and dimensions in the data through analysis of the interviews, coding of the data, and further analysis as themes and patterns emerged. Her goal was to describe the participants' subjective experiences and views.

The first level of identification occurred during the initial review of each interview transcript. Upon receiving them, the researcher read each transcript, analyzed the data for each interview, and then conducted open coding utilizing NVivo 9 software, which is an analytic tool to facilitate the coding of qualitative data.

Open coding utilizes a brainstorming technique. Corbin and Strauss (2008) described open coding as "open[ing] up the data to all potentials and possibilities contained within them" (p. 160). In open coding, the data contained within the data set are thoroughly reviewed before beginning to group and label concepts. The process of coding is taking the raw data and pulling out concepts and then grouping them into themes. The data analysis process included the following steps:

1. Reviewing all interview transcripts
2. Importing the data into NVIVO
3. Coding the data in NIVIVO using open coding
4. Defining the properties of the dominant themes
5. Creating subthemes, when needed.

The resulting themes are described in the summary of the research findings for Research Questions 4, 5, and 6.

Validity, Trustworthiness, and Reliability

The researcher ensured the validity, trustworthiness, and reliability of the research study through employing various mechanisms. Qualitative validity, according to Creswell (2009), means that the researcher checks for the accuracy of the findings by employing certain procedures. Validation of findings in qualitative research occurs throughout the steps in the process of the research (Creswell, 2009). The researcher did a continual check during the coding process to ensure that coding did not drift from the original intent as the coding process evolved. She used an electronic codebook within

NVivo 9.0 to code the data. The researcher was responsible for initially analyzing the data, and an outside expert cross-checked for intercoder agreement.

Coding

A total of seven primary themes were identified in the coding process. The themes were delineated into two areas, with each area focusing on one of the two research questions. Several primary themes were further classified into subthemes. The findings for each research question are summarized and exemplary quotes from the interviews are used to illustrate the themes and subthemes.

Findings for Research Question 4

Research Question 4 was "What factors motivate the participant to initially self-select the directed versus the self-directed learning options?" The three primary themes related to this research question are summarized in this section. This section includes tables summarizing the definitions of the identified themes, the frequency of occurrence for the themes and subthemes (see Table 22), as well as the number of interviewees who mentioned a specific theme and subtheme. As reflected in Table 23, the primary themes were factors that influenced choice, perceived improvement, and immediate relevance of skills. The related subthemes are also summarized.

Factors that influenced choice. The first theme was factors that influenced choice. The exemplar quotes associated with this theme were further classified into five subthemes: (a) choice was convenient, (b) chosen for help, (c) chosen for independence, (d) lack of time, and (e) does not remember.

Table 22

Definition of Themes and Subthemes for Research Question 4

Theme	Definition
Factors that influenced choice	
Choice was convenient	Choice of DL and SDL was convenient for the participants.
Chosen for help	DL/SDL was chosen because of the perception that the choice would be most helpful for the participants.
Chosen for independence	DL/SDL was chosen because of the perception that the choice would allow participants to be more independent
Lack of time	DL/SDL was chosen because of the participants' lack of time or schedule.
Does not remember	Participant does not remember why they chose DL/SDL.
Perceived improvement	
Performed the same	Participants felt their skills remained the same
Improved	Participants felt their skills improved
Immediate relevance of skills	
Relevance to job	Relevance of new skills to employment settings
Relevance to other area	Relevance of new skills to employment settings

Table 23

Frequency of Themes and Subthemes for Research Question 4

Theme	Number of interviewees mentioning this theme	Total exemplar quotes
Factors that influenced choice		
Choice was convenient	8	10
Chosen for independence	7	8
Lack of time	3	3
Chosen for help	2	2
Does not remember	1	1
Perceived improvement		
Improved	13	22
Performed the same	1	1
Immediate relevance of skills		
Relevance to job	14	15
Relevance to other area	1	1

Choice was convenient. This subtheme was defined as the choice of DL and SDL being convenient for the participants. It was mentioned 10 times in eight interviews. One self-directed participant shared, "I was motivated for SD because of time. If I can do it by myself, I'd rather do that than going on Saturday." SD16 said, "I picked SD because I was able to be on my own time and dates." A directed participant stated, "I don't have a working computer and I think it was a good thing that I did choose directed because it was helpful." D3 indicated, "I chose directed because it was convenient for my time and schedule." In a final example, D7 said, "I don't have access to a computer, and I could use the computer in the directed sessions."

Chosen for independence. This subtheme was defined as DL/SDL being chosen because of the perception that the choice would allow participants to be more independent. It was mentioned eight times in seven interviews. For example, SD16 mentioned, "Yes, because I know the task that needs to be done and if don't know how to do it, I go to someone to get help instead of giving up." SD23 indicated, "To have somebody available by e-mail or phone call—yes, that would be OK. But, I don't want to have to go to a classroom setting for content expert help." In another example, SD30 said, "I liked SD since I am already familiar with CLASS through work and confident on taking it on my own." None of the directed participants mentioned choosing SDL or DL because of independence.

Lack of time. This subtheme was defined as choosing DL/SDL because of the participants' lack of time or schedule. It was mentioned three times in three interviews. SD12 mentioned lack of "time with children and extracurricular." SD28 indicated, "[I]

went with SD this time because I have 2 jobs, I could not go to the directed sessions." SD32 replied, "SD allowed me to be at own time and pace. I am computer literate and do not have to get a babysitter for a Saturday session."

Chosen for help. This subtheme was defined as choosing DL/SDL because of the perception that the choice would be most helpful for the participants. It was mentioned two times in two interviews. SD11 replied, "I thought the classes were great and I learned a lot. Seeing different people do what you do every day and seeing other ways of doing things a different way is confirming you are doing the right way and fine." D8 indicated, "Directed was better for me because English is a barrier for me. But, I know the [training coordinator] could have helped with English."

Does not remember. This subtheme was defined as not remembering why DL/SDL was chosen. It was mentioned one time in one interview. When asked about why she chose SDL, SD8 simply replied, "I don't really know."

Perceived improvement. The next theme was perceived improvement. The exemplar quotes associated with this theme were further classified into two subthemes: (a) improved and (b) performed the same.

Improved. This subtheme was defined as participants' feeling that their skills improved. It was mentioned 22 times in 13 interviews. SD11 shared, "Yes, I improved. I never guessed, it was because I understood more from the training." SD12 said, "Yes! The training helped." SD16 stated, "On the post assessment it was more the new learnings, I saw exactly what I needed to look for." D19 indicated, "I think it got better and I improved. Sometimes it is a little bit hard to see things right away to get the

answer, and sometimes I don't know how to explain it. But I think I got better after the training." D23 said, "I think I improved. The training was helpful . . . like on the one where you go to work early and get things organized." D3 stated, "I am sure I did [improve]. I think watching the videos helped." In a final example, SD30 indicated, "Definitely, and then at work we did a recertification of CLASS. Between the videos and recertification of CLASS, they both helped me."

Performed the same. This subtheme was defined as participants' feeling that their skills remained the same. It was mentioned one time in one interview. SD25 said, "I think I probably could have answered more correctly."

Immediate relevance of skills. The final theme was immediate relevance of skills. The exemplar quotes associated with this theme were further classified into two subthemes: (a) relevance to job and (b) relevance to other area.

Relevance to job. This subtheme was defined as participants' feeling that their new skills were relevant to employment settings. It was mentioned 15 times in 14 interviews. SD11 shared, "Immediate yes—everything is relevant. It is like they had a content that put it just for me. Why? Because you see the example and they talk about it and then they talk about it again. I am very visual." SD16 said, "Immediate—yes . . . I was able to watch the video and see things and use information in my preschool classroom." D19 indicated, "Immediate—absolutely! Every time you see something positive, you can do it in the classroom." D23 said, "Yes—the materials like the computers provided for us and the pens and paper were relevant." SD23 stated, "Yes—I already had a discussion with my boss about the improvements I can make when I go

back. I was observed by a person in a coaching capacity." SD28 indicated, "Immediate—yes. Totally, I actually have implemented some of the trainings. Especially in talking with my coworkers, I am modeling the daily routine." D3 indicated, "Yes, I thought it was relevant to my job now. Like the one segment about the clock: how she said this is why we do it, things like that you take for granted." In a final example, SD32 shared, "Yes immediate at the center there were many ideas and very relevant."

Relevance to other area. This subtheme was defined as participants' feeling that their new skills were relevant to other areas. It was mentioned one time in one interview. SD12 responded, "Immediate yes in personal life; my children are ages, 10, 9, 3."

Findings for Research Question 5

Research Question 5 was, "Does the participant's motivation for choosing directed versus self-directed learning change upon completion of a directed or self-directed learning experience [in the future]?" The four primary themes related to this research question are summarized in this section. This section includes tables summarizing the definitions of the identified themes, the frequency of occurrence for the themes and subthemes (see Table 24), as well as the number of interviewees that mentioned a specific theme and subtheme. As reflected in Table 25, the primary themes were factors that influenced future choice, future relevance of skills, perceptions of DL, and perceptions of SDL. The related subthemes are also summarized.

Factors that influenced future choice. The first theme was factors that influenced future choice. The exemplar quotes associated with this theme were further

classified into three subthemes: (a) schedule, (b) prefers independence, and (c) prefers help.

Table 24

Definition of Themes and Subthemes for Research Question 5

Theme	Definitions
Factors that influenced future choice	
Schedule	Choice of DL and SDL was convenient for the participants.
Prefers help	DL/SDL was chosen because of the participants' preference for additional help and input.
Prefers independence	DL/SDL was chosen because of the participants' preference for independence
Future relevance of skills	
Relevance to job	Future relevance of new skills to employment settings
Relevance to other area	Future relevance of new skills to other settings
Perceptions of DL	
Offers/provides more help	Participants perceive that a directed style offers/ provides more help
More structured	Participants perceive that a directed style is more structured.
Perceptions of SDL	
Offers/provides less help	Participants perceive that a self-directed style offers/ provides less help
Less structured	Participants perceive that a self-directed style is less structured.

Table 25

Frequency of Themes and Subthemes for Research Question 5

Theme	Number of interviewees mentioning this theme	Total exemplar quotes
Factors that influenced future choice		
Schedule	7	8
Prefers independence	5	6
Prefers help	2	2
Future relevance of skills		
Relevance to job	13	14
Relevance to other area	1	1
Perceptions of DL		
More structured	7	7
Offers/provides more help	6	6
Perceptions of SDL		
Offers/provides less help	8	8
Less structured	7	7

Schedule. This subtheme was defined as the choice of DL and SDL being convenient for the participants. It was mentioned eight times in seven interviews. SD11 shared, "My time would motivate me. I am confident in knowing that I know the content and how to access it." SD16 said, "In the future, if it is directed, I need to be sure that it fits into my schedule. I am a single mom." SD23 stated, "SD again if my schedule is busy." SD25 shared,

> I would still be self-directed because I could be in charge of my schedule. These trainings were ok, but—the people putting this together need to stick to the schedule they first promised. They weren't up on-line when they said they would be, and they weren't ready until the spring time. I was looking forward to a certain time frame and then it didn't start. . . . I wanted to do one a week, and then I couldn't get to it until spring. Even for SD people, they should divide all the work by certain dates . . . a timeline of what is due each week. That makes you accountable at that time and you don't leave it until the end.

SD28 indicated, "In the future, I would choose SD especially because of my time. I think I am able to go back and review if I didn't understand anything because of my English." D3 stated, "I like directed with a teacher that you would not normally read on-line. However, if timewise and schedule worked, then I would choose self-directed." In a final example, SD37 said, "I'd pick self-directed again for the same reason—convenience. I could be at home at night doing it."

Prefers independence. This subtheme was defined as DL/SDL being chosen (in the future) because of the perception that the choice would allow participants to be more independent. It was mentioned six times in five interviews. For example SD30 mentioned, "This experience played out the way I thought it would, and I felt confident. Then, I was successful on doing it my own. So I would in the future choose SD." SD32 indicated, "Yes, I would go with self-directed again, if it is the same training. At first I

would think I would need to ask questions, but how this was organized on the internet, if I had doubts, the video helped." SD37 said, "I don't know if that [directed sessions] was necessary. I liked doing my own thing. If I had questions, that might have changed my mind." In a final example, D7 said, "I feel more comfortable by myself because I feel lost in groups sometimes."

Prefers help. This subtheme was defined as choosing DL/SDL because of the participants' preference for additional help and input. It was mentioned two times in two interviews. D23 mentioned, "Directed because I liked the way it went—my computer skills were not that good and [training coordinator] helped us go online and guided us on the content." SD23 indicated, "I like directed with a teacher that you would not normally read on-line."

