ABSTRACT

Title of Document: CAREER RESILIENCE AND CONTINUING SPECIAL EDUCATION TEACHERS: THE DEVELOPMENT AND EVALUATION OFTHE SPECIAL EDUCATION CAREER RESILIENCE SCALE

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The purpose of this study was to develop and field test the Special Education Career Resilience Scale (SECRS) as an instrument to assess the career resilience of special education teachers. Four scales, two measuring resilience, one measuring coping behaviors, and one measuring perceived administrative support, were used to comprise the SECRS in an attempt to construct a survey with items that would reflect the four domains of the Career Resiliency Framework (i.e. Theme Acceptance, Support for Self-Awareness, Conversion, and Connectedness). Cognitive interviews, expert opinion, and pilot testing were all used during the initial stages of development. The final version of the SECRS was field tested with a sample of 567 continuing and non-continuing special education teachers from suburban and rural school systems. Exploratory factor analysis revealed that an interpretable factor structure could not be derived. Subsequent analysis of each subscale that comprised the SECRS resulted in the derivation of a 2-factor simple structure for the Theme Acceptance subscale only. Analyses of individual item scores

between continuing and non-continuing special educators revealed statistically significant differences in the latent construct of career resilience for two items (TA2 and SSA1), and for one item (SSA17) when disability type was considered. A significant main effect for both teaching status and disability type was found for the Theme Acceptance subscale between the non-continuing/low incidence group and all other groups (i.e. the continuing/low incidence group, continuing/ high incidence group, and non-continuing/high incidence group). These results are discussed in light of the limitations of the study and areas for further research are suggested.

CAREER RESILIENCE AND CONTINUING SPECIAL EDUCATION TEACHERS: THE DEVELOPMENT AND EVALUATION OF THE SPECIAL EDUCATION CAREER RESILIENCE SCALE

by

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Dedication

This project is dedicated to my husband, Randy, whose patience, love, support, shoulder to cry on, and never-ending belief in me made it possible to achieve this accomplishment. You have always been my biggest fan, loudest cheerleader, and calm during the storm in all that I do. I love you more than I can say.

I also dedicate this project to my parents, Dr. V. Gilbert and June Bailey, who instilled a love of education in me since birth. Although they are no longer living, I can still feel their pride. I miss you both everyday.

Lastly, I wish to thank my family, friends, and colleagues for their encouragement, support, and interest in this project. You all helped make this journey possible.

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Chapter 1

Recruiting and retaining qualified teachers has been a concern in the field of education for the last 30 years (Gehrke & McCoy, 2007). When highly qualified teachers decide to leave education, it is often difficult to replace them with qualified individuals, which in turn, undermines the instruction of students (Borman & Dowling, 2008). This is especially problematic due to the implementation of legislation and initiatives during the last decade; the Elementary and Secondary Education Act of 2001, also known as No Child Left Behind (NCLB) and the 2004 reauthorization of the Individuals with Disabilities Education Act (IDEA), and the more recent Race to the Top Act introduced in 2011. A central component of each of these initiatives is rigorous instruction for all students in the general education curriculum, which must be implemented by highly qualified teachers. In addition, the Race to the Top Act of 2011 includes a requirement that teacher performance evaluations be linked in part to student progress on core learning objectives intended to improve student college and/or career readiness. This increased focus on student performance and teacher accountability has led to a need for more qualified general and special educators (Gehrke & McCoy). However, the ability to recruit and retain qualified educators continues to be problematic.

What We Know about Teacher Retention

During the 1980s and 1990s, the most common response to the issue of teaching shortages was the implementation of innovative programs created to draw individuals to the teaching profession. Projects such as Teach for America and Troops-to-Teachers were developed to attract talented individuals from other disciplines or individuals who were retiring from the military into the teaching force (Borman & Dowling, 2008).

Additionally, alternative licensing practices were introduced that allowed individuals without formal education training to begin teaching immediately using provisional certification. However, these alternative routes to teacher training and certification often produced teachers who were not adequately prepared (Boe et al., 1997). And although the implementation of these programs resulted in an initial increase in individuals entering the teaching profession, they did little to address the issue of teacher attrition which continued to be problematic.

Teacher retention and attrition have also been on-going challenges in special education (Billingsley, 2004). Data from a decade of research have indicated that special educators are more likely to leave teaching than their general education counterparts (Gehrke & Murri, 2006). Additionally, there is a propensity for special education teachers to migrate to general education, while general education teachers rarely migrate to special education. Factors associated with general education teacher attrition such as increased requirements on teacher quality and higher student achievement standards have also contributed to the shortage of special education teachers (Billingsley). As with general education, alternative certification pathways have been put into place in an attempt to increase the number of special education teachers. However, these alternative teacher preparation programs do not effectively resolve the issue of too few special education teachers. To effectively reduce this shortage, it is imperative not only to train individuals to be highly qualified special educators, but also to retain them.

To improve the retention of special education teachers, it is necessary to understand factors that contribute to their career decisions and to identify ways to mitigate factors associated with teacher attrition. Stress associated with the legal and

instructional challenges of teaching special education students has been cited as negatively impacting retention rates of special educators (Billingsley 2004). However, most research in this area has focused primarily on the development of programs or strategies that may increase retention including mentoring programs (Gehrke & McCoy, 2007), strong collegial and administrative support (Gerke & Murri, 2006), and improved pre-service and in-service for special educators (Billingsley & Carlson, 2004). While these programs may help to alleviate some of the stress associated with teaching in special education, there is little discussion regarding the importance of building internal teacher capacity to successfully navigate through the everyday stressors that face special education teachers. Teachers who develop that capacity have been characterized as resilient and tend to continuing teaching, thereby demonstrating career resilience (Brunetti, 2006; Castro et al., 2010; Dallas, 2006; Day & Gu, 2009; Gu & Day, 2007; Malloy & Allen, 2007; Patterson et al., 2004; Stanford, 2001; Yost, 2006; Zost, 2010). Previous research on career resilience has focused primarily on general education teacher career choices. There are a limited amount of studies that examine whether career resilience is a factor associated with special education teacher retention.

Understanding how career resilience impacts career decisions of special educators is a way to examine the issue of special education teacher retention. Therefore, the goal of this study was to develop and field test the Special Education Career Resilience Scale (SECRS) as an instrument to assess the career resilience of special education teachers.

The first purpose was to develop and pilot the SECRS, based on a review of the literature on teacher retention and resiliency and to use a Career Resiliency Framework

(CRF) to assess career resilience of special education teachers. The specific research questions for this purpose included:

1a. Does the SECRS instrument have acceptable content validity as evaluated by the cognitive interview process and expert reviews?

1b. Does the SECRS have acceptable internal consistency when piloted with a randomly selected group of continuing and non-continuing special educators?

A second purpose of this study was to field test the SECRS instrument with two group of teachers who had been in the field of special education for three or more years (continuing special educators) or who had left special education (non-continuing special educators) to determine whether their responses to items measuring career resiliency differed. Research questions related to this purpose included:

2a. What is the factor structure of the SECRS?

2b. Is the SECRS and the factors derived from the instrument internally consistent?

2c. Do significant differences exist between continuing and non-continuing special education teachers on items comprising the SECRS?

2d. Do significant differences exist between continuing and non-continuing special education teachers when student disability category is considered?

The following sections briefly discuss issues with special education teacher retention, and continue with an examination of the construct of resilience as it applies to the field of education and the career decisions of special educators. Finally, a review of previously applied theoretical models to teacher retention is provided and the CRF is introduced.

Retention of Special Education Teachers

Data from the 2008 Executive Summary on Educator Supply and Demand (2008) indicated that 9 out of 14 critical teaching shortages are in the area of special education. Although the number of students with disabilities has steadily increased, the induction of new special education teachers has lagged behind that of their general education counterparts. Additionally, special educators are more likely to leave the field than other educational professionals. Low induction and retention rates have resulted in the extreme shortages of qualified special educators, as reported by up to 98% of school systems nationwide (Billingsley, 2004). At least 13.2% of special education teachers leave their positions each year, 29% leaving within the first three years, and up to 50% within the first five years of their teaching career (Billingsley 1991; Edgar & Pair, 2005.). Plash & Piotrowski (2006) reported a shortage of at least 611,550 special education teachers within the United States.

If policy makers and school systems are to address the increasing need for qualified special educators, it is essential to understand what influences the career choices of special education teachers. There is a significant body of literature that has examined the issue of teacher retention in special education (e.g. Billingsley, 1993; Billingsley, 1994; Billingsley et al., 2004; Billingsley & Cross, 1992; Boe et al., 1997; Boe et al., 2008). As a result of these efforts, several factors have been identified as impacting the career decisions of special educators. These include administrative support, salary level, pre-service training, job satisfaction, role ambiguity, job stress, increased legal requirements, professional development opportunities and commitment to teaching, with job satisfaction and commitment to teaching identified as the most influential factors

(Billingsley & Cross; Boe et al.; Borman & Dowling, 2008; Chapman, 1984; Chapman & Green, 2001; Cross & Billingsley, 1994; Gehrke & McCoy, 2007; Gehrke & Murri, 2006; Gersten et al., 2001; Kersaint et al., 2007; Litrell et al., 1994; Miller et al., 1999; Plash & Piotrowski, 2002; Smith & Ingersoll, 2004; Weiskopf, 1984; Whitaker, 2000). Stress associated with job ambiguity, the need to meet special education legal requirements, and the amount of non-teaching responsibilities was found to contribute to low levels of job satisfaction and commitment to teaching as reported by special educators who have left the teaching profession (Billingsley; Billingsley; Billingsley & Cross; Fimian & Santoro, 1983; Fore, 2002). Reducing the impact of that stress is essential to improving teacher longevity. Fostering resiliency within special educators is one way to address this issue.

Resiliency

Resiliency has been defined as "the ability to bounce back, to recover strengths or spirit quickly and efficiently in the face of adversity" (Gu & Day, 2006, p. 1302) and the "ability to overcome adversity and be successful in spite of exposure to high risk" (Green et al., 2003, p. 77). The concept of resiliency originated in the fields of psychiatry and developmental psychology primarily with children, and was developed to address personal characteristics that assist individuals in overcoming aversive conditions or incidents in their lives (Gu & Day). It is considered a dynamic process of "positive adaptation in the context of significant adversity" (Gillespie et al., 2007, p. 125).

Resiliency can be cultivated at any point during a lifespan and is not considered an inherent trait or characteristic of an individual (Gillespie et al., 2007). This initial concept has been expanded upon within the last two decades to include factors associated

with building resiliency in individuals through fostering positive emotions such as joy, interest, contentment and love (Fredrickson, 2001). These emotions then aid in the development of resiliency within an individual, which in turn, assists that individual in navigating aversive situations.

Professional resiliency. Examining resilient behaviors among employees has traditionally been a focus in the helping professions such as nursing, counseling, social work, and emergency personnel (Gu & Day, 2007; Rickwood et al., 2004), and has emerged as a result of earlier studies of resilience in adolescent development, family dynamics, and ethnographic studies. Although once viewed narrowly as the inborn capacity of an individual to change and transform, resiliency is now thought of as the ability of individuals to "adapt to adversity by learning and developing resilient behaviors, thoughts, and actions" (Rickwood et al., p. 99). The need to foster resilience in those within the helping professions is based on the premise that individuals tasked with assisting others who have been involved with or witness to catastrophic or traumatic events will often experience significant amounts of personal and professional stress due to that interaction (Gillespie et al., 2007). By working to develop resilient characteristics within individuals who choose to work in a helping career, the capacity to endure and even thrive through those events may also increase.

Gillespie and colleagues (2007) sought to operationally define resiliency and identify and describe attributes of this concept as it related to the nursing profession. Through their investigation, attributes of resilience were defined as a construct of "self-efficacy, hope and coping" (p. 128). Additionally, consequences of resilience were also identified including the integration of the psychological and personal in context, the

development of personal control in context, psychological adjustment and personal growth in the wake of disruption. Gillespie et al. concluded that the development of resilience in an individual is a "bi-directional relationship shared between individuals and their environments" (p. 132) and that this process is often activated through adversity and the introduction of interventions that lessen the impact of that adversity on the individual.

Clark (2009) also investigated the role of resiliency in the longevity of practicing marriage and family therapists in an effort to understand factors associated with the high attrition rate of therapists in these areas. Supportive work environments, managing risk and liability issues, enjoyment in practicing therapy and finding meaning in work were all variables found to positively impact therapists' longevity. Additional areas identified as ways to support new therapists in the counseling field included understanding the personal and professional "calling" of therapists and the impact of early experiences, and adequate collegial support, self-care and training.

Resiliency and education. Similar constructs of resiliency have been applied within the education system, however the traditional focus has not been on the professionals within the field, but instead on students considered to be at high risk for violence, school failure or other adverse circumstances (Bosworth & Earthman, 2002). In a landmark longitudinal study on resiliency and children from high risk environments, Werner (1992) found that protective factors such as parental competence and care-giving style, support from family, neighborhood, school and community mitigated the adverse effects of traumatic or disruptive life events commonly associated with adult pathology. Further examination of the link between protective factors of individuals and outside or environmental supports or stressors indicated that men and women who successfully

overcame a variety of childhood adversities constructed environments for themselves that "supported and reinforced and sustained their outgoing dispositions and rewarded their competencies" (p. 199).

When applied to the educational setting, the traditional emphasis has been on the importance of the school environment and the community in fostering resilience among at-risk students (Werner & Smith, 1992). In a school environment, teachers often play a significant role in moderating the negative impact of poor conditions at home or in the community (Bosworth & Earthman, 2002; Lips, 2007). The common goal of studies examining the impact of poor environmental conditions is to provide children with the skills necessary to overcome the effects of stressful events they may be exposed to through development of coping skills. These coping skills develop as a result of positive aspects of the school environment, teacher relationships, peer interactions, and self-actualization (Shaw & Goode, 2008; Lips) and allow students to more appropriately navigate through events that are traumatic or stressful in their lives, thereby becoming successful adults (Masten & Coatsworth, 1998).

Resiliency and special education. Although there is consensus regarding the need to foster resiliency in students who are considered at-risk, minimal attention has been directed to the development of these same resilient characteristics in the teachers instructing those high-risk students. Many students considered at-risk due to violence or disruptive home environments fall under the umbrella of special education (Lips, 2007; Shaw & Goode, 2008) and are identified as students with behavioral, emotional and/or learning disabilities. Overt behaviors commonly associated with those disabilities often lead to classroom situations that may be characterized as workplace violence, which

increases the level of stress experienced by many special educators (Kaplan & Cornell, 2005).

In addition to the challenges associated with overt student behaviors, non-teaching responsibilities, including excessive paperwork and role ambiguity have also been associated with increased stress of special educators (Billingsley & Cross, 1992; Cross & Billingsley, 1994; Fimian & Santoro, 1983; Fore et al., 2002; Gersten et al., 2001; Kaff, 2004;Weiskopf, 1980). Special education teachers also reported they were often unprepared for the range of disabilities of students they were required to teach, experienced unease about collaborating with their general education counterparts, and were overwhelmed with legal requirements, meeting preparations and data collection required, all of which contributed to increased levels of stress.

It is evident that stress associated with student challenges and job functions plays an important role in the career decisions of special educators and by navigating through those stressors, special education teachers can become more resilient. This resilience in turn allows them the ability to continue teaching. Understanding how to foster that resilience is critical when seeking to improve the retention rates of special educators. However, an appropriate theoretical model is needed to adequately investigate the construct of resilience. In previous research, various models were suggested as appropriate for the study of special education teacher retention. These models are briefly reviewed next.

Models Associated with General and Special Education Teacher Retention

Economic models. Economic models of teacher attrition have focused on the role of teacher wages and retention/attrition cost analyses which may impact the decision to

remain in or leave the education profession (Allen, 2001; Alliance for Excellent Education, 2005; Holtman, 1969; Stinebrickner, 2001). One concept that has emerged to explain teacher retention is known as "equal net advantage" (Holtmann, 1969, p. 211). This concept posits that individuals enter the field of teaching until the net advantage of becoming a teacher is just equal to the advantage of entering a different profession at that salary margin. In other words, teachers enter the profession only at the rate that allows them to obtain a salary equal to or better than other professions that require the same level of personal qualifications.

Socialization/organizational models. Socialization/organizational models utilize social learning theory to examine teacher attrition or retention. According to these models, teacher career choices are a function of (a) teachers' personal characteristics, (b) educational preparation, (c) initial commitment to teaching, (d) quality of first teaching experience, (e) professional and social integration into teaching, and (f) external influences (Chapman & Green, 1983). By adding a career development aspect into the model, Steffy and Wolfe (2001) proposed six different stages for teacher development including novice, apprenticeship, professional, expert, distinguished, and emeritus.

Teacher development is considered "transformational" over time and includes critical reflection on practice, redefinition of assumptions and beliefs, and enhanced self worth. Alternatively, as a result of negative conditions, teachers can disengage from the work environment as a source and stimulation for new learning and begin the gradual decline into professional withdrawal, leading to attrition. Other retention factors associated with socialization and/or organizational models include lack of responsiveness of administrators, overwhelming workload, legal requirements of the job, loss of teaching

time to the various administrative tasks associated with special education, teacher job satisfaction, and teachers pursuing other jobs (Ingersoll, 2001; Nance & Calabrese, 2009).

Social/economic models. A third conceptual model used to explain teacher retention combines both economical and socialization concepts (Billingsley, 1993; Chapman & Green, 1986; Brownell & Smith, 1993; Miller et al 1999). Variables associated with this framework include personal characteristics, educational preparation, commitment to teaching, professional qualifications, employment factors, and external factors. Employment factors, including professional qualifications, work conditions, and teacher commitment, were identified as impacting teacher career choices more than external or personal factors.

Brownell and Smith (1993) adapted Broenfenbrenner's Ecological Systems Theory to expand upon the investigation of variables impacting teacher retention. This theory includes microsystems (teacher's immediate setting and the interactions that occur as a result of student and teacher characteristics), mesosystems (interrelations among several variables in the workplace, such as collegiality and administrative support), exosystems (formal and informal social structures, including the socioeconomic level of a community), and macrosystems (cultural beliefs and ideologies of the dominant culture, as well as economic conditions that affect schools and teachers' career decisions) (Broenfenbrenner, 1983). Brownell and Smith posited that the interaction between microsystems, mesosytems, exostystems, and macrosystems impact the everyday experiences of teachers. Student and teacher characteristics, class size, support and collegiality, professional integration, decision-making power, role conflict, nature of

school district, local and federal policy, perceptions of teaching and learning, and economic conditions were also identified to influence special education teachers' career choices.

Although earlier models incorporated factors associated with professional resilience (e.g. collegiality, professional integration, social structure, and administrative support), none have incorporated resilience as a factor that influences special education teacher career decisions. Using the construct of resiliency to examine variables that increase the likelihood of teacher continuation, particularly in special education, incorporates all factors from the attrition and retention literature, while broadening the conceptualization to include internal characteristics and external factors that influence teacher career decisions. Rickwood et al., (2004) developed a framework that encompasses such variables and uses a career perspective.

Career Resiliency Framework. The Career Resiliency Framework (Rickwood, et al., 2004) grew out of resiliency theory and promotes development of characteristics within employees that empower workers who may be affected by radical changes that often occur in everyday working environments. By supporting these characteristics, employers can assist "high-risk" employees in ways to persevere when faced with those aversive conditions. As part of this framework, individuals are encouraged to seek intrinsic motivation through the exploration of goals and dreams for their chosen career. The cultivation of interests and activities that promote a sense of well-being and connections to others within the chosen career assist individuals in navigating through career challenges that may arise. Because special educators are often faced with environments and work requirements that may change radically from day to day and year

to year, Rickwood's framework may be particularly beneficial in studying how resilient characteristics impact the career decisions of special education teachers.

Previous research on factors associated with teacher retention has incorporated various theoretical models including economic, socialization/organizational, and social/economic. Each model has contributed to the understanding of what impacts special education teacher retention; however resiliency and examining teaching from a career perspective have not been part of the previous literature in this area. The Career Resiliency Framework was developed as a tool to measure an individual's resilience as it pertains to career choice and what factors increase that resilience. Examining special education teacher resilience using a career perspective fills a gap that currently exists in the research on teacher retention in special education.

Significance of Study

Although resiliency has recently become an area of interest regarding the impact these characteristics may have on teacher retention, the literature exploring the possible relationship between the two is limited, especially in the area of special education. The resiliency construct encompasses internal characteristics that may influence special education teacher continuation, and including a career perspective via a career resiliency framework has not been attempted. This approach provided a unique model to contribute to previous research in the area of special education teacher retention and to add to the literature through the examination of factors not previously included in retention research.

Research in the area of teacher resilience has relied almost solely on the use of qualitative analyses. As a result, I was unable to identify quantitative scales that were

previously developed to evaluate the impact of resilience on teacher career choices. Additionally, special education teachers have been under-represented in the samples of qualitative studies conducted (Brunetti, 2006; Dallas, 2006; Day & Gu, 2009; Gu & Day, 2007; Malloy & Allen, 2007; Patterson et al., 2004; Stanford, 2001). A standardized measure, which targets special educators and evaluates whether resilience impacts special education teacher career choices is the natural next step in this process. The development and piloting of such an instrument can guide future research in the continued examination of career resilience to determine whether it is a valid and consistent indicator of special education teacher longevity.

Definition of Key Terms

Career resilience – "the ability to adapt to changing circumstances, even when the circumstances are discouraging or disruptive (Richwood, 2002, p. 3).

Continuing special education teachers – For the purposes of this study continuing special educators are defined as special educators who have continued in the field for three or more years.

Non-continuing special education teachers – For the purposes of this study non-continuing special educators are defined as special educators who no longer teach in special education but do teach in general education.

Job satisfaction – Measure of "importance and challenge, working conditions, salary and benefits, opportunities for developing new skills, relationships with colleagues, and security and permanence" (Billingsley & Cross, 1992, p. 458).

Resiliency – "The ability to adjust to varied situations and increase one's competence in the face of adverse conditions" (Bobek, 2002, p. 202).

Teacher resiliency – using energy productively to achieve school goals in the face of adverse conditions (Patterson, et al, 2004; Standford, 2001).

Teacher stress – "Response syndrome of negative effects resulting from the teachers' job" (Rieg et al., 2007, p. 212). Teacher stress results from inadequate resources, limited decision-making power, burdensome paperwork loads, extensive time spent in meetings, limited opportunities for individualization, and extreme ranges in student ability (Albrecht et al., 2009; Fore, 2002).

Chapter 2

The overall goal of this study was to develop and field test the Special Education Career Resilience Scale (SECRS) as an instrument to assess the career resilience of special education teachers. The first purpose was to develop and pilot the SECRS, based on a review of the literature on teacher retention and resiliency and to use a Career Resiliency Framework (CRF) to assess career resilience of special education teachers. A second purpose of this study was to field test the SECRS instrument with two groups of teachers who had been in the field of special education for three or more years (continuing special educators) or who had left the teaching profession (non-continuing special educators) to determine whether their responses to items measuring career resiliency differed.

The remainder of this chapter includes (a) a discussion of the Career Resiliency Framework including the development, past application and appropriateness for examining resiliency factors associated with continuing special educators, (b) content and methodological reviews of literature on resiliency within the teaching field, which will address both general and special education teachers and (c) a discussion of the selection process used to create the Special Education Career Resilience Scale (SECRS).

Career Resiliency Framework

In order to examine the role resilience plays in special education teacher career choices, it is important to identify an appropriate framework from which to capture this phenomenon. Theoretical perspectives to examine teacher continuation within special education included the interaction of the individual with the environment and the impact that interaction has on teacher retention (Chapman & Green, 2001; Gu & Day, 2006;

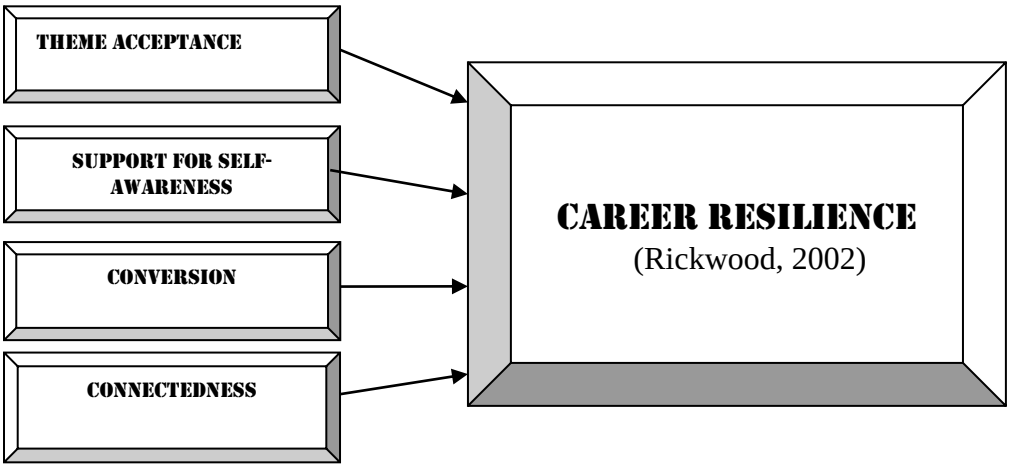
Malloy & Allen, 2007; Miller et al., 1999; Nance & Calabrese, 2009; Plash & Piotrowski, 2006; Weiskopf, 1980). Others have examined administrative support and organizational structure and the influence those factors have on teacher career choices (Billingsley, 1993; Billingsley, 2004; Billingsley et al., 2004; Billingsley & Cross, 1992; Billingsley & Cross, 1993). However, few have explored how resilience affects the negative variables often associated with these areas or how resilience within teachers can positively impact the level of teacher retention especially in the high-need area of special education.

Using the perspective of career resiliency to address this concern is an approach that may assist in understanding how resilience influences special education teacher continuation and how variables within the school or workplace environment support or inhibit the development of resiliency. The Career Resiliency Framework (CRF; Rickwood, 2002; Rickwood et al., 2004) is a model that captures this phenomenon.

Career resilience is the "ability to adapt to changing circumstances, even when the circumstances are discouraging or disruptive" (Rickwood, p. 3). Fostering that resilience occurs at a "deep, structural, and human level where all interactions and interventions involve relationships, beliefs and opportunities for participation and power" (Rickwood et al., p. 101).

Figure 1 provides a visual representation of the four domains Rickwood (2002, 2004) proposed to capture how resilience is fostered. They are: (1) theme acceptance - creating an environment that supports resiliency through professional development; (2)

Figure 1. Four Domains of the Career Resiliency Framework



support for self-awareness – selecting tools that assist employees in developing an understanding of their core values and interests; (3) conversion – assisting employees in identifying and overcoming aversive career situations by developing action plans to address those situations; (4) connectedness – fostering a sense of community within a work environment and encouraging meaningful interactions among individuals (Rickwood, 2002; Rickwood et al., 2004). To date, the application of the CRF has been limited to the career counseling field and a guide was developed as a tool to assist career counselors with clients who experienced traumatic situational events, which might adversely impact their ability to successfully maintain employment. To apply this framework to the study of special education teachers' resiliency a closer examination of the four areas comprising the model, and the appropriateness of those areas to the identification of factors associated with resilient teachers follows.

Theme acceptance. Within the context of the CRF, theme acceptance is defined as the use of resiliency theory to guide organizational activities and programs. This is accomplished by employers through staff education, professional development and policies that are based upon the theme of resiliency. Through these policies and

professional development opportunities, employees become better able to handle stress and the process of change that are often inherent in any occupation. The importance of professional development opportunities is documented in literature on factors that impact teacher retention (Billingsley, 1993; Billingsley, 2004; Billingsley et al., 2004; Billingsley & Cross, 1991; Borman & Dowling, 2008; Chapman, 1984; Cross & Billingsley, 1994; Fore, 2002). Individuals who remained in teaching were those that sought out professional development opportunities (Patterson et al., 2004); viewed organizational and administrative support as essential in maintaining stability in their professional identity (Gu & Day, 2007; Brunetti, 2006); and felt that administrators and teaching environments that fostered close professional relationships and promoted collaboration among professional were powerful factors influencing their decisions (Dallas, 2006).

However, a clear focus of components of successful professional development is often missing within this body of literature with the exception of studies investigating resilient teachers (Castro et al., 2010; Dallas, 2006; Gu & Day, 2007; Malloy & Allen, 2007; Patterson et al., 2004; Stanford, 2001; Yost, 2006; Zost, 2010;).

Areas of professional development cited as contributing to the resilience of teachers include professional learning communities (Dallas, 2006), team approach to curriculum implementation (Stanford, 2001), sharing and interacting with other teaching professionals (Patterson et al., 2004), providing meaningful input into programming decisions at the school level (Brunetti, 2006; Castro, 2010; Day & Gu, 2009; Malloy & Allen, 2007); workshops and strong induction programs for teachers (Zost, 2010), and activities that promote shared meaning and a sense of community in schools (Yost,

2006). All of these areas have been identified as promoting the theme of resiliency within a school environment, and as such, foster resiliency within teachers.

Support for self-awareness. The second area associated with the CRF is the support for self-awareness, which is defined as processes or tools that facilitate a deep understanding of an individual's core values and interests (Rickwood et al., 2004). The guiding principal of this element is the belief that values guide life choices, while interests and pastime activities are important to individuals as an avenue to maintaining balance between work and personal lives. Within the literature on resilience and teachers, there is a clear connection to this area of the framework. Patterson and others (2004) found that resilient teachers have personal values that guide their decision-making processes while Stanford (2001) found that resilient teachers find strength and support from colleagues, church community, and personal spiritual lives. Malloy and Allen (2007) found that rural teachers' belief in high expectations for themselves and their students was influential in the level of resilience. Because core values and interests have been identified as essential components that must be considered when seeking to foster resiliency, this element of the CRF is applicable to the study of resilience and teachers.

Conversion. The element of conversion within the CRF is defined as the identification of hopes and dreams within the individual, and then seeking to assist them in realizing those hopes and dreams in concrete, real-life events and actions (Rickwood et al., 2004). Achieving this goal requires the enhancement of intrinsic motivation within an individual, which in turn encourages the development of a plan of action that will allow them to overcome barriers that might otherwise thwart career goals. Again, this area seems a natural fit when examining teacher resilience.

Motivation and proactive planning when faced with aversive circumstances has been a common theme throughout the research on teacher career choices. Brunetti (2006) found that student academic growth and success was an important motivational factor associated with desire to remain in teaching, while Patterson et al (2004) found that resilient teachers were problem-solvers and explore new ways of reaching difficult students if an initial approach is not successful. Additionally, Castro et al (2010) found that problem-solving, identifying buffers against barriers and seeking to change unsatisfactory work conditions through the acquisition of resources were all characteristics indicative of resilient teachers, including special educators. These factors are linked to overcoming barriers through motivation and problem-solving, including proactive planning to address difficult teaching situations.

Connectedness. This element of the Framework addresses the need of individuals within the work environment to feel a sense of community, which supports meaningful interactions and connectedness with other individuals within that environment (Richwood, 2002; Rickwood et al., 2004). This connectedness is achieved through the pooling of resources through groups and teams in order to support continuous learning and celebrate successes. The importance of connectedness to resilient teachers has been well documented in the literature. Dallas (2006), Malloy and Allen (2007), Patterson et al (2004), Albrecht et al (2009), Castro et al (2010) and Yost (2006) and Zost (2010) all identified collegial support, team participation, mentoring and work relationships as influential factors associated with the career decisions of resilient general and special education teachers. Through this connectedness, teachers were more able to

navigate the daily stressors associated with their employment situation and were more likely to develop strong problem-solving skills and to grow professionally.

Applying the CRF to the investigation of resilience in teachers, particularly special educators, appears to be appropriate. However, career resiliency has not been examined as a model from which to understand the complex nature of teacher resilience and how that resilience impacts teacher career decisions. Additionally, the paucity of research in this area warrants attention and highlights the need for further study. There is still much to analyze regarding the importance of resilience in teachers and the factors associated with it.

Although research is limited in the study of resilience and educators, there is a small body of literature that does examine this construct. A review of this literature is provided next to examine resilience in educators and to determine whether special education teachers are included in this research, or have not been a focus in the limited study in this area.

Method

Search Procedures

A general electronic database search of EBSCO and ERIC using the terms teacher retention and resiliency and special education produced eight commentaries, qualitative and mixed-method studies. Abstracts were reviewed in order to determine whether the articles addressed teacher resiliency in either general or special education teachers. Studies focusing on general education teachers were included due to the limited number addressing the area of resiliency and teaching. An ancestral search was conducted of that pool of studies resulting in an additional four articles. After excluding commentaries, the

result was 12 potential articles for analysis.

Inclusion Criteria

Studies were included if (a) the dependent variable was resiliency or (b) if resiliency was investigated as a possible factor linked to teacher retention. Articles were included regardless of student disability categories or teacher assignment areas (i.e. elementary or secondary levels). The participants in all of the studies were general educators, special educators, or a combination of both. Studies utilizing qualitative, quantitative, or mixed methods were included in the analysis. Applying these criteria, 11 studies comprised the final review. Appendix A contains a summary of content findings by study type, purpose, participants/setting, design/data collection procedures, data analysis, and results/emergent themes/patterns.

Overview

Eight studies used qualitative analysis and three utilized a mixed-methods approach. Six studies included only general education teachers in sample, four studies had a sample which included both general and special educators and one study included only special educators as participants. Nine studies examined factors associated with teacher resilience while two investigated strategies teachers use to become resilient. Data collection procedures varied according study type with those following qualitative guidelines utilizing case studies, interviews, observations, and field notes as primary sources of data. The three mixed methods studies utilized the same type of qualitative data collection procedures, while questionnaires using Likert scales were the data collection measure for quantitative information. Participants in the studies were all similar in that teachers were the primary source of data. However, ethnicity, teaching

situations, and type of students instructed varied across studies. The number of participants was also limited in all but three studies, as the majority of the projects were qualitative in nature. However, one qualitative study by Gu & Day (2007) utilized data from a large sample of 300 participants during a four-year longitudinal mixed-methods project (Day & Gu, 2009). The three mixed methods projects had significant variations in the number of participants, with a low of 32 and a high of 776.

Results

Content Findings/ Qualitative Studies

Purpose. Five studies examined factors associated with teacher continuation in areas considered to negatively impact teacher retention including inner city schools, rural schools, schools with high poverty levels, and teaching students with disabilities (Albrecht et al., 2009; Brunetti, 2006; Dallas, 2006; Malloy & Allen, 2007; Stanford, 2001). Additionally, three studies explored strategies used to build resiliency within teachers who are employed the same high risk areas (Castro et al., 2010; Patterson et al., 2004; Zost, 2010), two studies focused on the role of resiliency in teacher effectiveness, (Gu & Day (2007; Day & Gu, 2009), and Yost (2006) examined obstacles faced by novice teachers that may influence teacher resilience, and thereby, teacher retention.

Participants/Settings/Contexts. Participant numbers for the studies ranged from a low of six (Dallas, 2006) to a high of 300 (Day & Gu, 2009; Gu & Day, 2007). Years of teaching experience of participants also varied greatly ranging from first year teachers to 33-year veterans. Participants in four of the studies taught for 10 years or less (Castro et al., 2010; Dallas; Patterson et al., 2004; Yost, 2006; Zost, 2010) with one study, Stanford (2001) reporting teacher participants with years of teaching experience ranging

from 10 to 33 years. Gu and Day, and Day and Gu reported a teaching experience range from 24 to 31+ years. Malloy and Allen (2007) gave no data regarding length of teaching career. Castro et al., Dallas, and Yost provided certification information regarding participants, which included non-certificated, certification in one area and dual certification in general and special education. Alternative or nontraditional certification routes were reported in two studies (Castro et al.; Dallas).