Future relevance of skills. The next theme was future relevance of skills. The exemplar quotes associated with this theme were further classified into two subthemes: *(a) relevance to job and (b) relevance to other area.*

Relevance to job. This subtheme was defined as the future relevance of new skills to employment settings. It was mentioned 14 times in 13 interviews. SD11 shared, "I am putting what I put in practice. I like to try new things and going through the videos gave me ideas of how to do my job better." SD12 said, "Future yes—I am always up to learning—just because we have experiences we are always up for—and I will be ECE in the future." D19 stated, "Future-working in this career with the children, you learn and see new things all the time. I like working with the toddlers and I think I would like to continue." SD23 shared, "Oh, you mean the material in the training videos? The

information will apply to my job—I remember some of the videos when I am working." SD 23 indicated,

> Future—every aspect of my job, personal life—young family members. It helped me to see certain things that I can use for environment, classroom setting and soc-emo. What you have and don't have and it allows time to really interact with the children. That is my focus this year

SD28 said, "Yes future—able to go back to this training and use it for my future." In a final example SD30 said, "Future—definitely. I will use it the same way: use it for goals with teachers I supervise. I use it a lot with the teachers."

Relevance to other area. This subtheme was defined as future relevance of new skills to other settings. It was mentioned one time in one interview. For example, SD16 mentioned, "Future—most definitely . . . personal life because of my work and also in parenting my single child. Sets the ground rules, how to be a better parent."

Perceptions of DL. The next theme was perceptions of DL. The exemplar quotes associated with this theme were further classified into two subthemes: (a) more structured and (b) offers/provides more help.

More structured. This subtheme was defined as participants' perceiving that a directed style is more structured. It was mentioned seven times in seven interviews. SD16 described DL as "directed or traditional—the student is in a classroom and listens to a teacher lecture." D19 said, "Directed [is]—when somebody is giving the training." SD23 stated directed/traditional—going by somebody's schedule." SD25 indicated directed "is teacher initiated." D3 shared, "Directed for adults—they are told this is due and then this is due. Somebody else is in control." Finally, SD 30 indicated, "Directed—at pace of whoever is doing it."

Offers/provides more help. This subtheme was defined as participants perceiving that a directed style offers/provides more help. It was mentioned six times in six interviews. For example, SD11 mentioned DL was "traditional or directed, yes, that's sitting in a classroom with a teacher explaining the answer." D23 stated, "Directed is like I did it in a group and class and [content specialist] was there to help me with the computer. My computer skills were not that good and [content specialist] was able to help me." SD28 indicated, "Directed is more dependent on the instructor." SD37 shared, "Traditional or directed—there, you need to receive the information via teacher." In a final example, D7 stated, "Directed is when somebody gives ideas, a good way to learn too, then it is good—then you get more ideas."

Perceptions of SDL. The next theme was perceptions of SDL. The exemplar quotes associated with this theme were further classified into two subthemes: (a) less structured and (b) offers/provides less help.

Offers/provides less help. This subtheme was defined as participants' perceiving that a directed style offers/provides less help. It was mentioned eight times in eight interviews. For example, SD11 mentioned SDL was, "Self-directed is doing your own book by yourself, and reading the book, and having your own computer." SD23 stated, "With self-directed you're on your own schedule and have to be confident that you can actually do it on your own." SD25 indicated, "Self-directed means disciplined—take on the task and get it done and not wait to the last minute." SD28 stated, "Self-directed means more independent, choose when they watch the videos, know the requirements to complete the training." D7 explained, "For self-directed it means when you know

something and you know how to do it and if we want to learn something by ourselves, we need to watch other teachers and then implement." In a final example, D3 stated, "Self-directed means a teacher encourages a child to do something by themselves when they see the child needs something. The teacher can add to it."

Less structured. This subtheme was defined as participants' perceiving that a self-directed style is less structured. It was mentioned seven times in seven interviews. SD11 described SDL as "understanding what you are learning. It depends on the way you learn or want to learn." SD16 said, "Self-directed learners incorporate their own learning style and going at your own pace, listening to the video again, and not being self- conscious that you're sitting in a group and people think you 'don't get it.'" D19 stated, "Self-directed means you do it on your time." SD23 indicated SDL as having "your own schedule, but you have to be confident that you can actually do it on your own." D3 shared, "They are independent in self-directed and they are in control and motivated." Finally, SD30 indicated, "Self-directed means it is at their own pace."

Findings for Research Question 6

Research Question 6 was, "Did the factors that motivated participants to initially self-select directed versus self-directed change during learning experience?" This research question is included to capture participants' responses specific to why those choosing DL did not participate in DL sessions as well as why those choosing SDL chose to remain self-directed. Of the self-directed, only one participant chose to attend DL sessions. Table 26 lists the number of sessions self-selected directed participants attended. There were four DL sessions. The two primary themes related to this research

question are summarized in this section. This section includes tables summarizing the definitions of the identified themes, the frequency of occurrence for the themes (see Table 27), as well as the number of interviewees that mentioned a specific theme. As reflected in Table 28, the primary themes were factors remained the same and factors changed.

Table 26

Of the Four DL Sessions, How Many Sessions Were Attended and By Whom?

Number of directed sessions attended	Number of participants	Participant ID#	session attended 1	2	3	4
0 sessions	9	D3, D7, D8, D19, D23, D41, D44, D49, D61				
1 session	0					
2 sessions	1	D51	1			4
3 sessions	1	D55	1	2	3	
4 sessions	2	D38, D68				
		*SD29	1	2	3	4

Note. $N = 13$ self-selected directed.
*Participant SD29 chose to attend all four directed sessions.

Table 27

Definitions of Themes for Research Question 6

Theme	Definition
Factors changed	Factors that led participants to self-select directed versus self-directed change during learning experience
Factors remained the same	Factors that led participants to self-select directed versus self-directed did not change during learning experience

Table 28

Frequency of Themes for Research Question 6

Theme	Number of interviewees mentioning this theme	Total exemplar quotes
Factors changed	10	13
Factors remained the same	6	8

Factors changed. The first theme was factors changed. This theme was defined as the factors that led participants to self-select directed versus self-directed changing during the learning experience. It was mentioned 13 times in 10 interviews; that is 10 participants indicated that the factors that led them to choose DL or SDL did not change. D19 shared, "I like directed because when I am there I can ask questions, but after going to the orientation, I figured out that I could do it by myself and didn't really need the sessions." SD25 said,

> With this last one, I should have gone to the directed, but in the future, I could be self-directed. What sent me to self-directed, is that I don't like to give up a lot of my Saturdays. We thought we were going to be able to do this at work, got the internet at work, then we were out of time. Really, I want evening sessions for directed, rather than Saturday.

D3 indicated, "I chose directed, but I think I am a self-directed learner because I am more on the creative side and I get frustrated with deadlines and having to go on Saturdays." SD32 stated, "I could do either one. If there is a content that I won't understand, I would want directed, but if I am confident in topic, I could go with self-directed." D7 said, "I feel more comfortable with self-directed—I figured out I didn't need help and didn't want help and if I don't have something by myself then I rely on other people—self-directed helps me take lead by myself. So, I didn't go to the Saturday sessions." In a

final example, D8 shared, “sometimes I don’t have time to go to the sessions—I have other things to do.”

Factors remained the same. The second theme was factors remained the same. This theme was defined as the factors that led participants to self-select DL versus SDL remaining the same during learning experience. It was mentioned eight times in six interviews. SD11 shared, “My time would motivate me. I am confident in knowing that I know the content and how to access it.” SD12 said, “Yes, the experience matched the reason for choosing self-directed: the videos helped a lot—seeing it first and seeing it again.” SD23 stated, “Self-directed—next year, I like this so much I would do it the same.” SD25 shared,

> I would still be self-directed because I could be in charge of my schedule. These trainings were ok, but—the people putting this together need to stick to the schedule they first promised. They weren’t up on-line when they said they would be, and they weren’t ready until the spring time. I was looking forward to a certain time frame and then it didn’t start . . . I wanted to do one a week.

In a final example D8 said, “I would want to do directed again. But, in directed, I don’t have the ability to watch things over.”

Summary

The purpose of this case study included detection of motivation in an individual’s selection in DL or SDL. Three qualitative research questions were explored in this analysis. Research Question 4 explored the motivation to initially select DL or SDL. Research Question 5 explored motivation for future self-selection of DL or SDL. Research Question 6 explored motivation to change learning styles during the course of a training.

Research Question 4 was, "What factors motivate the participant to initially self-select directed versus self-directed learning options?" This question examined the initial choice of DL or SDL; the three primary themes related to these research question data were factors that influenced choice, perceived improvement, and immediate relevance of skills. The majority of respondents stated that their choice of DL or SDL was motivated by convenience of schedule, independence, or desire for help. Convenience of schedule is a positive force, as considered with Lewin's Force Field Analysis (1943); absence of convenience of schedule is considered a negative force. Ability to control schedule is part of independence, another force field considered a positive motivator. Desire for help is reflective of SDL as a stage theory, where the learner is not ready for SDL (Brockett & Heimstra, 1991; Grow, 1991). Yet, a more detailed investigation of the kind of help participants thought they needed or emerging needs would add greater understanding to the stage at which they could move into SDL. For example, was the help needed in the form of having computer access or the skill to use the computer or using the technology needed to access the training videos? This is different than help from a content expert to facilitate the learning presented in the LAC training videos. No participants stated they chose DL or SDL based on the content topic of the training as would be expected in the interactive model (Spear, 1988), where a learner gathers "clusters" of what is known and considers it as important or unimportant. However, the majority of respondents stated that the training topic was relevant to their job and believed their job skills improved as a result of the training. This motivator meets one of the main tenets of andragogy as

defined by Knowles (1984); adults want learning subjects that have immediate relevance to their job or personal life.

Research Question 5 was, "Does the participant's motivation for choosing directed versus self-directed learning change upon completion of a directed or self-directed learning experience [in the future]?" As previously mentioned, the purpose of this research was to detect motivation of an individual's selection in DL or SDL. Whereas the previous qualitative question (Research Question 4) sought data on initial choice of learning prior to this particular training, Research Question 5 sought to gather data on the respondent's motivation of selecting DL or SDL, if given a choice, in the future. The four primary themes related to this research question were factors that influenced future choice, future relevance of skills, perceptions of DL, and perceptions of SDL. Themes frequently occurring in Research Question 4 also frequently occurred in Research Question 5: schedule, independence, and help. As such, those motivations present prior to the study were reported as motivational factors in future selection of DL or SDL. This question captured respondents' perception of DL versus SDL. Responses show delineation between the two as expressed in terms of more/less structure and provision of more/less help. Considering more or less structure and provision of help points to the SDL as a stage process (Grow, 1991) where the learner might be self-directed in one subject, while a dependent in another subject. And, with each stage, there is a differentiated response. Although Research Question 4 did not ask why participants chose to stay in the learning modality they first selected (which is Research Question 6), participants were considering their future choice of learning based on their

past. This projection would be, as Cross (1981) contended, a link in the COR, a factor of how one self-evaluates the variables that become part of participating in learning activities.

Again, consideration of topic did not surface as a motivating factor in future choice of DL or SDL: Autonomy and independence over schedule are the primary motivators for choosing self-directed learning.

Research Question 6 was, "Did the factors that motivated participants to initially self-select directed versus self-directed change during learning experience?" While Research Question 4 examined motivation of DL or SDL prior to the study, and Research Question 5 examined motivation of DL or SDL in future studies, Research Question 6 sought data around the motivation to continue to participate in a DL or SDL modality during the course of this study. This question was generated when it became apparent that few, if any, of the participants who initially chose to be directed learners attended the face-to-face sessions with a content expert, as was part of their initial agreement at the start of the study. The two primary themes related to this research question were factors remained the same and factors changed. The primary themes in Research Question 4 and Research Question 5, time and autonomy of schedule, continue to be the primary themes here. Directed learners stated that autonomy over time and schedule was the motivating factor in not attending the face-to-face sessions with the content expert, and they did not want to attend sessions on Saturdays. Once again, Lewin's (1943) force field analysis appears to be the motivating factor here. However, the personal assessment of each participant, that is what factors that had been negative, for example, lack of computer

access or technology skill, was remediated on one way or another. Participants stated they needed help with how to use the computer program, and this need was ameliorated by the content expert as one might associate with the S-R theory (Hilgard, 1973, as cited in Knowles, 1973; Thorndike, 1898;) or resolved some other way. Some participants remedied a negative factor by attending one learning session where they learned how to access and honed their technology skill to a point of independence and gained confidence in moving forward with remainder of the video training as a self-directed learner, as described by Brockett and Hiemstra (1991) in their model.

Another source of help needed, for many learners selecting DL was their concern over their English skill level and its impact on learning content. Many participants found that the videos were a match to their English skill level and thus moved forwarded independently, absent the content specialist. As mentioned in the literature review, Srinivasin (1977, as cited in Cross, 1981) stressed than a major tenet of behaviorism specific to learning can be achieved when the materials are broken into smaller segments and analytically designed to be in relation to the end behavior. Those learners assessed the situation and discovered they were capable of the learning task. This was the main factor that changed. The factor for self-directed learners to stay as self-directed learners during the course of the study was autonomy over time and schedule of viewing training videos and, unique to those initially selecting SDL, their confidence/familiarity/comfort with the topic content.

This summary of qualitative questions included tables summarizing the definitions of the identified themes and subthemes, the frequency of occurrence for the

themes and subthemes, as well as the number of interviewees that mentioned a specific theme and subtheme. Exemplar quotes were also provided.

CHAPTER V

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

This chapter of the study includes the problem statement, purpose statement, research questions, brief summary of findings, limitations of the study, conclusions, implications, and recommendations for future research.

Problem Statement

The problem identified for this study was as follows: What are the motivating factors in choosing directed (DL) or self-directed learning (SDL) and can learners correctly identify their readiness for SDL? Is there a relationship between a learner's readiness toward self-directed instruction related to his or her learning achievement?

Purpose Statement

The purpose of this sequential, mixed-methods exploratory case study of early childhood professionals was threefold. First, determine if a relationship exists between a learner's readiness toward directed and self-directed learning style and the perception of their inclination toward directed or self-directed learning, when given a choice of the two. Second, examine how self-selection of directed or self-directed learning relates to learning achievement. Third, detect motivation of individual's selection in directed or self-directed learning.

Limitations of the Study

There are several notable limitations for this study. First, the researcher used a convenience sample of early childhood professionals within a case study; the participants were selected for their accessibility. Nash (2005) contended that convenience sample use is often better than not doing the research at all, provided the research is well designed and screening criteria are used to define the target population. While the case study target population was adult learners who were early childhood professionals, this research was limited to the population of early childhood professionals in Northern Santa Barbara County associated with the Santa Barbara County STAR project.

Second, due to attrition, the number of participants was reduced by 30%. Creswell (2002) considered an acceptable sample size to be "approximately 30 participants for a correlational study that relates variables" (p. 168). Anything less could potentially limit the validity of the study to expand much beyond its initial population sample. Attrition, also referred to as "mortality" in research design (Krathwohl, 1998), is a serious matter affecting the power of quantitative statistical analysis and representation of the population in qualitative analysis. No mechanism was included in the research design to access participants who dropped out of the study; qualitative data specific to their motivation of self-selected learning choice and motivation for leaving the study could have been valuable information adding to depth of understanding to the research questions. Future research should consider inclusion of access to participants dropping from the study, particularly to investigate mortality by treatment, defined by

Krathwohl (1998) as "changes in the composition of the sample due to reactions to treatment that caused some individuals to drop out of the study before its completion" (p. 687). The treatment in this study was defined as accessing and viewing the LAC training videos.

A third limitation concerned the viewing time of the LAC training videos. An original focus of this research was to study the difference of different groups' responses to the VAIL posttest minus pretest results after having access and viewing 21 hours of LAC video training. The original research design included documenting the amount of time participants accessed LAC video training through the use of a unique identifier code, essentially creating a time stamp to document that each participant accessed LAC video training for the entire 21 hours. The original research design included that upon completion of accessing 21 hours of LAC training videos, a computer program generated a "certificate of completion" for each participant stating that all 21 hours of LAC training had been accessed. However, during the study, a constraint beyond researcher control was the factor that participants could access as few as 6 hours, rather than all 21 hours, of LAC video training and receive a certificate of completion. Essentially, there was no mechanism built into the LAC training video program to insure that more than 6 hours of LAC video were accessed. Nor was there a unique identifier to establish exactly how many hours beyond 6 hours were viewed by each participant. These led to treatment infidelity, uneven application of the treatment for all participants (Krathwohl, 1998), and may serve as a rival explanation to the results.

The fourth limitation is quite notable specific to directed learners. The research design included four face-to-face sessions of directed learners with a content expert. Most directed learners rarely, if ever, attended sessions. In fact, the majority of the participants self-selecting DL essentially behaved like a self-directed learner, choosing when and where they would access the LAC video training, absent a content expert in face-to-face sessions. This might be considered a surprise finding, which according to Miles and Huberman (1994), "means that something has occurred well outside the range of your expectations" (p. 270). This surprise led to inclusion of an additional qualitative research question to capture data on the motivation of changing to SDL after initially choosing DL. While this is a limitation to the present study, it may support previous research (Grow, 1991; Hersey & Blanchard, 1988) around the distinct stages of self-directed learners, with Stage 1 being a dependent learner, Stage 2 an interested learner, Stage 3 an involved learner, leading to Stage 4—a self-directed learner.

Methodology Summary

The research study consisted of two phases. In the first phase, participants self-selected either D or SD on the survey. Then, they completed the SDLRS assessment (Guglielmino, 1978) as a self-reported measure to assess their readiness for SDL. The intent of completing the SDLRS was to ascertain if participants could correctly identify their readiness for SDL. Participants were not informed of their results on the SDLRS at that time. Their participation in treatment (watching a 2-hour CLASS video orientation and accessing LAC video training) as a directed or self-directed learner was determined by their self-selection; it was not determined by the SDLRS result.

Immediately after completing the SDLRS, all participants completed a VAIL pretest to measure their understanding of quality teaching strategies and corresponding behavioral examples of each strategy.

Following the VAIL pretest, all participants were provided with a code allowing Internet access to a 2-hour CLASS video orientation and 21 hours of LAC video training. Self-directed learners accessed the orientation and video training independently, whereas directed learners were provided the access code and were also scheduled to attend four face-to-face sessions with a content expert in a room equipped with computer Internet access to view the 2-hour video orientation and 21 hours of video training. The access code allowed all participants the same period of time to access the orientation and training, regardless of their choice of SDL or DL learning, and regardless of whether directed learners attended the face-to-face sessions. At the end of the allotted time period for viewing videos, all participants completed a VAIL posttest. The difference between the VAIL posttest minus pretest results was used to explore if a relationship existed between a participant's readiness for SDL and achievement as measured by VAIL.

The second phase incorporated information provided from the first phase and placed participants into two groups: all participants who self-selected DL and a purposeful sample of participants who self-selected SDL. In this phase, qualitative interviews were conducted to explore factors of participants' motivation for initially choosing DL or SDL, and whether those factors stayed or changed after initial selection.

Research Questions

Following are the research questions; the first three are quantitative and the last three are qualitative:

1. Is there a relationship between a participant's self-selection of directed or self-directed learning style with his or her self-directed learning readiness as measured by the SDLRS?
2. How does one's level of readiness for self-direction (as measured by the SDLRS) relate to his/her change on the Video Assessment of Interactions and Learning (VAIL)?
3. How does one's correct identification as directed or SDL (based on the SDLRS category score) relate to his/her posttest-pretest VAIL scores?
4. What factors motivate the participant to initially self-select directed versus self-directed learning options?
5. Does the participant's motivation for choosing directed versus self-directed learning change upon completion of a directed or self-directed learning experience?
6. Did the factors that motivated participants to initially self-select directed versus self-directed change during their learning experience?

Summary and Discussion of Findings

Quantitative Research Questions

Research Question 1. Findings from the quantitative data for Research Question 1 showed a significant relationship between self-selection of SDL and actual readiness, as

measured by the SDLRS. Data were disaggregated and analyzed to categorically determine relationships of positive self-selection within the five levels of SDLRS.

Research Question 2. A quantitative question, this research question asked how one's level of readiness for self-direction (as measured by the SDLRS) related to his/her change on the VAIL. There appears to be no relationship between degrees of readiness for SDL as measured by the SDLRS and achievement as demonstrated by the 16 VAIL posttest and pretest items. This result may be due to a small sample size affecting analyses due to no power or effect size. The original study population of this case study was to include the whole of northern Santa Barbara County STAR professionals who were easily accessible and within close proximity to the training rooms. Of the 120 northern Santa Barbara County STAR professionals, this study initially enrolled 77 participants who were easily accessible and within close proximity to the training rooms. However, the attrition rate was relatively high: 25 participants dropped out of the study, leaving only 52 participants to complete the study, which resulted in a small sample size, for statistical purposes.

Although a statistical interpretation of data pertaining to Research Question 2 is limited, this discussion considers the intent of SDL and professional development through intervention treatment of access to video training. As previously mentioned, VAIL is designed to examine participants' understanding of quality teaching strategies (defined as behavioral indicators) and corresponding behavioral examples (where a teacher in the LAC video training demonstrates use of a specific strategy) as they related to CLASS dimensions. In examining participants' responses, there was little movement

from pretest responses to posttest responses, regardless of whether the participant was identified as ready for SDL by the SDLRS. Those who did poorly to start with essentially did not gain after watching the LAC video training, which served as the intervention. There was no remarkable difference after the intervention, even though the intent was to see the low scores move up. A confounding variable may be the intervention application of watching LAC video training. The original intent of this research was to study the difference in VAIL responses of directed learners and self-directed learners after having access and viewing 21 hours of LAC video training documented by a certificate of completion stating that all 21 hours of LAC training had been accessed. During the study, a constraint beyond researcher control was a factor that participants could view as few as 6 hours, rather than all 21 hours, of LAC video training and receive a certificate of completion documenting LAC video training. There was no mechanism built into the LAC video training to insure that more than 6 hours of LAC training video was accessed, nor was there a unique identifier to establish exactly how many hours, beyond 6 hours, were viewed by each participant. As such, it was beyond the researcher's control, in this case study, to assure uniform application of the intervention (the number of hours of LAC video training accessed by each participant). Further, directed learners were expected to attend four face-to-face sessions with a content expert. Here too, a constraint beyond the researcher's control was that directed learners rarely, if ever, attended the face-to-face sessions with a content expert.

This exploratory research might be considered in the future to examine if the task of strategy-behavior identification itself was too difficult or too confusing for these

participants, resulting in little, if any improvement on the VAIL scores. Additionally, future research might control for standardized intervention of number of hours LAC video training is accessed as it relates to outcomes specific to directed and self-directed learners. Finally, future research could seek to influence consistent treatment of directed learners specific to participation in sessions with content experts.

Research Question 3. The intent of Research Question 3 was to find a predictive relationship between a participant's readiness for SDL, regardless of whether the participant selected it and his/her achievement as demonstrated by the 16 VAIL posttest and pretest items. Data were disaggregated for many factors in analysis, and across all 16 VAIL items, there were no significant differences to indicate a predictive relationship on each VAIL item.

In summary, the findings of these quantitative data were that although most participants could correctly identify themselves as either directed or self-directed, when looking at the levels of readiness for SDL, there was no significant relationship between their readiness for SDL and achievement on the VAIL assessment after viewing LAC video training. Further, according to the findings from these quantitative data, there was no significant relationship between whether these participants could positively identify themselves as a directed or self-directed learner and their achievement on the VAIL assessment after accessing LAC video training.

Qualitative Research Questions

The purpose of Research Questions 4, 5, and 6 was to gain an understanding of the motivation behind the participants' choice of DL or SDL: their initial choice at start

of study, their choice to remain directed or self-directed during the study, and their motivation for choosing DL or SDL in the future. These questions were intended to seek, to discover, and to explore a process, or describe experiences (Creswell, 1998). The study design originally included qualitative Research Question 4 and 5 to help the researcher understand why participants chose DL or SDL before the study, and upon completion of the study, whether they would choose DL or SDL in the future. However, during the course of the study, the behavior of participants choosing DL appeared to parallel that of SDL. Specifically, DL participants rarely, if ever, attended the scheduled face-to-face sessions with a content expert: only two of the 13 DL participants attended all four sessions and the remainder rarely, if ever, attended a session. Conversely, one SDL participant chose to attend all four sessions. Glesne (2006) stated, "Although the planned scope for a research topic should be realistic, neither too broad nor too narrow, the researcher cannot always know the ideal scope until data collection is underway" (p. 25). It followed logically to further investigate (Onwuegbuzie & Leech, 2006) the motivation associated with participants to remain a DL or SDL or to change during the course of the study. Hence, an additional qualitative research question was added: Did the factors that motivated participants to initially self-select directed versus self-directed change during learning experience?