Five studies reported no certification information (Gu & Day, 2007; Malloy & Allen, 2007; Patterson et al., 2004; Stanford, 2001; Zost, 2010) although Stanford discussed the level of education received by the participants, which ranged from a bachelor's degree to graduate and administration coursework. Five authors indicated whether participants were elementary, secondary or special education or content teachers (Castro et al., 2010; Dallas, 2006; Malloy & Allen; Stanford; Yost, 2006). Zost identified participants as special education teachers, but gave no further information regarding instructional level or subject area taught. Patterson et al. described participants as regular educators only, and Gu & Day and Day & Gu (2009) gave no information regarding participants teaching assignments.

Demographic information regarding participants' race or gender varied across studies reporting this data. In Stanford's 2001 study on persevering urban teachers, all 10 participants were female and were African-American (n=9) or African (n=1). Student demographic data were also included in this study with the student population reported to be of African American decent (100%). Brunetti (2006) also included the gender and racial demographics of his participant sample (45% = M; 55% = F; 100% Caucasian) and also reported the racial demographics for the student population (42% Latino; 23.2%

African-American; 23.2% Asian; 9.3% other including Caucasian). A third study, Yost, (2006) also presented data regarding the race of the participants, with 94% reported as Caucasian. No student demographics were provided. Eight studies included no demographic information on participants or students (Albrecht et al., 2009; Castro et al., 2010; Dallas, 2006; Day & Gu, 2009; Gu & Day, 2007; Malloy & Allen, 2007; Patterson et al., 2004; Zost, 2010) and Dallas (2006) presented only student demographics (73% African American; 10% Caucasian; 8% Asian American; 4% Hispanics; 5% Other minorities) and overall school faculty demographics (African American 53%; Caucasian 47%).

Nine studies were conducted within the United States, and two took place in England (Day & Gu, 2009; Gu & Day, 2007). Four studies were implemented in urban settings (Brunetti, 2006; Dallas, 2006; Patterson et al., 2004; Stanford, 2001), two in rural settings (Malloy & Allen, 2007; Zost, 2010), one in urban and rural settings (Castro et al., 2010) and two in urban, rural and suburban settings (Albrecht et al., 2009; Yost, 2006). Two projects did not detail specific information on the settings utilized (Day & Gu; Gu & Day).

Design/Data Collection Procedures. Three studies specified a design for examining resilience in teachers. Dallas (2006) used an embedded unit case design. This design is implemented when more then one unit of analysis is required (Tellis, 1997). Dallas used a learning community as the primary unit of analysis, but also included embedded or subunits to analyze. Baxter and Jack (2008) recommend the use of embedded units of analysis when the researcher is interested in looking at the same issue but want the differing perspectives from participants on that issue. Embedded units give

the researcher the "ability to look at sub-units that are situated within a larger case" (p. 550). This type of analysis can be powerful in that data may be analyzed within the subunits separately (within case analysis), between the different subunits (between case analysis), or across all of the subunits (cross-case analysis). These embedded units of analysis used by Dallas were the different teacher participants.

A three-cycle interview process was implemented by Patterson et al. (2004) to conduct a series of three separate interviews with each study participant (Seidman, 1998). The first interview established the context of the participants' experience. The second explored the context of the experiences and the third encouraged participants to identify and reflect on the meaning of the experiences. Malloy and Allen (2007) used a descriptive case study design which allowed the researchers to present a detailed account of the phenomenon under study. It is useful in presenting basic information about areas of education where little research has been done. Such case studies often involve innovative programs and practices and often form a database for future comparison and theory building (Merriam, 1998).

Seven studies utilized interview procedures as a primary data source to examine factors associated with teacher resilience (Castro et al., 2010; Dallas, 2006; Malloy & Allen, 2007; Patterson et al., 2004; Stanford, 2001 Yost, 2006; Zost, 2010). However, the process in which the interviews were conducted varied across studies. A semi-structured interview protocol was implemented in four studies (Castro et al.; Day & Gu, 2009; Stanford; Zost). A semi-structured interview can be characterized as conversational in nature with the interviewer engaging in questioning that has been pre-determined, is often open-ended in nature, and offers flexibility of diverting from the

questions to obtain more in-depth information on a given topic if needed (Cohen & Crabtree, 2006). Yost and Dallas also used interviews as the primary source of data but did not indicate the format of the interview process.

Although the two mixed method studies also included interview data, only Day & Gu (2009) identified the protocol followed (i.e. semi-structured). Brunetti (2010) did not indicate a particular interview protocol but described the questions used as "open-ended" (p. 815). The majority of the studies provided information regarding the length of interview sessions (Brunetti; Castro et al., 2010; Malloy & Allen, 2007; Stanford, 2001), with a range of 30 – 50 minutes per session (Malloy & Allen; Stanford) to 60 – 90 minutes per session (Brunetti; Castro et al.). The number of interview sessions varied among studies from one session (Malloy & Allen; Patterson et al., 2004; Zost, 2010) to as many as eight (Day & Gu; Dallas; Patterson et al.; Stanford; M = 3). Interview sessions ranged in length from 30-50 minutes (Stanford) to 60 – 90 minutes (Castro et al.). One study, (Zost) did not indicate interview length.

Interview questions developed for four studies focused on characteristics of resilient teachers and ways in which teacher resilience can be cultivated (Castro et al., 2010; Malloy & Allen, 2007; Patterson et al., 2004; Zost, 2010), while Brunetti (2006), and, Stanford (2001) addressed teacher attitudes and reflections, which have contributed to their longevity. Day & Gu (2009) developed questions to explore the length between teacher effectives and different features of life, work, identifies, and their effect on pupils, and Dallas (2006) designed questions to gather information to determine the effectiveness of professional communities on teacher resilience.

Secondary data sources included observations (Dallas, 2006; Malloy & Allen,

2007; Patterson et al., 2004; Stanford, 2001; Yost, 2006); field notes (Dallas; Stanford, Yost); artifacts (Dallas; Gu & Day, 2007; Patterson et al., 2004); video-taping (Stanford; Yost); focus group discussion format (Stanford); questionnaires (Dallas; Yost); ranking activity to determine source of teacher satisfaction (Stanford), and a survey data on proposed dimensions of building resiliency: caring and support, high expectations and meaningful participation. A story development process was used by Gu and Day to create profiles of resilient teachers in the latter years of their careers via data collected from a separate longitudinal study examining resiliency factors of veteran teachers (Day & Gu, 2009).

Data Analysis. A variety of data analysis methods were used to explore teacher resiliency. Transcription analysis from video, interviews and/or observation field notes was used in nine studies (Brunetti, 2006; Castro et al., 2010; Dallas, 2006; Day & Gu, 2009; Malloy & Allen, 2007; Patterson et al., 2004; Stanford, 2001; Yost, 2006; Zost, 2010). Additional analyses were conducted through primary unit analysis and pattern matching (Dallas), coding of data for theme generation (Albrecht et al., 2009; Castro et al.; Dallas; Stanford; Yost) or coding as part of a constant comparison analysis (Castro et al.). Stanford and Dallas used triangulation as part of the data analysis, while Dallas included member checks and informal data audits. Questionnaire data (Dallas) were reported via yes/no responses, and survey data (Malloy & Allen), were reported using percentages only. Gu & Day (2007) reported information via scenario development based upon longitudinal interview data collected from a previous qualitative study (Day & Gu).

Results/Emergent Themes/Patterns. All 11 studies addressed the influence of resilience in teacher retention but investigated that influence from different perspectives, which led to the development of themes and patterns associated with continuing teachers. When examining factors associated with resilient inner city teachers, Brunetti (2006), found that commitment to students, personal and professional fulfillment, support from fellow teachers and organization and operation of the school all contributed to the teacher resilience, which was essential to continued work in the inner city classroom. Likewise, Stanford (2001) found that commitment to students and making a difference in their lives were the prominent factors associated with resilience in inner city teachers, with optimism about the future, support from community, personal relationships and spirituality also cited as factors. Malloy and Allen (2007) found when examining rural environments, three distinct constructs, caring and support, setting and communication of high expectations, and opportunities for meaningful participation, were associated with teachers exhibiting high levels of resilience. Additionally, team teaching, peer evaluations, reflective conversations, the adoption of specific philosophies that encourage high expectations for students and teachers and collaborative relationships that encourage professional growth and do not emphasize teacher status were found to be factors that support resilience in teachers. Similarly, Dallas (2006) found that professional learning communities fostered strong professional relationships, effective collaboration and collegial support, which in turn, enhanced teacher resilience.

In studies examining factors associated with resilience in special educators Albrecht et al. (2009) found those factors included a support system provided by administrators, other teachers and parents. Job satisfaction, interest in students' welfare,

convenience and familiarity and the desire for consistency through the teaching career were also factors cited as building resiliency within special education teachers. Conversely, lack of support, promotion and better job opportunities, stress, burn-out and dissatisfaction were cited as reasons associated with teacher attrition. Zost (2010) also found that school and community, flexibility of teachers and support systems in and out of the school environment were factors associated with resilience of rural special educators. However, excessive paperwork, low teacher salaries, and isolation often associated with teacher stress were not found to influence resilience.

Patterson et al. (2007), Castro et al. (2010), and Yost (2006) found that resilient teachers employed specific strategies that mitigated negative situations, and improve teacher retention in both general and special education. Castro et al. determined that novice general and special educators used strategies such as problem-solving, help-seeking, advocating for resources and a willingness to change work conditions that are unsatisfactory and that these strategies added to the level of resilience exhibited by the participants. Patterson et al. also found that resilient urban teachers were problem-solvers who sought out professional development opportunities, provided mentoring to other teachers, focused on children and their learning, were flexible in their teaching styles and knew when to get involved with situations and when to step back. Yost investigated resilience strategies used by novice special and general educators and determined that "self-efficacy, derived from successful field and student teaching experiences and the ability to use reflection for problem-solving actually outweighed positive school climate as a factor in novice teacher success" (p. 73). Additionally, positive school environments, in and of themselves, did not necessarily improve the resilience of new

teachers. This finding differs from other studies that identified organizational structure, administrative support, work conditions and support systems within the schools as critical factors associated with teacher resilience in special and general educators (Albrecht et al., 2009; Brunetti, 2006;Castro et al., 2010; Dallas, 2006; Day & Gu, 2009; Gu & Day, 2007; Malloy & Allen, 2007; Stanford, 2001;Zost, 2010).

Exploring the effectiveness of resilient teachers was the focus of two studies (Gu and Day, 2007; Day and Gu, 2009). Teachers in latter stages of their careers (24+ years) were interviewed over a four-year (2001 – 2006) period in England (Day & Gu) and the data from that project were used to create three teacher Scenarios in a subsequent study (Gu & Day). Qualitative results from Day and Gu's mixed-methods study indicated that teachers' capacities to sustain their commitment and resilience over time were influenced by phases within their professional lives and identities and that these phases were impacted by the contexts in which teachers worked and lived. Additionally, the management of the interaction of those contexts could positively influence teacher resilience and effectiveness in the school environment. Of the 300 teacher participants, 76% were able to maintain a positive trajectory or continuation in teaching across all phases of professional life during the study (early, mid-years, 24 – 30 years and 31+ years). The authors posited that motivation, commitment and a strong sense of active engagement in the profession factors associated with the percentage of persistent teachers in late career phases (54% for 24+ years; 64% for 31+ years). Challenges to teacher retention within the 24 – 30 year phase included additional leadership responsibilities, external policies and initiatives, deteriorating pupil behavior, and adverse personal life events, while challenges for 31+ year teachers included results driven systems, poor

health, increased paperwork, heavy workloads and long working hours.

A subsequent Gu and Day (2007) study utilized Day and Gu's 2009 data to create three Scenarios to differentiate the level of complexity of situations across dimensions from least complex (Scenario 1) to most complex (Scenario 3). Using these Scenarios, Gu and Day found that resilient teachers were able to balance personal, situated and professional components of teaching, if one or two of the components of teachers identities dominated. Teachers were less likely to continue teaching over time, if they were unable to manage fluctuations of any of the identity components.

Summary

Results of the 11 studies reviewed indicated that resilient teachers in both general and special education value professional development and are motivated by the students they teach (Brunetti, 2006; Day & Gu, 2009; Malloy & Allen, 2007; Patterson et al., 2004; Stanford, 2001). Additionally, resilient teachers were problem solvers (Castro et al., 2010; Patterson et al., 2004), willing to explore new ideas and teaching methods (Patterson et al, 2004), and impacted by various situation, professional and personal experiences throughout their career (Day & Gu, 2009; Gu & Day, 2007). High expectations for students and teachers, professional learning communities, and collegial and administrative support were all identified as factors that contribute to resilience in teachers (Dallas, 2006; Malloy & Allen, 2007; Patterson et al., 2004; Zost, 2010), while student teaching and other pre-service field experiences were found to mediate the negative impact of an unsatisfactory work situation in one study (Yost, 2006). Interestingly, Zost (2010) found excessive paperwork, low teacher salaries, and isolation were not influential factors impacting special educator longevity. Similarly, Abrecht et

al. (2009) found that special educators reported unfavorable working conditions tolerable as long as administrative support was available on a daily basis.

While these qualitative studies have identified factors associated with teacher resilience in urban, rural, and with student populations with challenging academic and/or behavioral issues, there remains a gap in the literature on whether quantitative scales would find similar factors. Additionally, the participants in these studies were overwhelmingly general educators with very few special education teachers included. Given the need to improve teacher retention rates in special education, it is essential to expand this research to the special education teacher population.

Mixed Methods Studies

Quantitative data were included in three mixed-methods studies (Albrecht et al.,2009; Brunetti, 2006; Day & Gu, 2009). Johnson and Onwuegbuzie (2004) defined mixed methods research as a body of research "where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study" (p. 17). Mixed method designs include both quantitative and qualitative phases within one study and must include an integration of both sets of data at some point. These studies often prioritize one research methodology over the other, or a dominant-less dominant design (Onwuegbuzie & Johnson, 2006). Three studies in this review utilized this type of approach. Albrecht et al. (2009) implemented a dominant quantitative design, while Brunetti (2009) and Day and Gu (2009) employed a dominant qualitative method. As all qualitative data were reviewed previously, this section will focus on the quantitative data associated with each study and includes the following areas: independent and dependent variables, measurement, data analysis and

results.

Independent Variables. Each study used different independent variables as part of the quantitative analysis of factors associated with teacher resilience. Brunetti (2006) examined motivation; Albrecht et al. (2009) explored working conditions and demographic information; and Day & Gu (2009) investigated the impact of teachers' lives, work, and personal identities.

Dependent Variables. All three studies selected dependent variables that measured resilience indirectly through intent to remain in teaching (Albrecht et al., 2009; Brunetti, 2006) or teacher effectiveness (Day & Gu, 2009).

Measurement. Surveys were the primary source of quantitative data used in two mixed-methods studies (Albrecht et al., 2009; Brunetti, 2006). However, the amount of data collected by the surveys varied, with Albrecht et al. using this measurement as the primary source of data, while Brunetti included survey data as a secondary source. Albrecht et al. developed and implemented an Emotional Behavioral Disorders (EBD) Working Conditions Survey, which consisted of 28 items measuring demographics, personal and instructional resources, methodologies, preservice and in-service training, intent to continue in current setting. Various responses were elicited from this survey including Likert scales, forced response, multiple responses and narrative comment. Brunetti used the Experienced Teacher Survey, which included 22 items and used a Likert scale to assess participant responses. Four items measured teacher satisfaction, with the remaining 18 items addressing factors that contribute to teacher continuation including professional, practical and social factors. Day & Gu (2009) used pre- and post-testing of student academic performance at the beginning and end of each of the four

academic years included in their study as a measurement of teacher effectiveness.

Data Analysis. Descriptive statistics were calculated in two of the three mixed methods studies (Albrecht et al., 2009; Brunetti, 2006), with one study, Albrecht et al. reporting inferential data as well. Day and Gu (2009) did not report data related to their pre- post-testing analysis of student achievement, which calls into question the reliability of their results given that these data were to be collected used as a measure of teacher satisfaction. Brunetti derived mean scores and standard deviations to measure Teacher Job Satisfaction items on the administered survey, which used a rating scale of 1 – 4, with 4 equaling the most positive rating. Both Brunetti and Day and Gu employed qualitative-dominant study designs, which may explain the limited quantitative data reported. By providing limited quantitative data, the authors are unable to bolster the qualitative data compiled. Inclusion of quantitative data collected would provide support and clarity to the qualitative results reported.

However, Albrech et al. (2009) used more in-depth quantitative analyses to derive data regarding the impact of working conditions on EBD teachers' intent to remain in teaching. Percentages were reported related to demographic data, access to resources, availability of specific support personnel, responsibilities, and methodological approach. Correlations were used to determine the relationship between demographics and working conditions and the intent of teachers to continue teaching students with EBD for the next two years. Chi-square analyses examined whether demographics, access to support personnel and instructional resources, and methodologies and classroom responsibilities were associated with teacher intent. A one-way within-subject analysis of variance (ANOVA) examined the level of satisfaction participants reported regarding working

conditions and school climate.

Results. Only two studies, Albrecht et al. (2009) and Brunetti (2006) reported results from their quantitative analyses. Brunetti found that that resilient inner city teachers who participated in the study looked forward to coming to work each day (M = 2.94; SD = 0.73); would like to still be teaching in five years (M=3.00; SD = 0.93); would choose the teaching profession again (M = 3.38; SD = 0.52); and were satisfied with their job (M = 3.06; SD = 0.81). Day and Gu (2009) did not include this data, although they indicated this information was collected. The lack of reporting on the quantitative data is concerning and results in the need to view the results and recommendations reported with caution.

When evaluating factors which may be associated with the intent of EBD teachers to continue teaching, Albrecht et al. (2009) found years of experience to be a significant determinant of EBD teachers' intent to remain (χ^2 = 12.47, df = 3, p = .006), with 84.8% of teachers with more than 10 years of teaching in the field more likely to continue (t = 2.9). However, only 70.7% of teachers with two to five years of experience in the field were likely to continue (t = -3.2). Working conditions were evaluated via a 5-point Likert scale (1=very poor to 5 = excellent) and results indicated that teachers found school climate to be satisfactory (mean range = 3.07 – 3.55) with the exception of time to complete paperwork, which was rated significantly lower than the other factors (M = 2.47, SD = 1.143). Additionally, the association between administrative support and EBD teachers' intent to continue teaching indicated a significant association (χ^2 = 16.694, df = 1, p <.001) with 82.4% of teachers likely to stay in their current position indicating that administrative support was available to them. The frequency of that support was also

found to be associated with teachers' declared intent to continue teaching ($\chi^2 = 13.147$, $df = 4$, $p = .011$) with 87.3% of teachers likely to stay reporting that administrative support was available on a daily basis. An association was also found between the frequency of paraprofessional support and the likelihood of teachers continuing in their assignment ($\chi^2 = 8.532$, $df = 2$, $p = .014$) with 80% who indicate their intention to remain reporting daily availability of paraprofessional support.

When examining the association between methodologies and classroom responsibilities and teachers' stated intent to remain or leave their current positions, Albrecht et al. (2009) reported no association evident between EBD teachers' intent to stay or leave and the use of physical restraint ($\chi^2 = .198$, $df = 1$, $p = .656$), or injury by a student ($\chi^2 = .223$, $df = 1$, $p = .637$). Additionally, methodological approaches were found to be associated with EBD teachers' intent to stay or leave ($\chi^2 = 28.565$, $df = 13$, $p = .008$) with 89.8% of participants who reported using Positive Behavior Interventions and Supports (PBIS) in conjunction with point systems more likely to continue than teachers using a point system and other non-PBIS approaches.

Summary

Of the three mixed-methods studies reviewed, only two, Albrecht et al. (2009) and Brunetti (2006) provided data regarding the quantitative analyses performed. Results indicated that resilient inner city teachers were more satisfied with their jobs, looked forward to coming to work, would continue teaching for at least the next five years and would choose the teaching profession again if given the opportunity (Brunetti). Additionally, Albrecht et al. found that EBD teachers who indicated the intent to remain in their current position for at least two more years, were teachers supported both by

administration and paraprofessionals, were satisfied with working conditions and school climate, and used combinations of methods to instruct students. However, adequate time for paperwork was found to be less than satisfactory for EBD teachers and the use of physical restraint or physical injury by a student were not significantly associated with teachers leaving their current positions.

While the mixed-methods studies reviewed included some quantitative data, with the exception of one study (Albrecht et al., 2009) the information was very limited with Gu & Day (2009) neglecting to report any data at all. Additionally, like the qualitative studies reviewed, the mixed-methods studies were almost entirely conducted with general educators. Only Albrecht et al. focused only on special educators. However, the special education teachers who participated in the study worked exclusively with students who were identified as having emotional or behavioral disabilities. This narrow focus makes it difficult to generalize their results to special educators who work with students in other disability categories. There continues to be a need to expand this research quantitatively to include special educators who work with a wider range of student disability types.

Methodological Findings

This methodological review defines and reports concerns with the validity of the included qualitative and mixed-methods studies per criteria outlined by Lincoln and Guba (1985) and elaborated upon by Bradley (1993) and Anfara (2006). Lincoln and Guba (1985) assert that an appropriate evaluation of qualitative research must address the following criteria pertaining to the “trustworthiness” of the information reported (p. 301): credibility, transferability, dependability, and confirmability. Research procedures that support credibility include a prolonged stay in the field, persistent observation, data

triangulation, debriefing with peers, member checks, and reported research bias (Bradley; Lincoln & Guba). Transferability is the ability of the reader to make a comparison between the context of the study reviewed and a similar context through appropriate data descriptions. Dependability is established primarily through an independent audit of data collected and in the way in which any changing conditions are explained. Confirmability is accomplished when data characteristics posited by the researcher are confirmed by others who read or review the research results.

Establishing validity within mixed-methods studies is an area that has only recently been addressed (Anfara, 2006; Onwuegbuzie & Johnson, 2006). However, Anfara identified five design issues that should be considered by researchers when using a mixed method approach. These are (1) rationale, (2) explanation of the quantitative and qualitative forms of data collected and why, (3) the priority of one method over the other, (4) sequencing of methods, and (5) matching data analysis to design. A summary of all relevant findings are in contained in Appendix A.

Qualitative Studies

Credibility. All eight qualitative studies addressed credibility in one or more areas recommended by Lincoln and Guba (1985) and Bradley (1993). Data triangulation and member checks were documented by three studies (Dallas, 2006; Stanford, 2001; Yost, 2006). Castro et al. (2010) and Yost (2006) included peer debriefing information, while Zost (2010) and Dallas provided discrepant data that was not anticipated. Researcher bias was addressed in two studies (Dallas; Stanford) with only Stanford elaborating on the past experiences of the researcher and how those experiences may or may not influence the research project.

Seven out of eight studies included persistent time in the field (Dallas, 2006; Gu & Day, 2007; Malloy & Allen, 2007; Patterson et al., 2004; Stanford, 2001; Yost, 2006; Zost, 2010) while Castro et al. (2010) reported only minimal time with participants (i.e. 60 – 90 minutes). Of all the studies reviewed, only Dallas included five out of the six areas recommended to enhance credibility of qualitative research data, with Yost including four areas. Four studies provided credibility data on only one area out of the six recommended (Castro et al.; Gu & Day; Malloy & Allen; Patterson et al.).

Transferability. Five out of the eight studies reviewed included ample and rich descriptions of the research projects and results found (Castro et al., 2010; Dallas, 2006; Patterson et al., 2004; Stanford, 2001; Yost, 2006). Although Gu and Day (2007) included ample information regarding the portraits derived from their data analysis, the information regarding how those data were collected was limited and would not be easily transferred to a similar setting. Similarly, Zost (2010) and Malloy and Allen (2007) provided very limited information on the data collection procedures or analyses. Additionally, neither study included any comprehensive data on teacher responses to interview questions or how categories where developed from those responses. Instead, they offered only a synopsis of their findings, with little direct information on how those synopses were derived.

Dependability. Only two studies established dependability through the use of internal audits (Castro et al., 2010; Dallas, 2006). Castro et al. used a team approach to reach consensus regarding the nature of the finding, while Dallas reported the inclusion of an internal audit procedure, but did not specify what the audit was conducted.

Confirmability. External audits were used to determine confirmability by two of the eight studies reviewed (Dallas, 2006; Yost, 2006). Dallas did not provide specifics on how the external audit was conducted, only state that the audit took place. However, Yost specified that interview protocols were reviewed by education professors, graduate students, and teachers not associated with the study and these data were used to establish confirmability of the procedures used during the project.

Summary

Although all eight studies reviewed addressed various issues associated with trustworthiness in qualitative research, no study included all the recommended information. Time in the field was the area most frequently documented, with seven out of eight studies reporting length of spent gathering data (Dallas, 2006; Gu & Day, 2007; Malloy & Allen, 2007; Patterson et al., 2004; Stanford, 2001; Yost, 2006; Zost, 2010). Castro et al. (2010) provided only limited information regarding the length of interview sessions. Thick description was the second most common area cited with five out of eight studies providing this information (Castrol et al.; Dallas; Patterson et al.; Stanford; Yost), while three studies, Dallas, Stanford, and Yost reported triangulating data and using member checks as part of their data analysis. Peer debriefing was reported in two studies (Castro et al., 2010; Yost, 2006) along with discrepant information (Dallas; Zost), researcher bias (Dallas; Yost), internal audit (Castro et al.; Dallas), and external audit (Dallas; Yost).

Of all the studies reviewed, only Dallas (2006) included a majority of areas associated with trustworthiness in qualitative research (eight) with one area, peer debriefing, not included in the analysis. Stanford (2001) and Yost (2006), while not

including all recommended areas, did include five and six respectively out of the nine. Castrol et al. (2010) included only three areas, Zost (2010) two areas, and Gu and Day (2007) and Malloy and Allen (2007) provided data for only one area in their studies. However, Lincoln and Guba (1985) do not specify how many aspects of trustworthiness should be included when considering the reliability of qualitative research. In fact, they emphasize that trustworthiness criteria are not "prescriptions of how inquiry must be done" (p. 331). In light of this stance, measuring the credibility of qualitative results based solely upon the number of trustworthiness components included is not necessarily appropriate.

Although Lincoln and Guba (1985) caution readers not to evaluate qualitative literature by the number of trustworthiness criteria included, it is difficult not to associate a higher inclusive rate with more valid results. Out of the eleven studies reviewed, only two, Stanford (2001) and Dallas (2006) included a majority of the areas associated with validity in qualitative literature. Peer debriefing (Dallas; Stanford), external audits (Stanford) and discrepant information (Dallas) were the areas missing for those studies. Yost (2006) included all trustworthiness data except researcher bias, discrepant information and specific data triangulation information. In the area of data triangulation, only Stanford and Dallas gave specific information on data types and how data would be triangulated. This is an area of concern as lack of specific triangulation information could make replication difficult.

Additionally, external audits were reported in only two studies (Dallas, 2006; Yost, 2006). An external review is characterized by an individual who is new to the project and can provide "an assessment of the project throughout the process of the

research or at the conclusion of the study" (Creswell, 2003, p. 196). Although not mandated, lack of this information makes it difficult for the reader to determine whether the procedures were appropriate for the research question proposed. Inclusion of this data can bolster the validity of the scales used and thereby the reported results.

Peer debriefing was another area that was evident in only two studies, Yost (2006) and Castrol et al. (2010). This process requires the researcher to meet with impartial colleagues to determine the appropriateness of the methodology used in the study (Lincoln & Guba, 1985). Distinctly different from an external audit, this process enhances the accuracy of the account of the information presented through impartial questioning of the data and assists in making sure the account given will resonate with individuals other then the researcher (Creswell, 2003). Again, omitting this information requires those outside of the study to trust that the researcher reports data accurately and consistently.

Finally, researcher bias was documented by Stanford (2001). Because qualitative research often involves the emersion of the researcher into the context being investigated, self-reflection of the researcher is extremely important in determining any prejudices that may impact study design and results.

While it is generally understood that there are no strict criteria on the number or quality of trustworthiness data that must be included in qualitative research, studies that incorporated more of this information reported results that appeared more credible and more easily replicated as compared with those with limited trustworthiness data. By expanding this research quantitatively, issues from the qualitative methodology that impact generalizability and replication such as lack of triangulation of data, external

audits, and researcher bias can be controlled or eliminated completely.

Mixed-Methods Data

Although mixed-methodology has been used among social science and educational researchers since the 1980s, there has been less information available pertaining to evaluating the quality of that research when compared to qualitative or quantitative methods (Anfara, 2006; Creswell, 2003). However, there are an increasing number of researchers who have recommended certain criteria to guide the evaluation of mixed methods research designs (Anfara). Although there is no strong consensus regarding the most important elements to consider when reviewing mixed-methods studies, the following five criteria have been posited (Creswell; Anfara): (1) providing the appropriate rationale for the design, (2) explaining what quantitative and qualitative forms of data will be collected and why, (3) determining the priority of one method over the other, or if both will be used, (4) sequencing of methods, and (5) matching the data analysis to the design. The three mixed-methods studies in this review were evaluated using these recommendations.

Rationale. Two studies, Day and Gu (2009) and Albrecht et al. (2009) included a rationale for why a mixed-methods design was selected and what information they hoped to obtain through using both qualitative and quantitative methods that might not be captured with only one method. Brunetti (2006) did not indicate any rationale for selecting a mixed-methods approach. Because this information was not included it is difficult to determine why this method was selected over using a qualitative or quantitative method exclusively. Inclusion of the rationale would have provided insight

into whether a mixed-methodology provides more comprehensive data or was chosen for convenience. In not providing this information, the results of the study may be viewed with more skepticism then may have been the case if the rationale was provided.

Form of data collected and why. All three studies included the form of data collection as it pertained to either quantitative or qualitative measures and why they chose to collect that data (Albrecht et al., 2009; Brunetti, 2006; Day & Gu, 2009). However, Day and Gu offered a more extensive explanation in support of the form of data collected stating that using these two forms allowed for more "detailed, holistic profiles of teachers' work and lives over time" (p. 444). Brunetti gave the least amount of support for the forms of data collected and Albrecht et al. provided only a cursory explanation regarding why two forms of data were needed. Because of this, replication of the Brunetti and Albrecht et al. studies would be difficult if not impossible to undertake resulting in the inability to validate data that were reported.

Priority of method. All three studies indicated the priority of one method over the other, with Albrecht et al. (2009) primarily using a quantitative approach with minimal qualitative data collected. Both Day and Gu (2009) and Brunetti (2006) used qualitative methods with limited quantitative procedures included.

Sequencing of methods. All studies indicated a sequence of methods within the procedural information provided (Albrecht et al., 2009; Brunetti, 2006; Day & Gu, 2009). However the exact sequence of data collection reported by Brunetti was less clear as he indicated that survey data would be used as a support for the information gained from teacher interviews, but did not specify whether the survey data were collect before, during or after the collection of the qualitative measures. Day and Gu indicated that

quantitative data on student achievement were collected at the beginning and the end of the study to use as comparison data for teacher effectiveness, while Albrecht et al. collected both qualitative and quantitative data simultaneously as part of a questionnaire.

Matching data analysis to design. In two studies, Brunetti (2006) and Albrecht et al. (2009) data analysis procedures were appropriate for the designs used. Because quantitative measures were the prioritized method used in Albrecht et al. to assess EBD teachers' working conditions, deriving inferential and descriptive statistics from those data were appropriate. Additionally, Albrecht et al. included teachers' narrative response in order to assist in theme and pattern development, which support the quantitative findings. Similarly, Brunetti included means and standard deviations derived from survey data collected on teacher satisfaction. This information was used to "support findings that emerged from the teacher interviews" (p. 814). However, Day and Gu (2009) did not indicate how quantitative data were analyzed. There was significant information regarding the teacher interviews and pattern and themes that emerged as a result, but student data collected to determine teacher effectiveness in various career phases was not reported. This is a distinct weakness in the study's design.

Summary

Only one study reviewed, Albrecht et al. (2009) included all five elements associated with a rigorous mixed-methods study, with two studies, Day and Gu (2009) and Brunetti, (2006) including at least 80% of the recommended elements. Brunetti did not include the rationale for the use of mixed-methods while Day and Gu lacked information regarding the quantitative data collected. While this area is only one of five that is recommended, the lack of this information is troubling, as it negatively impacts

any findings, implications or recommendations made by the authors. Had this information been included, credibility would have been added to the results reported the recommendations proposed by the authors.

Scale Search for the SECRS

Previous research found that teachers who remain in schools or districts in urban or rural areas or are considered to teach a student population that has been labeled high risk (e.g. students with disabilities, students living in extreme poverty, students who are abused or neglected) have characteristics associated with resilience. This characteristic has been identified qualitatively as influencing the career choices of those teachers. However, the exploration of resilience and teachers has been limited to general educators, with only limited inclusion of special educators. Additionally, there were no studies that incorporated a scaled survey instrument as the primary measurement of resilience. Quantitative data were considered only as secondary information sources with limited discussion of how those data could be used to evaluate the impact of resilience on teacher career choices in general and special education teacher career choices. There has also been limited attention given to exploring whether differences exist in the resiliency of general or special education teachers who continue to teach as compared to those who have left teaching.

In an attempt to address this gap in the research on special education teacher retention, a search was undertaken to locate any existing quantitative scales developed to measure teacher resilience. However, no scales were found. To address this issue, a further review of studies of resiliency in fields other than education was conducted to determine if scales measuring resilience in other professions would be appropriate for use

with special education teachers. The following sections describe the research and selection of the scales used to comprise the SECRS.

Scale Selection for the SECRS

Most reviewed studies for this project used an interview format with only three including survey items to examine teacher resilience (Yost, 2006; Burnetti, 2006; Albrecht et al., 2009). Of those three studies, none were focused on the development of an instrument that would reliably measure the construct of teacher resilience. As a result, an expanded electronic search was conducted that included the related fields of psychology and sociology, both of which often study resilience in individuals, in an attempt to find previously constructed survey instruments that would measure the resilience construct. The Psychology and Behavioral Sciences database, the JSTOR database, along with the ERIC database were used to search for possible scales. The terms resilience, survey, special education teachers were inputted for each search resulting in the identification of 167 qualitative, quantitative, mixed methods studies which included the use of surveys, questionnaires, or interviews. After reviewing the abstracts of the studies, four were found to focus on teacher resilience in general and only one focused solely on special educators. Three studies were qualitative and one was mixed-methods. Further review of the four studies indicated that only one provided quantitative information regarding special education teachers and working conditions. Because the purpose of that study was not to validate the instrument used, no data were provided on the statistical analysis of items comprising that instrument. Therefore, that scale was excluded.

When the term career was added to the search, a total of 55 studies were identified

from the JSTOR database only. The ERIC and Psychology and Behavioral Sciences databases identified no studies. After further review of the abstracts, none of the 55 studies included a survey that would evaluate the career resilience of special educators. Due to the inability to locate survey instruments measuring special education career resilience, a second search was conducted to find scales that might be combined to produce a new instrument proposed to measure career resilience. The descriptions of the four domains of the CRF (i.e. Theme Acceptance, Support for Self-Awareness, Conversion, Connectedness) were used as the basis to identify scales that would most closely measure each domain. The nursing profession was found to have retention issues that were very similar to those associated with teacher retention in special education. In particular, nurses who work primarily in operating rooms were found to have high levels of stress associated with job responsibilities and were much more likely to leave nursing due to those stressors (Gillespie et al., 2009). Additionally, resilience in operating room nurses was found to mitigate the impact of those stressors. Further inquiry into nursing and resilience resulted in the identification of several previously developed instruments used to quantify the level of resilience associated with nurses who continue in the field. The instruments used to measure resilience in nursing were reviewed to see their applicability in creating a new instrument to measure the career resilience in special educators through a CRF. As a result, three scales were identified for three domains of the CRF: the Resilience Scale (Wagnild & Young, 1993), the Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003), and the Brief Resilience Scale (Sinclair & Wallston, 2004).