Research Question 4. Research Question 4 was concerned with the factors that motivated participants to choose DL versus SDL options. The results identified themes around convenience, independence, time or schedule, need of help, relevance to skills to job or other area. These findings aligned closely with the previously mentioned major

steps of SDL as they related to Knowles's (1984b) andrologogical model as well as chain-of-response (COR) model (Cross, 1981). In her model, Cross (1981) contended that a learner is motivated toward or away from SDL due to several characteristics and situations: self-evaluation (do they lack confidence for participation in a certain learning style), attitudes toward education (arising "directly from the learner's own past experiences of friends and 'significant others'" [p. 125]), importance of goals and expectations that participation will meet goals ("if the goal is not especially important or the likelihood of success is in doubt, motivation decreases accordingly" [p. 126]), life changes, opportunities and barriers, information, and participation.

Cross (1981) emphasized that these factors, taken together, are the motivating factors for a learner to participate in some form of learning. They are salient factors in choosing DL versus SDL when given a choice. Research Question 6 continues a discussion of the COR model stages of opportunities and barriers, information, and participation, factors germane to staying with DL or SDL as the study continued.

It might be important to consider that many exemplar quotes specific to DL mentioned computer assistance and access as the motivation for choosing DL. It appears that access to and support with technology, rather than training content, was a motivating factor in participants' choosing DL over SDL.

Research Question 5. The purpose of this question was to get a sense of participants' view of DL or SDL in the future. While the critical thinking of participants might influence their future choice, the question also holds a practical value for planners and designers of training, particularly in the agency aligned with this case study. The

primary themes emerging through responses to this question were relevancy of skills to the employment setting, schedule convenience, and availability of help. Further, participants were asked to provide their perceptions of DL versus SDL. Overall, participants viewed DL as more structured and a model that offered more help, whereas, SDL was perceived as less structured and offers/provides less help.

It might be important to consider what kind of "help" is perceived as needed. Many of the exemplar quotes specific to DL demonstrated that "help" is around technology, rather than training content.

Research Question 6. Research Question 4 examined why participants selected DL or SDL in this study and Research Question 5 queried if participants would select DL or SDL in the future. Research Question 6 explored whether the factors that motivated participants to initially select DL or SDL at the beginning of the study changed during the study.

The question was generated as the result of a surprise finding: The majority of the participants choosing DL did not attend face-to-face sessions; therefore, their behavior was more like that of self-directed learners than the behavior expected of directed learners. Of the 13 participants who self-selected DL, only two attended all four sessions, one attended two sessions, one attended three sessions, and the remaining nine did not attend any sessions. Another surprise finding that was that one SDL participant attended all four sessions.

The DL participants not attending sessions stated that factors changed during the study; for example, they had no time to attend sessions, they had no need to get computer

help, they figured out that they did not need help and that they could it by themselves. In the previously mentioned COR model, Cross (1981) spoke to opportunities and barriers: "Once the individual is motivated to participate in some form of learning activity, barriers and special opportunities for adult learning are thought to play an important role" (p. 127). In this study, for example, some DL participants had rethought barriers, for example, lack of technology skill or access to computers, and found solutions to mitigate those perceived barriers, thereby allowing them to behave more like self-directed learners. When they were given a choice, most participants chose not to attend sessions due to lack of time or not wanting to attend on Saturdays. Some participants stated that they thought the sessions would take place during work, not after work, or on the weekends. They believed that this gave them the opportunity to not attend sessions, as participation in the sessions could not be mandated. Specific to barriers and opportunities, Cross (1981) stated, "For the weakly motivated, modest barriers may preclude participation, while the awareness of special new opportunities for adults may enhance the motivational force for participation" (p. 127). Paradoxically, in this study, what might have been viewed as a barrier (time, schedule) to directed learning, may have served as a motivation and opportunity to explore SDL. Cross (1981) emphasized that one's self-evaluation and attitudes about his or her previous education serve as motivation to be involved in adult learning opportunities. This paradox of a barrier becoming an opportunity might be further explored within a force field analysis (Lewin, 1947; Miller, 1967) in future research. It might be that the participants who initially chose DL were motivated to become self-directed learners once they felt confident they

could successfully complete the LAC video training. This might have been influenced by the treatment change, as participants learned soon after the study started that the 21 hours initially required of LAC video training was reduced to 6 hours. It might also have been that most of the DL participants were ready for SDL, as evidenced by their SDLRS score (a score of above 201 was considered ready for SDL). See Appendix H listing participant numbers, their self-selection of DL or SDL, their SDLRS scores (in raw score and percentage), VAIL posttest minus pretest score, and the number of sessions attended, if they initially selected DL.

Conclusions

The pace of change and delivery systems of information has had a profound impact on adult learning in general, and specifically, professional development. No longer are formal education systems, such as higher education institutions, the end of adult learners' knowledge acquisition leading to a profession. Instead, professional development is now necessary in many professional fields to maintain current skill sets as well as to be trained on evolving information and skill sets.

How best can adult learners, and the designers and planners of professional training programs for them, know what motivates individuals to learn, particularly as a directed or self-directed learner? These were the guiding questions that inspired the researcher to explore the topic of SDL readiness. The knowledge gained from the literature review and the in-depth analysis of what motivates adults to be self-directed learners will help the body of knowledge around adult learning and human resource development when considering the following key findings from this study:

1. Adults are capable of identifying their readiness for SDL. This supports research of Guglielmino (1978).
2. Motivation for initially choosing DL rather than SDL may change during the course of a training program. This has been discussed by Tough (1979) and Brockett and Hiemstra (1991).
3. SDL is situational; in other words, not all learners are self-directed at all times and in all situations. Three barriers determine the ability to access and process information: situational, institutional, and dispositional. This was previously widely discussed through the work of Cross (1991) and Brockett and Hiemstra (1991).
4. Seeking to find why an adult chooses DL over SDL, including perceived barriers, may help designers of professional development training programs consider the content of a training program within the construct of a clear theory of change approach, thereby allowing participants to enter and exit DL or SDL at different points in the program. This falls to the classic work of force field analysis by Lewin (1943) and is contemporarily addressed by the work of Tough (1979), Brockett and Hiemstra (1991), Grow (1991), Cross (1981), and Tennant (1992).

Implications

Given the nature of this case study, there were quantitative and qualitative findings that had direct implications for consideration in professional development training programs. The quantitative findings found that most adult learners could correctly identify their readiness for SDL. The qualitative findings around motivation and learning showed that (a) choosing SDL was motivated by autonomy to schedule

access to video training materials and (b) choosing DL was motivated by most participants by access to technology and/or a content expert to guide use of technology needed to access video training materials. Very few participants chose DL specifically for support from the content specialist to facilitate their understanding of content contained in the LAC video training.

The lack of fidelity in participants' access to training materials impacted the researcher's ability to examine the relationship of readiness for SDL and measurable outcomes of intervention. The practical implication therefore is designing a training program where the intervention is evenly accessed to determine change in outcomes. Additionally, when designing a training program for adult learners defined as part of a larger professional field, controlling for individual differences prior the start of a training program may strongly influence the delivery system (e.g., completely via technology, fully face-to-face, hybrid). Further, while adult learners in professional development are defined as a group, individual differences of preexisting knowledge of the training material might be considered to stratify or delineate individuals within the group. For example, training programs could allow a learner to enter at different points in the training program, if he or she demonstrates knowledge of the material prior to that entry point. This practical implication is reflected by several participants specific to this study who commented that they already knew this material, because the agency where they were either employed previously or currently used these training materials. Policymakers purchasing and/or providing professional development may be able to save time and resources when correctly identifying which professionals are in need of professional

development, and at what level (e.g., entry, mid-level). Further, upon completion of professional development, feedback regarding the participant's satisfaction and utility of the professional development (Guske, 2002) can be used to assess current, and consider future, professional development.

Recommendations for Future Research

Adult learning theory draws from the rich empirical and theoretical work conducted within developmental, educational, and social science disciplines. How this transfers to practical application within a professional development training program is a challenge faced by policymakers and professional development training planners. Hamre, Downer, Jamil, and Pianta's (2012) research considers this; they stated, "The recent proliferation of evidence based PD [professional development] programs for early childhood education teachers is an encouraging step toward realizing the promise of early childhood education programs" (p. 527). Yet, they contended, "Not only do we need to understand more about what is working, but we need to continue to critically examine what is not working" (Hamre et al., 2012, p. 526), by more explicitly taking on the challenge of examining professional development, specifically in the field of early childhood education.

Future researchers should consider applying the quantitative stage of the research to a larger population to more confidently report differences. In addition to contributing to statistical inferential power, a larger sample size is more likely to include a more representative population of demographic characteristics.

By adopting a case study approach, the findings may be contextually specific and not generalizable. To be certain that differences in demographics, learning experience, and barriers either do or do not exist, a more diverse population of early childhood professionals from different geographical areas would result in better representation of the population of early childhood professionals.

The focus of this study was, if individuals could correctly identify if they were ready for SDL, what motivated them to choose and stay a self-directed learner during the course of this study and in future studies? But SDL can be situational and knowing how and why adult learners choose SDL for professional development when perceiving barriers (situational, institutional, dispositional) will inform the design of professional development programs and address participants' perceived barriers. Taken together, mitigating these issues will move research, and ultimately, practical application toward inclusion of and less attrition of participants.

Final Remarks

The personal goal of the researcher in conducting this study was to help early childhood professionals and professional development designers and facilitators identify motivation and barriers of readiness for SDL, and its relation to training achievement, particularly within the context of professional development delivered in part by an electronic component. To that point, Huey Long, founder of the International Self-Directed Learning Symposium started in 1986, cautions that effective learning is as important as efficient learning ("SDL Emerging Trends and Themes," n.d.). This study examined whether participants could correctly perceive if they were ready for SDL, and

the training was delivered through technology. Increasingly, technology is viewed as an efficient mode of training delivery, yet more research needs to be conducted on the efficacy of such delivery. While the scope of this work was a small study, the researcher wants to push the field forward as it examines and reexamines how educators can support early childhood professional development, in hopes of bringing this topic to a larger scale and scope of inquiry and understanding, eventually resulting in widespread practical utility.

REFERENCES

REFERENCES

Ambrose, S., Bridges, M., DiPietro, M., Lovett, M., and Norman, M. (2010). *How learning works: Seven research-based principles for smart teaching.* San Francisco, CA: Jossey-Bass.

American Library Association. (n.d.). Professional development. Retrieved from http://www.ala.org/rusa/vrc/development

Aslanian, C., & Brickell, H. (1980). *Americans in transition: Life changes as reasons for adult learning.* New York, NY: College Board.

Bamgerher, M., Rugh, J., & Mabry, L. S (2011). *Real world evaluation: working under budget, time, data, and political constraints* (2nd ed.). Thousand Oaks, CA: Sage.

Beder, H. W., & Darkenwald, G. G. (1982). Differences between teaching adults and preadults: Some propositions and findings. *Adult Education, 32,* 142-155.

Berger, N. (1990). *A qualitative study of the process of self-directed learning* (Unpublished doctoral dissertation). Virginia Commonwealth University, Richmond, VA.

Best, J., & Kahn, J. (2003). *Research in education* (9th ed.). Boston, MA: Allyn & Bacon.

Booth, M., & Schwartz, H. (2012). We're all adults here: Clarifying and maintaining boundaries with adult learners. *New Directions for Teaching and Learning, 131,* 43-55. doi:10.1002/tl.20026

Boshier, R. (1991). *Psychometric properties of the alternative form of the education participation scale. Adult Education Quarterly, 41(3),* 150-167.

Brockett, R. G. (1985). Methodological and substantive issues in the measurement of self-directed learning readiness. *Adult Education Quarterly, 36*(1), 15-24.

Brockett, R. G., & Hiemstra, R. (1991). *Self-direction in adult learning: Perspectives on theory, research, and practice*. New York, NY: Routledge.

Brookfield, S. (1984). *Adult learners, adult education and the community.* New York, NY: Teachers College Press.

Brookfield, S. (1985). Self-directed learning: A critical review of research. *New Directions for Continuing Education, 25,* 5-16. doi:10.1002/ace.36719852503

Brookfield, S. (1989). Facilitating adult learning. In S. B. Merriam & P. M. Cunningham (Eds.) *Handbook of adult and continuing education* (pp. 201-210). San Francisco, CA: Jossey-Bass.

Brookfield, S. (1993). Self-directed learning, political clarity, and the critical practice of adult eduation. *Adult Education Quarterly, 43*(3), 227-242.

Brookfield, S. (1995). Adult learning: An overview. In A. Tuinjman (Ed.), *International Encyclopedia of Education*. Oxford, England: Pergamon Press.

Brookfield, S. D. (1986). *Understanding and facilitating adult learning*. San Francisco, CA: Jossey-Bass.

Bruner, J. (1966). *Toward a theory of instruction*. Cambridge, MA. Belknap Press of Harvard University Press.

Bryman, A. (2006). Integrating qualitative and quantitative research: How is it done? *Qualitative Research, 6*(1), 97-113.

Caffarella, R., & Merriam, S. (1999). *Learning in adulthood* (2nd ed.). San Francisco, CA: Jossey-Bass.

California Commission on Teacher Credentialing. (2013). *Child development permits.* Retrieved from http://www.ctc.ca.gov/credentials/leaflets/cl797.pdf

Candy, P.C. (1991). *Self-direction for lifelong learning: A comprehensive guide to theory and practice.* San Francisco, CA: Jossey-Bass.

Carp, A., Peterson, R., & Roelfs, P. (1974). Adult learning interests and experiences. In K. P. Cross Jr. Valley and Associates, *Planning non-traditional programs: An analysis of the issues for postsecondary education* (pp. 11-52). San Francisco, CA: Jossey-Bass.

Corbin, J. M., & Strauss, A. L. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Los Angeles, CA: Sage.

Craig, R. (1974). Lawrence Kohlberg and moral development: Some reflections. *Educational Theory, 24,* 121-129.

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage.

Creswell, J. (2002). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research.* Upper Saddle River, NJ: Pearson.

Creswell, J. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks, CA: Sage.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage.

Creswell, J. W., & Plano Clark, V. (2011). *Designing and conducting mixed methods research.* Thousand Oaks, CA: Sage.

Cross, P. (1981). *Adults as learners*. San Francisco, CA: Jossey-Bass.

Culatta, R. (2013a). Andragogy (Malcolm Knowles). Retrieved from http://www.instructionaldesign.org/theories/andragogy.html

Culatta, R. (2013b). Constructivist theory (Jerome Bruner). Retrieved from http://www.instructionaldesign.org/theories/constructivist.html

de Moura Castro, C., & de Oliveira, J. B. A. (1996). Convergence between education and training. In A. Tuijnman (Ed.), *International Encyclopedia of Adult Education and Training* (2nd ed., pp. 18-22). Tarrytown, NY: Elsevier Science.

DeVries, R. (1997). Piaget's social theory. *Educational Researcher, 26*(2), 4-17.

Direct instruction. (n.d.). The glossary of education reform. Retrieved from http://edglossary.org/direct-instruction/

Driver, R., Asoko, H., Leach, J., Mortimer, E., & Scott, P. (1994). Constructing scientific knowledge in the classroom. *Educational Researcher, 23*(7), 5-12.

Elan, M. (1989). *A critical introduction to the post-Fordist debate: Technology, markets and institutions* (Working Paper No. 45). Linkoping, Sweden: Linkoping University, Department of Technology and Social Change.

Elias, D. (1979). Andragogy revisited. *Adult Education, 29*(4), 252-256.

Eliasson, G. (1988). *The knowledge base of an industrial economy.* Coronet Books.

Ellinger, A. (2004) The concept of self-directed learning and its implications for human resource development. *Advances for Developing Human Resources, 16*(*2*)*,* 158-177. doi:10.1177/1523422304263327

Feuer, D., & Geber, B. (1988, December). Second thoughts about adult learning theory. *Training, 25*(12), 31-39. (EJ 381416)

Field, L. (1991). Guglielmino's self-directed learning readiness scale: Should it continue to be used? *Adult Education Quarterly, 41*, 100-103.

Fraenkel, J., & Wallen, N. (2003). *How to design and evaluate research in education* (5th ed.). Boston, MA: McGraw-Hill.

Freed, S.A. (2003). Metaphors and reflective dialogue online. *New Horizons in Adult Education, 17*(3), 4-19.

Gall, J., Gall, M., & Borg, W. (1999). *Applying education research* (4th ed.). New York, NY: Longman.

Garrison, D. R. (1997). *Self-directed learning: Toward a comprehensive model: Adult Education Quarterly, 48,* 18-33. doi: 10.1177/074171369704800103

Garrison, D. R. (2009). Communities of inquiry in online learning. In P. L. Rogers, G. A. Borg, J. V. Botchler, C. Howard, L. Justice, & K. D. Shnek (Eds.). *Encyclopedia of distance learning* (2nd ed., pp. 352-355). Hershey, PA: IGI Global.

Gergen, K. J. (1995). Social construction and the educational process. In L. P. Steffe & J. Gales (Eds.), *Constructivism in education* (pp. 17-39). Hillsdale, NJ: Erlbaum.

Glesne, C. (2006). *Becoming qualitative researchers* (3rd ed.). Boston, MA: Pearson.

Gong, Y., Rai, D., Beck, J., & Heffernan, N. (2009, July 1-3). *Does self-discipline impact students' knowledge and learning?* Paper presented at the 2nd International Conference on Educational Data Mining (EDM), Cordoba, Spain. Retrieved from http://eric.ed.gov/?id=ED539087

Grow, G. (1991). Teaching learners to be self-directed. *Adult Education Quarterly, 41,* 125-149.

Grow, G. (1994). In defense of the staged self-directed learning model. *Adult Education Quarterly*, *44*, 109-114.

Guglielmino, L. M. (1978). Development of the self-directed learning readiness scale. *Dissertation Abstracts International*, *38/11A*, 6467.

Guglielmino, L. M., & Guglielmino, P. J. (n.d.). *Learning preference assessment.* Retrieved from Guglielmino & Associates website: http://www.lpasdlrs.com/

Guske, T. R. (2002, March). Does it make a difference? Evaluating professional development. *Professional Development*, *59* (6), 45-51.

Hamre, B., Downer, J., Jamil, F., & Pianta, R. (2012). Enhancing teachers' intentional use of effective interactions with children: Designing and testing professional development interventions. In R. C. Pianta, W. S. Barnett, & L. M. Justice (Eds.), *Handbook of early childhood education* (pp. 507-532). New York, NY: Guilford Press.

Hamre, B., Goffin, S., & Kraft-Sayre, M. (2009). *Classroom Assessment Scoring System (CLASS) implementation guide.* Baltimore, MD: Brookes.

Hamre, B., Pianta, R., Burchinal, M., Field, S., LoCasale-Crouch, J., Downer, J. . . . Scott-Little, C. (2012). A course on effective teacher-child interactions: Effects on teacher beliefs, knowledge, and observed practice. *American Educational Research Journal, 49*, 88-123. doi:10.3102/0002831211434596

Hartree, A. (1984). Malcom Knowles' "theory of andragogy": A critique. *International Journal of Lifelong Education, 3*(3), 203-210.

Harvey, C. E. (2004, May). Beyond the journal. *Young Children on the Web.* Retrieved from http://www.naeyc.org/files/yc/file/200405/ThreeE-LearningTables.pdf

Herod, L. (2002). *Adult learning: From theory to practice.* Glossary. Retrieved from http://www.nald.ca/adultlearningcourse/glossary.htm

Hersey , P. & Blanchard, K. (1998). *Management of organizational behavior: Utilizing human resources* (5th ed.). Englewood Cliffs: NJ: Prentice-Hall.

Holland, P. (2008). Cognitive versus stimulus-response theories of learning. *Learning Behavior, 36*(3), 227-241.

Houle, C. (1961). *The inquiring mind*. Madison, WI: University of Wisconsin Press.

Houle, C. (1971). *Residential continuing education, notes and essays on education for adults*, no 70. Syracuse: NY: Syracuse University.

Houle, C. (1988). *The inquiring mind* (2nd ed.). Norman, OK: Oklahoma Research Center for Continuing Professional and Higher Education, University of Oklahoma.

Huck, S. W., Cormier, W. H., & Bounds, W. G. (1974). *Reading statistics and research*. New York, NY: Harper & Row.

Human Resource Development. (n.d.). Retrieved from http://www.whatishumanresource.com/human-resource-development

Internet usage 3Q update. (2005, September). *Internet World Stats News, 010.* Retrieved from http://www.internetworldstats.com/pr/edi010.htm

Isaac, S., & Michael, W. B. (1971). *Handbook in research and evaluation for education and the behavioral sciences.* San Diego, CA: Knapp.

Isaac, S. & Michael, W. B. (1995). *Handbook in research and evaluation: A collection of principles, methods, and strategies useful in the planning, design, and evaluation of studies in education and the behavioral sciences* (3rd ed.). San Diego, CA: EdITS.

Johansson, R. (2003, September 22-24). Case study methodology. A keynote speech International Conference "Methodologies in Housing Research" organised by the Royal Institute of Technology in cooperation with the International Association of People–Environment Studies, Stockholm. Retrieved from http://www.psyking.net/htmlobj-3839/case_study_methodology-_rolf_johansson_ver_2.pdf

Johnson, D. W., & Johnson, R. (1989). *Cooperation and competition: Theory and research.* Edina, MN: Interaction Book Company.

Johnstone, J. W. C., & Rivera, R. J. (1965). *Volunteers for learning: A study of the educational pursuits of adults*. Hawthorne, NY: Aldine de Gruyter.

Kasworm, C. E. (1988). Self-directed learning in institutional contexts: An exploratory study of adult self-directed learners in adult education. In H. B. Long (Eds.), *Self-directed learning: Application and theory* (pp. 65-98), Athens, GA: University of Georgia.

Kerka, S. (1999). *Self-directed learning. Myths and realities No. 3.* Columbus, OH: ERIC Clearinghouse on Adult, Career, and Vocational Education. (ED 435834)

Kim, K., Hagedorn, M., Williamson, J., & Chapman, C. (2004, September). Participation in adult education and lifelong learning: 2000-01 (NCES 2004-050). National Center for Education Statistics. Retrieved from http://nces.ed.gov/pubs2004/2004050.pdf

Kline, R. B. (2011). *Principles and practices of structural equation modeling*. New York, NY: Guilford Press.

Knowles, M. S. (1962). *A history of the adult education movement in the USA*. New York, NY: Krieger.

Knowles, M. S. (1970). *The modern practice of adult education: Andragogy versus pedagogy.* New York, NY: Cambridge Books.

Knowles, M. S. (1973). *The adult learner: A neglected species*. Houston, TX: Gulf.

Knowles, M. S. (1975). *Self-directed learning: A guide for learners and teachers.* New York, NY: Association Press.

Knowles, M. S. (1979). Andragogy revisited, part II. *Adult Education, 30*(1), 52-53.

Knowles, M. S. (1980). *The modern practice of adult education* (Rev. and updated). Chicago, IL: Association Press.

Knowles, M. S. (1984a). *The adult learner: A neglected species* (3rd ed.). Houston, TX: Gulf.

Knowles, M. (1984b). *Andragogy in action.* San Francisco, CA: Jossey-Bass.

Kop, R., & Fournier, H. (2010). New dimensions to self-directed learning in an open networked learning environment. *International Journal for Self-Directed Learning 7*(2), 1-20.

Krathwohl, D. (1998). *Methods of educational and social science research: An integrated approach* (2nd ed.). Long Grove, IL: Waveland.

Kulich, J. (1970). *A historical overview of the adult self-learner.* Paper presented at the Northwest Institute Conference on Independent Study, The adult as a self-learner, University of British Columbia, Vancouver

Lee, M. (2003). Andragogy and foreign-born learners. In L. M. Baumgartner, J. Lee, S. Birden, & D. Flowers (Eds.), *Adult learning theory: A primer* (pp. 11-16). Columbus, OH: Center on Education and Training for Employment.

Lewin, K. (1943, May). Defining the "field at a given time." *Psychological Review, 50*(3), 292-310. doi:10.1037/h0062738

Lewin, K. (1947, June). Frontiers in group dynamics: Concept, method and reality in social science. *Human Relations, 1,* 5-41.

Little, D. (1919). Adult learning and education: A concept analysis. In P. M. Cunningham (Ed.) *Yearbook of adult and continuing education (1979-1980).* Chicago, IL: Marquis Academic Media.

Long, H. (1976). *Continuing education of adults in Colonial America.* Syracuse, NY: Syracuse University Publications in Continuing Education

Long, H. B., and Associates. (1988). *Self-directed learning: Application & theory*. Athens, GA: University of Georgia.

Long, H. B., and Associates. (1990). *Advances in research and practice in self-directed learning.* Norman, OK: Oklahoma Research Center for Continuing Professional and Higher Education.

Lowyck, J. (1996). Learning in the workplace. In A. Tuijnman (Ed.), *International Encyclopedia of Adult Education and Training* (2nd ed., pp. 414-147). Tarrytown, NY: Elsevier Science.

Mackenzie, J. (1991). *Making change: Preparing your schools for the next century.* Paper presented at NSBA InfoMart pre-conference workshop, Austin, TX.