Locating a scale that was appropriate for the domain of Theme Acceptance required further exploration due to the focus of this domain on the impact of organizational support for individual employees (Rickwood, et al., 2004). Organizational support was not an area examined in the nursing literature. Therefore, the search for a scale that would reflect this domain was expanded to include the broader concept of how organizations can initiate programs and supports that enhance the resilience of employees. Ingersall in a 2001 project examined whether the function of an organization had a direct impact on the rate of employee turnover, and found that those organizations that maintain a sense of community had higher rates of employee retention. Therefore, a scale was sought that contained items that would capture this phenomena. As a result, the Brief Survey of Perceived Organizational Support (Eisenberger & Huntington, 1986) was selected. Items in this scale examine how leaders within an organization are perceived to either be supportive of employee's accomplishments or uninterested in the well-being of those employed in the organization, both of which are thought to impact the level of career resilience in individuals.

The four scales selected to comprise the SECRS contained items associated with factors identified in the literature as impacting special education teacher retention and teacher resilience. There is precedence for the incorporation of previously developed instruments when creating a new one. Gillespie and colleagues (2007) combined seven previously constructed scales along with items created specifically in their examination of the relationship between perceived competence, collaboration, control, self-efficacy, hope, coping, age, experience, education, and years of employment and resilience in OR nurses.

Items from each scale are included in Appendix B. The following sub-sections will review each scale and discuss the psychometrics reported.

The survey of perceived organizational support. The Survey of Perceived Organizational Support (SPOS) was chosen as the subscale for the Theme Acceptance domain due to items which appeared to be a measure of administrative support, organizational structure, and opportunities for professional development. The SPOS was developed to assess the extent to which employees believe their employer values their contributions and cares about their well-being. The SPOS contained 36 commitment statements, and used a 7-point Likert scale (1 = strongly disagree, 7 = strong agree) to determine the extent of agreement. Factor analysis indicated that items loaded on two different factors: perceived support and a possible second factor that was not named by the authors. The Perceived Support factor accounted for 93.9% of the common variance and 48.3% of the total variance and had factors loadings ranging from a low of .43 to a high of .84. Reliability and item analyses were also conducted on the SPOS and resulted in a reliability coefficient (Cronbach's alpha) of .97, with item-total correlations ranging from .42 - .83 (Eisenberger et al., 1986).

The resilience scale. The Resilience Scale (RS) was developed from a qualitative study of 24 women who demonstrated successful navigation through a significant life event (Wagnild & Young, 1993). Five interrelated components that constituted resilience were incorporated in the scale: equanimity, perseverance, self-reliance, meaningfulness, and existential aloneness.

Although the RS was developed using data obtained from a sample comprised of only females, the authors reported that data from subsequent studies using samples with

varying demographic characteristics demonstrated that internal consistency and test-retest reliabilities, as well as construct and concurrent validity supported the original study data (Wagnild & Young, 2004). The RS contained 25-items and individual responses were based upon a 7-point Likert scale (1 = Strongly Disagree; 7 = Strongly Agree). A pilot form was pretested for reliability and clarity of items and directions by 39 undergraduate nursing students. Internal consistency reliability coefficient was .89 for that sample.

After the pilot testing, the RS was administered to a sample of 1,500 individuals and principal component analysis (PCA) was conducted followed by oblimin rotation with Kaiser normalization. This normalization process is used due to the tendency for the rotation procedure to give equal weights to variables whether they have low communalities or near unity communalities. Kaiser normalization corrects this by dividing each loading within a given row of a factor structure by the square root of the communality of that variable (Harris, 2001). Once the rotation is completed, the effects of this normalization are removed by "multiplying each loading in the rotated structure by the square root of the communality of the variable described in that row" (p. 363).

The initial factor solution of the RS indicated one primary factor underlying the data, with an eigenvalue of 9.56, which accounted for 38.3% of the variance. Loadings ranged from .30 to .76 with 23 of the 25 items falling between .45 and .76. The correlation between the factor score and total RS score was .99, $p < .001$. Five factors were identified that accounted for 57.1% of the variance. When the factor procedure was stopped at the point where the last factor accounted for no less the 5% of the variance, a two factor solution was obtained, which was reported as more interpretable. Factors 1 (Personal Competence) included 18 items with factor loadings ranging from .75 to .41

and Factor 2 (Acceptance of Life and Self) included 8 items with factor loadings ranging from .49 to .45. However, only 44% of the total variance was explained by the two-factor solution, leaving 56% of the total variance unaccounted for. When a five-factor solution was obtained, 57.1% of the total variance was accounted for. However, several secondary loadings caused ambiguity in that factor solution. Because of the percent of variance that remained unaccounted for in the factor solution derived by Wagnild and Young, there appears to be some ambiguity in the overall factor structure of the RS.

The RS was selected as the subscale to measure the domain of Support for Self-Awareness because the central component in that domain is the development of a deep understanding of personal values and interests that facilitate resilience in an individual. In the analysis of the Resilience Scale (RS), Personal Competence and Acceptance of Life and Self were found to be factors associated with resilience. As these factors can be associated with the development of self-awareness, the RS was selected as the measure for the Support for Self-Awareness domain of the CRF.

The conner-davidson resilience scale. The Connor-Davidson Resilience Scale (CD-RISC) was developed as “a brief, self-rated assessment to help quantify resilience and as a clinical measure to assess treatment response” (Connor & Davidson, 2003, p. 77). Items from the CD-RISC were derived using research from different areas associated with resilience such as hardiness, perceived stress, stress vulnerability, and social support. The CD-RISC contains 25 items, which use a 5-point Likert scale for responses (0 = not true at all; 4 = true nearly all of the time), which will be modified to a 7-point scale for this study. A total of 828 individuals including individuals from the general public (*n* = 577); primary care patients (*n* = 139); psychiatric out-patients in

private practice (n = 43); subjects in a study of generalized anxiety disorder (n = 25); and subjects in two clinical trials of Post Traumatic Stress Disorder (n = 22; n = 22). All participants were asked to respond to items based upon how they felt over the previous month. A score range of 0 - 100 was possible with higher scores indicating greater resilience.

Cronbachs' alpha for the CD-RISC was .89 and item-total correlations ranged from .30 to .70. Convergent and discriminant validity data were also reported on the CD-RISC. Convergent validity is demonstrated when two scales that should be theoretically related to each other are, in fact, highly correlated (Harrington, 2009) while discriminant validity is demonstrated when scales of different constructs are distinct. Convergent validity was examined for the CD-RISC by correlating the CD-RISC with independent and valid measures of hardiness (Kobasa Hardiness Scale), perceived stress (Perceived Stress Scale), stress vulnerability (Stress Vulnerability Scale), disability (Sheehan Disability Scale), and social support (Sheehan Social Support Scale). Discriminant validity was assessed by correlating the CD-RISC scores with the Arizona Sexual Experience Scale. Because several of the samples were not normally distributed, Spearman r_s as well as Pearson r_p were calculated. Scores were positively correlated with hardiness (Pearson r_p = .83, p<.0001) and social support (Spearman r_s= .36 p<.0001); negatively correlated with perceived stress (Pearson r_p = -.76, p <.001); stress vulnerability (Spearman r_s = -.32, p<.0001), and disability (Pearson r_p = -.62, p<.0001). The CD-RISC was not significantly correlated with the measure of sexual experience at the baseline (r = .34, p = .11) or at the endpoint (r = -.30, p = .21).

Factor analysis of the CD-RISC was conducted using an ORTHO-MAX rotation, which yielded five factors with eigenvalues ranging from 1.07 to 7.47. Factor 1 reflected personal competence, high standards and tenacity (eigenvalues of 7.47); Factor 2 corresponded to "trust in one's instincts, tolerance of negative affect, and strengthening effects of stress (eigenvalues of 1.53)" (Connor & Davidson, 2003, p. 80). Factor 3 was associated with secure relationships and acceptance of change (eigenvalue of 1.376); Factor 4 was related to control (eigenvalue of 1.128) and Factor 5 to spirituality (eigenvalue of 1.073). It should be noted that the authors did not conduct a parallel analysis to determine whether these factors would have been derived from a random sample or if they are unique to this sample used in the study. Without this type of data it cannot be assumed that the factors derived were not merely chance. Also, the authors note that the CD-RISC has not been validated against an objective measure or against biological measures associated with resilience in response to extreme stress, both of which are considered limitations of the reported analysis. Although there are some limitations in the use of the CD-RISC, it has supportive data for its use in measuring resilience for both clinical practice and research.

The CRF domain of Conversion includes the premise that an individual must identify goals and then develop a plan for realizing those goals in real, concrete events and actions. This is accomplished through intrinsic motivation which assists individuals in overcoming barriers that may negatively impact career goals (Rickwood et al., 2004). The CD-RISC was chosen to measure this domain because the five factors associated with the CD-RISC, may also measure the ability of an individual's ability to identify

goals through enhancement of internal motivation and the tenacity needed to realize those goals.

The brief resilient coping scale. The Brief Resilient Coping Scale (BRCS; Sinclair & Walston, 2004) was developed to measure resilient coping and how individuals use social support constructs effectively. An unreported number of original items was developed by the authors and of that set of items, nine were selected for analysis to determine whether they represented a "unidimensional measure of coping" (p. 96). A 5-point Likert scale was used to determine the extent to which items described a participant (1 = not at all; 5 = very well). All nine items were administered to a sample of 230 men and women with rheumatoid arthritis to measure their ability to cope with stress brought on by chronic pain. Principal components analysis with orthogonal rotation was performed on the data from this sample. A Scree test indicated two factors from these nine items, with four items loading on the first factor (.685, .679, .652, .623), three items loading on the second factor (.846, .414, .174), one item loading on both (Factor 1: .494; Factor 2: .481), and one item loading on neither factor (Factor 1: .239; Factor 2: -.756). From this data, the authors determined that only four items, which all loaded on the first factor, were more indicative of their conceptualization of resilient coping. However, they don't clearly articulate what that conceptualization is so it is difficult to ascertain why these items were more salient to resilient coping then those loading on the second factor. Validity and reliability data are only available for the four item BRCS with the authors reporting an overall alpha of .69.

Because no validity and reliability data are provided regarding all original nine items of the BRCS, it is difficult to determine whether the inclusion of these items may

have led to higher internal consistency or not. Additionally, it is unclear why the authors chose to discard questions loading on Factor 2, given fairly strong loadings for at least two of the items (i.e. .846; .414). The absence of a parallel analysis causes further difficulty when evaluating the data because there is no evidence to indicate whether the factors derived from this data were unique to the sample used or whether they were derived by chance. Although constructing a scale with only four items allows a brief assessment of resilient coping strategies, the authors point out that the brevity may negatively impact the internal consistency of the scale. Because of the questionable internal consistency with only four items and the fact that the original nine items developed for the scale more closely reflect the career resilience construct of connectedness, all original nine items were included in the SECRS .

The BRCS was chosen to measure Connectedness because meaningful interactions with others within an environment and a sense of community are both hypothesized as influential when seeking to increase the career resilience of an individual (Rickwood et al., 2004). The BRCS (Sinclair & Wallston, 2004) contains items associated with resilient coping that measure an individual's proclivity to seek assistance from others when working towards goals or encountering problems. Because meaningful interactions within an environment and a sense of community are part of the domain of Connectedness, the BRCS was considered to be an appropriate measure for that domain. For the purposes of this study, the original nine items on the BRCS were included in the SECRS instrument.

Summary

The impact of resilience on special and general education teacher continuation has been well documented in the studies reviewed (Albrecht et al., 2009; Brunetti, 2006; Castro et al., 2010; Day & Gu, 2009; Dallas, 2006; Gu & Day, 2007; Malloy & Allen, 2007; Patterson et al., 2004; Stanford, 2001; Yost, 2006; Zost, 2010). Teachers choosing to remain in their job for three or more years exhibit resilient characteristics such as problem-solving skills (Castro et al.; Patterson et al; Yost); satisfaction in student achievement (Brunetti; Dallas; Stanford; Patterson et al.) work to alter a work situation that was unsatisfactory through collaboration, flexibility and seek personal and professional fulfillment from colleagues and community (Castro et al; Dallas; Day & Gu; Gu and Day; Malloy & Allen; Patterson et al; Stanford; Zost).

However, of equal importance to continuing teachers was the role of administrators and school leaders. Teachers choosing to remain in their positions identified supportive administrators as essential in developing resilience, especially in areas considered to at high risk for attrition such as urban teachers, inner city teachers, rural teachers, new teachers and teachers of students with disabilities (Albrecht et al., 2009; Brunetti, 2006; Castro et al., 2010; Dallas, 2006; Malloy & Allen, 2007; Patterson et al., 2004 Stanford, 2001; Yost, 2006; Zost, 2010). Administrative and peer support impact job satisfaction and teacher commitment, which are closely related to teacher retention (Billingsley & Cross, 1992; Billingsley & Cross, 1991; Boe et al., 2008; Borman & Dowling, 2008; Cross & Billingsley, 1994; Chapman, 1984; Chapman & Green, 2001; Gehrke & McCoy, 2007; Gehrke & Murri, 2006; Gersten et al., 2001; Johnson & Birkeland, 2003; Kersaint et al., 2007; Litrell et al., 1994; Miller et al., 1999;

Nickson et al., 2006; Otto et al., 2005; Plash & Piotrowski, 2002; Smith & Ingersoll, 2004; Weiskopf, 1984; Williams, 2003; Whitaker, 2000).

Previous frameworks have been offered to investigate factors that positively impact teacher commitment and satisfaction. They include economic (Allen, 2005; Holtman, 1969; Stinebrickner, 2001), social/economic (Billingsley, 1993; Brownell & Smith, 1993; Chapman & Green, 1986; Miller et al., 1999), and socialization/organizational (Chapman & Green, 1983). However, a framework investigating the impact of resiliency in the retention of teachers in areas considered to be at higher risk for attrition has not been applied. While the social/organization framework proposed by Steffy and Wolfe (2001) added a career perspective into a social framework, it did not examine teaching from a career perspective or include resilience as a factor to consider when investigating teacher retention in high risk areas. There is a need to explore the role of resiliency in continuing general and special education teacher career choices in high risk areas from a high risk career perspective.

Although the problem of improving teacher retention in these high risk areas is not new, understanding the importance of resilience on teacher career choices has only recently become an area of interest. As a result, research in this area is limited, with most studies examining veteran teachers in high risk areas such as inner city/urban and/or rural schools, as well as special education. Additionally, the majority of studies conducted implemented qualitative methodology, with only three including quantitative data. Although these studies have identified factors associated with teachers who choose to remain in high risk teaching fields and/or areas, there is limited consensus regarding which are most important in predicting teacher resilience, and thereby teacher retention.

Only one study, Albrecht et al. (2009), focused solely on special education teachers as participants, which is concerning given the difficulty in retaining special educators (Plash & Piotrowski, 2006). Identifying factors associated with resilient special educators may contribute valuable information to improve teacher retention.

Although resilience has recently become an area of interest regarding the impact this characteristic may have on teacher retention, the literature exploring the possible relationship between the two is limited especially in the area of special education. Additionally, using a career perspective to include a construct of resiliency has not been attempted in previous studies. This construct encompasses internal characteristics that may influence special education teacher continuation and will build upon previous research in this area. Including a career perspective via a CRF will provide a unique model for investigating special education teacher career choices.

Chapter 3

The overall goal of this study was to develop and field test the Special Education Career Resilience Scale (SECRS) as an instrument to assess the career resilience of special education teachers. The first purpose was to develop and pilot the SECRS, based on a review of the literature on teacher retention and resiliency and to use a Career Resiliency Framework (CRF) to assess career resilience of special education teachers. The specific research questions for this purpose included:

1a. Does the SECRS instrument have acceptable content validity as evaluated by the cognitive interview process and expert reviewers?

1b. Does the SECRS have acceptable internal consistency when piloted with a randomly selected group of continuing and non-continuing special educators?

A second purpose of this study was to field test the SECRS instrument with two groups of teachers who had been in the field of special education for three or more years (continuing special educators) or who had left the teaching profession (non-continuing special educators) to determine whether their responses to items measuring career resiliency differed. Research questions related to this purpose included:

2a. What is the factor structure of the SECRS?

2b. Is the SECRS and the factors derived from the instrument internally consistent?

2c. Do significant differences exist between continuing and non-continuing special education teachers on items comprising the SECRS?

2d. Do significant differences exist between continuing and non-continuing special education teachers when student disability category is considered?

In this chapter, first the setting or local school systems and the participants who field tested the SECRS are described to set the context. Next, the steps that were followed to develop and pilot the SECRS are described including the scales that were selected to reflect the four domains of the CRF, the format of the items and instrument, the cognitive interview process, the expert review of the instrument, and the pilot phase. The final section describes the method used to field test the SECRS and the analysis plan for comparing continuing and non-continuing special education teachers on item responses.

Setting and Participants

This study was conducted in one mid-Atlantic state that is comprised of 24 local school systems or counties. Previous research on teacher resilience focused teachers who taught primarily in urban settings, with limited examination of teacher resilience in either suburban or rural settings. Consequently, I initially chose four local school systems or counties that were representative of suburban or rural for this study. My first contact with each county was through the Director of Special Education. Each Director was sent an email with information on the purpose and scope of the study (see Appendix D) for the email letter). Each Director contacted me via email and provided me with the procedures for conducting a research study in their school systems. An application to conduct research was submitted to each county, and written consent was received from all four counties. The Directors of Special Education from each county then contacted the Human Resources Department and requested the names of all special educators who were teaching for three or more years as well as the names of former special education teachers who were now working in general education. The names of continuing special education teachers were generated using computer-based queries that identified all special educators

teaching for three years or longer. Non-continuing special educators were identified through data collected in teacher exit interviews and/or data indicating the migration of special educators to general education. Three of the four counties provided names of both continuing and non-continuing special educators for the 2011 – 2012 school year. One county was only continuing special education teachers because they did not collect that information. All lists were sent via email to me from either Human Resources individuals or the Directors of Special Education.

Participants

The participants in this study were 567 special education teachers who either continued to teach in the field of special education (i.e. continuing special educators) or left the field to teach in general education or pursue other careers (non-continuing special educators).

There were 495 continuing special educators and 72 non-continuing special educators invited to participate in the study. The 72 non-continuing special educators included teachers from three of the counties as one could not generate the names of non-continuing special educators as requested.

Of the 567 participants, ten individuals from one county were asked to participate in the cognitive interview process and thirty from all four counties were asked to participate in the piloting of the SECRS. All were then asked to complete the SECRS during the field test phase.

Development of the SECRS

As discussed in Chapter 2, I was unable to locate an instrument or scale through a review of the literature. Therefore, four scales were selected to reflect the four domains of

the CRF: The Survey of Perceived Organizational Support (Eisenberger et al., 1986) for Theme Acceptance; The Resilience Scale (Wagnild & Young, 1993) for Support for Self-Awareness; The Connor-Davidson Resilience Scale (Connor & Davidson, 2003) for Conversion; and The Brief Resilient Coping Scale (Sinclair & Walston, 2004) for Connectedness. These four scales served as the basis for the development of the SECRS. The authors of these scales were contacted by email to request permission to use these scales in developing the SECRS. Permission for use of three scales, The Survey of Perceived Organization Support, The Connor-Davidson Resilience Scale, and The Brief Resilient Coping Scale was granted through proper citation. Permission for use of the Resilience Scale was granted with proper citation in addition to the following conditions: all of the original items must be included, no modification to any wording of items was permitted, and all data analysis information must be sent to the authors upon completion of the study. All conditions were met.

Format

To format the SECRS, I chose an equal spaced ordinal scale format. This type of scale asks individuals to select a response category that most closely reflects an opinion on a given topic or area of interest. The advantages of using an equal spaced ordinal scale include improvement of reliability of responses over time, improvement in the precision of responses due to a wider range of choice, and examination of characteristics in a broader scope that are often difficult to assess with a single question (Fink, 1995; Hayes, 1992; Presser et al., 2004).

Response options for ordinal scales, such as a Likert scale, have a typical range of five to seven scaled steps (Pett et al., 2003; Spector, 1992). A 7-point Likert scale with

an anchor of 1 corresponding to the Strongly Disagree option and 7 corresponding to Strongly Agree was used for all items with the exception of the demographic items.

Initial item pool. Because it is difficult to predict the size of the correlation of items at the developmental stage of an instrument (Pett, Lackey, & Sullivan, 2003) a large pool of initial items is preferable. Therefore, all items from each of the four scales (*N*=68) were selected to comprise the pilot version of the SECRS (see Appendix F). All of the selected scales used a 7-point Likert response range with the exception of the Connor-Davidson Resilience Scale, which used a 5-point range. For the purposes of this study, that scale was changed to a 7-point response range. No changes were made to the wording of the initial items.

The 68 items were grouped according to the selected scales and entered into the web-based survey tool, *Survey Monkey* as this survey application has been used widely in education (e.g. Purdue University Technology Website, 2011; *Survey Monkey* Website, 2011; University of Minnesota, 2011). During each phase of development and field testing, the SECRS was available online through the *Survey Monkey* Website or as paper copy for participants who requested this format.

Demographic items. The SECRS also included a series of demographic items for each participant to complete and included the following: age, gender, race, ethnicity, highest degree earned, number of years in teaching profession, number of years as a special education professional, level of teaching (elementary, middle, high), types of students with disabilities taught (i.e. disability categories), and career choice if no longer teaching in the field of special education. (See Appendix F for the original 68 items of the SECRS along with the demographic items).

Once the initial item selection and formatting of the instrument were complete and participants and counties were identified, the next steps in the development of the SECRS were to conduct cognitive interviews, have the scale reviewed by national expert, and pilot the instrument with a small group of participants to further the items and the format before field testing

Cognitive Interviews

A first step in piloting the SECRS was to conduct cognitive interviews. Cognitive interviewing is a process for ascertaining whether an instrument has been interpreted correctly (Fink, 1995; Presser, et al., 2004), and successful completion of this process establishes that both the cognitive standard (Presser, et al.) and content validity (Fink) of the survey have been met. The purpose of this step was to gain insight into the thought processes that respondents used to interpret a question and arrive at an answer and then to analyze that information to establish whether problems existed with particular questions or whether there was response error. An email was sent to 10 special educators from one county (five continuing and five non-continuing special educators) explaining the purpose of the study and requesting volunteers for this phase. Six individuals agreed to participate; four continuing special educators and two non-continuing special educators. Each interview was conducted in-person at a time and location that was convenient for each individual. All six participants were asked to complete a paper copy of the SECRS individually with the researcher and to use the think-aloud method during the interview process to verbalize their thoughts while reading the items. Additionally, each participant was asked whether the format of items and amount of time to complete the SECRS were appropriate or if changes were needed. Each interview was recorded and later transcribed

to determine if item revisions or deletions were necessary. Each interview was recorded and took approximately 45 minutes to complete. The recorded interviews were then transcribed to search for patterns or suggestions for item revisions or deletions.

Data analysis of cognitive interviews. Transcriptions of the six cognitive interviews indicated that three items (TA1, TA3, and TA5) in the domain of Theme Acceptance were not interpreted as intended by the participants. Each item asked the respondents to rate the degree to which the "organization" valued employees, listened to their complaints, or recognized their work (i.e. "The organization values my contribution to its well-being"; "The organization would ignore any complaint from me"; "Even if I did the best job possible, the organization would fail to notice"). Each participant suggested that these items would be better understood if "school system" replaced the word "organization" in each question. When asked whether the length and item configuration of the survey were appropriate all six interviewees indicated that item format and layout made the survey easy to access and that the amount of time to complete all items was appropriate. The suggested changes from the cognitive interview process were made to the SECRS on-line and paper versions and the revised instrument was used in the next step of the development process, expert opinion.

Expert Opinion

Expert opinion data is an essential step in establishing the content validity of a new survey instrument. During this step, experts are asked to judge whether a specific test domain is relevant and whether test items accurately reflect the domain. Seven national experts were identified through the review of literature and then contacted by email to request they serve as an expert opinion in reviewing the SECRS. Four were

authors of studies on teacher retention, and three were experts in the area of special education teacher retention. Six of the seven did not respond to the first or a second request, and one indicated she did not have the time to review the instrument. Three additional experts were then identified with assistance from members of the dissertation committee, contacted by email, and all agreed to review the SECRS. Two experts had advanced degrees in Psychology and one had an advanced degree in Special Education with expertise in teacher training and retention. Each received an email with the link to the Expert Version of the SECRS online and specific instructions were provided as part of that version to guide the expert review and feedback process (see Appendix C).

Data analysis of expert opinion process. Two measures of association were used to evaluate the expert opinion data: Kendall's tau coefficient and the intraclass correlation coefficient (ICC). A Kendall's tau coefficient was calculated for each pair of experts (i.e. experts one and two; experts one and three; and experts two and three). However, this coefficient can be problematic in that there may be occasions when judges scores are highly correlated with one another but show little agreement. For example, in this study two experts may be in agreement that SECRS items measure career resilience but may not agree on the degree to which the items measure that construct. To address this potential issue, the ICC was also calculated, which is an index of the reliability of the ratings for a typical, single judge or expert (Shrout & Fleiss, 1979). It is used when data are collected using only one expert at a time, but there are two or more experts on a subset of the data for purposes of estimating inter-rater reliability.

Kendall's tau coefficient. Kendall's tau coefficient is a measure of association that is most commonly used when data to be analyzed are ordinal in nature (Gibbons, 1993).

The tau coefficient measures "the association between X and Y as the proportion of concordant pairs minus the proportion of discordant pairs in the sample" (p. 11). Two bivariate observations are said to be concordant when the product $(X_i - Y_j)(Y_i - Y_j)$ is positive and discordant when the same product is negative. The purpose of this statistic is to evaluate the relative differences between the ratings of judges when using data that are rank ordered (Gibbons). In determining the tau coefficient, the level of agreement between experts on the content of the SECRS through item scores was derived. Kendall's Tau coefficient of .70 or higher indicates a strong association between item scores (Salkind, 2009).

Intraclass correlation coefficient. A second reliability coefficient used to analyze the expert opinion data was the intraclass correlation coefficient (ICC). The ICC is a "ratio of the variance of interest over the sum of the variance of interest plus error" (Shrout & Fleiss, 1979, p. 420) and has been defined as "the correlation between one measurement (either a single rating or a mean of several ratings) on a target and another measurement obtained on that target" (p. 422). In using the ICC, measurement error is included in the overall reliability index, thereby reducing the probably of a misinterpretation of the statistical analysis. The purpose of the intraclass coefficient is to evaluate the interval/ratio ratings of the judges, thereby evaluating the absolute differences between the judges (Shrout & Fleiss). Shrout and Fleiss recommend that researchers consider which of three defined cases most represents the study when selecting the appropriate ICC model to implement. The first case occurs when "each target is rated by a different set of k judges, randomly selected from a larger population of judges" (p. 421), while the second case occurs when "a random sample of k judges is

selected from a larger population, and each judge rates each target" (p. 421). For this study, case number three was used, as the expert judges were not randomly selected but were judges of interest. Again, ICC of .70 or higher indicates a strong association between the judges scores on the SECRS items.

*Descriptive statistics***.** In addition to the measures of association used for the expert opinion data, frequencies, means and standard deviations were calculated to provide further information on item responses. Because the SECRS used a seven-point Likert scale, items with means above 4.0 and a standard deviation below 2.0 were considered to indicate an acceptable level of agreement among the experts. The 2.0 standard deviation, although high, was selected due to the small number of experts reviewing the SECRS and the desire to include items that had less variability in responses, thereby indicating that the item measured career resilience. Items not meeting those criteria were considered to be problematic. Frequencies of responses were also used to assist in identifying items for possible revision or deletion.

Results of Kendall's tau-b and ICC analyses. The three experts were coded as Raters 1, 2, and 3 and their item responses from the SECRS were entered into the SPSS 20.0 statistical software program. Data were analyzed by comparing the item responses of Rater 1 to Raters 2 and 3 and then Rater 2 to Rater 3. Kendall's tau-b analysis revealed a low but statistically significant level of agreement that items comprising the overall SECRS instrument were appropriate measures of career resilience between Rater 1 and Rater 2, τ=.269, p<.05, and Rater 1 and Rater 3, τ = .247, p<.05. A moderate, statistically significant level of agreement between Rater 2 and Rater 3, τ=.398, p=<.01. Rater

agreement for each subscale items (i.e. Theme Acceptance, Support for Self-Awareness, Conversion, and Connectedness) was not statistically significant.

The results from the ICC analysis revealed all expert scores had a moderate level of association on items comprising the SECRS instrument (.612). Subscale data indicated a strong level of association for the Conversion subscale (.731), a moderate level of association for the Connectedness subscale (.583), and a low level of association for the Theme Acceptance subscale (.283). However, the Support for Self-Awareness subscale had an ICC of .-807, which indicated that the true intraclass correlation for this subtest was poor (Giraudeau, 1996).

Due to the variability in the level of interrater agreement evident in both the Kendall's tau-b and intraclass coefficients, it was difficult to determine with any degree of certainty which items in the SECRS instrument required modification or deletion. Therefore, an item analysis was conducted to examine the means, standard deviations, frequency of responses, and comments provided by the experts to identify problematic items in each subscale. Data from the descriptive analysis are depicted in Table 1.

Table 1
Expert Opinion Data for SECRS

Item	Expert 1	Expert 2	Expert 3	*n*	*M*	*SD*
TAQ1	6	7	2	3	5.00	2.646
TAQ2	1	5	6	3	4.00	2.646
TAQ3	4	7	6	3	5.67	1.528
TAQ4	6	6	2	3	4.67	2.309
TAQ5	2	7	6	3	5.00	2.646
TAQ6	5	6	6	3	5.67	.577
TAQ7	1	2	2	3	1.67	.577
TAQ8	6	5	5	3	5.33	.577

Item	Expert 1	Expert 2	Expert 3	*n*	*M*	*SD*
SSAQ1	7	6	5	3	6.00	1.000
SSAQ2	7	6	6	3	6.33	.577
SSAQ3	6	7	5	3	6.00	1.000
SSAQ4	6	6	5	3	5.67	.577
SSAQ5	7	6	6	3	6.33	.577
SSAQ6	7	7	6	3	6.67	.577
SSAQ7	6	6	6	3	6.00	.000
SSAQ8	7	7	3	3	5.67	2.309
SSAQ9	7	6	6	3	6.33	.577
SSAQ10	7	6	6	3	6.33	.577
SSAQ11	7	6	3	3	5.33	2.082
SSAQ12	5	6	6	3	5.67	.577
SSAQ13	5	7	6	3	6.00	1.000
SSAQ14	7	7	6	3	6.67	.577
SSAQ15	6	7	5	3	6.00	1.000
SSAQ16	7	6	6	3	6.33	.577
SSAQ17	7	7	6	3	6.67	.577
SSAQ18	7	6	5	3	6.00	1.000
SSAQ19	7	6	6	3	6.33	.577
SSAQ20	6	7	6	3	6.33	.577
SSAQ21	7	7	6	3	6.67	.577
SSAQ22	6	6	6	3	6.00	.000
SSAQ23	6	7	6	3	6.33	.577
SSAQ24	6	7	5	3	6.00	1.000
SSAQ25	6	6	6	3	6.00	.000
SSAQ26	7	7	7	3	7.00	.000
CONVQ1	6	7	6	3	6.33	.577
CONVQ2	6	6	6	3	6.00	.000
CONVQ3	5	6	2	3	4.33	2.082
CONVQ4	7	7	6	3	6.67	.577
CONVQ5	7	7	6	3	6.67	.577
CONVQ6	7	6	6	3	6.33	.577
CONVQ7	6	7	5	3	6.00	1.000
CONVQ8	7	6	5	3	6.00	1.000
CONVQ9	6	7	6	3	6.33	.577
CONVQ10	6	7	7	3	6.67	.577
CONVQ11	7	7	7	3	7.00	.000
CONVQ12	7	7	6	3	6.67	.577

Item	Expert 1	Expert 2	Expert 3	*n*	*M*	*SD*
CONVQ13	6	7	6	3	6.33	.577
CONVQ14	7	7	6	3	6.67	.577
CONVQ15	6	6	5	3	5.67	.577
CONVQ16	6	7	7	3	6.67	.577
CONVQ17	7	7	6	3	6.67	.577
CONVQ18	6	6	6	3	6.00	.000
CONVQ19	6	6	6	3	6.00	.000
CONVQ20	4	4	3	3	3.67	.577
CONVQ21	6	7	6	3	6.33	.577
CONVQ22	7	6	7	3	6.67	.577
CONVQ23	5	6	5	3	5.33	.577
CONVQ24	7	6	6	3	6.33	.577
CONVQ25	7	7	7	3	7.00	.000
CONNQ1	4	6	6	3	5.33	1.155
CONNQ2	5	6	6	3	5.67	.577
CONNQ3	6	7	7	3	6.67	.577
CONNQ4	6	7	7	3	6.67	.577
CONNQ5	2	5	2	3	3.00	1.732
CONNQ6	3	6	6	3	5.00	1.732
CONNQ7	6	5	2	3	4.33	2.082
CONNQ8	3	5	2	3	3.33	1.528
CONNQ9	5	6	2	3	4.33	2.082

Note. *SD* = Standard Deviation

Because each item was selected to measure the latent variable of career resiliency, those with means less than 4.0 indicating a lack of agreement with item appropriateness or with standard deviations greater than 2.0 indicating a high degree of response variability, were flagged as items that may be problematic. Although Likert scale response distributions with standard deviations less than 1 could be called consistent and higher than 1 inconsistent (Rumsey, 2007), a standard deviation of 2 was selected for this study due to the extremely small sample size (n = 3). Because smaller samples may yield higher standard deviations in item responses, using a standard deviation below 2.0 may have resulted in the erroneous elimination of an item.

Additionally, frequency of item response ratings was evaluated to determine whether there was a bi-modal distribution of responses, if the responses were primarily at the high end or low end of the response spectrum, or if the responses variability spanned the entire response spectrum. Expert comments were also considered when determining item modification or deletion.

Data from these analyses indicated that the Theme Acceptance (TA) subscale had four items with means above 4.0 but with standard deviations greater than 2.0 (TA1, *M*=5.0, *SD*=2.646; TA2, *M*=4.0, *SD*=2.646; TA4, *M*=5.76, *SD*=2.309, TA5, *M*=5.0, *SD*=2.646). However when looking at the frequency of responses, 66% of the responses for TA1, TA2, TA4, and TA5 were at the high end of the response spectrum (e. g. 5, 6, or 7) while TA1, TA2, and TA4 had 33% of responses at the lower end (2, 1, and 2 respectively). Although the standard deviations were above the 2.0 threshold, this could be due to the fact that only three experts rated the SECRS and the distances between the lowest response and the highest responses were large. As there were no suggestions regarding the wording of the items and the amount of variability in response frequencies was at the high end of the response spectrum, these items were retained without modification.

Conversely, item TA7 had a mean of 1.67 with a standard deviation of .577. When examining the frequency of responses for this item, all three experts gave the item low ratings (i.e. 1 & 2). Although the standard deviation on this item was small, that could be attributed to the small number of experts rating the item and the fact that the negative responses were close on the response spectrum. No suggestions for item modification were given. As this data indicated that TA7 (i.e. “my administrator shows

very little concern for me”) was not considered to be representative of career resilience by the experts, it was deleted from the pilot test version of the SECRS.