Maltby, J., Lewis, C. A., & Hill, A. (Eds.). (2000). *The commissioned reviews of 250 psychological tests* (Vol. 2). Lewiston, NY: Mellen Press.

Merriam, S. (1988). *Case study research in education: A qualitative approach*. San Francisco, CA: Jossey-Bass.

Merriam, S. (1997). *Qualitative research and case study applications in education: Revised and expanded from case study research in education.* San Francisco, CA: John Wiley.

Merriam, S. (2001, Spring). Andragogy and self-directed learning: Pillars of adult learning theory. *New Directions for Adult and Continuing Education, 89,* 3-14.

Merriam, S. B., & & Cafarella, R. S. (1999). *Learning in adulthood.* San Francisco, CA: Jossey & Bass.

Merriam, S. B., Cafarella, R. S., & Baumgartner, L. M. (2007). *Learning in adulthood: A comprehensive guide* (3rd ed.). San Francisco, CA: Jossey Bass.

Mezirow, J. (1981). A critical theory of adult learning and education. *Adult Education Quarterly, 32,* 3-24. doi: 10.1177/074171368103200101

Miles, M., & Huberman, A. (1994). *Qualitative data analysis* (2nd ed.). Thousand Oaks, CA: Sage.

Miller, H. L. (1967). *Participation of adults in education: A force-field analysis*. Boston, MA: Center for the study of Liberal Education for Adults.

Moore, M., & Kearsly, G. (1996). *Distance education: A systems view.* Belmont, CA: Wadsworth.

Moore, M. G., & Shattuck, K. (2001). *Glossary of distance education terms.* The Pennsylvania State University, World Campus Faculty Resources. Retrieved from https://courses.worldcampus.psu.edu/ public/faculty/DEGlossary.shtm

Morse J. M. (1991). Strategies for sampling in qualitative nursing research. In J. M. Morse (Ed.), *A contemporary dialogue* (pp. 127-145). Newbury Park, CA: Sage.

Mueller, R., & Mueller, C. (1995). *The cognitive revolution and the computer* (Version 2). DeKalb IL: Self-Published. Retrieved from ERIC database. (ED386169)

Nadler, L. (1984). *The handbook of human resource development.* New York, NY: Wiley.

National Association for the Education of Young Children and National Association of Child Care Resource & Referral Agencies. (2011). *Early childhood education professional development: Training and technical assistance glossary.* Retrieved from http://www.naeyc.org/GlossaryTraining_TA.pdf

National Association for the Education of Young Children. (1993, November). *A conceptual framework for early childhood professional development.* A position statement. Washington, DC: NAEYC. Retrieved from http://www.naeyc.org/files/naeyc/file/positions/PSCONF98.PDF

National Center for Education Statistics. (2013). Fast facts. Retrieved from http://nces.ed.gov/fastfacts/display.asp?id=89

Newsom, R. (1977). Lifelong learning in London: 1558-1640. *Learning: The Adult Years, 1* (4), 19-21.

Nottingham Andragogy Group. (1983). *Towards a developmental theory of andragogy.* Adults: Psychological and Educational Perspective, no. 9. Nottingham, England: University of Nottingham Department of Adult Education.

Oddi, L. F. (1986). Development and validation of an instrument to identify self-directed learners. *Adult Education Quarterly, 36,* 97-107.

O'Shea, E. (2003). Self-directed learning in nurse education: A review of the literature. *Journal of Advanced Nursing, 43*, 62-70.

Onwuegbuzie, A., & Leech, N. (2006, September). Linking research questions to mixed methods data analysis procedures. *The Qualitative Report, 11*(3), 474-498.

Page, G. (2005). Adult education and technology in a rural county: The irony of persistent poverty and "progress" in the information age. In R. J. Hill & R. Kiely (Eds.), *The 46th annual adult education research conference* (pp. 331-336). Athens, GA: University of Georgia.

Penland, P.R. (1981). *Towards self-directed learning theory.* Retrieved from ERIC database. (ED 209457)

Philips, D. C. (1995). The good, the bad, and the ugly: The many faces of constructivism, *Educational Researcher, 24*(7), 5-12.

Piaget, J. (1972). Intellectual evolution from adolescent to adulthood. *Human Development, 16*, 346-370.

Pianta, R. C., LaParo, K. M., & Hamre, B. K. (2008) *Classroom assessment scoring system manual: Pre-K*. Baltimore, MD: Brookes

Piskurich, G. (1993) *Self-directed learning: A practical guide to design, development, and Implementation*. San Francisco, CA: Jossey-Bass.

Pratt, D. (1988). Andragogy as a relational construct. *Adult Education Quarterly, 38*(3), 160-172.

Russell, J. W. (1989). Learning preference for structure, self-directed learning readiness, and instructional methods. *Dissertation Abstracts international, 49,* 1689A.

Samson, H. (2004). Navigating the waves: The usefulness of a pilot in qualitative research. *Qualitative Research*, *4*(3), 383-402. doi:10.1177/1468794104047236

Schrader-Naef, R. (2000). Foundations of self-directed lifelong learning. In G. A. Straka, *Conceptions of self-directed learning* (pp. 143-169). New York, NY: Waxmann.

Schreiber, J. (2008). Pilot study. In *The Sage encyclopedia of qualitative research methods*. Thousand Oaks, CA: Sage.

SDL emerging trends and themes. (n.d.). In Self-directed learning (SDL) in adult education. Retrieved August 18, 2014, from http://sdlearning.pbworks.com/w/page/1899143/SDL%20Emerging%20Trends%20and%20Themes

Sheridan, S. M., Edwards, C. P., Marvin, C. A., & Knoche, L. L. (2009, May 1). Professional development in early childhood programs: Process issues and research needs. Early Education Development, *20*(3), 377–401. doi:10.1080/10409280802582795

Smith, M. K. (2002). *Malcolm Knowles, informal adult education, self-direction and andragogy.* Retrieved from http://www.infed.org/thinkers/et-knowl.htm

Spear, G. (1988). Beyond the organizing circumstances: A search for methodology for the study of self-directed learning. In H. B. Long & Associates. *Self-directed learning: Application & theory* (pp. 199-221). Athens, GA: Adult Education Department, University of Georgia.

Spence, R. (1950). Adult education: An overview. *Review of Educational Research, 20*, 165-170.

Stake, R. (1994). Case studies. In N. Denzin &Y. Lincoln (Eds), *The Sage handbook of qualitative research* (pp. 236-247). Thousand Oaks, CA: Sage.

Stevenson, A. (Ed.). (2012). *Oxford English dictionary* (3rd ed.). Oxford, England: OED.

Svinicki, M. (2004). *New directions in learning and motivation*. New York, NY: Anker.

Tannenbaum, S. I. (1997). Enhancing continuous learning: Diagnostic findings from multiple companies. *Human Resource Management, 36*, 437-452.

Tennant, M. (1986). An evaluation of Knowles' theory of adult learning, *International Journal of Lifelong Education, 5*(2), 113-122.

Tennant, M. (1991). The psychology of adult teaching and learning. In J. M. Peters, P. Jarvis, & Associates (Eds.), *Adult education: Evolution and achievements in a developing field of study* (pp. 191-216). San Francisco, CA: Jossey-Bass.

Tennant, M. (1992). The staged self-directed learning model. *Adult Education Quarterly*, *42*(3), 164-166.

Thorndike, E. L. (1898). Animal intelligence. *Psychological Review Monographs, 2,* 8.

Tolman, E. (1948). Cognitive maps in rats and men. *Psychological Review*, *55*(4), 189-208. doi:10.1037/h0061626

Tough, A. (1968). *Why adults learn: A study of the major reasons for beginning and continuing a learning project* [Monographs in Adult Education, No. 3.]. Toronto, ON: Ontario Institute for Studies in Education.

Tough, A. (1971). *The adult's learning projects: A fresh approach to theory and practice in adult learning*. Toronto, ON: Ontario Institute for Studies in Education.

Tough, A. (1979). *The adult's learning projects: A fresh approach to theory and practice in adult learning* (2nd ed.). Toronto, ON: Ontario Institute for Studies in Education.

University of Western Australia. (2010, October 17). Towards a definition of online learning. Retrieved from http://www.catl.uwa.edu.au/e-learning/online/definition

Van Velsor, E., McCauley, C. D., & Ruderman, M. N. (Eds.), *Handbook of leadership development*. San Francisco, CA: CCL.

Video Assessment of Interactions and Learning: VAIL. (2010). *Coding manual*. Charlottesville, VA: Center for the Advanced Study of Teaching and Learning.

Wiens, P., Hessberg, K., LoCasale-Crouch, J., & DeCoster, J. (2013, July). Teaching and teacher education. *Elsevier, 33,* 24-33.

Williams, B. (2001). The theoretical links between problem-based learning and self-directed learning for continuing professional nursing education. *Teaching in Higher Education, 6*(1), 85-98.

Wright, L. (1957). *The cultural life of American colonies, 1607-1763*. New York, NY: Harper Torchbooks.

APPENDICES

APPENDIX A

PARTICIPANT FORM EXPLAINING PROCEDURE FOR SELF-SELECT DIRECTED OR SELF-DIRECTED LEARNING

PROCEDURES

If you decide to participate in this study, we will ask you to do the following things:

1. Complete a short assessment on line – this will take approximately 20 minutes.
2. Complete a short assessment (approximately 20 minutes) using paper and pencil after watching a 3 minute video.
3. Looking at CLASSrooms (LAC) video training:

If you chose **self-directed** learning group	If you chose **directed** learning group
You will be provided an access code to independently watch 21 hours Looking at CLASSrooms (LAC) video training via internet. You will have 10 weeks access to the videos and can watch the training at a time and location of your choice.	You will return to a designated location on designated dates (see attachment to this letter) for 2.5 hour group viewing of portions of 21 hours Looking at CLASSrooms (LAC) video training. A content expert will be present to facilitate discussions about the training content.

4. At the end of 10 weeks, you will complete two short assessments (approximately 20 minutes each) using paper and pencil after watching a 3 minute video.

   Upon completion of the assessments listed above, you may be selected to participate in a face-to-face interview. This interview will take approximately 45 minutes and concludes your participation.

APPENDIX B

QUESTIONS USED DURING ONE-TO-ONE INTERVIEW SESSIONS

Hello! My name is Susan Walsh. I am a doctoral student at the University of La Verne. I am conducting survey research on behalf of Santa Barbara County First Five. The purpose of the research is to gain your insights and opinions about the Looking At Classrooms training you participated in. We would like to express our appreciation at your willingness to participate in this important study. Your input will provide a critical piece in the planning of future trainings.

(*Pause for response*)

I know that you are busy, and we appreciate your cooperation in this activity. Your anonymity is absolutely guaranteed in this process. The results of this inquiry will be provided to you when they become available. We guarantee that its contents will only be used for our project and reviewed by our research team only. Your comments will also remain totally anonymous. To this end, we are required to gain written permission form you in order to proceed with this interview. (*pass out confidentiality statement)* Please read it over and sign it if you agree to participate today. *(Pause for questions and respond as appropriate)*. Thank you for your assistance. Do you mind if I record our conversation? The audio recording will insure that I take down your comments accurately and completely. (*Turn digital recorder on only when permission is granted.)*

This interview session is designed to understand your motivations and perceptions of self-selecting the directed or self-directed learning group. Please feel free to make comments that describe your experience, feelings, and perceptions, and be ready to give examples that support your ideas.

1. What motivated you to initially select the directed or self-directed learning group?
2. Prior to this experience, had you ever been in a self-directed learning group?
3. As you moved through the training, did you feel the experiences you had in the learning group matched the reasons you initially chose that group?
4. At the beginning of our discussion you were asked what motivated you to select the directed or self-directed learning group. Now that you have completed the training

within that group, consider the following question: what would motivate you to select directed or self-directed learning in the future?

5. Would you liked to have the option to attend directed session with a content expert to facilitate discussions about the training content?

   5A. Did you communicate with others about the video content?

6. You watched a 2-hour orientation, correct? After that, how many hours of training did you watch?

7. How did you decide what videos to watch in the training?

   7A. Were there any test/quizzes in the video training that assessed your knowledge of the video content?

8. Do you think you improved on the post assessment? Improvement means more identifying more correct examples and strategies.

   8A. If you did not improve, what were the barriers? If you did improve, what factors influenced the improvement?

9. Thinking back to the initial assessment (before the Looking at CLASSrooms training), which of the following most strongly influenced how you answered the strategy-example question? Was it prior knowledge or guessing?

   9A. Thinking back to the post assessment (after Looking at CLASSrooms training), which of the following most strongly influenced how you answered the strategy-example question? Was it the new learning experience of Looking at CLASSrooms training or guessing?