Three other items also had standard deviations above 2.0 with means above 4.0. In the Support for Self-Awareness (SSA) subscale, SSA8 had a mean of 5.67 and a standard deviation of 2.309. However, two responses or 66% were at the highest end of the response spectrum (i.e. 7) with one response or 33% at the lower end (i.e. 3) which may again explain the large standard deviation for this item. This item was retained for the pilot version of the SECRS. In the Conversion (CONV) subscale, CONV3 had a mean of 4.33 and a standard deviation of 2.082 and in the Connectedness (CONN) subscale, CONN7 also had a mean of 4.33 and a standard deviation of 2.082. Frequencies of responses for both CONV3 and CONN7 indicated that two responses or 66% for each item were at the high end of the spectrum (i.e. 5 & 6) while one response was low (i.e. 2). These items were also retained for the pilot version of the SECRS.

Two additional items in the Connectedness (CONN5, CONN8) subscale had means below 4.0 but a standard deviation below 2.0. For CONN8 response frequencies for two experts were on the low end of the response spectrum (i.e. 2 & 3) with one response moderately high (i.e. 5). Conversely, CONN5 had a mean of 3.0 with a standard deviation of 1.732, just under the 2.0 threshold. Frequency of responses indicated that two of the three experts or 66% gave a low rating to the question (i.e. 2) and one expert rated it moderately (i.e.5). Expert comments suggested that CONN8 be reworded positively by deleting the word “don’t” from the item. The item was changed from “my friends and family frequently don’t live up to my expectations” to “my friends and family frequently live up to my expectations” for the pilot version of the SECRS.

However, no suggestions given for modifying CONN5 ("I only set goals I know I can reach without the help of others"), and since the data indicated that two experts did not believe the item measured career resiliency, it was deleted from the pilot version. These changes were incorporated into the SECRS both online and in the paper copy and served as the instrument for the pilot test

Pilot Test

A final step in developing the SECRS was to pilot the instrument with continuing and non-continuing special educators. The purpose in this step was to obtain additional feedback on whether items were vague, confusing, or misleading along with additional information on the ease of accessibility, clarity of directions, whether scale construction and formatting was appropriate, and if items were interpreted as intended.

Thirty individuals from the 557 remaining participants were randomly selected to be administered the SECRS during the piloting phase. Every tenth individual from the participants' list of continuing and non-continuing special educators was invited by email to take the pilot version. Twenty continuing and 10 non-continuing teachers were selected. Fewer non-continuing special educators were selected due to the smaller number of non-continuing teachers identified by the four counties.

Four reminder emails were sent to the non-respondents over a span of three weeks to encourage completion of the survey. Seventeen teachers completed the pilot version of the SECRS, which corresponded with a 56% return rate.

Data analysis for pilot test. Originally, exploratory factor analysis (EFA) was proposed to analyze the data from the piloting of the SECRS. However, a sample of at least 100 is generally recommended for EFA and the sample size for the pilot was

significantly less (*n*= 30) with 17 individuals completing the survey (Gorsuch, 1983). As a result, when EFA was attempted, a valid factor solution could not be derived. Therefore means, standard deviations, and frequencies were used in conjunction with item-total statistics and participant comments to analyze the pilot responses and determine the need for item modification or deletion for the field test version of the SECRS.

Data were analyzed for the SECRS instrument as a whole and for each subscale to determine if there were problematic items. All negatively worded items were recoded to ensure rating consistency prior to data analysis. As each item was selected as a measure of career resilience, any item above 4.0 was considered to measure that latent variable. Items with means below 4.0 were reviewed for possible modification or deletion. Likewise, if the variability of item responses resulted in standard deviations exceeding 2.0, those items were considered questionable measures of career resilience and were also reviewed for modification or deletion. Frequencies of item response ratings were also evaluated to determine whether responses were primarily at the high end or low end of the response spectrum, or if the response variability spanned the entire spectrum. Item statistics including inter-item correlations and item-total statistics were evaluated to determine the internal consistency or the degree to which the items measured latent construct of career resilience. These statistics were examined for each of the subscales comprising the SECRS and the overall instrument. Finally, respondent comments regarding any items that were vague, misleading, or confusing were considered when determining the need for item modification or deletion. Data from the descriptive analysis for the SECRS and all subscales are depicted in Appendix G.

Theme acceptance subscale. Cronbach's alpha for The Theme Acceptance subscale (7 items) was .738, which indicated that the internal consistency for items in that subscale was acceptable. Evaluation of items' means and standard deviations indicated that item TAQ2 had a standard deviation of 2.21, which is above the 2.0 threshold but had a mean of 5.14, which is above 4.0. However, an examination of item response frequencies indicated that out of 17 responses, 10 indicated a moderate to strong agreement with the item and the lowest categorical response was "strongly disagree" (i.e.1). This variance in responses explained the large standard deviation found for TA2.

Examination of the corrected-item total correlation indicated that item TA2 had a coefficient of .421, indicating an acceptable correlation with the total subscale score. Only one item, TA1 ("The school system values my contribution to its well-being."), had a correlation coefficient below the suggested .3 value (.212). The mean and standard deviation of TA1 were .546 and 1.664 respectively with response frequencies indicating that 76.4% of responses ranged from moderately to strongly agree (i.e. 5, 6, and 7). The item mean and standard deviation were both acceptable and the amount of variability in response frequencies was at the high end of the response spectrum. Additionally, although the item was identified as vague by one respondent, there were no comments on how the item was vague or recommendations given to clarify the item. As deletion of TA1 did not significantly impact Cronbach's value (i.e. alpha with TA1 .738; alpha without TA1 .761) TA1 was retained unmodified.

Support for self-awareness subscale. The Support for Self-Awareness subscale (26 items) data indicated a Cronbach's alpha of .875. All items in the Support for Self-Awareness subscale had means of 4.0 or above and standard deviations below 2.0.

However, when examining the corrected-item total correlations of items SSA4 (.254), SSA6 (.264), SSA18 (.171), SSA21 (.119), and SSA22 (.089), each item had a value below the recommended .3 which could indicate that these items were measuring something different from the subscale as a whole. But when looking at the value of alpha if the items were deleted, there was minimal improvement from the original alpha of .875. Because one condition when using this subscale was to include all items with no modifications, and as Cronbach's alpha of .875 indicated a good level of internal consistency in conjunction with a lack of respondents identifying items as vague, misleading, or confusing, no changes were made to the original 26 items.

Conversion subscale. Data from the Conversion subscale (25 items) revealed a Cronbach's alpha value of .912 indicating excellent internal consistency for the items in this subscale. Examination of the descriptive statistics showed all item means above 4.0 and all standard deviations below 2.0. Item statistics data revealed five items with corrected item-total correlations below .3 (CONV2, .214; CONV4, .207; CONV6, .093; CONV9, .288; CONV10, -.227; CONV13, .209). When examining Cronbach's value if these items were deleted there was no significant improvement in the alpha of the scale. However, CONV10 was concerning due to the negative correlation value (-.227). This could have indicated a problem with the wording or understanding of the question by respondents. In reviewing the wording of the question, it appeared to straightforward (i.e. "I put forth my best effort no matter what."). Additionally the mean for this item was 6.63 and the standard deviation was .619 with a high level of consistency in responses (100% of responses indicating moderate to strong agreement). As there were no comments or indication that the question was confusing, vague or misleading this item

was retained for the field test. No items from the Conversion subscale were deleted or modified for the field test.

Connectedness subscale. Data analysis for the Connectedness subscale (8 items) revealed a Cronbach's value of .645 which is just below the acceptable range of internal consistency for subscale items. Because of this low value and the small number of items comprising this subscale, the mean inter-item correlation was also examined. The inter-item correlation value for the Connectedness subscale was .202, which was within the optimal range of .2 to .4 (Pallant, 2007).

In looking at specific item data, the mean and standard deviation for CONN6 ("I hesitate to ask others to help me") were 4.40 and 2.271 respectively. Although the standard deviation for this item was above 2.0, this was most likely due to the fact that there were levels of agreement at both extremes of the response continuum; six respondents moderately to strongly agreed with the item and four respondents moderately to strongly disagreed with the item. However, the corrected item-total correlation for CONN6 was. 514 and the Cronhach's value with the item deleted was .514, which was lower than the original alpha value of .645. Due to this and the fact that no respondents indicated the item was vague, confusing, or misleading or had recommendations for modifications, the item was retained for the field test.

Further examination of the item-total statistics revealed that CONN8 ("My friends and family often live up to my expectations of how they should act.") had a corrected item-total correlation of -.124, which indicated that the item was problematic, vague, or confusing. However, the mean and standard deviation of this item were 5.15 and 1.405 respectively and response frequencies ranged from moderate to strong agreement with the

item. As CONN8 wording appeared straightforward and no respondent rated the item as vague, confusing, or misleading or provided suggestions for modification, it was retained for the field test.

SECRS instrument. Cronbach's alpha for the pilot SECRS instrument (66 items) was .935 with an inter-item correlation mean of .236. Means and standard deviations for all items were 4.0 or above and standard deviations were below 2.0 indicating that items measured the latent variable of career resiliency. Twenty-three items were found to have corrected item-total correlation values below .3, with negative values reported for five items (CONN8, -.283; SSA3, -.477; SSA4, -.433; SSA5, -.246; SSA6, -.176, SSA9, -.216). However, when evaluating the change in Cronbach's value if item(s) were deleted, there was no significant improvement as the alpha remaining at .9. Therefore, these items were also retained for the field test

Additional changes to the SECRS. When reviewing the comments provided by participants during the piloting of the SECRS, it became apparent that some individuals were unclear of whether the items were to be answered in a professional or personal capacity (e.g. "This relates to my job?"). Additionally, when reviewing responses to demographic item #11 ("If you are no longer teaching in special education, what is your current career designation?") individuals identified as non-continuing special educators indicated that the question was not applicable. Upon further investigation of the demographic information, these individuals were reported to be in administrative positions as principals or vice-principals. Therefore, I modified the directions for completing the SECRS to provide more clarity as to who was considered a continuing and non-continuing teacher as follows:

> "You have been asked to participate in this survey as either a Continuing Special Educator (one who is actively teaching in special education) or a Non-Continuing Special Educator (individuals who have transferred to general education, are in an administrative role, or are no longer teaching)".

Additionally, in order to clarify how the items should be interpreted and answered, the following statement was added:

> "As you complete the SECRS, you are asked to indicate your level of agreement with statements that pertain to you as a Continuing or Non-Continuing Special Educator as well as those statements that pertain to your overall life experiences".

See Appendix F for each version of the SECRS including the final revision for the field test.

Field Testing of the SECRS

This section of the chapter describes how the SECRS was administered to a sample of continuing and non-continuing special education teachers, as per the participants lists, to further assess the SECRS' reliability and validity.

Field Test Participants

Of the original 567 participants, 10 individuals participated in the cognitive interview phase and 30 participated in the pilot phase. Five hundred and twenty-seven participants comprised the sample to field test the SECRS. This included 469 continuing and 58 non-continuing special education teachers from each of the four participating counties. The overall response rate to the field test of the SECRS was 57.1% or 301 total responses. Two hundred sixty-six or 56.7% of the responses were from continuing

special educators and 35 or 60.3% of response were from non-continuing special educators.

Field Test Procedures

The field test version of the SECRS was posted on the Survey Monkey website and participants were invited to complete the scale from May 7, 2012 through June 1, 2012. Four hundred sixty-nine continuing and 58 non-continuing special educator were sent emails asking them to participate in this phase of the study (see Appendix E for the email invitation). The email contained an electronic link to the SECRS on the Survey Monkey website and also gave the participants the option of requesting a paper copies. Three reminders were sent via email to all non-responders (i.e. May 14, 2012; May 21, 2012; May 29, 2012) in an effort to obtain as many completed surveys as possible. As an incentive to complete the survey, each participant was entered into a drawing for a $100 gift card from Amazon.

Data Analysis for Field Test

Exploratory factor analysis. Exploratory factor analysis (EFA) was used to analyze data from the field testing of the SECRS to determine the number and nature of common factors that accounted for the pattern of correlation among the items. In using this analysis I was able to determine a factor structure of the SECRS and whether there was support for the CRF or if the data provided a different outcome when attempting to derive a factor structure of career resilience.

The principal axis method was used as the extraction method and was selected over other methods including maximum likelihood (ML), because this method reduces the error between the actual correlation matrix and the matrix suggested by the factor

model. Once the initial factors were extracted, the determination was made of how many of those factors to retain. Kaiser's criterion (Kaiser,1970) suggests that all factors with eigenvalues greater then 1 should be retained. The scree test of the eigenvalues are graphed in descending order and then examined to identify the last large drop in the magnitude of the eigenvalues, which in turn determines the number of factors to retain. However, the Kaiser criterion and the scree test have been found to be somewhat arbitrary when determining factors to retain (Fabrigar et al., 1999; Hayton et al., 2004;Pett et al., 2003; Spector, 1992). Due to this subjectiveness, Horn's parallel analysis was also used to determine the number of factors to retain.

Parallel analysis. Parallel analysis (PA) seeks to overcome the problem of overestimation of the matrix rank due to sampling error and adjusts for the effect of that error (Hayton et al., 2004). In other words, for fixed samples, some of the factors with eigenvalues greater than 1 may occur simply as a result of sampling error. Because PA adjusts for this effect, it is a sample-based alternative to population-based methods. PA posits that "nontrivial components from real data with valid underlying factor structure should have larger eigenvalues than parallel components derived from random data having the same sample size and number of variables" (p. 194). Steps involved in conducting PA analysis included (a) the generation of random data; (b) the extraction of eigenvalues from the random data correlation matrix; (c) average eigenvalues; and (d) comparison of real data with parallel random data. Factors from the actual data with eigenvalues greater then the equivalent eigenvalues from the random data were retained.

Factor rotation. The direct oblimin rotation method, which is a form of oblique rotation, was used to determine a solution with correlated factors. This method was

selected because substantial empirical evidence indicates that factors associated with resilience are intercorrelated (Albrecht et al., 2009; Brunetti, 2006; Castro et al., 2010; Dallas, 2006; Day & Gu, 2009; Gu & Day, 2007; Malloy & Allen, 2007; Patterson et al., 2004; Stanford, 2001; Yost, 2006; Zost, 2010). In addition, although less evidence is available regarding career resilience (Rickwood, 2002; Rickwood et al., 2004) it appeared plausible to suspect that factors associated with that construct may be intercorrelated as well. When using oblique rotation the pattern matrix was examined for factor/item loadings along with the factor correlation matrix to determine whether there were any correlations between the factors.

Sample size. An adequate sample size is necessary in order to make inferences about the population of interest from the sample of that population used in the study. Gorsuch (1983) suggested that an adequate sample size for EFA should be a ratio of five participants per measured variable and never be comprised of less then 100 individuals. However Nunally, (1978) proposed a ratio of at least ten participants for every variable. For this study, Gorsuch's recommendation was used as the SECRS contained 66 items and the total sample size for the field test was 527, which resulted in eight participants for each item. This number of participants reduced the margin of error and allowed for a greater level of confidence that the results from this sample were representative of the larger population of special education teachers.

An additional measure of adequate sample size was implemented through the use of the Kaiser-Meyer-Olkin Measure of Sampling Adequacy test (KMO). This test was used to determine if the sample size was adequate for each item on the SECRS and for the entire group of questions. The KMO values can be interpreted as correlation

coefficients with ranges from range from 0 to 1. KMO values should be greater than 0.5 for a satisfactory factor analysis to proceed, with a value of .6 a suggested minimum (Pett et al., 2003). KMO values less than .5 are not acceptable, those between .51 and .7 are mediocre, those between .7 and .8 are good, those between .8 and .9 are excellent, and those exceeding .9 are superb. Items having KMO values below .5 are typically found to load on too many domains and are not considered appropriate for the factor analysis.

Item Analysis

The item-remainder coefficient was calculated for each item to conduct the item analysis for the SECRS field test data. The item-remainder coefficient is the "correlation of each item with the sum of the remaining items" (Spector, p. 30). For each item on the SECRS, a high score indicated a high level of the construct while a low score indicated a low level.

Although the item-remainder coefficient is often used in establishing the internal consistency of a survey, it is suggested that this procedure take place in tandem with the measurement of the magnitude of the interrcorrelations between items. While Cronbach's alpha coefficient has traditionally been recommended when measuring test score reliability and the internal consistency of a scale, there is literature demonstrating that this coefficient value often says very little about the factor structure (Bentler, 2009 ; Green & Yang, 2009a; Green & Yang, 2009b; Sijtsma, 2009). Specifically, Sijtsma, in a review of the applicability of Cronbach's alpha suggested that information alpha is able to provide regarding the interrelatedness of items on a test is the "average degree of interrelationedness provided there are no negative covariances, and keeping in mind that alpha also depends on the number of items in a test" (p. 114). Similarly, Green and Yang

discourage the use of coefficient alpha because “the assumptions underlying the coefficient alpha are unlikely to hold in practice, and violation of these assumptions can result in nontrivial negative or positive bias” (p. 121) and support the use of other statistical methods for assessing reliability.

Although there are many methods that can be implemented to determine reliability of test scores, coefficient H or maximal reliability, was proposed for use during this study to determine the reliability of latent career resilience factors derived from the SECRS if those factors were extracted. Coefficient H is the “squared correlation between the latent construct and the optimum linear composite formed from the measured indicators” (Hancock & Mueller, 2001, p. 203), and functions as a “reliability estimate but across all measured indicators of a single latent factor” (p. 202). Because the alpha coefficient can only assess the average interrelatedness of indicators whereas coefficient H provides a reliability estimate across all of the indicators of a latent factor, coefficient H would be a more appropriate coefficient than Cronbach’s alpha.

Descriptive Statistics

The final step in the analysis of the SECRS determined (a) the frequencies and percents for each SERCS response; (b) the items and domains which indicated the highest and lowest responses from continuing special education teachers, (c) the items and domains which indicated the highest and lowest responses from non-continuing special education teachers, (d) the differences in the career resilience of continuing and non-continuing special educators based on student disability type, and (e) the demographic data of study participants.

Frequencies of each response to the selected-response questions were analyzed using Pearson correlations, which provided an indication of whether item scores were positively or negatively correlated (Pett et al., 2003). A positive r_{xy} value indicated a direct relationship between two items, while a negative value for r_{xy} indicated an inverse relationship. Each item was correlated to the overall scale score (and/or its domain score) to determine whether higher scores on an item related to higher total survey (domain) scores.

Comparison of Continuing and Non-Continuing Special Educators

Means differences. An independent samples t-test was conducted to estimate the average difference in the career resilience of continuing and non-continuing special educators on the domains of the SECRS. A two-way, between groups, analysis of variance (ANOVA) was conducted as well to determine if there were also differences between the two groups based upon student disability type.

To estimate the difference between the two group means one of the groups, the continuing special educator group, was chosen to serve as the reference group and that group's mean on the construct is fixed to zero. Because the continuing special educator group had a fixed mean of zero, the construct mean of the other non-continuing special educator group represented the difference between the construct means of the two groups. An independent samples *t*-test was conducted to determine the average differences in the item responses between the continuing and non-continuing special educators on the SECRS instrument and each of the subscales (i.e. Theme Acceptance, Support for Self-Awareness, Conversion, and Connectedness).

To estimate the average differences in career resilience between continuing and

non-continuing special educators while considering disability type, a two-way between groups ANOVA was conducted to determine the impact of disability type on the average of continuing and non-continuing special education teachers for the SECRS instrument as well as the subscales. Prior to the analysis, disability type was recoded from fourteen different categories to either high or low incidence disabilities.

There is precedent for condensing disabilities types into the more general categories of high and low incidence disabilities in special education research literature (Howell & Gengel, 2005) as this reduction allows a closer examination of data trends. For this study, Emotional Disturbance, Specific Learning Disabilities, Speech or Language Impairment, Developmental Delay, Other Health Impairment, and Autism were defined as High Incidence Disabilities.

Although Autism has traditionally been considered a Low Incidence Disability, within the last decade, the number of students identified as having Autism Spectrum Disorder (ASD) has increased dramatically to a 1 in 88 prevalence rate (The Centers for Disease Control and Prevention, March, 2012). Therefore, I have included this disability category with the High Incidence Disabilities. Deaf-Blindness, Deafness, Hearing Impairment, Intellectual Disability, Multiple Disabilities, Orthopedic Impairment, Traumatic Brain Injury, and Visual Impairment, including Blindness are all defined as Low Incidence Disabilities.

Missing Data

Missing data are problematic in quantitative studies and must be accounted for through statistical analysis (Baraldi & Enders, 2010). Three common classifications for missing data based upon the mechanisms responsible for the missingness are used: (a)

missing completely at random (MCAR), (b) missing at random (MAR), and (c) missing not at random (MNAR). Each of these classifications describes the probability of missing data as it relates to the variables being measured. Data are considered MCAR when the missingness is unrelated to the other variables being tested. In this study, an example of MCAR data would be if a respondent's answers were lost due to an error on the Survey Monkey website, resulting in missingness that has no relationship with any other variables in the study. This assumption is considered very stringent and often difficult to satisfy in practice due to the difficulty verifying whether missingness is unrelated to other study variables. Data missingness may be MAR if the data meets the requirement that missingness does not depend on the value of the missing variable after controlling for another variable (Baraldi & Enders). For example, in this study a respondent may skip an item because of their teaching status but not because of the item itself. Missing data are considered NMAR if the missing data are related to the values that are missing. If data were NMAR in this study, a non-continuing teacher may not respond to an item asking about whether they continue to teach in the field of special education which would indicate that the missingness of teaching status depended on that teaching status.

Traditional techniques used to deal with missing data include deletion methods and single imputation (Baraldi & Enders, 2010). The most basic deletion method is the listwise deletion, which discards all cases that do not have complete data. While this method produces complete data sets, it is often problematic in that when cases are deleted, the overall sample size is reduced, which negatively impacts the power of the study. A second deletion method is pairwise deletion, which removes an incomplete case

from part of the analysis but may include it in other parts based upon which data are missing. Although considered an improvement over listwise deletion due to the inclusion of more cases in the overall analysis, both listwise and pairwise deletion methods can be problematic because data in deletion methods are assumed to be MCAR, and any violation of that assumption results in biased estimates. (Baraldi & Enders; Raghunathan, 2004).

Two newer methods that are widely recommended in the methodological literature are multiple imputation and maximum likelihood estimation (Baraldi & Enders, 2010; Raghunathan, 2006). These techniques are preferred because they can be used with both MCAR and MAR data, produce unbiased estimates, and no data are thrown out of the analysis.

When using multiple imputation to analyze missing data, several steps are followed. These steps include imputing the data, analyzing the data, and then pooling the results. Multiple data sets are created which have different imputed values and separate data analyses are carried out on each set, resulting in multiple parameter estimates and standard errors. These parameter estimates are then combined into a "single point estimate, its estimated standard error, and the associated confidence interval or significance test" (Raghunathan, 2004, p. 108).

Unlike multiple imputation, maximum likelihood estimation does not fill in missing values but instead uses both complete and incomplete data to identify "the parameter values that have the highest probability of producing the sample data" (Baraldi & Enders, 2010, p. 18). Both multiple imputation and maximum likelihood methods are

considered to be superior to the use of deletion or single imputation techniques (Baraldi & Enders; Raghunathan).

For the purposes of this study, multiple imputation was used to address missing data, which were defined as MAR. The MAR definition was applicable because the probability of a missing value may have been related to whether that individual was a continuing or non-continuing special educator but was not likely to be related to the missing value itself (Finch, 2010).

Summary

Before an instrument can be used with confidence, evidence must be provided to support the interpretation of item scores and as well as the actions suggested as a result of that interpretation. In addition, reliability must be demonstrated by determining the relationship between true scores and observed scores as well as the evaluation of the internal consistency of test items selected to represent scale domains. Finally, the instrument must be able to provide data on whether specified groups of interest have differences in mean scores on the variables associated with the underlying factors derived from the analyses performed.

One purpose of this study was to develop a new instrument to measure the career resilience of continuing and non-continuing special educators, the SECRS, and to evaluate the SECRS using procedures outlined in previous research on the validation of measurement scales (Behing & Law, 2000;; Fink, 2003; 2004; Groves et al., 2004; Gorsuch, 1983; Messick, 1989; Naredi, 2007; Presser et al., 2004; Reeve & Masse, 2004; Saris, 2006; Spector, 1992; Warner, 2008). Those steps were discussed and results of data analysis provided in the preceding sections. A second purpose was to determine whether

the SECRS differentiated continuing from non-continuing special educators in career resilience, thereby lending support for the use of the CRF as a theoretical basis from which to measure the career resiliency of special educators. The results of the data analyses for the second purpose of this study are provided in Chapter 4.

Chapter 4

Data Analysis

A second purpose of this study was to field test the SECRS instrument with two groups of teachers who had been in the field of special education for three or more years (continuing special educators) or who had left the teaching profession (non-continuing special educators) to determine whether their responses to items measuring career resiliency differed. Research questions related to this purpose included:

2a. What is the factor structure of the SECRS and does it conform to the CRF (construct validity)?

2b. Is the SECRS and the factors derived from the instrument internally consistent?

2c. Do significant differences exist between continuing and non-continuing special education teachers on items comprising the SECRS?

2d. Do significant differences exist between continuing and non-continuing special education teachers when student disability category is considered?

Data to address the above research questions were obtained during the field test of the SECRS with a sample of 546 continuing and non-continuing special education teachers. The remainder of this chapter provides a discussion of the results of the field test data analysis.

Data Screening

The data was screened to first ensure that the all the participants were special educators with at least three years teaching experience. Upon examination of the 301 continuing and non-continuing special educators in the data set, ten respondents were individuals with only one to two years teaching experience in special education. As these

individuals were outside the purpose of the study, there were deleted from the data. The data was then screened to determine whether cases had missing values. Any missing data was considered to be MAR due to the fact that being a continuing or non-continuing special educator may have been related to whether an item was not answered. Because the missing data was MAR, multiple imputation was used to infill missing values. However, thirty cases were found to have only demographic questions completed, with no responses for the items comprising the SECRS domains. Due to this significant amount of missing data, attempting to infill data was considered to be invalid due to the lack of responses from which to fill in. As a result, listwise deletion was used to delete those 30 cases. Although this type of deletion can causes a reduction of sample size, the remaining sample size was adequate for the analysis. After the deletion of the 30 cases, in addition to the 10 individuals deleted due to not meeting the study requirements, the final sample used for analyses was 261.

Maximum likelihood estimation was used to estimate the parameters of the model derived from the principal factor axis analysis. Maximum likelihood (ML) estimation is a normal theory estimator, and assumes that there is an adequate sample, observations are independent (randomly selected), the model is correctly specified, and data are multivariate normal and continuous (Mandrila, 2010). The model parameters derived from this estimation method maximize the likelihood of observing data if it were to be collected from the same population again.

Data exploration prior to the analysis revealed the data for this study were not mulitvariate normal. The Kolmogrorov-Smirnov (KS) test of normality was significant for continuing special educators on the SECRS mean as well as means for each of the

subscales (SECRS, p = .05; TA, p = .02; SSA, p = .00; CONV, p = .000; CONN, p = .01) indicating that the data differed significantly from the normal distribution. The KS values for non-continuing special educators were significant only for the CONN subscale (p = .01). If ML is used under conditions of non-normality, the chi-square statistic is often inflated, and that inflation increases as the non-normality increases (Finney & DeStefano, 2006). The inflation of the chi-square statistic may lead to an increased risk of a Type I error, or a greater chance to reject a correct model than would be expected by chance.

Although there is no firm consensus on what is considered tolerable non-normality (Finney & DiStefano, 2006), recommend cutoff values for acceptable univarariate skew and kurtosis are 2 and 7 respectively. Prior research on the impact of non-normal data on ML results suggests that as univariate skew and kurtosis approach those values, using ML as the estimator becomes more problematic (Finney & DiStefano). The skew and kurtosis values for the continuing and non-continuing special educators for the SECRS mean and the means of each subscale were below those suggested cutoff values. This indicated that ML estimation would still be robust even though the data were non-normal multivariate.

Descriptive Analysis

A demographic profile of the 261 respondents is presented in Table 2. The majority of respondents identified themselves as White/Caucasian (N = 210) or Black/African American (N = 43) and Female (N=232) with only 11.1% of the sample Male (N=29).

Table 2
Demographic Profile of Field Test Participants

Characteristics	Participants *N*	%
Sex		
Males	29	11
Females	232	89
Age		
20 – 29	46	17.6
30 – 39	68	26.1
40 – 49	53	20.3
50 – 59	74	28.4
60+	20	7.7
Race		
White	210	80.5
Black or African-American	43	16.5
Asian	2	.8
Pacific Islander	1	.4
Multiple Races	5	1.9
Ethnicity		
Spanish, Hispanic, or Latino	5	1.9
Non-Hispanic	256	98.1
Highest Degree Earned		
Bachelor's Degree	47	18.0
Post-baccalaureate Degree	27	10.3
Master's Degree	182	69.7
Doctorate	5	1.9
Years of Teaching Experience		
3 – 5	44	16.9
6 – 10	70	28.6
11 – 15	38	14.6
16 – 20	27	10.3
21 – 25	29	11.1
26 – 30	20	7.7
30+	33	12.6

Characteristics	Participants *N*	%
Years of Experience In Special Education		
3 – 5	50	19.2
6 – 10	85	32.6
11 – 15	33	12.6
16 – 20	34	13.0
21 – 25	18	6.9
26 – 30	21	8.6
30+	20	7.7
Age Level of Students		
Early Childhood	18	6.9
Elementary School	99	37.9
Middle School	73	28.0
High School	71	27.2
Student Disability Type		
High Incidence	223	85.4
Low Incidence	38	14.6
Current School Location		
Rural	96	36.8
Suburban	154	59.0
Urban	11	4.2
Current Career Designation		
General Education	20	7.7
Outside the Field of Education	2	.8
Special Education	239	91.6

Seventy-four percent of respondents were between the ages of 30 and 60 (i.e. 30 – 39, *N*= 68; 40 – 49, *N*=53; 50 – 59, *N*=74). Most respondents reported their highest level of education reported as a Masters Degree (*N*=182). Years of teaching experience varied across all response categories with the greatest number of respondents teaching between six and ten years overall (*N*=70) as well as in special education (*N*=85). Level of students

currently teaching varied across respondents with Elementary reported the most frequently (*N*=99), followed by Middle and High (*N*=73 and *N*=71 respectively) and Early Childhood reported the least (*N*=18).

Respondents were also asked to indicate the type of student disability they were currently teaching or had taught in the past. All fourteen disability categories identified in IDEA were included in this item. However, when analyzing this data, the fourteen disability categories were collapsed into one of two categories: high incidence or low incidence disabilities. There is precedent for condensing disabilities types into the more general categories of high and low incidence disabilities in special education research literature (Howell & Gengel, 2005) as this reduction allows a closer examination of data trends. Using these categories, 202 continuing special educators indicated that they were teachers of students with High Incidence Disabilities and 36 continuing special educators indicated they taught students with Low Incidence Disabilities while 21 non-continuing special educators taught student with High Incidence Disabilities and two taught students with Low Incidence Disabilities.

Item Analysis

An item analysis provided information about how well each individual item on the SECRS related to the other items in the analysis, which is reflected by the item-remainder coefficient. Frequencies, percent of item responses and correlations between items also were calculated for the SECRS and each subscale. Table 3 contains the SECRS mean item analysis data and Appendix H contains the complete item analysis data.

Keeping in mind that Cronbach's alpha estimates the average degree of

interrelationedness and is dependent on the number of items in a test (Bentler, 2009 ; Green & Yang, 2009a; Green & Yang, 2009b; Sijtsma, 2009), the results of the reliability analysis of the SECRS revealed that the overall internal consistency of the instrument was considered acceptable with an alpha coefficient of .9. Additionally, when examining the inter-item correlation matrix, there were no items identified that would improve the internal consistency if deleted. Reliability analysis of each subscale was as follows: Theme Acceptance, α =.71; Support for Self-Awareness, α = .83; Conversion, α = .91; Connectedness, α = .41. Reviewing item statistics for each subscale indicated that for the Theme Acceptance subscale, the deletion of item TA2 (i.e. "My administrator fails to appreciate any extra effort from me") would improve alpha to .83, whereas deletion of any other item would result in a lower alpha coefficient.

Table 3

SECRS Item Analysis

	N	*Mean*	*Variance*	*SD*
Statistics for SECRS	66	384.62	931.89	30.52

	Mean	Minimum	Maximum	Range	Max/Min	Variance
Item Means	5.82	3.31	6.73	3.41	2.03	.63
Item Variances	1.47	.42	4.47	4.05	10.54	.98
Inter-Item Correlations	.18	-.36	.69	1.06	-1.87	.03

	Alpha
Reliability Coefficients	.909

No items from the SSA or CONV subscales were found to improve internal consistency if deleted. The CONN subscale had the lowest reliability coefficient (α = .41), with alpha improving to .61 if item CONN6 (i.e. "I hesitate to ask others to help me") was deleted.

Examination of the highest and lowest item and domain responses from continuing special education teachers revealed that for the SECRS, the highest response for continuing teachers was item SSA 6 (i.e. "I feel proud that I have accomplished things in life.") with 71% indicating strong agreement with that statement. Conversely, the lowest item response on the SECRS was TA2 (i.e. "My administrator fails to appreciate any extra effort from me") with 52% indicating moderate to strong disagreement with that statement. It is important to note that because this item was negatively worded, the responses were recoded for the data analysis so that strong disagreement was coded as 7, moderate disagreement as 6, and so on. By doing this, I was able to ensure that strong disagreement with this item was interpreted as a positive response.

The domain with the highest item responses for continuing special education teachers was the Support for Self-Awareness domain with 80% or more of the respondents indicating agreement to strong agreement with 18 out of 26 or 69% of the items. The domain with the lowest item responses was the Theme Acceptance with a low of 28% to a high of 52% of respondents indicating agreement to strong agreement with positively worded statements (i.e. TA1, 43%; TA4, 52.9%; TA6, 43%, and TA7, 29%) or disagreement to strong disagreement with negatively worded statements (i.e. TA2, 25%; TA3, 36.3%; TA5, 28.7%).

Highest item response from non-continuing special educators and lowest item

responses for non-continuing teachers were items SSA1 (i.e. “When I make plans I follow through with them”) and item CONV13 (i.e. “I know where to turn to for help when I encounter adversity”) with 81% of respondents indicating strong agreement with those statements. The lowest item response was CONV item 20 (i.e. “I have to act on a hunch”) with only 28.6% of respondents indicating agreement to strong agreement with that statement.

The highest domain item scores for non-continuing special educators was again the Support for Self-Awareness subscale with respondents indicating agreement to strong agreement with 19 out of 26 or 73% of the total items. The Theme Acceptance subscale also had the lowest domain item scores with 41% to 71% of the respondents indicating agreement to strong agreement with positively worded items (i.e. TA1, 47%; TA4, 52.4%; TA6, 57%; TA7, 51%) or indicating disagreement to strong disagreement to negatively worded items (i.e. TA2, 71.4%; TA3, 41%; TA5, 42%). Although these scores were the lowest for the non-continuing special educators, overall, the respondents had higher item scores for this domain than did the continuing special educators.

EFA

The 66 items of the SECRS were subjected to principal factor analysis (PFA) using SPSS Version 20. Appendix I contains the data from the EFA. The analysis revealed the presence of 18 factors with eigenvalues exceeding 1, explaining 54.7% of variance. The KMO value was .87, which exceeded the recommended value of .6 and Bartlett’s Test of Sphericity reached significance (χ^2 =8412.22 (2145), $p \leq .000$), which supported the factorability of the correlation matrix. However, an examination of the screeplot was inconclusive as there was no clear break between factors. To aid in

determining the number of factors to retain, a parallel analysis was conducted on 1000 random data sets. Table 4 contains data of the comparison of eigenvalues from the PFA and criterion values from parallel analysis. An examination of this data revealed that all of the 18 factors derived from the EFA, also had eigenvalues exceeding the corresponding criterion values for a randomly generated data matrix of the same size (66 variables x 271 respondents).