   9B. Do you consider yourself to be a self-disciplined learner? Why or why not?

10. Do you feel the material in this training has an **immediate** relevance or application to your job or personal life? Why or why not?

    10A. Do you feel the material in this training has a **future** relevance or application to your job or personal life? Why or why not?

11. Do you feel the training added to your knowledge of how to notice examples and strategies of the topic of language and literacy?

    11A. Do you feel the training added to your knowledge of how to notice examples and strategies of the topic of quality of feedback?

    11B. Do you feel the training added to your knowledge of how to notice examples and strategies of the topic of instructional learning format?

    11C. If the training did not add to your knowledge, what could have been done differently to increase knowledge?

12. Although you only had to complete 6 hours of watching videos, are you curious about seeing more, if the videos were still available?

13. What do you think the difference is between “directed” or traditional and “self-directed” learning?

14. Finally, after all this, do you now consider yourself a directed or self-directed learner?

15. Last question - is there anything you would like to share about your thoughts on the whole training process?

APPENDIX C

DEMOGRAPHICS OF PARTICIPANTS

	Primary Language	ages/ number of children				Highest Level of Education	CD Permit
		Birth - 23 months:	2 yrs - 2 yrs 11 months:	3 - 5 years:	KG & SA:		
P001	English					Some college	Current and valid Child Development Permit: Associate Teacher
P002	English	0	5	30	20	BA in non-ECE/CD	Current and valid Child Development Permit: Site Supervisor
P003	English	0	1	19	0	AA in ECE/CD	Current and valid Child Development Permit: Teacher
P004	Spanish	0	7	36	0	BA in ECE/CD	Current and valid Child Development Permit: Site Supervisor
P007	Spanish	0	0	34	0	AA in ECE/CD	Current and valid Child Development Permit: Master Teacher
P008	Spanish	0	15	20	0	AA in ECE/CD	Current and valid Child Development Permit: Teacher
P009	English	0	16	20	0	BA in non-ECE/CD	Current and valid Child Development Permit: Site Supervisor
P011	English	0	0	24	0	BA in ECE/CD	Current and valid Child Development Permit: Master Teacher
P012	English/Spanish	0	0	48	0	BA in ECE/CD	Current and valid Child Development Permit: Teacher
P013	English	0	0	48	0	AA in ECE/CD	1- missing
P015	English/Spanish	0	0	34	0	AA in ECE/CD	Current and vaild Child Development Permit: Master Teacher
P016	English	0	0	34	0	AA in ECE/CD	Current and valid Child Development Permit: Site Supervisor
P018	English/Spanish	0	0	34	0	Some college	Current and valid Child Development Permit: Associate Teacher
P019	English/Spanish	0	0	34	0	Some college	Current and valid Child Development Permit: Associate Teacher
P020	Spanish	0	8	0	0	BA in ECE/CD	Current and valid Child Development Permit: Site Supervisor

P021	Spanish	0	8	20	0	BA in ECE/CD	1- missing
P022	English	0	0	24	0	Graduate degree in non-ECE/CD	I do not hold a Child Development Permit
P023	English	16	12	24	0	Some College	Current and valid Child Development Permit: Associate Teacher
P024	English	0	0	20	0	High School diploma/GED	Current and valid Child Development Permit: Associate Teacher
P025	English	0	8	20	0	Certificate in ECE/CD	Current and valid Child Development Permit: Associate Teacher
P028	Spanish	0	0	52	0	AA in non-ECE/CD	My permit has lapsed, I need to re-apply Level: Teacher
P029	Spanish	0	0	22	0	AA in non-ECE/CD, AA in ECE/CD	Current and valid Child Development Permit: Associate Teacher
P030	English	21	27	40	0	Certificate in ECE/CD	Current and valid Child Development Permit: Teacher
P031	English			40		BA in non-ECE/CD	Current and valid Child Development Permit: Program Director
P032	Spanish	0	0	34	0	BA in non-ECE/CD	Current and valid Child Development Permit: Site Supervisor
P033	Spanish	0	0	24	0	Some College	Current and valid Child Development Permit: Associate Teacher
P034	Spanish	2	4	0	0	AA in ECE/CD	Current and valid Child Development Permit: Teacher
P035	English	0	0	0	0	High school diploma/GED	Assistant
P036	English	0	2	3	3	BA in non-ECE/CD Liberal Arts	Current and valid Child Development Permit: Site Supervisor
P037	English	0	0	30	0	High school diploma/GED	Current and valid Child Development Permit: Associate Teacher
P038	English	2	2	1	1	Less than high School diploma?GED	1- missing

P039	Spanish	0	0	X	0	BA non- ECE/CD	Current and valid Child Development Permit: Associate Teacher
P040	English	0	0	24	0	Some College	1- missing
P041	English	0	0	52	0	BA in ECE/CD	Current and valid Child Development Permit: Site Supervisor
P043	English	0	0	40	0	Some college	Current and valid Child Development Permit: Site Supervisor
P044	Spanish	1	1	2		AA in ECE/CD	Current and valid Child Development Permit: Site Supervisor
P045	Spanish	0	16	0	0	AA in ECE/CD	Current and vaild Child Development Permit: Site Supervisor
P046	English	0	26	20	0	Some college	I do not hold a Child Development Permit
P047	English	0	21	93	0	BA in ECE/CD	Current and valid Child Development Permit: Program Director
P048	English	0	0	26	0	BA in ECE/CD	Current and valid Child Development Permit: Program Director
P049	English	20	30	60	0	AA in ECE/CD	1- missing
P051	English	5	6	8	0	Graduare degree in non-ECE/CD	1- missing
P052	English/Spanish	0	2	38	0	BA in ECE/CD	Current and valid Child Development Permit: Associate Teacher
P054	English	0	0	24	0	Some college	I do not hold a Child Development Permit
P055	Spanish	0	0	24	0	AA in non-ECE/CD	1- missing
P056	English	0	8	0	0	Some College	I do not hold a Child Development Permit
P059	Spanish	0	0	20	0	Some college	Current and valid Child Development Permit: Teacher
P060	Spanish	0	16	0	0	Some college	I do not hold a Child Development Permit
P061	Spanish	0	0	24	0	Some college	Current and valid Child Development Permit: Associate Teacher
P062	Spanish	0	16	0	0	Less than high school diploma/GED	I do not hold a Child Development Permit

P064	Spanish	1	0	4	1	BA in ECE/CD	Current and valid Child Development Permit: Site Supervisor
P068	Spanish	0	14	14	0	Some college	Current and valid Chid Development Permit: Associate Teacher
P074	Spanish	1	2	1	0	Some college	Current and valid Child Development Permit: Teacher
P078	Spanish	0	16	0	0	Less than high school diploma/GED	Current and valid Child Development Permit: Associate Teacher
P079	Spanish	3	2	5	2	Some College	Current and valid Child Development Permit: Assistant
P080	Spanish	2	2	0	0	AA in ECE/CD	Current and valid Child Development Permit: Site Supervisor
P082	English	26	25	46	0	BA in ECE/CD	1- missing
P083	Spanish	0	0	34	0	Some college	Current and valid Child Development Permit: Associate Teacher
P084	English	4	1	3	0		1- missing

APPENDIX D

VAIL PROMPT AND RESPONSE SHEET

VAIL Response Sheet

Name up to 5 strategies the teacher is using to engage the students in the lesson and hold their attention. For each strategy, list a specific, behavioral example of the strategy from the clip.

Strategy 1:	
Example 1:	
Strategy 2:	
Example 2:	
Strategy 3:	
Example 3:	
Strategy 4:	
Example 4:	
Strategy 5:	
Example 5:	

APPENDIX E

VAIL CODING SHEET

NCRECE Video Assessment

Score Sheet for Pre-Course Survey (Phase I)

P_id:	Coder ID:
Date Teacher Completed:	Date Coded:
Data Entry 1 ID:	

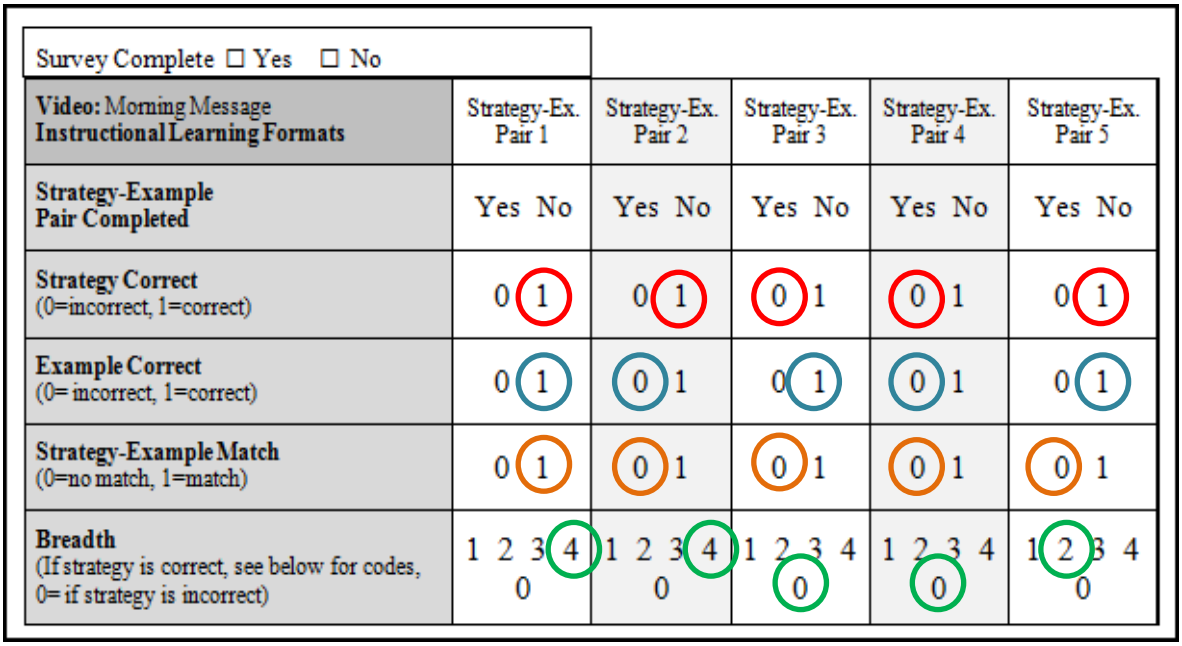
Video: Morning Message **Language and Literacy Strategies**	Strategy-Ex. Pair 1	Strategy-Ex. Pair 2	Strategy-Ex. Pair 3	Strategy-Ex. Pair 4	Strategy-Ex. Pair 5	Total Breadth Score
Strategy-Example Pair Completed	Yes No	Yes No	Yes No	Yes No	Yes No	
Strategy Correct (0=incorrect, 1=correct)	0 1	0 1	0 1	0 1	0 1	Total number of unique breadth scores across 5 pairs ↓
Example Correct (0= incorrect, 1=correct)	0 1	0 1	0 1	0 1	0 1	
Strategy-Example Match (0=no match, 1=match)	0 1	0 1	0 1	0 1	0 1	
Breadth (If strategy is correct, see below for codes, 0 if strategy is incorrect)	1 2 3 4 5 6 0	1 2 3 4 5 6 0	1 2 3 4 5 6 0	1 2 3 4 5 6 0	1 2 3 4 5 6 0	1 2 3 4 5 0
1: Repetition and extension • repeats • extends /elaborates						
2: Self and parallel talk • maps own actions with language • maps student action with language						
3: Advanced language/ vocabulary development • uses a variety of words • connects new words to familiar ideas/words						
4: Develops phonological awareness • sound blending/ sounds words • ID words that start with same sound • Rhyming						
5: Develops alphabet knowledge • identifies letters sounds • encourages letter-sound associations • discusses letters • children identify letter or sounds						
6: Develops print concept • focuses on how books work • focuses on how print works (letter in words, words in sentence, spaces, etc.) • points to letters/words • points out print in everyday objects beyond books • models writing • uses print vocabulary • identifies words						

APPENDIX F

VAIL DATA SCORING EXAMPLE

VAIL Data Scoring

Coders fill out score sheets:



Survey Complete ☐ Yes ☐ No

Video: Morning Message **Instructional Learning Formats**	Strategy-Ex. Pair 1	Strategy-Ex. Pair 2	Strategy-Ex. Pair 3	Strategy-Ex. Pair 4	Strategy-Ex. Pair 5
Strategy-Example Pair Completed	Yes No	Yes No	Yes No	Yes No	Yes No
Strategy Correct (0=incorrect, 1=correct)	0 1	0 1	0 1	0 1	0 1
Example Correct (0= incorrect, 1=correct)	0 1	0 1	0 1	0 1	0 1
Strategy-Example Match (0=no match, 1=match)	0 1	0 1	0 1	0 1	0 1
Breadth (If strategy is correct, see below for codes, 0= if strategy is incorrect)	1 2 3 4 0	1 2 3 4 0	1 2 3 4 0	1 2 3 4 0	1 2 3 4 0