In an attempt to derive a more interpretable factor solution, oblimin rotation was performed with the solution converging in 72 iterations. Item loading values below .3 were suppressed in the analysis. An examination of the structure and pattern matrices revealed no clear factor structure from either the initial extraction or the rotated solution.

Table 4

Comparison of eigenvalues from PFA and criterion values from parallel analysis for the SECRS

Component number	Actual eigenvalue from PFA	Criterion value from parallel analysis	Decision
1	16.08	1.52	accept
2	3.67	1.40	accept
3	2.98	1.31	accept
4	2.21	1.23	accept
5	2.12	1.17	accept
6	1.85	1.11	accept
7	1.63	1.06	accept
8	1.60	1.00	accept
9	1.45	.96	accept
10	1.40	.91	accept
11	1.32	.88	accept
12	1.27	.83	accept
13	1.22	.79	accept
14	1.15	.75	accept
15	1.12	.72	accept
16	1.11	.68	accept
17	1.04	.65	accept
18	1.00	.61	accept

A small number of items loaded on each factor ranging from a low of two items on Factors 4, 5, 10, 13, and 14 to a high of seven items on Factor 9 with an overall median of 3.5 items. It is generally recommended that at least three items load on each factor (Pallant, 2007) to ensure an interpretable solution, which did not occur in six of the extracted factors. An additional analysis was conducted with these factors deleted to see if a more interpretable solution could be derived. However, this analysis did not yield different results. The outcomes of these analyses indicated that the four domains of SECRS did not come together as one construct or separate into the four domains of the CRF (i.e. Theme Acceptance, Support for Self-Awareness, Conversion, and Connectedness) as expected.

In an attempt to understand why the analysis of the SECRS instrument did not result in a valid factor solution, I conducted separate principal factor analyses on each of the subscales. The purpose of these analyses was to determine what each subscale collectively measured and to gather more data as to why the overall SECRS instrument did not provide an interpretable factor structure.

Subscale Analysis

Theme acceptance subscale (7 items). PFA of the Theme Acceptance (TA) subscale indicated the presence of two factors with eigenvalues exceeding 1, explaining 42.4% and 9.9% of the variance in that subscale respectively. The KMO value was .80, exceeding the recommended value of .6 and Bartlett's Test of Sphericity reached significance (χ^2 =634.44 (21), $p \leq .000$), which supported the factorability of the correlation matrix. An examination of the screeplot indicated a break after the second factor which led to the retention of two factors for further investigation. Parallel analysis

also supported this decision with two factors exceeding the criterion values generated from a random data matrix of the same size (7 variables x 261 respondents). Table 5 contains the data from the parallel analysis of the Theme Acceptance subscale. Factor 1 and Factor 2 were found to have a moderate negative correlation (*r* = .-533).

Table 5

Comparison of eigenvalues from PFA and criterion values from parallel analysis for Theme Acceptance subscale

Factor number	Actual eigenvalue from PFA	Criterion value from parallel analysis	Decision
1	3.37	2.83	accept
2	1.12	.53	accept

An examination of the factor matrix revealed a two-factor solution, which explained a total of 51.9% of the variance. Oblimin rotation was again used to determine if a more interpretable factor solution was possible. Data from the analysis is shown in Table 6 and Table 7.

Table 6
Factor Loadings from the Rotated Factor Structure Matrix for the Theme Acceptance Subscale: Principal Axis Factoring with Oblimin Rotation

	Factor	
TA Items	School System Support	Administrator Support
TA1	**.64**	**-.45**
TA2	-.13	.30
TA3	**.81**	**-.40**
TA4	**.43**	**-.71**
TA5	**.78**	**-.33**
TA6	**.54**	**-.92**
TA7	**.68**	**-.50**

Note. Factor loadings > .30 are in boldface; TA = Theme Acceptance

Table 7

Factor Loadings from the Rotated Factor Pattern Matrix for the Theme Acceptance Subscale: Principal Axis Factoring with Oblimin Rotation.

	Factor	
TA items	School System Support	Administrator Support
TA1	**.56**	-.14
TA2	.02	**.31**
TA3	**.83**	.04
TA4	.07	**-.67**
TA5	**.83**	.11
TA6	.07	**-.88**

Note. Factor loadings > .30 are in boldface; TA = Theme Acceptance.

Support for self-awareness (26 items). PFA with conducted on the Support for Self-Awareness (SSA) subscale and revealed the presence of seven factors with eigenvalues exceeding 1, explaining 24.6%, 5.1%, 4.1% 3.1%, 2.4%, 2.2%, and 1.7% of the variance in that subscale respectively. The KMO value was .86, exceeding the recommended value of .6 and Bartlett's Test of Sphericity reached significance (χ^2 =2095.39, $p \geq .0001$), which supported the factorability of the correlation matrix. An examination of the screeplot indicated a break after the seventh factor which led to the retention of seven factors for further investigation. Parallel analysis was conducted to determine whether seven factors were derived with random data sets. Results of the parallel analysis supported the retention decision with seven factors exceeding the criterion values generated from a random data matrix of the same size (26variables x 261 respondents). Table 8 contains the data from the parallel analysis of the SSA subscale.

Table 8

Comparison of eigenvalues from PFA and criterion values from parallel analysis for the Support for Self-Awareness subscale

Factor number	Actual eigenvalue from PFA	Criterion value from parallel analysis	Decision
1	6.92	6.31	accept
2	1.90	1.28	accept
3	1.64	1.01	accept
4	1.35	.72	accept
5	1.23	.57	accept
6	1.16	.50	accept
7	1.04	.39	accept

The seven factor solution explained 43.5% of the total variance leaving 56.5% of the total variance unexplained. Oblimin rotation was used to derive a more interpretable factor solution. Data from the analysis is presented in Tables 9 and 10. The rotated solution converged in 30 iterations and an examination of the pattern matrix revealed Factor 1 with five items with factor loadings ranging from .40 to .69 (i.e. SSA5; SSA6; SSA8; SSA9; SSA10).

Table 9

Factor Loadings from the Rotated Factor Structure Matrix for the Support for Self-Awareness Subscale: Principal Axis Factoring with Oblimin Rotation

SSA Subscale Items	Factor						
	1	2	3	4	5	6	7
SSA1	.29	.28	**.60**	.22	.20	-.13	-.13
SSA2	.29	.05	**.61**	.15	.24	-.23	-.07
SSA3	.17	.06	.24	.03	**.39**	-.13	-.04
SSA4	.28	.22	**.54**	.02	.28	-.19	**-.36**
SSA5	**.49**	.07	.18	.10	.28	**-.36**	-.06
SSA6	**.72**	.27	.26	.04	.18	-.30	-.22
SSA7	**.40**	.30	**.36**	**.38**	.00	-.30	-.29
SSA8	**.62**	.22	.15	.19	.24	-.24	**-.43**
SSA9	**.56**	**.31**	**.33**	.11	.27	**-.40**	**-.33**
SSA10	**.70**	**.31**	**.39**	.12	.22	**-.50**	-.21

SSA Subscale Items	Factor 1	2	3	4	5	6	7
SSA12	.08	.19	.07	**.63**	.01	-.10	-.10
SSA13	**.42**	.14	-.06	.21	**.46**	**-.58**	-.19
SSA14	.21	**.46**	.27	.02	**.44**	**-.38**	-.25
SSA15	**.31**	**.48**	**.41**	.06	**.42**	**-.39**	**-.52**
SSA16	**.40**	**.38**	**.39**	.17	.00	**-.34**	**-.61**
SSA17	**.31**	**.36**	.01	.30	**.42**	**-.39**	**-.55**
SSA18	**.45**	.23	.15	.02	.14	**-.66**	**-.32**
SSA19	.12	**.35**	.30	.13	.04	**-.56**	**-.57**
SSA20	.19	.13	.07	.10	.19	**-.53**	-.14
SSA21	.18	.23	.03	.16	.05	-.26	**-.54**
SSA22	.02	**.57**	-.09	**.35**	-.12	-.02	.03
SSA23	**.36**	**.46**	.14	.23	.27	**-.55**	**-.43**
SSA25	.18	**.31**	-.08	.30	.12	-.19	-.12
SSA26	.29	**.42**	.07	.26	.23	**-.53**	**-.41**

Note. Factor loadings > .30 are in boldface; SSA = Support for Self-Awareness

To interpret Factor 1, those items were reviewed and found to have a strong focus on individual strength (i.e. "I can be on my own if I have to"; "I feel proud that I have accomplished things in life") interpreted as Personal Strength.

Table 10

Factor Loadings from the Rotated Factor Pattern Matrix for the Support for Self-Awareness Subscale: Principal Axis Factoring with Oblimin Rotation

SSA subscale Items	Factor 1	2	3	4	5	6	7
SSA1	.13	.16	**.54**	.14	.07	.06	.07
SSA2	.11	-.12	**.58**	.12	.09	-.12	.08
SSA3	.05	-.01	.18	.00	**.34**	-.01	.04
SSA4	.09	.04	**.44**	-.07	.16	.04	-.25
SSA5	**.39**	-.07	.06	.04	.13	-.20	.09
SSA6	**.69**	.13	.08	-.09	-.01	.00	-.02
SSA7	.26	.07	.27	.29	-.17	-.11	-.08
SSA8	**.58**	-.03	-.04	.08	.10	.12	**-.33**
SSA9	**.40**	.10	.17	-.02	.08	-.12	-.13

SSA subscale Items	Factor 1	2	3	4	5	6	7
SSA11	.12	-.04	-.13	-.29	-.08	-.02	.12
SSA12	-.03	.00	.05	**.63**	-.04	-.01	.01
SSA13	.22	-.08	-.23	.12	**.33**	**-.43**	-.01
SSA14	-.05	**.39**	.13	-.14	**.33**	-.19	-.01
SSA15	.03	.29	.24	-.13	.27	-.09	**-.31**
SSA16	.22	.11	.25	.01	-.19	-.08	**-.46**
SSA17	.10	.08	-.18	.16	**.32**	-.10	**-.42**
SSA18	.23	.02	.01	-.11	-.08	**-.56**	-.10
SSA19	-.19	.09	.21	-.01	-.14	**-.48**	**-.39**
SSA20	-.02	-.02	.00	.03	.05	**-.54**	.02
SSA21	.05	.00	-.08	.05	-.03	-.08	**-.51**
SSA22	.01	**.57**	-.09	**.34**	-.12	-.01	.03
SSA23	.10	.23	-.02	.05	.09	**-.35**	-.18
SSA24	.03	**.71**	.03	-.03	-.01	.05	-.02
SSA25	.09	.23	-.17	.21	.06	-.07	.02
SSA26	.04	.19	-.07	.10	.07	**-.37**	-.19

Note. Factor loadings > .30 are in boldface; SSA = Support for Self-Awareness

Items loading on Factor 3 (i.e. SSA1; SSA2; SSA4) were also problematic to interpret (i.e. “When I make plans I follow through with them”; “Keeping interested in things is important to me”) as they also did not have a clear theme across items.

Factor 4 had a total of two items with loadings ranging from .34 to .63 (i.e. SSA12; SSA22). Factor 5 had four items factor loadings ranging from .32 to .34 (i.e. SSA3; SSA13; SSA14; SSA1) and also could be interpreted as individual strength, much like Factor 1 (i.e. “I can get through difficult times because I’ve experienced difficulty before”; “I have self-discipline”) making the factors more difficult to differentiate. Items loading on Factor 6 (i.e. SSA13; SSA18; SSA19; SSA20) were interpreted as Coping (i.e. “Sometimes I make myself do things whether I want to or not”; “I usually look at a situation in a number of ways”). However, SSA13 crossloaded on Factors 5 (.33) and

Factor 6 (-.438), and could fit the interpretation of either factor, making it an ambiguous item.

Factor 7 had six items with factor loadings ranging from -.3 to -.51 (i.e. SSA8; SSA15; SSA16; SSA17; SSA19; SSA21). Review of those items indicated that they focused on an individual's self affirmation (i.e. "I am friends with myself"; I can usually find something to laugh about"; "My belief in myself gets me through hard time"). Factor 7 was interpreted as Self-Affirmation.

Because the analysis resulted in three interpretable factors, a subsequent analysis was conducted with factor extraction set at three to determine whether this would result in a more interpretable factor solution for this subscale. Oblimin rotation was used suppressing values below .3 and a factor solution converged in 20 iterations. Results indicated a 3-Factor solution which explained 32.8% of the variance, which was 10.7% less variance explained than the original seven factor solution. Examination of the 3-Factor structure and pattern matrices indicated eight items loading on Factor 1with factor loading ranging from .32 to .68 (i.e. SSA5; SSA6; SSA8; SSA9; SSA13; SSA18; and SSA20). A review of those items revealed a theme of Personal Competence (i.e. "I can be on my own if I have to"; "I feel that I can handle many things at a time"). Five items had low to strong factor loadings on Factor 2 (i.e. SSA1; SSA2; SSA4; SSA7; and SSA15) with loadings ranging from -.36 to -.65. A review of the items loading on Factor 2 revealed a theme of Positive Coping (i.e. "I usually manage one way or another"; "I usually take things in stride"). Factor 3 had five items with factor loadings ranging from .32 to .63 (i.e. SSA11; SSA12; SSA 19; SSASS; and SSA24). A review of these items resulted in a more difficult interpretation of this factor as these items were closely related

to items loading on Factor 2 (i.e. “I take things one day at a time”; “I can usually look at a situation in a number of ways”). Therefore, Factor 3 was interpreted as Positive Coping along with Factor 2, which may account for the lack of explained variance in the three factor solution.

Although the second analysis resulted in a simple three factor structure, this solution only explained 32.8% of the variance leaving 67.2% of the variance unexplained. Factor 1 was moderately negatively correlated with Factor 2 (r = -.398) and Factor 3 (r = -.326) and Factor 2 and 3 had a small, positive correlation (r = .266).

Connversion (25 items). PFA conducted on the Conversion (CONV) subscale revealed the presence of five factors with eigenvalues exceeding 1, explaining 34.7%, 5.2%, 3.2%, 2.8%, and 2.3% of the variance in that subscale respectively. The KMO value was .92, which exceeded the recommended value of .6 and Bartlett’s Test of Sphericity reached significance (χ^2 =2845.46, $p \geq .0001$), which supported the factorability of the correlation matrix. An examination of the screeplot showed a break after the fifth factor, which led to the retention of five factors for further investigation. Parallel analysis was conducted and supported the decision, with five factors exceeding the criterion values generated from a random data matrix of the same size (25 variables x 261 respondents). Table 11 contains the data from the parallel analysis of the Conversion subscale.

Table 11

Comparison of eigenvalues from PFA and criterion values from parallel analysis for the Conversion subscale

Factor Number	Actual eigenvalue from PFA	Criterion value from parallel analysis	Decision
1	9.18	8.68	Accept
2	1.82	1.26	Accept
3	1.29	.75	Accept
4	1.22	.63	Accept
5	1.10	.56	Accept

The five-factor solution explained a total of 48.5% of the variance leaving 51.5% of the variance unexplained. Oblimin rotation was used to determine if a more interpretable factor solution could be extracted. Data from the analysis are shown in Tables 12 and 13. The rotated solution converged in 24 iterations and factor loadings below .3 were suppressed resulting in a five factor simple solution.

Eight items loaded on Factor 1 with loading values ranging from .33 to .59 (i.e. CONV2; CONV5; CONV7; CONV8; CONV10; CONV12; CONV13; CONV22). When reviewing these items, those with the highest factor loading values (i.e.CONV13, CONV12, CONV8, CONV2, CONV7, and CONV5) were all related to the ability to manage events in life competently (i.e. “Past success gives me confidence for new challenges”; “I know where to turn to for help when I encounter adversity”). As such, Factor 1 was interpreted as Personal Competence.

Table 12

Factor Loadings from the Rotated Structure Matrix for the Conversion Subscale: Principal Axis Factoring with Oblimin Rotation

	Factor				
CONV subscale Items	1	2	3	4	5
CONV1	**.41**	.20	**-.43**	**.42**	**-.65**
CONV2	**.58**	.19	**-.32**	**.43**	**-.41**

CONV subscale Items	Factor 1	2	3	4	5
CONV4	**.36**	.21	**-.43**	**.39**	**-.58**
CONV5	**.62**	.20	**-.50**	**.44**	**-.51**
CONV6	**.49**	.11	**-.38**	**.45**	**-.50**
CONV7	**.58**	.12	**-.31**	**.53**	**-.40**
CONV8	**.61**	.20	**-.41**	**.35**	**-.34**
CONV9	.21	**.68**	-.12	.09	-.09
CONV10	**.53**	.11	**-.52**	**.39**	-.26
CONV11	**.54**	.21	**-.68**	**.48**	**-.40**
CONV12	**.68**	.09	**-.50**	**.49**	**-.33**
CONV13	**.61**	.16	**-.37**	**.31**	-.15
CONV14	**.31**	-.08	**-.30**	**.67**	**-.44**
CONV15	**.32**	-.05	**-.42**	**.74**	**-.42**
CONV16	**.47**	.06	**-.40**	**.77**	**-.44**
CONV17	**.39**	.06	**-.64**	**.70**	**-.61**
CONV18	**.35**	.08	**-.35**	**.67**	-.17
CONV20	**.24**	.08	-.23	**.42**	-.21
CONV21	**.52**	.19	**-.60**	**.46**	**-.35**
CONV22	**.50**	.00	**-.37**	**.41**	**-.512**
CONV23	**.49**	-.00	**-.49**	**.69**	**-.44**
CONV24	**.46**	.14	**-.80**	**.45**	**-.33**
CONV25	**.36**	.15	**-.79**	**.36**	**-.33**

Note. Factor loadings > .30 are in boldface; CONV= Conversion

Only two items loaded on Factor 2 (CONV9, .671 and CONV3, .653), which made this an unstable factor. In reviewing these items, they both were intended to measure an individual's spirituality or beliefs (i.e. "I believe sometimes fate or God can help"; "I believe that things happen for a reason"). Because these were the only items that addressed belief systems in the Conversion subscale, it is not unexpected that these two items would load exclusively on one factor with no other items.

Table 13

Factor Loadings from the Rotated Factor Pattern Matrix for the Conversion Subscale: Principal Axis Factoring with Oblimin Rotation

CONV Subscale Items	Factor				
	1	2	3	4	5
CONV1	.10	.11	-.12	.06	**-.53**
CONV2	**.45**	.09	.06	.13	-.20
CONV3	-.09	**.65**	-.04	-.04	-.02
CONV4	.03	.12	-.17	.08	**-.45**
CONV5	**.42**	.06	-.16	.01	-.28
CONV6	.27	.01	-.04	.15	**-.32**
CONV8	**.51**	.07	-.11	-.02	-.11
CONV9	.07	**.67**	.05	.04	-.01
CONV10	**.33**	-.01	**-.33**	.06	.02
CONV11	.20	.07	**-.48**	.10	-.08
CONV12	**.54**	-.06	-.17	.12	-.01
CONV13	**.59**	.02	-.12	-.00	.11
CONV14	-.03	-.11	.04	**.62**	-.20
CONV16	.08	.01	.02	**.68**	-.11
CONV17	-.13	-.01	**-.37**	**.45**	**-.32**
CONV18	-.00	.05	-.06	**.72**	.17
CONV19	.26	.05	.01	**.65**	.18
CONV20	.00	.06	-.01	**.39**	-.02
CONV21	.23	.06	**-.40**	.11	-.05
CONV22	**.33**	-.11	-.06	.06	**-.34**
CONV23	.12	-.09	-.16	**.49**	-.12
CONV24	.06	-.00	**-.75**	.06	.02
CONV25	-.04	.02	**-.80**	-.02	-.03

Note. Factor loadings > .30 are in boldface; CONV = Conversion

Factor 3, interpreted as Belief in Self (i.e."I have a strong sense of purpose"; "I am in control of my life"; "I work to attain my goals"), had six items with factor loadings ranging from -.34 to -.80. (i.e. CONV25; CONV24; CONV11; CONV21; CONN17; CONV10).

Eight items loaded on Factor 4 with values ranging from .39 to .72. Five items loading strongly on this factor (i.e. CONV18; CONV15; CONV16; CONV19; CONV14)

and three items loading moderately or low (i.e. CONV23; CONV17; CONV20). When examining those items they all were related to Self-Assurance (i.e. “I prefer to take the lead in problem-solving”; “I can make unpopular or difficult decisions”; “I am not easily discouraged by failure”) leading to Factor 4 being interpreted as Self-Assurance.

Five items had factors loadings ranging from -.32 to -.53 on Factor 5 (i.e. CONV1; CONV4; CONV6; CONV15; CONV22). However, Factor 5 was more difficult to interpret with two items (CONV1, “I am able to adapt to change” and CONV4, “I can deal with whatever happens to me”) relating to the ability to deal with changing circumstances, while item CONV6 (“I see the humorous side of things”) and item CONV22 (“I am in control of my life”) did not fit with that interpretation, which was supported by the low factor loading values of both items.

Factor 1 had small to large positive correlations with Factor 2 (r = .193) and Factor 4 (r = .507) and medium to strong negative correlations with Factor 3 (r = -.484) and Factor 5 (r = -.371). Factor 2 was weakly positively or negatively correlated with Factors 1, 3, 4, and 5 (r = .193; r = -.182; r = .044; r = -.085 respectively). Factor 3 was moderately positively correlated with Factor 5 (r = .412) and moderately negatively correlated with Factor 1 (r = -.484) and Factor 4 (r = -.491). Factor 4 had a strong positive correlation with Factor 1(r = .507), and moderate negative correlations with Factor 3 (r = -.491) and Factor 5 (r = -.459).

Connectedness (8 items). PFA conducted on the Connectedness (CONN) subscale revealed the presence of three factors with eigenvalues exceeding 1, explaining 25.5%, 11.8%, and 7.0% of the variance in that subscale respectively. The KMO value was .68 which meets the recommended value of .6 and Barlett’s Test of Sphericity

reached significance (χ^2 =355.23 (28), $p \geq .000$), which supported the factorability of the correlation matrix. However, during the initial factor extraction, three factors were attempted to be extracted but after 50 iterations with no conversion, the extraction was terminated. An additional analysis was conducted increasing the number of iterations to 150. A three-factor solution converged after 105 iterations. An examination of the screeplot indicated a break after the third factor which led to the retention of three factors. Parallel analysis data supported this decision with three factors exceeding the criterion values generated from a random data matrix of the same size (8 variables x 261 respondents). Table 14 contains the data from the parallel analysis conducted on the Connectedness subscale.

Table 14

Comparison of eigenvalues from PFA and criterion values from parallel analysis for the Connectedness subscale

Factor number	Actual eigenvalue from PFA	Criterion value from parallel analysis	Decision
1	2.52	1.83	accept
2	1.45	.69	accept
3	1.06	.28	accept

The three-factor solution explained a total of 45.2% of the variance, leaving 54.8% of the variance unexplained. The three-factor solution was rotated using Oblimin rotation to determine if a more interpretable factor solution was possible. Data from the analysis are shown in Tables 15 and 16. The rotated solution converged in five iterations with factor loading values below .3 suppressed and the results indicated a simple structure of three factors.

Table 15

Factor Loadings from the Rotated Factor Structure Matrix for the Connectedness Subscale: Principal Axis Factoring with Oblimin Rotation

CONN Subscale Items	Factor 1	2	3
CONN1	**.53**	-.22	-.00
CONN2	**.66**	-.17	-.12
CONN4	**.49**	**-.35**	-.16
CONN5	**.34**	**-.94**	-.28
CONN6	.13	**-.44**	-.23
CONN7	-.15	.24	**.58**
CONN8	.07	-.21	**-.62**

Note. Factor loadings > .30 are in boldface; CONN = Connectedness

An inspection of the pattern matrix indicated that two items, CONN5 and CONN6 had factor loadings above .4 on Factor 2 and CONN7 and CONN8 and factor loadings above .4 on Factor 3. An optimal factor solution should have three or more items with factor loadings above .4 to be considered a stable factor (Pallant, 2007). Although Factor 2 and 3 had item loadings that exceeded the recommended .4, there were only two items loading on each factor, suggesting that a one-factor solution was likely more appropriate.

Table 16

Factor Loadings from the Rotated Factor Pattern Matrix for the Connectedness Subscale: Principal Axis Factoring with Oblimin Rotation

CONN subscale Items	Factor 1	2	3
CONN1	**.52**	-.08	.10
CONN2	**.67**	.05	-.04
CONN3	**.84**	.13	-.09
CONN4	**.42**	-.20	-.02
CONN5	.04	**-.94**	.04
CONN6	-.01	**-.42**	-.09
CONN7	-.05	.03	**.56**
CONN8	-.03	-.01	**-.62**

Note. Factor loadings > .30 are in boldface; CONN = Connectedness

A subsequent analysis with a factor solution set at one resulted in a facture structure that explained only 22.9% of the variance, leaving 77% of unexplained variance. This solution explained 22.3% less variance than the original three-factor solution making it a less parsimonious factor solution.

Differences between Continuing and Non-Continuing Special Educators

The remainder of this chapter discussed the results that address the last two research questions of the study.

2c. Do significant differences exist between continuing and non-continuing special education teachers on items comprising the SECRS?

2d. Do significant differences exist in item responses between continuing and non-continuing special education teachers when student disability category is considered?

Independent sample *t*-tests were conducted to detect mean differences in items responses between continuing and non-continuing special educators. However, an assumption of the *t* –test is that the amount of variability between continuing and non-continuing special educators should be equal. The Kolmogorov-Smirnov and Shapiro-Wilk tests of normality were conducted to assess the normality of the datasets and revealed non-normal data distribution of scores for the Support for Self Awareness, Conversion, Connectedness subscales and the overall SECRS instrument. Table 17 contains the Kolmogorov-Smirnov and Sharpiro-Wilke data for the SECRS and all subscales.

Table 17

Tests of Normality for SECRS and Subscales

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	*df*	Sig.	Statistic	*df*	Sig.
SECRS_Mean	.06	261	.03	.96	261	.00
TA_Mean	.05	261	.20*	.99	261	.36
SSA_Mean	.09	261	.00	.90	261	.00
CONV_Mean	.09	261	.00	.94	261	.00
CONN_Mean	.06	261	.01	.98	261	.00

Note. *.This is a lower bound of the true significance. a. Lilliefors Significance Correction

However, the Central Limit Theorem suggests that even if the parent distribution of a population is non-normal, the sampling distribution of the mean is shaped somewhat like a normal curve, which supports the use of a *t*-test for these analyses (Pallant, 2007; Salkind, 2004). Therefore, *t*-tests were appropriate to use when comparing group means of continuing and non-continuing special education teachers and between teachers of students with high incidence and students with low incidence disabilities on the SECRS and each subscale item responses.

Item response comparison. Results of the independent-samples t-tests used to compare continuing and non-continuing special educator mean item scores for the SECRS overall instrument and for each individual subscale revealed no significant differences in SECRS mean scores for continuing special educators (M = 5.81, SD = .46) and non-continuing special educators, M = 5.92, SD =.47; t (259) = -1.03, p = .30. The magnitude of the differences in the means (mean difference = .10, 95% CI: [-.31 to .09]) was very small (d = .004). Similarly, there were no significant differences in mean scores found between the continuing and non-continuing special educators on the Theme Acceptance, Support for Self-Awareness, Conversion, or Connectedness subscales, with

the magnitude of mean differences in each subscale being very small (TA, d = .006; SSA, d = .005; CONV, d = .0006; CONN, d = .001).

Individual item analysis. Independent samples t –tests were also conducted to determine if there were statistically significant differences between continuing and non-continuing special educators on individual SECRS item scores and if there were statistically significant differences on individual SECRS item scores between teachers of students with high incidence disabilities and students with low incidence disabilities. Statistically significant differences in item scores were found between continuing and non-continuing special educators on two items, TA2, t (259) = 3.2, p = .002; SSA1, t(259) = 3.96, p =.000 and between special educators who teach low and high incidence disabilities on one item SSA17, t(259) = 2.3, p = .021.

Between subjects analysis. A two-way, between subjects analysis of variance with teaching status (continuing, non-continuing) and disability type (low incidence, high incidence) as between-subject factors was conducted to examine the effect of disability type and teaching status on mean item responses on the SECRS instrument and each of the individual subscales (TA, SSA, CONV, and CONN). There was homogeneity of variance between groups as assessed by Levene's test for equality of error variances on the SECRS and all subscales with the exception of the TA subscale (p =.002) indicating that the variance across the groups for that subscale was significantly different. The interaction effect between teaching status and disability type for the SECRS instrument scores was not statistically significant F (3, 257) = .689, p = .407. The interaction effect between teaching status and disability type for three of the four subscales was also not

statistically significant (SSA, $F(3, 257) = .196$, $p = .658$; CONV, $F(3, 257) = .013$, $p = .909$; CONN, $F(3, 257) = .010$, $p = .921$).

Because the Levene's test of the TA subscale indicated that the variances among the groups were unequal ($p < .05$), the Brown Forsythe statistic was computed, which was significant ($p < .01$) indicating the mean TA score for one or more groups were significantly different. The Game-Howell post-hoc test was conducted with the results indicating statistically significant differences in group means between the non-continuing/low incidence group and the continuing/low incidence group ($p = .00$), continuing/ high incidence group ($p = .02$), and the non-continuing/high incidence group ($p = .00$). The interaction effect between teaching status and disability type was statistically significant for the TA subscale, $F(3, 257)= 4.45$, $p =.03$. Table 18 summarizes the two-way, between subjects ANOVA data.

There was also a statistically significant main effect of teaching status, F (3, 257) = 9.71, $p = .002$ and disability type, $F(3,527) = 7.47$, $p = .000$ on item scores for the TA subscale. However, the effect size for teaching status ($\eta^2 = .03$) and for disability type ($\eta^2 = .005$) was small.

Table 18

Two-Way Between Groups ANOVA Exploring the Impact of Disability Type on Teaching Status

Source	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.
Corrected Model	16.48[a]	3	5.49	4.42	.00
Intercept	728.07	1	728.07	586.64	.00
HI_LOWINC	9.27	1	9.27	7.47	.00
TeachingStatus	12.05	1	12.05	9.71	.00

Source	Type III Sum of Squares	*df*	Mean Square	*F*	Sig.
HI_LOWINC * TeachingStatus	5.53	1	5.53	4.45	.03
Error	318.96	257	1.24		
Total	5506.29	261			
Corrected Total	335.44	260			

a. R Squared = .049 (Adjusted R Squared = .038)

Summary

The SECRS was subjected to EFA to determine whether items selected to measure the four domains of the CRF measured the latent factor of career resilience of continuing and non-continuing special educators. Results of the analysis indicated that an interpretable factor structure could not be derived from the SECRS. Subsequent subscale analyses were conducted with similar results with the exception of the TA subscale analysis that derived a 2-factor solution, School System Support and Administrator Support, which explained 53.5% of the variance.

Mean difference analyses between continuing and non-continuing special educators and between special education teachers of students with high and low incidence disabilities, found statistically significant differences for only three items on the SECRS (i.e. TA2, SSA1, and SSA17). However, between-group means analysis revealed a statistically significant difference between the non-continuing/low incidence group and all other groups on the TA subscale, indicating that administrative and school system support were influential on the career resilience for that group. However, due to the small number of participants in that group, that data should be viewed cautiously.

The results of the analyses, their potential implications, limitations, and suggestions for further areas of study are detailed in Chapter 5.

Chapter 5

Discussion

To improve the retention of special education teachers, it is necessary to understand factors that contribute to their career decisions and to identify ways to mitigate factors associated with teacher attrition. While there is research regarding the factors that are related to special education teachers' career choices (Billingsley & Cross, 1992; Billingsley & Cross, 1991; Boe et al., 2008; Cross & Billingsley, 1994; Chapman, 1984; Gersten et al., 2001; Kersaint et al., 2007; Litrell et al., 1994; Miller et al., 1999; Plash & Piotrowski, 2002), there is little research on teacher resilience and if that characteristic mitigates factors associated with teacher attrition.

Stress associated with student challenges and job functions has been found to have a profound role in the career decisions of special educators (Billingsley & Cross, 1992; Cross & Billingsley, 1994; Fimian & Santoro, 1983; Fore et al., 2002; Gersten et al., 2001; Kaff, 2004;Weiskopf, 1980). The ability to navigate successfully through those stressors results in more resilient teachers, which enables them to continue teaching. Resilient teachers are those that are able to problem-solve, are optimistic about the future, seek the assistance of others, are supported by building administrators, have a strong commitment to student achievement, and demonstrate flexibility (Albrecht, et al., 2009; Brunetti, 2006; Castro, et al., 2010; Dallas, 2006; Patterson et al., 2004; Stanford, 2001; Yost, 2006). Teachers who possess these resilient characteristics tend to continue teaching even when faced with significant challenges in the teaching environment. Developing these resilience characteristics is critical when seeking to improve the retention rates of special educators.

This study investigated whether career resilience impacted the career decisions of special educators using a quantitative research approach. The concept of career resilience stems from the Career Resiliency Framework (CRF) used to study the career paths of individuals who experienced traumatic events or were exposed to extreme stress. Rickwood (2002) posited that the four domains of the CRF, Theme Acceptance, Support for Self-Awareness, Conversion, and Connectedness, were related to the development of career resilience in those individuals thereby improving their career stability. In applying this framework to the investigation of special education teacher retention, I hoped to determine whether career resilience influenced the career decisions of special educators who had been in the field for three or more years.

I developed and field tested the Special Education Career Resilience Scale (SECRS) in an effort to quantitatively assess the career resilience of special education teachers. I made this decision based on the following: a) there was limited research available on how resilience impacts teachers' career decisions; b) the past studies focused primarily on general educators rather than special educators; and c) the study of teacher resilience was conducted almost exclusively from a qualitative perspective. With that in mind, the CRF was used to explore the career resilience of continuing and non-continuing special educators. Four previously developed scales, two measuring resilience, one measuring coping behaviors, and one measuring perceived administrative support, were used to comprise the SECRS in an attempt to construct a survey with items that would reflect the four domains of the CRF (i.e. Theme Acceptance, Support for Self-Awareness, Conversion, and Connectedness).

In this chapter, I discuss implications from the development and piloting of the SECRS and the results of the field test analysis. Next, implications for the field of special education teacher retention and suggestions for future research are offered. Finally, limitations of this study are discussed.

Cognitive Interview, Expert Opinion, and Pilot Test Implications

Six individuals participated in the cognitive interview process and analysis of their data led to the modification of three items in the SECRS to improve clarity (i.e. TA1, TA3, and TA5). The change for each problematic item was to replace the word "organization" with "school system". These changes made the items more relevant to education and teaching.

Expert opinion data from the Kendall's tau analyses revealed a low to moderate statistically significant level of agreement among the three experts for the overall SECRS indicating agreement that items selected for the SECRS measured the construct of career resilience. Although statistically significant, the correlations were well below the desired .7 which would have indicated a strong agreement between experts. Results from the ICC analysis revealed all expert scores had a moderate level of association on item scores for the overall SECRS instrument and low to moderate association on item scores for each of the subscales with the exception of the Support for Self-Awareness subscale, which had a negative ICC value indicating a poor reliability for that subscale. Negative ICC values typically occur when the between-subject variation is relatively small compared to the within-subject variation, e.g. due to different raters (Gibbons, 1993).

Due to the variability in the measures of association, additional analyses were conducted which included the calculation of means, standard deviations, frequency of

responses, and comments provided by the experts to determine if item or scale modifications were required. Based on those results item TA7 was deleted from the Theme acceptance (i.e. My administrator show very little concern for me"). Additionally, item CONN5 (i.e. "I only set goals I know I can reach without the help of others") was deleted from the Connectedness subscale and item CONN8 was reworded positively from "My friends and family frequently don't live up to my expectations" to "My friends and family frequently live up to my expectations."

Although the Kendall's tau and ICC data were inconclusive regarding whether items represented the construct of career resilience, it is important to note that the experts evaluating the SECRS were not experts in special education teacher retention or teacher resilience. Additionally it may be the case that the three experts did not evaluate the items appropriately (i.e. whether the items appropriately measured career resilience) but instead may have rated them in relation to themselves and their personal or professional experiences. Although the instructions provided to them asked them to evaluate the items based upon how well each measured career resilience, it is difficult to ascertain whether that in fact occurred. Both of these factors may explain why more substantial changes were not recommended, which may have resulted in a stronger overall instrument.

Results from item analyses conducted on the pilot data indicated acceptable internal consistency for the SECRS instrument and each subscale. Analyses of means, standard deviations, and frequency of responses did not support the need to modify or delete items for the field test version. As part of the piloting process, respondents were given the option to identify an item as vague, misleading, or confusing and then to provide comments on how the item could be changed. It was hoped that this data would

provide insight into problems with the items, and guide how the item would be modified or if need be, deleted. However, out of the six items identified as vague, confusing or misleading, only four had comments identifying how the items were problematic. Again, the instructions for the pilot may not have been specific enough to give participants guidance on identifying troublesome items or on the use of the comment sections to explain why the items were problematic.

The techniques and data analyses used were those suggested by the literature to ensure that the development of the SECRS met the standards required in creating a reliable and valid survey. The analyses resulted in substantive changes to the items that comprised the instrument and the comments from the cognitive interviews, experts and piloting were minimal.

Field Test Implications

The SECRS was field tested by 301 continuing and non-continuing special educators or 57.1% of the total field test participants. Of the 301 responses, 261 were used for the final data analysis. The analyses of the SECRS indicated that the instrument did not measure the latent factor of career resilience of continuing and non-continuing special educators as it related to the domains of the CRF as expected. Although the initial item analyses of the SECRS indicated acceptable internal consistency, with total item correlations exceeding .9, when the SECRS was subjected to exploratory factor analysis, an interpretable factor structure could not be derived. Subsequent analysis of each subscale that comprised the SECRS resulted in the derivation of simple factor structures for the SSA and CONV subscales, however those structures did not explain a acceptable amount of the variance, leaving large percentages of variance unexplained. An

interpretable factor structure for the CONN subscale could not be derived. Conversely, the analysis of the TA subscale revealed a two-factor structure which was interpreted as School System Support and Administrative Support, both of which represented the CRF domain of Theme Acceptance. These data provides further evidence of the importance of administrative support in teacher career decisions that has been identified in previous research on teacher resilience (Albrecht et al., 2009; Brunetti, 2006; Malloy & Allen, 2007).

The inability to derive an interpretable factor structure for the SECRS may have been due to the use of an untested theoretical framework as a basis for the instrument. The CRF may more accurately pertain to organizational support for individuals, which in turn, increases the level of career resilience, than it does to individual characteristics that promote higher level of career resilience. Although Rickwood and others (2002) proposed that this framework should be applied when seeking to increase the career resilience of individuals who are at high-risk for leaving a chosen career, it did not aid in differentiating between continuing and non-continuing special educators. Additionally, the definitions of each of the four domains tended to overlap; this may have contributed to my difficulty in finding scales and items that were different enough to explicitly measure each of the domains. For example, the use of two scales developed to specifically measure personal resilience i.e. The Resilience Scale (Wagnild & Young, 1993) and the Connor-Davidson Resilience Scale (Connor & Davidson, 2003) along with a third scale developed as a measure personal coping (Sinclair & Wallston, 2004) may have resulted in items that were too similar to provide the information that I was seeking for three of the four domains (Support for Self-Awareness, Conversion, and

Connectedness). Conversely, the scale used for the Theme Acceptance domain (The Survey of Perceived Organizational Support, Eisenberger et al., 1986) contained items specifically created to measure only administrative and organizational support. There were no similarities between these items and the items from the other subscales which allowed a more interpretable 2-factor structure to converge for the Theme Acceptance domain.

The results from the Theme Acceptance analysis are in line with previous research on teacher retention and attrition, which found Administrative Support to be influential teacher career decisions. However, overall school system support has only rarely been addressed and has focused on mentoring programs and availability of professional development for new teachers (Brunetti, 2006; Dallas, 2006; Patterson et al., 2004). The items on the TA subscale relating to school system support went beyond those traditional areas to determine whether teachers felt they were appreciated by the school system for the work they do. School system support is an area that has not been explored in special education teacher retention research but should be part of future research to determine whether this area is influential in special education teacher career decisions.

Analyses of individual item scores between continuing and non-continuing special educators on the SECRS indicated that there were statistically significant differences in the latent construct of career resilience for itemsTA2 (i.e. “My administrator fails to appreciate any extra effort from me”) and SSA1 (i.e. “When I make plans I follow through with them”). When analyzing differences in means item scores for continuing and non-continuing special educators when disability type (i.e. high

incidence/low incidence) was considered, there was a statistically significant difference between those groups in the latent construct of career resilience on SSA17 (i.e. “My belief in myself gets me through hard times”). No other items scores were significantly different. This was an unexpected result, as I anticipated more significant differences on item responses from continuing and non-continuing special educators. However, the item scores that were significantly different provide important information that should be considered when hiring and retaining special educators. Specifically, item TA2 (i.e. “My administrator fails to appreciate any extra effort from me”) provides insight into the importance of administrator support and acknowledgement of the work required in special education. Administrators may not recognize that special educators are often required to work above and beyond what is required of their general education counterparts, especially given the demands of both the IDEA, and the increased requirements for student academic achievement required in the Race to the Top legislation. This lack of recognition and support may increase the likelihood that special educators will leave the field and is especially important to investigate as schools implement the Common Core Standards and corresponding assessments for student achievement.

A significant main effect for both teaching status and disability type was found for only one of the four subscales (Theme Acceptance) between the non-continuing/low incidence group and the continuing/low incidence group (p = .00), continuing/ high incidence group (p = .02), and the non-continuing/high incidence group (p = .00). However, due to the small number of non-continuing teachers participating in this study

(n = 21), and the even smaller number of non-continuing special educators who taught students with low-incidence disabilities (n = 2), this result must be viewed with caution.

The inability to detect statistically significant mean differences between continuing and non-continuing special educators on the SECRS and three of the four subscales may have been due to the large difference in sample size between the two groups. The non-continuing special education teachers represented only 13% (N = 74) of the overall sample (N = 567) and only 9% (N = 22) of the respondents whose data were used in the field test analysis (N = 261). The small number of non-continuing special educators may have made it less likely that statistically significant differences between groups would be found. Another consideration is that non-continuing special educators were defined as individuals who left the field of special education but continued to teach in general education. The fact that those individuals continued to teach may have made the two groups too similar in their responses whereas non-continuing special educators who left the teaching profession altogether may have responded to items much differently. Although it is often difficult to find teachers who have left the profession altogether, it may be important for school systems to consider how to follow-up with at least a sample of former teachers in an effort to obtain this information. Again, this is an area to target in future research.

Implications for the Field

Although the data from this study did not provide support for the use of the CRF or the SECRS as a valid instrument to measure the career resiliency of special educators, there are still important implications for the study of special education teacher retention. Data from the Theme Acceptance subscale revealed items that loaded moderately to

strongly on two distinct factors; School System Support and Administrator Support. This subscale also contained one item that revealed a statistically significant difference in item responses between continuing and non-continuing special educators. Additionally, there was a statistically significant main effect for teaching status and disability type on items measuring the latent construct of career resilience in this subscale. These results suggest that the Theme Acceptance subscale contained some items discriminative enough to determine differences in career resilience between continuing and non-continuing special educators as well as between those groups when disability type was considered. This data supports past research which has identified administrative support as a significant factor impacting special education teacher career decisions (Albrecht et al., 2009; Brunetti, 2006; Malloy & Allen, 2007) and highlights the need for schools and school systems to examine the amount and type of administrative support given to special educators.

With the increasing demands on special educators resulting from the shift from adequate yearly progress requirements of the No Child Left Behind Act to the student performance and teacher evaluation requirements in the Race to the Top Act, administrative and school system supports are essential to improving the retention of qualified special education teachers. With the implementation of Race to the Top, a Common Core Curriculum is expected to be provided for all students and teacher performance evaluations, including special educators, are based in part on the progress of special education students in that curriculum. A consequence of low student performance on high stakes testing is the identification of schools as either “Focus” or “Priority” Schools. Because special education students are typically the lowest performing student

group, special educators are faced with what may seem an overwhelming task of improving student performance to match that of non-disabled students to avoid the label of “Priority” or “Focus”. With the added pressure of teacher evaluations that are based in part on that student performance, the obligation of administrators and school systems to provide meaningful professional development and individual teacher support cannot be overemphasized. Without that support, it is extremely difficult to retain qualified special educators.

Implications for Future Research

Although this was an unsuccessful first attempt to develop a valid instrument to measure the career resilience of continuing special educators, there continues to be a need to investigate the importance of resilience in special education teacher career decisions. It was my hope that using previously developed scales measuring resilience, coping, and organization support to measure career resiliency would result in an accurate measurement of the four domains of the CRF. However, based upon the data derived from this study, it is evident that the use of the CRF did not aid in understanding how career resilience impacts the career decisions of special educators. Additionally, the use of previously developed scales to measure each of the four domains of the CRF was also unsuccessful.

In the future, it seems important to expand upon the qualitative data that are already available on teacher resilience especially as it pertains to special educators, as this population has been significantly underrepresented in the existing literature. Introducing quantitative analyses with so little data derived from qualitative exploration may have made it difficult to identify salient factors associated with special education career

resilience, especially those internal factors that impact special educator career decisions. One way to identify those internal factors would be to conduct interviews with both continuing and non-continuing special educators with open-ended questions that clearly delineate between external and internal factors associated with both groups. Using that format would assist in providing more guidance on item development, resulting in a more sensitive instrument, which may identify unique characteristics associated with teachers who continue teaching in special education. After those data are collected, it may be possible to construct a scale that would more closely align with the CRF.

Future investigation in this area should also focus on special educators who have left the teaching profession altogether, as data from this group may be significantly different than data from individuals who have migrated to general education but are still teaching. What factors may have influenced their decision to leave? Are the factors that contribute to the decisions of special educators who leave common to their general education counterparts that have left education? Would understanding these differences aid in increasing special education teacher retention? Although this may be challenging data to collect, most school systems have adopted the practice of asking departing teachers to complete an exit survey. This is typically voluntary in nature. However, in order to adequately gather the important data of why teachers leave the teaching profession, this type of exit survey may need to be a requirement prior to final release of employment, which could be accomplished through state departments of education or local education agencies. This is particularly important for departing special educators due to the difficulty finding highly qualified special educators to fill those vacancies. In doing this, school systems can gather vital information regarding how to better support

new and veteran special education teachers. If these data are collected, future research in special education teacher retention and resilience will have a better chance to include the individuals of the greatest interest: those who not only left special education but have left the teaching profession completely. Those individuals can provide the most insight into the study of resilience and how it impacts special education teacher retention.

Certification routes of continuing and non-continuing special educators may also yield important data regarding special education teacher career choices. Possible areas to investigate include whether special educators who choose non-traditional certification routes have lower career resilience than those teachers that participate in traditional teacher certification programs. If that is the case, what are the implications for those programs in helping to improve the resilience of special educators, thereby improving retention rates of those teachers?

Significance of Study

Resiliency has recently become an area of interest regarding the impact these characteristics may have on teacher retention. However, there has been limited exploration on whether resilience influences the career decisions of teachers, especially those who teach in special education. The resiliency construct encompasses internal characteristics that may influence special education teacher continuation. Examining this construct from a career perspective via the CRF offered a new approach. This approach provided a unique model that contributed to previous research in the area of special education teacher retention and also added to that literature through the examination of factors not previously included in teacher retention research.

Additionally, previous research on teacher resilience relied almost exclusively on qualitative or mixed -methodology to investigate resilient characteristics of teachers who continued to work in high stress teaching situations (i.e. inner-city schools, rural schools, students with behavioral and/or academic challenges). Moreover, special education teachers have not been included or have been underrepresented in those studies. While unsuccessful, the development and evaluation of a quantitative instrument such as the SECRS represents a first step in the quantitative study of career resiliency with a focus on special education teachers. This is an area that has been missing from the study of teacher resilience and career choices. Additionally, the use of the CRF introduced a new perspective from which to examine special education teacher retention. And while this study did not yield the amount of significant differences that were anticipated, the CRF may still prove to be a viable framework to use when examining the career resilience of special educators due to the relevance of the four domains of the CRF to resilient characteristics that have been identified in previous research on resilience and teacher retention.

Limitations

Several limitations of this study have been discussed previously but require further explanation. First, only rural and suburban school systems were selected to participate in this study. There were no urban or inner-city school systems included. Because of this, the results of this study should not be generalized to special educators working in school systems located in those areas. Secondly, the SECRS was developed using an untested framework with domains that proved not to be differentiated enough to provide information on the career resilience of special educators. Although Rickwood

(2004) indicated that the CRF was based upon resiliency theory and that each domain reflected important aspects of individual career resilience, his assertion that the use of this framework by employers or career counselors could improve the level of career resilience of individuals who were at risk for leaving a chosen career path was not based upon evidence. When tested in this study, the CRF was found not to be a useful framework for examining the career choices of special educators.

Additionally, the use of four different scales that were not designed to measure career resilience as well as the item review by individuals who were not experts in either teacher resilience or retention also proved to be a limitation. Had the SECRS items been created specifically for this study and the review of those items been conducted by experts in either teacher retention or teacher resilience, it is possible the items would have been more carefully scrutinized as to whether they were reflective of teacher resilience and/or influential on teacher career decisions.

Another limitation was the significant disparity in the number of continuing and non-continuing special educators in the sample. A larger number of non-continuing special educators may have improved the results. Because the schools systems included in this study varied in how they collected data of special educators who migrated to general education, there were fewer non-continuing teachers provided from each county, with one county providing no non-continuing teachers at all. Because of this, there was not a truly representative sample of continuing and non-continuing special educators participating in this study.

Finally, teachers who comprised the non-continuing special educator group were individuals who migrated to general education. This group of teachers may have been

too similar to the continuing group making it difficult to detect differences as both groups were still in the teaching profession and most likely had students with disabilities in their general education classes. Future research should attempt to compare special educators who have left the teaching profession completely to those who remain. These individuals may provide additional insight into whether career resilience influences special education teacher career choices

Appendix A
Summary of Studies

Summary of Studies: Content

Teacher Resiliency								
Study	**Purpose**	**Overall Design**	**Independent Variable(s)**	**Dependent Variable(s)**	**Participants**	**Measurement**	**Data Analysis Method(s)**	**Results**
Brunetti, G. J., (2006)	Investigation of what motivates experienced inner city high school teachers to remain in the classroom.	Mixed Method	Motivation	Intent to remain in teaching	32 high school teachers 9 high school teachers with 12 or more years experience Caucasian Approximately 50% Female	Experienced Teacher Survey (Brunetti, 2001) 18-items, 4-point scale. Interviews	Descriptive (means, standard deviations) Transcription analysis Theme/subtheme generation	1. Teachers cite students as an important reason for staying in the classroom. 2. Teachers received personal and professional fulfillment from working at the inner city school. 3. Support from administrators, fellow teachers and the general organization and operation of the school was a powerful factor in teachers' decision to

								remain in the classroom. 4. A critical underlying factor for continued productive work in an inner city classroom was the teachers' resilience.
Dallas, F. (2006)	Investigation of the influences that one professional learning community had on teacher resilience, teacher retention and school reform initiatives.	Qualitative	Professional learning community	Teacher resilience Teacher retention School reform initiatives	6 teachers Certification: 1 provisional, 2 elementary, 2 middle 1 special education; 6th grade Language Arts Teaching range 1 – 7 years	Embedded – Unit Case Design (Yin, 1994) Interviews (teacher and student) Participant observer field notes Formal and informal observations Questionnaires End of grade reading scores Group artifacts	Primary unit of analysis (professional learning community) Pattern Matching (research questions, study propositions, cross case matrix) Data triangulation Informal data audits Member checks	1. The professional community fostered strong professional relationships, effective collaboration and collegial support, enhanced resilience, and assisted in implementing effective curriculum reforms. 2. Student achievement increased slightly ending a downward trend.

Day, C. & Gu,Q., (2009)	Investigation of factors associated with teachers' effectiveness in different phases of their professional career and how resiliency and commitment impacts that effectiveness.	Mixed Method	Teachers' lives Teachers' work Teachers' personal identities	Resilience Commitment to teaching Effectiveness	300 experienced teachers 100 schools in 7 locations England	Semi-structured interviews Pre-post testing of student performance	Interview transcription Document analysis	1. Teachers' capacities to sustain their commitment and resilience were influence by their professional life phases and their identities. 2. These influences were mediated by the contexts in which they lived and worked. 3. The mediating influences were found to consist of three dimensions: the personal, the situated, and the professional. 4. These dimensions were not static and change in one world impacted a teachers' ability to manage the others.

								5. The support of the organization was crucial in assisting teachers to maintain stability in their personal and professional identities.
Gu, Q. & Day, C. (2007)	Examination of the role of resilience in teacher effectiveness .	Qualitative	Personal identity School situations Professional values	Teacher resilience	300 experienced teachers 100 schools in 7 locations England	Semi-structured interviews Document analysis Pre-post testing of student achievement	Scenerio development	1. Resilient teachers were able to balance personal, situated and professional components of teaching. 2. If one or two of the components of teachers' identities dominated, teachers were less likely to persist over a long period of time. 3. The inability to manage fluctuations in any of the identity

								components resulted in a decrease in teacher persistence.
Malloy, W. W. & Allen, T. (2007)	Examination of the extent to which a rural school enhanced teacher retention by overcoming barriers that otherwise would present a challenge to teacher retention.	Qualitative	Caring and support Setting and communicating high expectations Opportunities for meaningful participation	Teacher retention	28 teachers Rural location K-8 grade range	Assessing School Resiliency Building (Henderson & Milstein, 2003) 18-items; 4-point scale Descriptive case study (Merriam, 1998). Observations; group interviews	Percentages Closed question responses	1. Survey results indicated that the rural school was a resiliency-building school across all three constructs (caring and support, setting and communication of high expectations, opportunities for meaningful participation). 2. Small group interviews indicated that the rural school fostered resiliency in teachers through supportive practices of team teaching, peer evaluations, and reflective

								conversations; the adoption of specific philosophies that encourage high expectations for students and teachers; and collaborative relationships that encourage professional growth and obviates status differences.
Patterson, J. H., Collins, L., & Abbott, G. (2004)	Investigation of strategies used by urban teachers to build their personal resilience.	Qualitative	Strategies for coping with adversity	Teacher resilience	16 participants, (8 teachers; 8 teacher leaders) Large urban school district Student scores above state average At least 3 years of teaching experience	Three cycle interview process (Seidman, 1998). Primary source data (teacher interviews) Secondary source (archival data; observations)	Transcription	1. Resilient teachers have a set of personal values that guides their decision-making. 2. Resilient teachers place a high premium on professional development and will seek it out. 3. Resilient teachers provide mentoring to others.

4. Resilient teachers are not victims, but problem-solvers.
5. Resilient teachers stay focused on the children and their learning.

6. Resilient teachers do whatever it takes to help children be successful.

7. Resilient teachers have friends and colleagues who support their work emotionally and intellectually.

8. Resilient teachers are not wedded to one best way of teaching and will explore new ideas.

9. Resilient teachers know when to get

								involved and when to let go.
Stanford, B. H. (2001)	Examined how resilient teachers have maintained endurance and continuing enthusiasm for their work.	Qualitative	Satisfaction Support	Resilience	10 teachers 2 different schools Washington, DC Range of teaching experience from 10 – 33 years. K-6 grade range African-American (ages 37 – 55, M = 49) Range of education from bachelor's to master's degrees.	Semi-structured interviews Self-anchoring Scaling (Kilpatrick & Cantril, 1960), ranking activity Field notes Focus group discussion	Data triangulation Review of audiotapes, transcriptions, field notes and summarized response to questions. Review and analysis of focus group videotape and transcription	1. Commitment to and love of the students was the most prominent pattern to emerge to explain teacher perseverance. 2. Making a difference in students' lives was the prominent source of satisfaction of resilient teachers. 3. Resilient teachers had a sense of optimism regarding the future. 4. Colleagues, church community, personal spiritual lives and family and friends were the most frequently

								cited sources of support for resilient teachers. 5. Participants metaphor choices for teaching experiences were positive, similar and reflected preferences for a familial and collegial school climate.
Special Education Teachers								
Albrecht, S. F. et al., (2009)	Examination of the working conditions reported by special education teachers of students with emotional and behavioral disorders to identify factors common to teachers likely to leave or stay in their positions for 2	Mixed-Methods	Working conditions Demographics	Intent to leave or stay in teaching	776 special education teachers and related service providers Balanced distribution of school settings (33.4% urban, 30.3% rural, 35.8% suburban, .5% combination) 45 U.S. states, Washington, DC	EBD Working Conditions Survey 28-items Various responses elicited including Likert scales, forced response, multiple responses and narrative comment. Demographics 8-items Personnel and instructional	Quantitative: Correlation Chi-square One-way ANOVA t-tests	1. EBD teachers with 10 or more years experience were more likely to remain in the same position. 2. Time for paperwork had a mean rating of below satisfactory as a variable measuring working conditions. 3. Teachers were

	years.				Canada Range of teaching experience Range of special education qualifications	resources 4-items Methodologies and classroom responsibilities 8-items Preservice and in-service training 5-items Intent to continue in current setting 2-items Additional information 1-item	Qualitative: Coding of narrative responses Identification of common themes	more likely to stay in their EBD position with a strong level of administrative and collegial support. 4. Teachers who utilized Positive Behavior Interventions and Supports along with point systems and level systems were more likely to stay in their positions. 5. Unfavorable work conditions were tolerated as long as administrative support was available on a daily basis.
Castro, A. J., Kelly, J. & Shih, M. (2010)	Investigation of the strategies of resilience exhibited by novice teachers employed in high-needs areas such as	Qualitative	Strategies Resources	Resilience	15 first year teachers Various high needs areas (urban, rural, special education) Rural teachers:	Semi-structured interview protocol (Creswell, 2002; Merriam, 1998)	Constant-comparison Coding Theme identification	1. Resilience strategies identified were help-seeking, problem-solving, managing difficult relationships, and seeking rejuvenation/renewal.

urban and rural contexts and in special education.	Low –income Culturally diverse Urban teachers: Large school district Special Education teachers: Suburban Elementary and secondary Variety of subject areas	2. The political and social organization of the schools plays a fundamental role in the experiences of novice teachers. 3. Resilience strategies such as advocating for resources, seeking allies and buffers, and forming teacher peer groups create new resources but also expend energy from beginning teachers. 4. Resilient teachers are resource builders and do not accept the current situation as it is, but recruit others to assist in altering their work conditions. 5. Resilience strategies place additional burdens on novice teachers.

Yost, D. S. (2006)	Explore major obstacles faced by successful novice teachers during their first year of teaching, the impact of teacher education programs on views and successes and the extent of the use of critical reflection by teachers to problem-solve.	Qualitative	Teacher education programs	Level of resiliency in novice teachers	17 teachers dually certified in general and special education (ages 22-25) Predominantly Caucasian Range teaching experiences	Phase I. Interviews Observations Phase II. Current Teaching Position questionnaire	Transcription of audio and video recordings Field notes Coding of data	1. Self-efficacy, derived from successful field and student teaching experiences and the ability to use self-reflection for problem-solving outweighed positive school climate as a factor in novice teacher success.
G. C. Zost (2010)	Examination of the intrinsic resiliency and ways to build resiliency in rural special education teachers.	Qualitative	Teaching situation	Teacher resiliency and longevity.	15 special education teachers 5 or more years teaching experience Southeastern Nebraska	Semi-structure interviews	Development of themes, categories through interview response analysis	1. Familiarity with school and community, flexibility of teachers, and support systems both in and out of the school environment were influential factors associated with teacher resiliency and longevity. 2. Excessive paperwork, low

teacher salaries, and isolation often associated with teacher stress were not found to be influential factors impacting teacher longevity.

Summary of Studies: Methodological

Qualitative Studies

	Credibility						Transferability	Dependabilty	Confirmability
Study	Triangulation	Time in the Field	Peer Debriefing	Member Checks	Discrepant Information	Bias	Thick Description	Internal Audit	External Audit
Castro et al. (2010)	No	No	Yes	No	No	No	Yes	Yes	No
Dallas (2006)	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Gu & Day (2007)	No	Yes	No	No	No	No	No	No	No
Malloy & Allen (2007)	No	Yes	No	No	No	No	No	No	No
Patterson et al. (2004)	No	Yes	No	No	No	No	No	Yes	No
Stanford (2001)	Yes	Yes	No	Yes	No	Yes	Yes	No	No
Yost (2006)	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes
Zost (2010)	No	Yes	No	No	Yes	No	No	No	No

Mix-Methods Studies

Study	Rationale	Form of data Collected and Why	Priority of Method (Quant/Qualit)	Sequencing of Method	Matching Data Analysis to Design
Brunetti (2006)	No	Yes	Yes	Yes	Yes
Day & Gu (2009)	Yes	Yes	No	Yes	Yes
Albrecht et al. (2009)	Yes	Yes	Yes	Yes	No

Appendix B

SECRS Questions by Career Resiliency Construct

Career Resilience Construct **Survey**	**Questions**
Theme Acceptance **(The Survey of Perceived Organizational Support,** **Eisenberger & Huntington, 1986**)	The school system values my contribution to its well-being. My administrator fails to appreciate any extra effort from me. The school system would ignore any complaint from me. My administrator really cares about my well-being. Even if I did the best job possible, my administrator would fail to notice. My administrator cares about my general satisfaction at work. My administrator shows very little concern for me. The school system takes pride in my accomplishments at work.

Support for Self-Awareness

(The Resilience Scale, Wagnild & Young, 1987)

When I make plans, I follow through with them.

I usually manage one way or another.

I am able to depend on myself more than anyone else.

Keeping interested in things is important to me.

I can be on my own if I have to.

I feel proud that I have accomplished things in life.

I usually take things in stride.

I am friends with myself.

I feel that I can handle many things at a time.

I am determined.

I seldom wonder what the point of it all is.

I take things one day at a time.

I can get through difficult times because I've experienced difficulty before.

I have self-discipline.

I keep interested in things.

I can usually find something to laugh about.

My belief in myself gets me through hard times.

In an emergency, I'm someone people can generally rely on.

I can usually look at a situation in a number of ways.

Sometimes I make myself do things whether I want to or not.

My life has meaning.

I do not dwell on things that I can't do anything about.

When I'm in a difficult situation, I can usually find my way out of it.

I have enough energy to do what I have to do.

It's okay if there are people who don't like me.

I am resilient.

Conversion

(The Connor-Davidson Resilience Scale, Connor & Davidson, 2003).

I am able to adapt to change.

I have close and secure relationships.

I believe sometimes fate or God can help.

I can deal with whatever happens.

Past success gives me confidence for new challenges.

I see the humorous side of things.

Coping with stress gives me strength.

I tend to bounce back after an illness or hardship.

I believe that things happen for a reason.

I put forth my best effort no matter what.

I believe that I can achieve my goals.

When things look hopeless, I don’t give up.

I know where to turn for help.

Under pressure, I can focus and think clearly.

I prefer to take the lead in problem solving.

I am not easily discouraged by failure.

I think of myself as a strong person.

I can make unpopular or difficult decisions.

I can handle unpleasant feelings.

I have to act on a hunch.

I have a strong sense of purpose.

I am in control of my life.

I like challenges.

I work to attain my goals.

I take pride in my achievements.

Connectedness

(Brief Resilient Coping Scale, Sinclair & Wallston, 2004)

I actively look for ways to replace the losses I encounter in life.

I believe that I can grow in positive ways by dealing with difficult situations.

I look for creative ways to alter difficult situations

Regardless of what happens to me, I believe I can control my reaction to it.

I only set goals which I know I can reach without the help of others.

When I need help, I don't hesitate to ask a friend to help.

I hesitate to ask others to help me.

My friends and family frequently don't live up to my expectations of how they should act.

I really resent anyone telling me what to do.

Appendix C

Additional Expert Reviewer Questions

(1)"Please review the following descriptions of each of the four constructs used as the framework for the development of the SECRS, along with the rationale for determining which items reflect each construct." (2) "As you complete the SECRS, please rate your level of agreement regarding whether survey items represent parts of the domain of the construct that is under examination and whether you believe that the domain has been adequately represented by the items selected using the following scale: Strongly disagree, Moderately Disagree, Disagree, Neither Disagree nor Agree, Agree, Moderately Agree, Strongly Agree. Additional space has been provided after each item for comments or suggestions for item revision." Two final questions were included in the questionnaire for the experts to complete: (a) are there additional items pertaining to career resilience that should be included in the SECRS; and (b) how many minutes do you estimate the SECRS will take to complete." Question (a) required a YES/NO response, while question (b) had a range of times for the respondents to choose from.

Appendix D

Email Invitation Sent to County Directors of Special Education

INFORMATION LETTER
for a Research Study entitled:
Career Resilience and Continuing Special Education Teachers: An Evaluation of the Special Education Career Resilience Scale

Dear _____

Your school system is invited to participate in a research study designed to investigate the career resilience of continuing and non-continuing special education teachers. The study is being conducted by Arden Sotomayor, Ph.D. candidate, University of Maryland, Special Education program, under the direction of Dr. Debra Neubert, Professor University of Maryland.

Participation in this study is completely voluntary. If your school system decides to participate, special education teachers will be asked to complete the Special Education Career Resilience Scale (SECRS), which is available on-line or in paper format. The total time commitment for teacher participants will be approximately 30 minutes. Teachers may decide not to participate, or they may withdraw their participation at any time. If they choose to withdraw, their data will be withdrawn

Although there are no direct benefits to the participants in this study, they may enjoy reflecting on the issues raised by the SECRS. Participants may indirectly benefit from the knowledge produced from this study as it may inform the field about resilience characteristics that distinguish continuing and non-continuing special educators.

Any data obtained in connection with this study will remain confidential. The names of the teachers who participate will not be shared with anyone outside the research group. Teachers' privacy and the data they provide will be protected by storing all information in a locked file cabinet located in the home office of Arden Sotomayor. Information collected will be used to fulfill an educational requirement for a Doctor of Philosophy degree from the University of Maryland.

Please send the school system's application to conduct a research study, along with any other specific procedures that must be followed when conducting research in your school system, to Arden Sotomayor at the following email address: asotomayor@ccboe.com or ardensotomayor@verizon.net.

Should you have any questions or would like additional information on the proposed study, please contact Arden Sotomayor at asotomayor@ccboe.com or ardensotomayor@verizon.net or by cellular at 301-861-6111.
Thank you for consideration of this request.

Sincerely,
Arden E. Sotomayor, M. Ed.

Appendix E

Email Invitation for Field Test Participation

Dear Special Educator,

In an effort to understand the career resilience of special educators, Arden Sotomayor and Dr. Debra Neubert from the University of Maryland, College Park are conducting a research study with special education teachers who have taught for three or more years or who have left the field of special education altogether. We are asking that you complete the Special Education Career Resiliency Scale, which has been developed specifically for this study. Your input can help us determine whether there are differences in the career resilience of teacher who continue to teach in special education and those who do not continue. We estimate that it will take you approximately 15 - 20 minutes to complete the survey.

The survey is available either in an on-line format or paper format. To access the on-line survey, simply click on the link below, or cut and paste the entire URL into your browser to access the survey:

Survey link

Please be assured that the Survey Monkey website is a secure website with strict privacy and security guidelines. To find more information on the privacy and security policies of *Survey Monkey*, please click on the following links:

Privacy policy: http://www.surveymonkey.com/privacypolicy.aspx

Security statement: http://www.surveymonkey.com/Monkey_Security.aspx

If you would prefer a paper copy, we ask that you contact Arden Sotomayor either through email at: ardensotomayor@verizon.net or by phone at: 301-861-6111. Please include your mailing address in your message and the survey will be sent via the U.S. Postal Service. An addressed, postage-paid return envelope will be provided to you for the completed survey.

By participating in this study, you will be entered into a drawing for a $100.00 gift card from Amazon.com, which will occur upon the completion of the study.

We would appreciate your response by December 31, 2011.

Prior to beginning the SECRS, you will be asked to indicate your consent to participate in this study. Please read the consent form that is provided and indicate that you agree to participate by clicking on the Agree button if using the electronic version, or by signing the consent form provided in the paper version and returning it with the completed survey. If you choose not to participate, you may select the exit button in the electronic

version of the survey or simply not complete the paper version. All participants who agree to participate will receive a copy of the consent form for their records.

Your input is very important to us and will be kept strictly confidential (used only for the research purpose of this project).

If you have any questions, please contact Arden Sotomayor at ardensotomayor@verizon.net or asotomayor@ccboe.com or by cellular at 301-861-6111.

Sincerely,

Debra Neubert , Ph. D.
1308 Benjamin Building
University of Maryland, College Park, MD 20742-1161
Phone: 301-405-6466

Arden Sotomayor, M. Ed.

Director of Special Education
Charles County Public Schools
Radio Station Road, La Plata, MD 20646
Phone: 301-861-6111

To be removed from this or any future mailings, please click here or reply to this message and enter “REMOVE” in the subject line

Appendix F

All Versions of the SECRS

Expert Version of the SECRS

Special Education Career Resilience Scale - Expert Version

Consent Form

Project Title: Career Resilience and Continuing Special Education Teachers: The Development and Evaluation of the Special Education Career Resilience Scale.

Purpose of the Study:
This research is being conducted by Arden E. Sotomayor, under the supervision of Dr. Debra Neubert, at the University of Maryland, College Park. We are inviting you to participate in this research project because you are either currently teaching in special education or have taught in special education in the past. The purpose of this research project is to develop and evaluate the Special Education Career Resilience Scale (SECRS), which is intended to measure the career resilience of continuing and non-continuing special educators.

Procedures:
As an expert, you will be asked to complete the SECRS by indicating your level of agreement with the selection of items to measure each of the four domains of the Career Resiliency Framework (i.e. Theme Acceptance, Support for Self-Awareness, Conversion, Connectedness).

You will be asked to rate how well an item reflects the domain it has been selected to measure and whether additional items should be included. Definitions of each domain are provided on the first page of the scale and on each page of questions selected to measure the four domains.

Space has been provided for you to offer comments or suggestions for revision if needed. It should take you approximately one hour to complete the SECRS and provide your comments.

Potential Risks and Discomforts:
There are no known risks.

Potential Benefits:
There are no direct benefits to you. However, you may enjoy reflecting on the career resilience issues raised by the SECRS. You may also benefit indirectly from the knowledge produced from this study as it may inform the field about resilience characteristics that distinguish continuing from non-continuing special educators.

Confidentiality:
Any potential loss of confidentiality will be minimized by storing the master list of teacher names and email addresses in a locked cabinet at the student investigator's home office and/or on an electronic file that is password protected. If we write a report or article about this research project, your identity will be protected to the maximum extent possible. Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if we are required to do so by law.

Right to Withdraw and Questions:
Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigator,
Dr. Debra Neubert
1308 Benjamin Building
University of Maryland, College Park, MD 20742-1161
phone: 301 405 6466
or
Arden E. Sotomayor, M. Ed.
University of Maryland, College Park
phone: 301-861-6111;
ardensotomayor@verizon.net.

Special Education Career Resilience Scale - Expert Version

Participant Rights:
If you have questions about your rights as a research participant or wish to report a research-related injury, please contact:

University of Maryland College Park
Institutional Review Board Office
1204 Marie Mount
College Park, Maryland, 20742
E-mail: irb@umd.edu
Telephone: 301-405-0678

This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.