Data entered as:

VMORNINGIS1	1
VMORNINGIS2	1
VMORNINGIS3	0
VMORNINGIS4	0
VMORNINGIS5	1
VMORNING1X1	1
VMORNING1X2	0
VMORNING1X3	1
VMORNING1X4	0
VMORNING1X5	1
VMORNINGIM1	1
VMORNINGIM2	0
VMORNINGIM3	0
VMORNINGIM4	0
VMORNINGIM5	0
VMORNINGIB1	4
VMORNINGIB2	4
VMORNINGIB3	0
VMORNINGIB4	0
VMORNINGIB5	2

What goes in the VAIL dataset for Morning Message ILF:

Raw Sum Scores for MMILF:

MORNINGIS_SUM	VAIL: MM Ins Lrn Fmat raw strategy sum	3
MORNINGIX_SUM	VAIL: MM Ins Lrn Fmat raw example sum	3
MORNINGIM_SUM	VAIL: MM Ins Lrn Fmat raw match sum	1
ILFTOTB	VAIL: MM Ins Lrn Fmat Tot # unique Breadth Scores	2

Standardized Scores for MMILF:

SMORNINGIS_SUM	VAIL: MM Ins Lrn Fmat std strategy sum	2.3425
SMORNINGIX_SUM	VAIL: MM Ins Lrn Fmat std example sum	1.2557
SMORNINGIM_SUM	VAIL: MM Ins Lrn Fmat std match sum	-0.289
SILFTOTB	VAIL: MM Ins Lrn Fmat Tot std # unique Breadth Scores	0.0947

** This process would be repeated for each prompt (i.e. MMLL, LHQF, and LHLL)

Overall Composites for Dataset:

VAIL_Strategy	VAIL: Mean of standardized strategy scores from MMILF, MMLL, LHQF, and LHLL	2.3425
VAIL_Example	VAIL: Mean of standardized example scores from MMILF, MMLL, LHQF, and LHLL	1.2557
VAIL_Match	VAIL: Mean of standardized match scores from MMILF, MMLL, LHQF, and LHLL	-0.289
VAIL_Breadth	VAIL: Mean of standardized breadth scores from MMILF, MMLL, LHQF, and LHLL	0.0947

APPENDIX G

PARTICIPANT MEETING SCHEDULE LISTED BY DIRECTED AND SELF-DIRECTED GROUPS

	DIRECTED	SELF-DIRECTED
SDLRS & VAIL pre-test	**SDLRS & VAIL pre-test** (1 hr total) • SDLRS (1/2 hr) • (pre) VAIL (1/2 hr)	**SDLRS & VAIL pre-test** (1 hr total) • SDLRS (1/2 hr) • (pre) VAIL (1/2 hr)
Session 1	Orientation (2 hours)	
Session 2	Content export support while viewing LAC (2.5 hours)	
Session 3	Content export support while viewing LAC (2.5 hours)	
Session 4	Content export support while viewing LAC (2.5 hours)	
VAIL post-test	(post) VAIL (1/2 hr)	(post) VAIL (1/2 hr)

LAC (Looking At CLASSrooms)

APPENDIX H

PARTICIPANT CHOICE OF DL OR SDL, SDLRS RAW SCORE AND SDLRS PERCENTAGE, VAIL POSTTEST-PRETEST SCORE, NUMBER OF SESSIONS ATTENDED

Participant #	Choose directed (DL) or self-direct (SDL)	SDLRS score	SDLRS %	VAIL posttest-pretest score	If DL - # of sessions attended
P001	SDL	234	74	-2	
P002	SDL	243	85	2	
P003	DL	200	25	-2	0
P004	SDL	214	45	-1	
P007	DL	198	22	-1	0
P008	DL	208	36	-2	0
P009	SDL	232	72	1	
P011	SDL	255	93	0	
P012	SDL	200	25	-1	
P013	SDL	238	79	6	
P015	SDL	248	88	-1	
P016	SDL	228	66	-4	
P018	SDL	206	33	5	
P019	DL	220	53	4	0
P021	SDL	223	60	3	
P022	SDL	242	83	-1	
P023	DL	222	57	1	0
P024	SDL	203	30	1	
P025	SDL	212	42	-3	
P028	SDL	240	81	-4	
P029	SDL	263	97	6	4*
P030	SDL	218	51	-3	
P031	SDL	259	95	0	
P032	SDL	220	53	6	
P033	SDL	232	72	0	
P034	SDL	219	53	6	
P035	SDL	212	42	1	
P036	SDL	267	98	0	
P037	SDL	241	83	5	
P038	DL	198	22	2	4
P039	SDL	224	60	-3	
P040	SDL	219	53	1	
P041	DL	244	85	-1	0
P043	SDL	272	98	6	
P044	DL	237	79	5	0
P045	SDL	243	85	-2	
P046	SDL	246	87	0	
P048	SDL	253	92	1	
P049	DL	168	3	1	0
P051	DL	252	92	1	2
P052	SDL	177	6	0	
P054	SDL	238	79	0	
P055	DL	211	42	1	3
P056	SDL	236	76	3	
P059	SDL	248	88	3	
P061	DL	236	76	2	0
P064	SDL	248	88	0	
P068	DL	222	57	1	4

Participant #	Choose directed (DL) or self-direct (SDL)	SDLRS score	SDLRS %	VAIL posttest-pretest score	if D - # of sessions attended
P079	SDL	230	69	2	
P080	SDL	250	90	2	
P082	SDL	235	76	2	
P084	SDL	235	76	3	

*P029 chose SDL and attended 4 sessions.

APPENDIX I

PERMISSION TO USE COPYRIGHTED MATERIALS

Faiza Jamil steveandfaiza@gmail.com via laverne.edu Sep 19, 2011
to Susan

Hi Susan,

I have spoken to my advisor [Bridget Hamre], and I think we have figured out what we can do for you:

1 – We will provide you a training on the measure in the second half of October. I will conduct the training. It can be done over the phone or Skype. I will send you a PowerPoint to follow, and we will talk through it. It is better if we can do it over Skype because it does help to be able to see each other as we work. The training takes between 2 and 3 hours to complete

2 – After the training, there is usually a reliability test. I will send you the test and the master codes so you can self-administer the test. That way, if you decide to add more coders, you have the training materials and the reliability tests to train and prepare additional coders.

3 – The videos are currently on a website where they can be accessed with a password. In our work, we have been able to actually collect the data online, which means that after watching the video, teachers are able to enter their responses to the prompts right into the website. The advantage to this is that the data is then downloaded into a spreadsheet when the study is completed, and you are able to read typed responses instead of dealing with handwriting. I have to check with our technology person to see if this is something we still have up and can easily allow you to access. If so, we will send you that information, and once you are done collecting your data, we will download your data file and send it to you.

4 – If that does not work for some reason, you can still have access to the videos, and I will send you the prompts. In that case, you will have to administer them the old-fashioned paper and pencil way.

5 – We cannot support coding, data analysis, and reliability procedures beyond the day of training, but I will make sure to include a section in your training which covers the steps you will need to take to analyze the data and make sure that your coders are maintaining inter-rater reliability. Of course, if you have any specific questions once your training is finished, please feel to contact me.

6 – Of course, we ask that you use the correct citation when publishing findings using the VAIL (I can send you that information), and share your results with us when your study is completed so that it can add to our understanding of the VAIL in future work.

Does that sound reasonable? If so, we need to go ahead and schedule a training date. I will need to know how many people will attend, etc. I will also get back to you on the question concerning the actual VAIL interface.

Good luck on your dissertation work!

Take care,
Faiza

Faiza M. Jamil
Doctoral Student
Educational Psychology – Applied Developmental Science
Curry School of Education
University of Virginia

Paul Guglielmino guglielmino@rocketmail.com via laverne.edu

Dec 17, 2011

to Susan, Lucy

Dear Susan: Congratulations on the progress you have made concerning your research project.

The administration of the ONLINE version of the SDLRS can be easily set up so that the respondents do not see their scores until after the study is complete. You will be able to check on the progress of the study when ever you want to by using your "Administrator's Code."

All of the data are automatically stored by our program in an Excel spreadsheet which you can view or download at any time during the conduct of the study.

We can give you a price break of $3.50 for each respondent based on 120 or more copies ordered. This rate is normally given to orders over 201. Individual copies of the SDLRS normally cost $6.95 each. These discounted rates apply only to educational research studies like yours.

We have attached a PDF of the complete SDLRS that you can use for your RFP as you requested. Also, you will find an Agreement to Honor Copyright and some general information concerning the use and interpretation of the SDLRS scores.

Please contact us before you collect your data so that we can answer any questions you have in advance of the study.

Sincerely,

Dr. Paul J. Guglielmino
Associate Professor and
Distinguished University Teacher,(Ret.)
Florida Atlantic University
Home Office: 7339 Reserve Creek Drive
Port St. Lucie, Florida 34986
H: 772-429-2425
e-mail: guglielmino@rocketmail.com
Website: http://www.lpasdlrs.com

APPENDIX J

SANTA BARBARA TRAINING AGREEMENT

Star Project
Building an Effective Early Care Workforce for Santa Barbara County

CLASS Training Agreement

I understand that First 5 California has contracted with Teachstone Inc. to provide me access to training on the Classroom Assessment Scoring System. I agree to complete the 2 hour Introduction to CLASS within 30 days of receiving my registration and also agree to complete 21 hours of Looking at CLASSrooms by March 3, 2012.

I understand that First 5 Santa Barbara County is conducting additional research on the use of the Classroom Assessment Scoring System as a tool for Professional Development and that I may be selected to participate in two assessments pre and post my participation in the CLASS Training requirements. Selection for this additional assessment will not determine the method of which I will complete the training, I will still have the option to complete the training Independently or Traditionally. (see below for descriptions)

The additional time spent completing the assessments has been projected at 2-4 hours. If selected I must attend a mandatory training on Saturday, January 7th, 2012 from 9 - 11am. I understand that I will have the opportunity to complete the 23-25 hours of required training during a 5 week period from January 7th, 2012 and March 3, 2012.

The method by which I plan to complete the mandatory trainings is:

☐ Independently – On my own computer and at my own pace
- ☐ January 7, 2012 - February 5, 2012
- ☐ February 18, 2012 - March 3, 2012

☐ Traditionally – Attend First 5 Computer Lab Sessions at Allan Hancock College in Santa Maria 5 Saturdays, 5 hours per day
- ☐ January 7, 2012 - February 5, 2012
- ☐ February 18, 2012 - March 3, 2012

Printed Name:_____

Signature:_____ Date:_____

Email:_____ Phone#:_____

STAR Advisor: _____

APPENDIX K

IRB APPROVAL LETTER

University of La Verne
Institutional Review Board

December 22, 2011

TO: Susan Walsh, Ed.D. Candidate

FROM: University of La Verne, Institutional Review Board

RE: 2011-CEOL-18: Am I A Good Predictor Of My Own Learning? A Mixed Methods Case Study of Perception in Self-selected Learning Modality and Its Relationship to Content Growth

---

The research project, cited above, was reviewed by the College of Education and Organizational Leadership IRB Committee. The college review determined that the research activity has minimal risk to human participants, and the application received an **Expedited** review. The application was approved with the following condition:

- Final organizational permission, from First 5 Santa Barbara County, should be forwarded to the IRB Director before beginning research.

A copy of this approval letter is required to be included as an appendix to your completed dissertation.

The project may proceed to completion, or until **December 22, 2012.** Please note the following conditions applied to all IRB submissions:

No new participants may be enrolled beyond the expiration date without IRB approval of an extension.

Notification of the completion of this project, or a request for extension within two weeks of the approval expiration date, whichever date comes earlier, shall be forwarded to the IRB Director.

The IRB expects to receive prompt notice of any proposed changes to the protocol, informed consent forms, or participant recruitment materials. No additional participants may be enrolled in the research without approval of the amended items. The IRB expects to receive prompt notice of any adverse event involving human participants in this research.

There are no further conditions placed on this approval.

The IRB wishes to extend to you its best wishes for a successful research endeavor. If you have any questions, please do not hesitate to contact me.

Approval Signature

Peter Williams, Ph.D.
CEOL IRB Member

Marcia Godwin, IRB Director/Chair, mgodwin@laverne.edu
(909) 593-3511, ext. 4103