1. Statement of Consent:

Your signature indicates that you are at least 18 years of age; you have read this consent form or have had it read to you; your questions have been answered to your satisfaction and you voluntarily agree to participate in this research study. You will receive a copy of this signed consent form.

If you agree to participate, please sign your name below.
Signature and Date:
PARTICIPANT NAME:
[Please Print]_____

Signature and Date
PARTICIPANT SIGNATURE:_____

DATE:_____

◯ Please indicate your consent to participate in the research: I have read and understand the above consent form by clicking the submit button to enter the survey, I indicate my willingness voluntarily take part in the study.

◯ No, I don't agree to the above consent form

Special Education Career Resilience Scale - Expert Version

Special Education Career Resilience Scale

The Special Education Career Resilience Scale (SECRS) has been developed to measure the career resilience of persistent and non-persistent special education teachers. The SECRS incorporates items from three existing scales previously constructed to measure the resilience of individuals and one scale developed to measure the impact of organizational support on individuals in the workplace. Each scale has been selected to reflect the four constructs of the Career Resiliency Framework: Theme Acceptance, Support for Self-Awareness, Conversion, and Connectedness (Rickwood et al., 2004).

Please review the following descriptions of each of the four constructs used as the framework for the development of the SECRS along with the rationale for determining which items reflect each construct.

Theme Acceptance: An organization's wide-spread use of policies based upon resiliency theory, which support an individual's need to continue to improve skills necessary to successfully meet the demands of a particular career through professional development and staff education. These themes include providing opportunities for individuals to work through stressful situations, promoting an engaging cooperative learning environment among professionals, allowing all employees to participate in setting goals for an organization, and the communicating high expectations for individual achievement and/or improvement. Individuals in leadership roles within an organization support the implementation of these themes within an organization. The Survey of Perceived Organizational Support (SPOS) has been selected to measure this construct because it includes items that address the supporting mechanisms, which are required for employee improvement and/or sustainability within an organization (Eisenberger et al., 1986). Because the construct of Theme Acceptance is heavily reliant on the impact of administrative and organizational support in enhancing the career resilience of individuals, the SPOS would appear to be an appropriate scale to measure this construct.

Support for Self-Awareness: Processes, activities or tools that facilitate a deep understanding of an individual's core values and interests (Rickwood et al., 2004). An individual's career goals are guided by core beliefs and interests and are realized with perseverance in attaining those goals through self-reliance. Additionally, this construct includes the importance of personal, outside interests, and activities to maintain equanimity in one's life. The Resilience Scale (RS) was selected to measure this construct because factors associated with the RS, Personal Competence and Acceptance of Life and Self, reflect the central component in this construct, which is the development of a deep understanding of personal values and interests that facilitate resilience in an individual (Wagnild & Young, 1987).

Conversion: Involves changing the abstractness of goals and dreams in an individual to actual realization in concrete, real-life events and actions. This realization requires intrinsic motivation, which fosters a plan of action to include strategies for overcoming barriers that might otherwise thwart career goals. The Connor-Davidson Resiliency Scale (CD-RISC) was chosen to measure this construct because factors associated with the CD-RISC including personal competence, high standards and tenacity; trust in one's instincts, tolerance of negative affect, and strengthening effects of stress; secure relationships and acceptance of change; and control and spirituality may also be an appropriate measure of an individual's ability to identify and reach goals by the enhancement of internal motivation and tenacity (Connor & Davidson, 2003).

Connectedness: Individuals within the work environment need to feel a sense of community, which supports meaningful interactions and connectedness with others within that environment (Rickwood et al., 2004). This connectedness is achieved pooling r

As you complete the SECRS, please rate your level of agreement regarding whether survey items appropriately measure each construct as described above using the following scale: Strongly Disagree, Moderately Disagree, Disagree, Neither Disagree nor Agree, Moderately Agree, Agree, Strongly Agree. Additional space has been provided for any comments or suggestions for item revisions.

Thank you for reviewing the SECRS as an expert. Your feedback regarding the appropriateness of items included in the scale is invaluable when determining the content validity for this new measure.

Thank you for taking the time to complete the Special Education Career Resilience Survey. This survey should only take about one hour of your time.

- Click the Next >> button to continue to the next page.
- Click the Previous >> button to return to the previous page.
- Click the Exit the Survey Early >> button if you need to exit the survey.
- Click the Submit >> button to submit your survey.

1. Which category below includes your age?

- ◯ 20 - 29
- ◯ 30 - 39
- ◯ 40 - 49
- ◯ 50 - 59
- ◯ 60 or older

2. Are you male or female?

- ◯ Male
- ◯ Female

3. Are you White, Black or African-American, American Indian or Alaskan Native, Asian, Native Hawaiian or Pacific Islander, or some other race?

- ◯ White
- ◯ Black or African-American
- ◯ American Indian or Alaskan Native
- ◯ Asian
- ◯ Native Hawaiian or other Pacific Islander
- ◯ Multiple races (please specify)

4. Are you Spanish, Hispanic, or Latino?

- ◯ Yes
- ◯ No

5. What is the highest degree you have received?

- ◯ Bachelor's degree
- ◯ Post-baccalaureate degree
- ◯ Master's degree
- ◯ Ed. D. or Ph.D.

6. How many years of teaching experience do you have?

- ◯ 1-2
- ◯ 3-5
- ◯ 6-10
- ◯ 11-15
- ◯ 16-20
- ◯ 21-25
- ◯ 26-30
- ◯ 30+

7. How many years of teaching experience do you have in special education?

- ◯ 1-2
- ◯ 3-5
- ◯ 6-10
- ◯ 11-15
- ◯ 16-20
- ◯ 21-25
- ◯ 26-30
- ◯ 30+

8. What is the age level of the students you currently teach?

- ◯ Early Childhood
- ◯ Elementary School
- ◯ Middle School
- ◯ High School

9. Indicate all disability categories that represent students you currently teach or taught when you were a special education teacher.

- ☐ Autism
- ☐ Deaf-blindness
- ☐ Deafness
- ☐ Developmental delay
- ☐ Emotional disturbance
- ☐ Hearing impairment
- ☐ Intellectual disability
- ☐ Multiple disabilities
- ☐ Orthopedic impairment
- ☐ Other health impairment
- ☐ Specific learning disability
- ☐ Speech or language impairment
- ☐ Traumatic brain injury
- ☐ Visual impairment, including blindness

10. Is the school you are currently teaching in located in a rural, suburban, or urban area?

- ○ Rural
- ○ Suburban
- ○ Urban

11. If you are no longer teaching in special education, what is your current career designation?

- ○ General Education
- ○ Outside the Field of Education
- ○ Not Applicable

Theme Acceptance

Theme Acceptance: An organization's wide-spread use of policies based upon resiliency theory, which support an individual's need to continue to improve skills necessary to successfully meet the demands of a particular career through professional development and staff education. These themes include providing opportunities for individuals to work through stressful situations, promoting an engaging cooperative learning environment among professionals, allowing all employees to participate in setting goals for an organization, and the communicating high expectations for individual achievement and/or improvement. Individuals in leadership roles within an organization support the implementation of these themes within an organization. The Survey of Perceived Organizational Support (SPOS) has been selected to measure this construct because it includes items that address the supporting mechanisms, which are required for employee improvement and/or sustainability within an organization (Eisenberger et al., 1986). Because the construct of Theme Acceptance is heavily reliant on the impact of administrative and organizational support in enhancing the career resilience of individuals, the SPOS would appear to be an appropriate scale to measure this construct.

Please read the following statements. Below each statement, you will find a selection of responses ranging from Strongly Disagree to Strongly Agree. Please select the response that best indicates your feelings about that statement.

1. The school system values my contribution to its well-being.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional comments

2. My administrator fails to appreciate any extra effort from me.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

3. The school system would ignore any complaint from me.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

4. My administrator really cares about my well-being.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

5. Even if I did the best job possible, the organization would fail to notice.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

6. My administrator cares about my general satisfaction at work.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

7. My administrator shows very little concern for me.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

8. The school system takes pride in my accomplishments at work.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

Support for Self-Awareness

Processes, activities or tools that facilitate a deep understanding of an individual's core values and interests (Rickwood et al., 2004). An individual's career goals are guided by core beliefs and interests and are realized with perseverance in attaining those goals through self-reliance. Additionally, this construct includes the importance of personal, outside interests, and activities to maintain equanimity in one's life. The Resilience Scale (RS) was selected to measure this construct because factors associated with the RS, Personal Competence and Acceptance of Life and Self, reflect the central component in this construct, which is the development of a deep understanding of personal values and interests that facilitate resilience in an individual (Wagnild & Young, 1987).

Please read the following statements. Below each statement, you will find a selection of responses ranging from Strongly Disagree to Strongly Agree. Please select the response that best indicates your feelings about that statement.

1. When I make plans, I follow through with them.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

2. I usually manage one way or another.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

3. I am able to depend on myself more than anyone else.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

4. Keeping interested in things is important to me.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

5. I can be on my own if I have to.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

6. I feel proud that I have accomplished things in life.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

7. I usually take things in stride.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

8. I am friends with myself.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

9. I feel that I can handle many things at a time.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

10. I am determined.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

11. I seldom wonder what the point of it all is.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

12. I take things one day at a time.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

13. I can get through difficult times because I've experienced difficulty before.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

14. I have self-discipline.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

15. I keep interested in things.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

16. I can usually find something to laugh about.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

17. My belief in myself gets me through hard times.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

18. In an emergency, I'm someone people can generally rely on.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

19. I can usually look at a situation in a number of ways.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

20. Sometimes I make myself do things whether I want to or not.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

21. My life has meaning.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

22. I do not dwell on things that I can't do anything about.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

23. When I'm in a difficult situation, I can usually find my way out of it.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

24. I have enough energy to do what I have to do.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

25. It's okay if there are people who don't like me.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

26. I am resilient.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

Conversion

Conversion: Involves changing the abstractness of goals and dreams in an individual to actual realization in concrete, real-life events and actions. This realization requires intrinsic motivation, which fosters a plan of action to include strategies for overcoming barriers that might otherwise thwart career goals. The Connor-Davidson Resiliency Scale (CD-RISC) was chosen to measure this construct because factors associated with the CD-RISC including personal competence, high standards and tenacity; trust in one's instincts, tolerance of negative affect, and strengthening effects of stress; secure relationships and acceptance of change; and control and spirituality may also be an appropriate measure of an individual's ability to identify and reach goals by the enhancement of internal motivation and tenacity (Connor & Davidson, 2003).

Please read the following statements. Below each statement, you will find a selection of responses ranging from Strongly Disagree to Strongly Agree. Please select the response that best indicates your feelings about that statement.

1. I am able to adapt to change.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

2. I have close and secure relationships.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

3. I believe sometimes fate or God can help.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

4. I can deal with whatever happens.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

5. Past success gives me confidence for new challenges.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

6. I see the humorous side of things.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

7. Coping with stress gives me strength.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

8. I tend to bounce back after an illness or hardship.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

9. I believe that things happen for a reason.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

10. I put forth my best effort no matter what.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

11. I believe that I can achieve my goals.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

12. When things look hopeless, I don't give up.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

13. I know where to turn to for help.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

14. Under pressure, I can focus and think clearly.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

15. I prefer to take the lead in problem-solving.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

16. I am not easily discouraged by failure.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

17. I think of myself as a strong person.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

18. I can make unpopular or difficult decisions.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

19. I can handle unpleasant feelings.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

20. I have to act on a hunch.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

21. I have a strong sense of purpose.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

22. I am in control of my life.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

23. I like challenges.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

24. I work to attain my goals.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

25. I take pride in my achievements.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

Connectedness

Individuals within the work environment need to feel a sense of community, which supports meaningful interactions and connectedness with other individuals within that environment (Rickwood et al., 2004). This connectedness is achieved through the pooling of resources through groups and teams in order to promote continuous learning and celebrate successes. The Brief Resilience Coping Scale (BRCS) was selected to measure the construct of Connectedness because it includes items associated with resilient coping that examine an individual's proclivity to seek assistance from others when working to attain goals or when encountering problems.

Please read the following statements. Below each statement, you will find a selection of responses ranging from Strongly Disagree to Strongly Agree. Please select the response that best indicates your feelings about that statement.

1. I actively look for ways to replace the losses I encounter in life.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

2. I believe that I can grow in positive ways by dealing with difficult situations.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

3. I look for creative ways to alter difficult situations.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

4. Regardless of what happens to me, I believe I can control my reaction to it.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

5. I only set goals which I know I can reach without the help of others.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

6. When I need help, I don't hesitate to ask a friend to help.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

7. I hesitate to ask others to help me.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

8. My friends and family frequently don't live up to my expectations of how they should act.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

9. I really resent anyone telling me what to do.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Additional Comments

1. Are there additional items pertaining to career resilience that should be included in the SECRS?

- ◯ Yes
- ◯ No

Additional Survey Questions/Comments

2. How long do you estimate it will take an individual to complete the SECRS?

- ◯ 15 - 20 minutes
- ◯ 20 - 30 minutes
- ◯ 30 - 40 minutes
- ◯ Greater then 40 minutes

Additional Comments on SECRS Length

Pilot Version of the SECRS

Special Education Career Resilience Scale - Pilot Version

Consent Form

Project Title:
Career Resilience and Continuing Special Education Teachers: The Development and Evaluation of the Special Education Career Resilience Scale.

Purpose of the Study:
This research is being conducted by Arden E.Sotomayor, under the supervision of Dr. Debra Neubert, at the University of Maryland, College Park. We are inviting you to participate in this research project because you are either currently teaching in special education or have taught in special education in the past. The purpose of this research project is to develop and evaluate the Special Education Career Resilience Scale (SECRS), which is intended to measure the career resilience of continuing and non-continuing special educators.

Procedures:
Each item on the instrument will ask you to indicate your level of agreement with statements related to career resilience. Additionally, you will be asked to provide demographic information including gender, age, race and ethnicity, highest degree earned, years of teaching in special education, level of special education students you are currently teaching, disability of students you currently teach, whether you teach in an urban, suburban or rural area, and if no longer teaching in special education, what your current career choice is.

You will also be asked to indicate whether any item was vague, misleading, or confusing. A comment section is provided for you to make any suggestions regarding a particular item. It will take approximately 10 - 15 minutes to complete the scale.

If you would prefer to have a paper copy of the instrument, you will be asked to provide a mailing address and one will be sent to you along with a postage paid and addressed return envelope for you to use when you have completed the SECRS.

Once you have completed the pilot version of the SECRS, your name will be entered into a drawing for a $100.00 gift card, which will occur at the conclusion of the study. You are requested to complete and submit your answers on-line or return the completed paper copy of the SECRS via U.S. mail by March 9, 2012.

Potential Risks and Discomforts:
There are no known risks.

Potential Benefits:
There are no direct benefits to you. However, you may enjoy reflecting on the career resilience issues raised by the SECRS. You may also benefit indirectly from the knowledge produced from this study as it may inform the field about resilience characteristics that distinguish continuing from non-continuing special educators.

Confidentiality:
Any potential loss of confidentiality will be minimized by storing the master list of teacher names and email addresses in a locked cabinet at the student investigator's home office and/or on an electronic file that is password protected.

If we write a report or article about this research project, your identity will be protected to the maximum extent possible. Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if we are required to do so by law.

Special Education Career Resilience Scale - Pilot Version

Right to Withdraw and Questions:
Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigators:
Dr. Debra Neubert
1308 Benjamin Building
University of Maryland, College Park, MD 20742-1161
phone: 301 405 6466
or
Arden E. Sotomayor, M. Ed.
University of Maryland, College Park
phone: 301-861-6111;
ardensotomayor@verizon.net.
asotomayor@ccboe.com

Participant Rights:
If you have questions about your rights as a research participant or wish to report a research-related injury, please contact:
University of Maryland College Park
Institutional Review Board Office
1204 Marie Mount
College Park, Maryland, 20742
E-mail: irb@umd.edu
Telephone: 301-405-0678

This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.

Special Education Career Resilience Scale - Pilot Version

1. Statement of Consent:

Your signature indicates that you are at least 18 years of age; you have read this consent form or have had it read to you; your questions have been answered to your satisfaction and you voluntarily agree to participate in this research study. You will receive a copy of this signed consent form.

If you agree to participate, please sign your name below.
Signature and Date:
PARTICIPANT NAME:
[Please Print]_____

Signature and Date
PARTICIPANT SIGNATURE:_____

DATE:_____

◯ Yes Please indicate your consent to participate in the research: I have read and understand the above consent form by clicking the submit button to enter the survey, I indicate my willingness voluntarily take part in the study.

◯ No I don't agree to the above consent form.

Special Education Career Reseilency Scale

Thank you for taking the time to complete the Special Education Career Resilience Survey. This survey should only take about 10 -15 minutes of your time and your answers will be completely confidential. After completing the survey, you will be entered into a sweepstakes for a $100 gift card.

In order to progress through this survey, please use the following navigation links:

Click the Next >> button to continue to the next page.
Click the Previous >> button to return to the previous page.

Click the Exit the Survey Early >> button if you need to exit the survey. Your responses will be saved and you can re-enter the survey at a later time.

Click the Submit >> button to submit your survey.

As you complete the SECRS, please rate your level of agreement with each statement as it pertains to your current teaching position as a special educator or how it pertained to you when you taught in special education. Please use the following scale:

Strongly Disagree, Moderately Disagree, Disagree, Neither Disagree nor Agree, Agree, Moderately Agree, Strongly Agree.

Additionally, please indicate if you believe an item to be vague, confusing, or misleading by marking the corresponding box, and include any additional comments or suggestions about the item in the space provided.

1. Which category below includes your age?

- ◯ 20-29
- ◯ 30-39
- ◯ 40-49
- ◯ 50-59
- ◯ 60+

2. Are you male or female?

- ◯ Male
- ◯ Female

3. Are you White, Black or African-American, American Indian or Alaskan Native, Asian, Native Hawaiian or other Pacific Islander, or some other race?

- ◯ White
- ◯ Black or African-American
- ◯ American Indian or Alaskan Native
- ◯ Asian
- ◯ Native Hawaiian or other Pacific Islander
- ◯ Multiple races (please specify)

4. Are you Spanish, Hispanic, or Latino?

- ◯ Yes
- ◯ No

5. What is the highest degree you have received?

- ◯ Bachelor's degree
- ◯ Post-baccalaureate degree
- ◯ Master's degree
- ◯ Ed.D. or Ph. D.

6. How many years of teaching experience do you have?

- ◯ 1-2
- ◯ 3-5
- ◯ 6-10
- ◯ 11-15
- ◯ 16-20
- ◯ 21-25
- ◯ 26-30
- ◯ 30+

7. How many years of teaching experience do you have in special education?

- ◯ 1-2
- ◯ 3-5
- ◯ 6-10
- ◯ 11-15
- ◯ 16-20
- ◯ 21-25
- ◯ 26-30
- ◯ 30+

8. What is the age level of the students you currently teach?

- ◯ Early Childhood
- ◯ Elementary School
- ◯ Middle School
- ◯ High School

9. Indicate all disability categories that represent students you currently teach or taught when you were a special educator.

- [ ] Autism
- [ ] Deaf-blindness
- [ ] Deafness
- [ ] Developmental delay
- [ ] Emotional disturbance
- [ ] Hearing impairment
- [ ] Intellectual disability
- [ ] Multiple disabilities
- [ ] Orthopedic impairment
- [ ] Other health impairment
- [ ] Specific learning disability
- [ ] Speech or language impairment
- [ ] Traumatic brain injury
- [ ] Visual impairment, including blindness

10. Is the school you are currently teaching in located in a rural, suburban, or urban area?

- ( ) Rural
- ( ) Suburban
- ( ) Urban

11. If you are no longer teaching in special education, what is your current career designation?

- ( ) General Education
- ( ) Outside the field of education
- ( ) Not Applicable

Theme Acceptance

Please read the following statements. Below each statement, you will find a selection of responses ranging from Strongly Disagree to Strongly Agree. Please select the response that best indicates your feelings about that statement.

Additional response selections are provided to identify statements that are vague, confusing or misleading. These answer choices are designated with an asterisk. A comments section is available for you to provide suggestions for revising the item.

1. The school system values my contribution to its well-being.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional comments

2. My administrator fails to appreciate any extra effort from me.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

3. The school system would ignore any complaint from me.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

4. My administrator really cares about my well-being.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

5. Even if I did the best job possible, the organization would fail to notice.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

6. My administrator cares about my general satisfaction at work.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

7. My administrator shows very little concern for me.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

8. The school system takes pride in my accomplishments at work.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

Support for Self-Awareness

Please read the following statements. Below each statement, you will find a selection of responses ranging from Strongly Disagree to Strongly Agree. Please select the response that best indicates your feelings about that statement.

Additional response selections are provided to identify statements that are vague, confusing or misleading. These answer choices are designated with an asterisk. A comments section is available for you to provide suggestions for revising the item.

1. When I make plans, I follow through with them.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

2. I usually manage one way or another.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

3. I am able to depend on myself more than anyone else.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

4. Keeping interested in things is important to me.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

5. I can be on my own if I have to.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

6. I feel proud that I have accomplished things in life.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

7. I usually take things in stride.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

8. I am friends with myself.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

9. I feel that I can handle many things at a time.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

10. I am determined.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

11. I seldom wonder what the point of it all is.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

12. I take things one day at a time.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

13. I can get through difficult times because I've experienced difficulty before.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

14. I have self-discipline.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

15. I keep interested in things.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

16. I can usually find something to laugh about.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

17. My belief in myself gets me through hard times.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

18. In an emergency, I'm someone people can generally rely on.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

19. I can usually look at a situation in a number of ways.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

20. Sometimes I make myself do things whether I want to or not.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

21. My life has meaning.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

22. I do not dwell on things that I can't do anything about.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

23. When I'm in a difficult situation, I can usually find my way out of it.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

24. I have enough energy to do what I have to do.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

25. It's okay if there are people who don't like me.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

26. I am resilient.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

Conversion

Please read the following statements. Below each statement, you will find a selection of responses ranging from Strongly Disagree to Strongly Agree. Please select the response that best indicates your feelings about that statement.

Additional response selections are provided to identify statements that are vague, confusing or misleading. These answer choices are designated with an asterisk. A comments section is available for you to provide suggestions for revising the item.

1. I am able to adapt to change.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

2. I have close and secure relationships.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

3. I believe sometimes fate or God can help.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

4. I can deal with whatever happens.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

5. Past success gives me confidence for new challenges.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

6. I see the humorous side of things.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

7. Coping with stress gives me strength.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

8. I tend to bounce back after an illness or hardship.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

9. I believe that things happen for a reason.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

10. I put forth my best effort no matter what.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

11. I believe that I can achieve my goals.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

12. When things look hopeless, I don't give up.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

13. I know where to turn to for help.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

14. Under pressure, I can focus and think clearly.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

15. I prefer to take the lead in problem-solving.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

16. I am not easily discouraged by failure.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

17. I think of myself as a strong person.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

18. I can make unpopular or difficult decisions.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

19. I can handle unpleasant feelings.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

20. I have to act on a hunch.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

21. I have a strong sense of purpose.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

22. I am in control of my life.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

23. I like challenges.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

24. I work to attain my goals.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

25. I take pride in my achievements.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

Connectedness

Please read the following statements. Below each statement, you will find a selection of responses ranging from Strongly Disagree to Strongly Agree. Please select the response that best indicates your feelings about that statement.

Additional response selections are provided to identify statements that are vague, confusing or misleading. These answer choices are designated with an asterisk. A comments section is available for you to provide suggestions for revising the item.

1. I actively look for ways to replace the losses I encounter in life.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

2. I believe that I can grow in positive ways by dealing with difficult situations.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

3. I look for creative ways to alter difficult situations.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

4. Regardless of what happens to me, I believe I can control my reaction to it.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

5. I only set goals which I know I can reach without the help of others.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

6. When I need help, I don't hesitate to ask a friend to help.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

7. I hesitate to ask others to help me.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

8. My friends and family frequently don't live up to my expectations of how they should act.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

9. I really resent anyone telling me what to do.

- [ ] Strongly Disagree
- [ ] Moderately Disagree
- [ ] Slightly Disagree
- [ ] Neither Disagree nor Agree
- [ ] Slightly Agree
- [ ] Moderately Agree
- [ ] Strongly Agree
- [ ] *Item is Vague
- [ ] *Item is Confusing
- [ ] *Item is Misleading

Additional Comments

Field Test Version of the SECRS

Special Education Career Resilience Scale

Consent Form

Project Title:
Career Resilience and Continuing Special Education Teachers: The Development and Evaluation of the Special Educatio
Career Resilience Scale.

Purpose of the Study:
This research is being conducted by Arden E.Sotomayor, under the supervision of Dr. Debra Neubert, at the University of Maryland, College Park. We are inviting you to participate in this research project because you are either currently teaching in special education or have taught in special education in the past. The purpose of this research project is to develop and evaluate the Special Education Career Resilience Scale (SECRS), which is intended to measure the career resilience of continuing and non-continuing special educators.

Procedures:
Each item on the instrument will ask you to indicate your level of agreement with statements related to career resilience. Additionally, you will be asked to provide demographic information including gender, age, race and ethnicity, highest degree earned, years of teaching in special education, level of special education students you are currently teaching, disability of students you currently teach, whether you teach in an urban, suburban or rural area, and if no longer teachin in special education, what your current career choice is.

If you would prefer to have a paper copy of the instrument, you will be asked to provide a mailing address and one will be sent to you along with a postage paid and addressed return envelope for you to use when you have completed the SECRS.

Once you have completed the pilot version of the SECRS, your name will be entered into a drawing for a $100.00 gift card, which will occur at the conclusion of the study. You are requested to complete and submit your answers on-line or return the completed paper copy of the SECRS via U.S. mail by June 3, 2012.

Potential Risks and Discomforts:
There are no known risks.

Potential Benefits:
There are no direct benefits to you. However, you may enjoy reflecting on the career resilience issues raised by the SECRS. You may also benefit indirectly from the knowledge produced from this study as it may inform the field about resilience characteristics that distinguish continuing from non-continuing special educators.

Confidentiality:
Any potential loss of confidentiality will be minimized by storing the master list of teacher names and email addresses in a locked cabinet at the student investigator's home office and/or on an electronic file that is password protected.

If we write a report or article about this research project, your identity will be protected to the maximum extent possible. Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if we are required to do so by law.

Special Education Career Resilience Scale

Right to Withdraw and Questions:
Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigators:
Dr. Debra Neubert
1308 Benjamin Building
University of Maryland, College Park, MD 20742-1161
phone: 301 405 6466
or
Arden E. Sotomayor, M. Ed.
University of Maryland, College Park
phone: 301-861-6111;
ardensotomayor@verizon.net.
asotomayor@ccboe.com

Participant Rights:
If you have questions about your rights as a research participant or wish to report a research-related injury, please contact:
University of Maryland College Park
Institutional Review Board Office
1204 Marie Mount
College Park, Maryland, 20742
E-mail: irb@umd.edu
Telephone: 301-405-0678

This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.

Special Education Career Resilience Scale

1. Statement of Consent:

Your signature indicates that you are at least 18 years of age; you have read this consent form or have had it read to you; your questions have been answered to your satisfaction and you voluntarily agree to participate in this research study. You will receive a copy of this signed consent form.

If you agree to participate, please sign your name below.
Signature and Date:
PARTICIPANT NAME:
[Please Print]_____

Signature and Date
PARTICIPANT SIGNATURE:_____

DATE:_____

◯ Yes Please indicate your consent to participate in the research: I have read and understand the above consent form by clicking the submit button to enter the survey, I indicate my willingness voluntarily take part in the study.

◯ No I don't agree to the above consent form

Special Education Career Resilience Scale

Special Education Career Reseilency Scale

Thank you for taking the time to complete the Special Education Career Resilience Survey. You have been asked to participate in this survey as either a Continuing Special Educator (one who is actively teaching in special education) or a Non-Continuing Special Educator (individuals who have transferred to general education, are in an administrative role, or are no longer teaching).

This survey should only take about 10 -15 minutes of your time and your answers will be completely confidential. After completing the survey, you will be entered into a sweepstakes for a $100 gift card.

In order to progress through this survey, please use the following navigation links:

Click the Next >> button to continue to the next page.
Click the Previous >> button to return to the previous page.

Click the Exit the Survey Early >> button if you need to exit the survey. Your responses will be saved and you can re-enter the survey at a later time.

Click the Submit >> button to submit your survey.

As you complete the SECRS, you are asked to indicate your level of agreement with statements that pertain to you as a Continuing or Non-Continuing Special Educator as well as those statements that pertain to your overall life experiences using the following scale:

Please use the following scale:

Strongly Disagree, Moderately Disagree, Disagree, Neither Disagree nor Agree, Agree, Moderately Agree, Strongly Agree.

Special Education Career Resilience Scale

1. Which category below includes your age?

- ◯ 20-29
- ◯ 30-39
- ◯ 40-49
- ◯ 50-59
- ◯ 60+

2. Are you male or female?

- ◯ Male
- ◯ Female

3. Are you White, Black or African-American, American Indian or Alaskan Native, Asian, Native Hawaiian or other Pacific Islander, or some other race?

- ◯ White
- ◯ Black or African-American
- ◯ American Indian or Alaskan Native
- ◯ Asian
- ◯ Native Hawaiian or other Pacific Islander
- ◯ Multiple races (please specify)

4. Are you Spanish, Hispanic, or Latino?

- ◯ Yes
- ◯ No

5. What is the highest degree you have received?

- ◯ Bachelor's degree
- ◯ Post-baccalaureate degree
- ◯ Master's degree
- ◯ Ed.D. or Ph. D.

Special Education Career Resilience Scale

6. How many years of teaching experience do you have?

- ◯ 1-2
- ◯ 3-5
- ◯ 6-10
- ◯ 11-15
- ◯ 16-20
- ◯ 21-25
- ◯ 26-30
- ◯ 30+

7. How many years of teaching experience do you have in special education?

- ◯ 1-2
- ◯ 3-5
- ◯ 6-10
- ◯ 11-15
- ◯ 16-20
- ◯ 21-25
- ◯ 26-30
- ◯ 30+

8. What is the age level of the students you currently teach?

- ◯ Early Childhood
- ◯ Elementary School
- ◯ Middle School
- ◯ High School

Special Education Career Resilience Scale

9. Indicate all disability categories that represent students you currently teach or taught when you were a special educator.

- [ ] Autism
- [ ] Deaf-blindness
- [ ] Deafness
- [ ] Developmental delay
- [ ] Emotional disturbance
- [ ] Hearing impairment
- [ ] Intellectual disability
- [ ] Multiple disabilities
- [ ] Orthopedic impairment
- [ ] Other health impairment
- [ ] Specific learning disability
- [ ] Speech or language impairment
- [ ] Traumatic brain injury
- [ ] Visual impairment, including blindness

10. Is the school you are currently teaching in located in a rural, suburban, or urban area?

- ( ) Rural
- ( ) Suburban
- ( ) Urban

11. If you are no longer teaching in special education, what is your current career designation?

- ( ) General Education
- ( ) Outside the field of education
- ( ) Not Applicable

Special Education Career Resilience Scale

Theme Acceptance

Please read the following statements. Below each statement, you will find a selection of responses ranging from Strongly Disagree to Strongly Agree. If you are currently teaching in special education, please select your level of agreement as it relates to your current teaching assignment. If you no longer teach in special education, please select your level of agreement based upon the time you worked as a special educator.

1. The school system values my contribution to its well-being.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

2. My administrator fails to appreciate any extra effort from me.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

3. The school system would ignore any complaint from me.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

4. My administrator really cares about my well-being.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

5. Even if I did the best job possible, the school system would fail to notice.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

6. My administrator cares about my general satisfaction at work.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

7. The school system takes pride in my accomplishments at work.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

Support for Self-Awareness

Please read the following statements. Below each statement, you will find a selection of responses ranging from Strongly Disagree to Strongly Agree. Please indicate your level of agreement with statements that pertain to you professionally as well as those statements that may pertain to your overall life experiences.

1. When I make plans, I follow through with them.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

2. I usually manage one way or another.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

3. I am able to depend on myself more than anyone else.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

4. Keeping interested in things is important to me.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

5. I can be on my own if I have to.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

6. I feel proud that I have accomplished things in life.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

7. I usually take things in stride.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

8. I am friends with myself.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

9. I feel that I can handle many things at a time.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

10. I am determined.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

11. I seldom wonder what the point of it all is.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

12. I take things one day at a time.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

13. I can get through difficult times because I've experienced difficulty before.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

14. I have self-discipline.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

15. I keep interested in things.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

16. I can usually find something to laugh about.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

17. My belief in myself gets me through hard times.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

18. In an emergency, I'm someone people can generally rely on.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

19. I can usually look at a situation in a number of ways.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

20. Sometimes I make myself do things whether I want to or not.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

21. My life has meaning.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

22. I do not dwell on things that I can't do anything about.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

23. When I'm in a difficult situation, I can usually find my way out of it.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

24. I have enough energy to do what I have to do.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

25. It's okay if there are people who don't like me.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

26. I am resilient.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

Conversion

Please read the following statements. Below each statement, you will find a selection of responses ranging from Strongly Disagree to Strongly Agree. Please indicate your level of agreement with statements that pertain to you professionally as well as those statements that may pertain to your overall life experiences.

1. I am able to adapt to change.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

2. I have close and secure relationships.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

3. I believe sometimes fate or God can help.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

4. I can deal with whatever happens.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

5. Past success gives me confidence for new challenges.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

6. I see the humorous side of things.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

7. Coping with stress gives me strength.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

8. I tend to bounce back after an illness or hardship.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

9. I believe that things happen for a reason.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

10. I put forth my best effort no matter what.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

11. I believe that I can achieve my goals.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

12. When things look hopeless, I don't give up.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

13. I know where to turn to for help when I encounter adversity.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

14. Under pressure, I can focus and think clearly.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

15. I prefer to take the lead in problem-solving.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

16. I am not easily discouraged by failure.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

17. I think of myself as a strong person.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

18. I can make unpopular or difficult decisions.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

19. I can handle unpleasant feelings.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

20. I have to act on a hunch.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

21. I have a strong sense of purpose.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

22. I am in control of my life.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

23. I like challenges.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

24. I work to attain my goals.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

25. I take pride in my achievements.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

Connectedness

Please read the following statements. Below each statement, you will find a selection of responses ranging from Strongly Disagree to Strongly Agree. Please indicate your level of agreement with statements that pertain to you professionally as well as those statements that may pertain to your overall life experiences.

1. I actively look for ways to replace the losses I encounter in life.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

2. I believe that I can grow in positive ways by dealing with difficult situations.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

3. I look for creative ways to alter difficult situations.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

4. Regardless of what happens to me, I believe I can control my reaction to it.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

5. When I need help, I don't hesitate to ask a friend to help.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

6. I hesitate to ask others to help me.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Special Education Career Resilience Scale

7. I really resent anyone telling me what to do.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

8. My friends and family frequently don't live up to my expectations of how they should act.

- ◯ Strongly Disagree
- ◯ Moderately Disagree
- ◯ Slightly Disagree
- ◯ Neither Disagree nor Agree
- ◯ Slightly Agree
- ◯ Moderately Agree
- ◯ Strongly Agree

Appendix G

Item Analysis SECRS of Pilot Data

Table 1
SECRS Means and Standard Deviations

SECRS Items	*M*	*SD*	*N*
TA1	5.71	.76	7
TA2	3.00	1.83	7
TA3	3.71	1.11	7
TA4	5.86	.90	7
TA5	3.29	1.50	7
TA6	6.14	.90	7
TA7	5.29	.76	7
SSA1	6.43	.79	7
SSA2	6.57	.79	7
SSA3	6.43	1.51	7
SSA4	6.43	.55	7
SSA5	6.86	.38	7
SSA6	6.71	.49	7
SSA7	6.29	1.50	7
SSA8	6.43	.79	7
SSA9	6.57	.54	7
SSA10	6.57	.79	7
SSA11	5.43	1.30	7
SSA12	6.14	.90	7
SSA13	6.43	.80	7
SSA14	6.00	.58	7
SSA15	6.14	.70	7
SSA16	6.86	.38	7
SSA17	6.00	.58	7
SSA18	6.57	.54	7
SSA19	6.57	.54	7
SSA20	6.43	.54	7
SSA21	6.71	.49	7
SSA22	5.71	1.38	7
SSA23	6.43	.79	7
SSA24	6.00	.82	7
SSA25	6.29	.76	7
SSA26	6.29	.77	7
CONV1	6.29	.95	7

SECRS Items	*M*	*SD*	*N*
CONV2	6.57	.53	7
CONV3	6.14	1.45	7
CONV4	6.29	.75	7
CONV5	6.14	1.06	7
CONV6	6.71	.48	7
CONV7	6.14	.37	7
CONV8	6.14	.90	7
CONV9	6.00	1.29	7
CONV10	6.71	.48	7
CONV11	6.57	.53	7
CONV12	6.29	.75	7
CONV13	6.29	.75	7
CONV14	6.14	.69	7
CONV15	5.57	1.81	7
CONV16	5.71	.75	7
CONV17	6.43	.78	7
CONV18	6.14	.37	7
CONV19	6.29	.75	7
CONV20	6.43	.53	7
CONV21	5.86	1.06	7
CONV22	6.14	.69	7
CONV23	6.71	.48	7
CONV24	6.43	.53	7
CONN1	5.71	.75	7
CONN2	6.00	1.15	7
CONN3	6.00	.81	7
CONN4	5.86	1.46	7
CONN5	5.29	1.49	7
CONN6	3.86	2.47	7
CONN7	2.71	1.97	7
CONN8	5.29	1.38	7

Note. *SD* = Standard Deviation. SECRS = Special Education Career Resiliency Scale

Table 2
Item-Total Statistics

SECRS Items	Scale *M* if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	α if Item Deleted
TA1	383.43	569.61	.26	.90
TA2	386.14	577.14	-.00	.90
TA3	385.43	571.95	.12	.90
TA4	383.29	570.90	.18	.90
TA5	385.86	585.14	-.10	.90
TA6	383.00	579.33	-.00	.90
TA7	383.86	577.14	.05	.90
SSA1	382.71	567.23	.31	.90
SSA2	382.57	553.61	.69	.90
SSA3	382.71	599.23	-.29	.91
SSA4	382.71	584.57	-.19	.90
SSA5	382.29	581.90	-.12	.90
SSA6	382.43	568.61	.47	.90
SSA7	382.86	568.47	.12	.90
SSA8	382.71	551.90	.73	.89
SSA9	382.57	581.61	-.08	.90
SSA10	382.57	546.95	.87	.89
SSA11	383.71	576.57	.02	.90
SSA12	383.00	548.00	.73	.89
SSA13	382.71	545.23	.92	.89
SSA14	383.14	556.14	.85	.90
SSA15	383.00	558.00	.65	.90
SSA16	382.29	573.23	.35	.90
SSA17	383.14	556.14	.85	.90
SSA18	382.57	561.95	.69	.90
SSA19	382.57	566.95	.49	.90
SSA20	382.71	560.23	.76	.90
SSA21	382.43	559.95	.85	.90
SSA22	383.43	556.28	.33	.90
SSA23	382.71	553.90	.68	.90
SSA24	383.14	557.14	.57	.90
SSA25	382.86	569.81	.26	.90
SSA26	382.86	561.14	.50	.90
CONV1	382.86	543.81	.79	.89
CONV2	382.57	564.95	.57	.90
CONV3	383.00	521.66	.83	.89
CONV4	382.86	550.14	.82	.89

SECRS Items	Scale *M* if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	α if Item Deleted
CONV5	383.00	537.33	.83	.89
CONV6	382.43	570.95	.37	.90
CONV7	383.00	569.33	.57	.90
CONV8	383.00	552.33	.63	.90
CONV9	383.14	536.47	.69	.89
CONV10	382.43	577.61	.08	.90
CONV11	382.57	561.95	.69	.90
CONV12	382.86	559.81	.54	.90
CONV13	382.86	558.81	.57	.90
CONV14	383.00	564.33	.45	.90
CONV15	383.57	540.61	.42	.90
CONV16	383.43	566.61	.35	.90
CONV17	382.71	545.23	.92	.89
CONV18	383.00	569.33	.57	.90
CONV19	382.86	579.14	.00	.90
CONV20	382.71	560.23	.76	.90
CONV21	383.29	538.23	.81	.89
CONV22	383.00	552.00	.84	.89
CONV23	382.43	559.95	.85	.90
CONV24	382.71	566.90	.49	.90
CONV25	382.86	541.43	.51	.90
CONN1	383.43	574.28	.13	.90
CONN2	383.14	530.81	.89	.89
CONN3	383.14	564.47	.37	.90
CONN4	383.29	518.23	.89	.89
CONN5	383.86	566.47	.15	.90
CONN6	385.29	562.23	.09	.91
CONN7	386.43	625.69	-.50	.91
CONN8	383.86	605.81	-.41	.91

Note. SECRS = Special Education Career Resiliency Scale

Table 3
SECRS Summary Item Statistics

SECRS Items	*M*	Minimum	Maximum	Range	Maximum / Minimum	Variance	*N*
Item Means	5.98	2.714	6.857	4.143	2.526	.756	65

Note. SECRS = Special Education Career Resiliency Scale

Table 4

SECRS Reliability Statistics

α	α Based on Standardized Items	*N*
.904	.945	65

Theme Acceptance Subscale

Table 5

Theme Acceptance Subscale Item Statistics

TA Items	*M*	*SD*	*N*
TA1	5.46	1.66	13
TA4	5.85	1.67	13
TA6	6.15	1.21	13
TA7	4.92	1.55	13
TA2a	5.00	2.23	13
TA3a	4.23	1.42	13
TA5a	5.08	1.38	13

Note . *SD* = Standard Deviation. TA = Theme Acceptance

Table 6
Theme Acceptance Scale Statistics

M	Variance	SD	N
36.69	50.06	7.07	7

Note. *SD* = standard deviation; S^2 = variance

Table 7
Theme Acceptance Subscale Reliability Statistics

α	α Based on Standardized Items	*N*
.74	.76	7

Support for Self-Awareness Subscale

Table 8

Support for Self-Awareness Subscale Item Statistics

SSA Items	*M*	*SD*	*N*
SSA1	6.09	1.22	11
SSA2	6.64	.67	11
SSA3	5.91	1.81	11
SSA4	6.36	.67	11
SSA5	6.55	.68	11
SSA6	6.55	.68	11
SSA7	5.82	1.99	11
SSA8	6.55	.68	11
SSA9	6.18	1.16	11
SSA10	6.45	.82	11
SSA11	5.09	1.57	11
SSA12	5.64	1.56	11
SSA13	6.45	.82	11
SSA14	5.64	1.02	11
SSA15	6.18	.75	11
SSA16	6.82	.40	11
SSA17	6.00	.63	11
SSA18	6.45	.68	11
SSA19	6.55	.52	11
SSA20	5.64	1.91	11
SSA21	6.82	.40	11
SSA22	5.36	1.36	11
SSA23	6.36	.67	11
SSA24	5.91	.83	11
SSA25	5.82	1.47	11
SSA26	6.36	.80	11

Note. *SD* = standard deviation

Table 9

Support for Self-Awareness Item-Total Statistics

SSA Items	*M* if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	α if Item Deleted
SSA1	154.09	176.89	.59	.86
SSA2	153.55	190.07	.37	.87
SSA3	154.27	175.21	.39	.87
SSA4	153.82	192.36	.25	.87
SSA5	153.64	189.05	.42	.87
SSA6	153.64	192.05	.26	.87
SSA7	154.36	170.65	.44	.87
SSA8	153.64	188.85	.43	.87
SSA9	154.00	177.20	.61	.86
SSA10	153.73	184.01	.57	.86
SSA11	155.09	171.09	.58	.86
SSA12	154.55	180.67	.34	.87
SSA13	153.73	187.81	.40	.87
SSA14	154.55	179.07	.63	.86
SSA15	154.00	186.00	.53	.87
SSA16	153.36	193.85	.31	.87
SSA17	154.18	185.76	.66	.86
SSA18	153.73	193.81	.17	.87
SSA19	153.64	190.85	.44	.87
SSA20	154.55	152.47	.87	.85
SSA21	153.36	196.05	.11	.87
SSA22	154.82	192.36	.08	.88
SSA23	153.82	186.76	.56	.87
SSA24	154.27	183.21	.60	.86
SSA25	154.36	167.25	.74	.86
SSA26	153.82	189.36	.33	.87

Note. SSA = Support for Self-Awareness

Table 10

Support for Self-Awareness Summary Item Statistics

	M	Minimum	Maximum	Range	Maxi / Min	Variance	*N*
Item Means	6.16	5.09	6.81	1.72	1.33	.20	26
Inter-Item Correlations	.24	-.59	.90	1.49	-1.51	.09	26

Table 11

Support for Self Awareness Reliability Statistics

α	α Based on Standardized Items	*N*
.87	.89	26

Conversion Subscale

Table 12

Conversion Subscale Item Statistics

CONV Items	*M*	*SD*	*N*
CONV1	6.55	.82	11
CONV2	6.64	.50	11
CONV3	6.27	1.19	11
CONV4	6.45	.68	11
CONV5	6.18	1.16	11
CONV6	6.82	.40	11
CONV7	5.45	1.63	11
CONV8	6.27	.78	11
CONV9	6.00	1.09	11
CONV10	6.55	.68	11
CONV11	6.64	.50	11
CONV12	6.36	.67	11
CONV13	6.09	1.22	11
CONV14	6.00	1.18	11
CONV15	5.55	1.75	11
CONV16	5.73	1.19	11
CONV17	6.45	.68	11
CONV18	6.09	1.13	11
CONV19	5.82	1.53	11
CONV20	6.18	1.16	11
CONV21	5.73	1.55	11
CONV22	5.82	1.47	11
CONV23	6.73	.46	11
CONV24	6.27	.64	11
CONV25	6.64	.65	11

Note. *SD* = standard deviation. CONV = Conversion

Table 13

Conversion Subscale Item-Total Statistics

CONV Items	*M* if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	α if Item Deleted
CONV1	142.09	214.69	.34	.91
CONV2	142.00	220.20	.21	.91
CONV3	142.36	203.65	.54	.90
CONV4	142.18	218.96	.20	.91
CONV5	142.45	193.87	.87	.90
CONV6	141.82	222.36	.09	.91
CONV7	143.18	193.76	.59	.90
CONV8	143.55	211.52	.52	.90
CONV9	142.64	213.25	.28	.91
CONV10	142.09	227.89	-.22	.91
CONV11	142.00	212.20	.76	.90
CONV12	142.27	214.41	.44	.91
CONV13	142.55	214.67	.20	.91
CONV14	142.64	197.25	.75	.90
CONV15	143.09	192.49	.57	.90
CONV16	142.91	195.89	.79	.90
CONV17	142.18	208.16	.75	.90
CONV18	142.55	198.07	.76	.90
CONV19	142.82	201.96	.44	.91
CONV20	142.45	194.07	.86	.90
CONV21	142.91	181.69	.94	.89
CONV22	142.82	188.96	.80	.90
CONV23	141.91	211.49	.87	.90
CONV24	142.30	193.78	.61	.90
CONV25	146.43	193.78	.54	.90

Note. CONV = Conversion

Table 14

Conversion Subscale Summary Item Statistics

	M	Minimum	Maximum	Range	Max/Min	Variance	*N*
Item Means	6.19	5.45	6.81	1.36	1.25	.14	24
Inter-Item Correlations	.31	-.49	.92	1.41	-1.88	.10	24

Table 15

Conversion Subscale Reliability Statistics

α	α Based on Standardized Items	*N*
.91	.91	24

Note. α = Chronbach's alpha coefficient

Connectedness Subscale

Table 16

Connectedness Subscale Item Statistics

CONN Items	*M*	*SD*	*N*
CONN1	5.40	.96	10
CONN2	6.00	1.05	10
CONN3	6.10	.73	10
CONN4	5.90	1.28	10
CONN5	5.60	1.35	10
CONN8	5.10	1.52	10
CONN6	4.40	2.27	10
CONN7	5.20	1.81	10

Note. *SD* = standard deviation. CONN = Connectedness

Table 17

Connectedness Summary Item Statistics

	M	Minimum	Maximum	Range	Maxi /Mini		*N*
Item Means	5.46	4.40	6.10	1.70	1.38	.32	8
Item Variances	2.10	.54	5.15	4.61	9.46	2.26	8
Inter-Item Correlations	.20	-.30	.74	1.05	-2.43	.08	8

Table 18

Connectedness Subscale Reliability Statistics

α	α Based on Standardized Items	*N*
.64	.67	8

Note. α = Chronbach's alpha coefficient

Appendix H

SECRS Item Analysis Data

Table 1

SECRS Means and Standard Deviations

SECRS Item	*M*	*SD*	*N*
TA1	4.69	1.76	261
TA2	3.74	2.11	261
TA3	4.43	1.87	261
TA4	5.05	1.84	261
TA5	4.09	1.90	261
TA6	4.79	1.80	261
TA7	4.37	1.73	261
SSA1	6.37	.93	261
SSA2	6.41	1.12	261
SSA3	6.10	1.14	261
SSA4	6.36	1.10	261
SSA5	6.25	1.31	261
SSA6	6.62	.86	261
SSA7	5.91	1.19	261
SSA8	6.33	1.04	261
SSA9	6.27	1.10	261
SSA10	6.53	.82	261
SSA11	3.75	1.86	261
SSA12	5.42	1.47	261
SSA13	6.34	.97	261
SSA14	6.29	.89	261
SSA15	6.13	.96	261
SSA16	6.44	.84	261
SSA17	6.15	.99	261
SSA18	6.51	.73	261
SSA19	6.30	.75	261
SSA20	6.34	.81	261
SSA21	6.74	.69	261
SSA22	5.07	1.54	261
SSA23	6.13	.86	261
SSA24	5.42	1.51	261
SSA25	5.82	1.17	261

SECRS Items	*M*	*SD*	*N*
SSA26	6.47	.74	261
CONV1	6.41	.73	261
CONV2	6.45	.89	261
CONV3	6.09	1.38	261
CONV4	6.31	.77	261
CONV5	6.45	.82	261
CONV6	6.43	.78	261
CONV7	5.42	1.32	261
CONV8	6.22	1.01	261
CONV9	6.25	1.06	261
CONV10	6.34	.84	261
CONV11	6.58	.65	261
CONV12	6.24	.91	261
CONV13	6.32	.94	261
CONV14	5.89	1.13	261
CONV15	5.62	1.32	261
CONV16	5.63	1.37	261
CONV17	6.39	.82	261
CONV18	5.80	1.18	261
CONV19	5.64	1.19	261
CONV20	4.85	1.28	261
CONV21	6.30	.86	261
CONV22	6.20	.92	261
CONV23	5.95	1.11	261
CONV24	6.57	.68	261
CONV25	6.64	.65	261
CONN1	5.22	1.18	261
CONN2	6.08	1.01	261
CONN3	5.98	.95	261
CONN4	5.84	1.22	261
CONN5	5.78	1.35	261
CONN6	4.50	1.93	261
CONN7	3.32	1.62	261
CONN8	5.27	1.67	261

Notes. *SD* = standard deviation. SECRS = Special Education Career Resiliency Scale

Table 2

SECRS Item-Total Statistics

SECRS Items	*M* if Item Deleted	S^2 if Item Deleted	Corrected Item-Total Correlation	R^2	α if Item Deleted
TA1	379.93	901.27	.25	.54	.91
TA2	380.88	937.60	-.07	.33	.91
TA3	380.19	898.17	.26	.63	.91
TA4	379.56	911.59	.15	.62	.91
TA5	380.53	898.26	.26	.50	.91
TA6	379.83	902.58	.24	.68	.91
TA7	380.25	901.69	.26	.58	.90
SSA1	378.25	912.19	.33	.53	.90
SSA2	378.21	914.92	.23	.54	.90
SSA3	378.52	921.45	.13	.38	.91
SSA4	378.26	906.77	.36	.52	.90
SSA5	378.37	902.59	.35	.49	.90
SSA6	378.00	910.84	.38	.58	.90
SSA7	378.71	899.78	.42	.54	.90
SSA8	378.29	905.60	.40	.54	.90
SSA9	378.35	894.90	.54	.61	.90
SSA10	378.09	905.62	.52	.70	.90
SSA11	380.87	954.83	-.23	.36	.91
SSA12	379.20	910.37	.22	.43	.91
SSA13	378.28	911.52	.33	.52	.90
SSA14	378.33	905.42	.48	.57	.90
SSA15	378.49	897.10	.58	.61	.90
SSA16	378.17	903.20	.55	.69	.90
SSA17	378.47	896.51	.58	.57	.90
SSA18	378.11	911.33	.45	.55	.90
SSA19	378.32	908.24	.51	.56	.90
SSA20	378.28	914.97	.33	.45	.90
SSA21	377.88	912.89	.44	.60	.90
SSA22	379.55	888.81	.44	.56	.90
SSA23	378.49	900.38	.59	.62	.90
SSA24	379.19	887.15	.47	.49	.90
SSA25	378.79	910.74	.28	.50	.90
SSA26	378.15	904.31	.61	.63	.90
CONV1	378.21	907.24	.54	.58	.90
CONV2	378.17	902.53	.53	.54	.90
CONV3	378.53	922.69	.08	.40	.91
CONV4	378.30	907.96	.50	.57	.90
CONV5	378.17	900.47	.62	.62	.90
CONV6	378.19	904.53	.56	.64	.90

SECRS Items	*M* if Item Deleted	S^2 if Item Deleted	Corrected Item-Total Correlation	R^2	α if Item Deleted
CONV7	379.20	883.38	.59	.62	.90
CONV8	378.40	897.53	.54	.60	.90
CONV9	378.37	916.42	.22	.45	.90
CONV10	378.28	905.61	.50	.62	.90
CONV11	378.03	908.39	.58	.63	.90
CONV12	378.38	899.81	.56	.63	.90
CONV13	378.29	906.04	.44	.53	.90
CONV14	378.73	897.50	.49	.61	.90
CONV15	379.00	885.73	.56	.65	.90
CONV16	378.99	877.73	.64	.68	.90
CONV17	378.23	896.46	.70	.74	.90
CONV18	378.82	897.33	.47	.61	.90
CONV19	378.98	888.37	.59	.67	.90
CONV20	379.77	905.42	.32	.38	.90
CONV21	378.32	902.01	.56	.61	.90
CONV22	378.41	902.13	.52	.57	.90
CONV23	378.67	888.55	.63	.67	.90
CONV24	378.05	907.55	.58	.70	.90
CONV25	377.98	910.30	.54	.64	.90
CONN1	379.40	900.69	.42	.45	.90
CONN2	378.53	898.29	.53	.60	.90
CONN3	378.64	896.05	.61	.63	.90
CONN4	378.78	893.40	.51	.52	.90
CONN5	378.84	903.13	.33	.46	.90
CONN6	380.12	914.12	.12	.41	.91
CONN7	381.30	953.75	-.24	.43	.91
CONN8	379.35	913.28	.15	.39	.91

Note. S^2 = sample variance; R^2 = squared multiple correlation; α = Cronbach's alpha coefficient; SECRS = Special Education Career Resiliency Scale.

Table 4

SECRS Summary Item Statistics

	M	Minimum	Maximum	Range	Max / Min	S^2	*N*
Item Means	5.83	3.32	6.74	3.42	2.03	.63	66
Inter-Item Correlations	.17	-.37	.69	1.06	-1.87	.03	66

Note. S^2 = sample variance; SECRS = Special Education Career Resilience Scale

Table 5

SECRS Reliability Statistics

α	α Based on Standardized Items	N
.90	.93	66

Note. α = Chronbach's alpha coefficient

Appendix I
SECRS Exploratory Factor Analysis Data

Table 1

Factor Loadings from the Rotated Factor Structure Matrix for the SECRS: Principal Axis Factoring with Oblimin Rotation

	Factor																	
Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
TA1	.17	**.58**	.25	.02	-.17	-.01	.09	.01	-.11	.02	.09	-.02	-.01	.09	-.00	.09	.07	-.12
TA2	-.03	-.22	-.10	.08	.07	-.03	.04	-.21	-.14	.05	.09	.12	.05	.17	-.18	.09	.07	.03
TA3	.15	**.70**	.05	.11	-.09	.09	.11	-.19	-.17	-.02	.08	.03	.03	.08	.05	-.01	.05	.07
TA4	.05	**.62**	.24	.09	.08	.04	-.21	.09	.15	.12	-.05	.10	-.11	-.09	-.18	.03	-.13	.02
TA5	.16	**.65**	.06	.06	-.11	.02	.15	-.15	-.21	-.15	.10	.06	.07	.07	.07	-.09	.12	.00
TA6	.14	**.72**	.17	.02	-.06	-.04	-.16	.17	.16	.08	-.18	.15	-.03	-.16	.02	-.01	-.11	.10
TA7	.16	**.61**	.21	.09	-.15	-.03	.08	-.01	-.02	-.02	-.02	.06	.13	.05	.12	-.00	.05	-.06
SSA1	**.36**	-.03	.27	.13	.27	**-.37**	.16	.08	.11	.03	.07	.07	-.05	-.00	.00	.01	.04	.08
SSA2	.27	-.27	**.31**	.14	.25	-.17	.12	.24	-.02	-.08	.09	.16	.02	-.08	.20	.11	.11	.18
SSA3	.19	-.24	.20	.06	-.14	-.19	.15	.00	-.11	.05	-.03	-.11	.12	-.05	.09	-.01	.10	.09
SSA4	**.38**	-.08	.29	.10	.12	-.22	.08	.01	-.09	-.21	-.07	.07	-.12	-.02	.01	-.02	-.00	.09
SSA5	**.34**	-.10	.30	.20	-.08	.24	.11	.19	.03	-.08	.03	.00	.05	.02	-.14	.18	-.03	-.03
SSA6	**.40**	-.06	**.47**	.20	.11	.11	-.02	-.14	.13	-.02	.01	-.21	-.10	.01	.02	-.02	.07	-.09
SSA7	**.42**	.01	.19	.22	.29	.07	.00	.18	-.12	.06	-.01	-.02	.05	.06	.13	-.04	-.14	-.10
SSA8	**.43**	-.04	**.34**	.09	.16	.21	.03	-.12	.04	.01	-.14	-.19	-.07	-.12	.01	.08	-.03	.03
SSA9	**.57**	-.10	.27	.28	-.08	-.02	-.13	-.01	-.01	-.01	-.01	-.06	.07	.06	-.03	.13	-.00	.06
SSA10	**.55**	-.10	**.45**	.11	.06	.01	-.03	-.06	.18	.00	.15	-.03	.01	-.02	.10	-.02	.03	-.12
SSA11	-.22	-.01	.06	.04	-.11	.10	-.20	-.03	.11	-.11	-.04	.14	-.07	-.13	-.02	.06	.04	-.10
SSA12	.22	.04	-.11	.12	**.31**	.08	.16	.12	.10	**.46**	-.00	.06	.09	**.32**	.06	-.00	-.09	-.02
SSA13	**.39**	-.22	.23	-.04	-.09	**.38**	.10	-.09	.12	.14	.09	.01	.02	-.05	-.04	-.06	-.07	.08
SSA14	**.52**	-.09	.06	-.01	-.02	-.17	.07	-.12	.13	-.07	-.04	.12	.20	.01	-.18	-.11	-.00	-.05
SSA15	**.63**	-.01	.19	-.05	.10	-.10	.07	-.03	-.05	-.20	-.10	.02	.05	-.03	-.11	-.10	.01	-.11
SSA16	**.58**	-.00	.15	.08	**.31**	.00	**-.35**	.01	-.16	-.09	-.16	.03	-.18	.18	-.00	-.02	.08	.05
SSA17	**.60**	.02	-.01	-.00	-.02	.17	.13	-.18	.00	.02	-.16	-.07	.01	-.00	-.09	.12	-.08	.14
SSA18	**.49**	-.13	**.31**	-.06	-.04	.20	-.17	-.10	-.04	.00	.30	.00	-.00	-.00	-.10	-.13	-.02	-.02
SSA19	**.57**	-.11	-.01	-.09	.10	.01	-.17	.01	-.26	-.07	.01	.17	.00	.05	-.00	-.13	-.04	.00
SSA20	**.35**	-.10	.11	-.17	-.03	.22	.03	.09	.01	-.00	.24	.13	.03	-.00	-.12	-.17	-.01	.03
SSA21	**.48**	.12	.00	**-.38**	.04	.05	-.08	-.11	-.10	.01	-.13	-.23	-.15	.13	.16	-.03	-.14	.13
SSA22	**.44**	.15	**-.31**	.26	.21	.05	.14	-.00	-.03	.14	.03	-.15	-.02	-.08	-.08	-.23	-.10	-.01

	Factor																	
Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
SSA24	**.48**	.12	-.13	.14	.08	-.10	.06	-.04	.00	-.04	.00	-.10	-.07	-.15	-.00	-.21	.03	-.09
SSA25	**.31**	-.11	-.26	.27	-.03	.24	.15	-.09	.18	.07	-.06	.08	-.29	.03	.21	-.17	.20	.01
SSA26	**.66**	-.06	-.08	-.05	-.06	.12	-.04	-.12	.00	.17	.01	.11	-.02	-.01	.03	.10	.21	-.14
CONV1	**.59**	-.02	-.11	-.05	.08	.05	-.14	-.10	-.09	.02	-.09	.19	.07	-.10	.01	-.05	.08	-.09
CONV2	**.57**	.05	-.17	-.08	.11	.03	-.05	.07	.05	-.08	.09	.04	-.12	-.15	.00	.10	.06	.14
CONV3	.09	.10	.05	-.30	.11	.22	.25	.06	-.00	-.01	-.16	.18	-.02	.01	.01	-.03	.08	.01
CONV4	**.57**	-.16	-.00	-.13	-.01	.07	.01	.08	-.19	.21	.04	.27	.08	-.18	.19	.00	-.01	-.12
CONV5	**.65**	.10	-.09	-.21	-.02	-.08	.03	-.00	-.06	.05	.05	-.07	-.02	-.15	.06	-.00	.00	.05
CONV6	**.61**	-.00	-.07	-.01	.15	.06	**-.34**	.07	-.17	.01	-.07	.07	-.12	.12	-.10	.01	.01	-.01
CONV7	**.61**	.05	-.13	.08	.05	-.05	.05	.27	-.16	.05	.05	-.15	-.03	-.02	-.08	.00	.08	-.01
CONV8	**.57**	.13	-.02	-.17	.13	-.16	.02	.11	-.07	.04	.01	-.16	.00	.11	-.12	-.05	.07	-.11
CONV9	.23	.01	.01	**-.31**	.22	.25	**.33**	.10	-.06	-.16	-.18	.10	.04	.01	-.20	.08	.08	.10
CONV10	**.54**	.08	.01	-.10	-.05	**-.35**	.18	.02	.22	.10	.06	.14	-.09	.00	-.13	-.13	-.13	.03
CONV11	**.65**	-.01	-.04	-.22	-.12	-.17	.04	-.14	.09	.03	-.11	.05	-.05	-.00	.02	.09	-.05	-.07
CONV12	**.63**	.02	-.17	-.11	.02	-.16	-.00	-.01	.07	.05	.21	.04	-.13	-.06	-.08	.09	.00	-.08
CONV13	**.45**	.20	-.14	-.29	-.04	-.05	-.03	.11	.05	-.01	**.31**	-.02	-.23	.10	.07	.12	.06	.08
CONV14	**.53**	-.15	-.19	.29	-.29	-.00	.00	.00	-.12	.08	.05	.06	-.06	-.03	.05	-.03	-.13	.10
CONV15	**.62**	-.12	-.10	.23	-.26	-.09	-.05	.05	-.13	-.07	-.00	.01	.07	.04	-.08	-.03	-.11	.02
CONV16	**.67**	.00	-.19	.23	-.21	-.00	.08	.03	-.02	-.04	-.04	.03	.02	-.03	-.07	-.03	.02	.19
CONV17	**.75**	-.03	-.06	.08	-.21	-.00	-.13	-.10	.06	.12	-.14	.10	.16	.04	.08	.02	.01	.06
CONV18	**.52**	-.10	-.25	.16	-.18	.05	-.01	.06	.18	**-.36**	-.02	.04	-.06	.14	.10	-.06	.01	-.01
CONV19	**.61**	.03	-.25	.21	-.10	.11	.09	.05	.22	-.06	-.02	.00	-.14	.19	-.09	.08	.08	.00
CONV20	**.35**	-.08	-.10	.07	-.17	-.00	.07	.27	-.03	-.02	-.09	-.00	.06	.06	.00	.15	-.09	-.06
CONV21	**.63**	-.00	.01	-.23	-.10	-.09	-.01	-.12	.06	.05	-.10	-.12	-.04	-.02	-.04	-.03	.02	.10
CONV22	**.56**	.06	-.18	.08	.08	-.15	.04	-.21	-.13	.12	-.06	-.17	.02	-.19	-.02	.16	.13	-.04
CONV23	**.68**	.00	-.10	.11	-.21	-.03	-.09	.04	.04	-.09	.02	-.03	.00	-.04	-.01	.07	-.07	-.12
CONV24	**.67**	-.16	.13	-.19	-.00	-.20	-.00	-.14	.14	-.01	-.02	.03	.04	.12	.06	-.03	-.03	-.04
CONV25	**.60**	-.06	.17	-.24	-.09	-.09	-.04	-.19	.12	.08	-.02	.02	.11	.17	.11	.12	-.05	.01
CONN1	**.46**	-.04	-.10	-.09	-.07	.04	-.00	.28	.04	-.05	-.19	-.06	.07	-.06	.18	-.10	-.02	-.06
CONN2	**.58**	.05	.06	-.26	-.07	.22	.11	.14	.04	-.13	.14	-.18	.10	-.05	.06	-.00	-.07	.00
CONN3	**.67**	-.01	-.02	-.15	-.06	.08	-.00	.14	-.03	-.17	.01	-.09	.07	.06	.05	-.05	-.05	-.10
CONN4	**.52**	.10	-.23	.02	.06	.00	.00	.15	.00	.11	-.04	-.11	.13	-.01	-.09	.10	.11	-.10
CONN5	**.31**	.19	-.29	-.01	.23	.07	-.19	.09	.23	-.07	.15	-.01	.21	-.07	.02	.12	.09	.02

	Factors																	
Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
CONN6	.12	.16	-.24	.05	**.31**	.00	-.24	-.09	.21	-.10	.07	-.08	**.40**	.04	.03	-.12	.09	.22
CONN7	-.22	-.07	.23	-.08	**-.36**	-.05	-.17	.26	-.12	.20	.08	-.09	-.00	.07	-.03	-.07	.13	.19
CONN8	.17	.08	-.26	.12	.28	.02	.09	-.21	-.15	-.17	.20	.08	-.02	-.01	.12	.19	**-.33**	.00

Note. Factor loadings > .30 are in boldface; TA =Theme Acceptance; SSA = Support for Self-Awareness; CONV = Conversion; CONN = Connectedness.

Table 2

Factor Loadings from the Rotated Factor Structure Matrix for the SECRS: Principal Axis Factoring with Oblimin Rotation

	Factor																	
Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
TA1	.18	**.58**	.26	.03	-.17	-.02	.10	.02	-.11	.02	.09	-.03	-.01	.09	.00	.09	.08	-.13
TA2	-.03	-.23	-.10	.08	.07	-.04	.05	-.22	-.14	.05	.10	.12	.06	.17	-.18	.10	.08	.04
TA3	.15	**.70**	.06	.12	-.10	.09	.12	-.19	-.17	-.03	.08	.03	.04	.09	.06	-.01	.05	.07
TA4	.06	**.62**	.24	.09	.08	.05	-.22	.09	.16	.12	-.05	.11	-.11	-.10	-.18	.03	-.13	.02
TA5	.17	**.65**	.07	.07	-.12	.03	.16	-.16	-.21	-.15	.10	.07	.08	.07	.07	-.09	.12	.01
TA6	.14	**.72**	.18	.03	-.07	-.04	-.16	.18	.17	.09	-.19	.16	-.03	-.17	.02	-.02	-.12	.10
TA7	.17	**.61**	.21	.09	-.16	-.03	.08	-.01	-.02	-.02	-.03	.07	.13	.06	.12	.00	.06	-.06
SSA1	**.36**	-.03	.27	.14	.27	**-.37**	.16	.09	.11	.04	.08	.07	-.06	.00	.00	.01	.04	.09
SSA2	.27	-.28	**.31**	.14	.26	-.18	.12	.24	-.02	-.08	.10	.16	.03	-.09	.21	.11	.12	.18
SSA3	.19	-.24	.20	.07	-.14	-.19	.15	.00	-.11	.05	-.04	-.11	.12	-.05	.10	-.01	.10	.09
SSA4	**.38**	-.09	.30	.10	.12	-.22	.09	.02	-.10	-.21	-.07	.07	-.13	-.02	.01	-.02	-.01	.09
SSA5	**.35**	-.10	**.31**	.20	-.08	.24	.11	.19	.03	-.09	.03	.00	.05	.02	-.14	.18	-.03	-.04
SSA6	**.40**	-.06	**.48**	.20	.11	.11	-.03	-.14	.13	-.02	.02	-.22	-.10	.01	.02	-.02	.08	-.10
SSA7	**.43**	.01	.19	.22	.30	.07	.00	.18	-.12	.07	-.02	-.03	.06	.07	.14	-.05	-.15	-.10
SSA8	**.43**	-.04	**.34**	.10	.16	.22	.03	-.12	.04	.02	-.14	-.20	-.07	-.13	.01	.09	-.03	.03
SSA9	**.57**	-.11	.28	.29	-.08	-.02	-.14	-.02	-.01	-.01	-.01	-.06	.08	.06	-.04	.13	-.01	.07
SSA10	**.56**	-.11	**.46**	.11	.07	.02	-.03	-.06	.18	.01	.15	-.03	.01	-.02	.11	-.02	.03	-.12
SSA11	-.23	-.01	.06	.04	-.11	.11	-.21	-.03	.12	-.11	-.05	.14	-.07	-.13	-.02	.06	.05	-.10
SSA12	.22	.05	-.11	.12	**.32**	.08	.16	.12	.11	**.47**	-.01	.06	.09	**.32**	.06	-.01	-.09	-.02
SSA13	**.39**	-.22	.23	-.04	-.09	**.39**	.11	-.10	.13	.15	.10	.02	.03	-.06	-.04	-.06	-.07	.09
SSA14	**.53**	-.09	.07	-.02	-.03	-.17	.08	-.13	.14	-.07	-.05	.12	.20	.01	-.19	-.12	-.01	-.05
SSA15	**.64**	-.02	.19	-.06	.11	-.11	.08	-.03	-.05	-.21	-.11	.03	.05	-.04	-.12	-.10	.01	-.11
SSA16	**.59**	-.01	.15	.08	**.32**	.01	**-.35**	.01	-.16	-.09	-.16	.04	-.18	.18	-.01	-.02	.09	.06

	Factor																	
Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
SSA17	**.61**	.02	-.01	-.01	-.03	.17	.13	-.18	.00	.03	-.17	-.07	.02	.00	-.10	.12	-.09	.15
SSA18	**.50**	-.13	**.31**	-.06	-.04	.20	-.18	-.11	-.05	.00	.30	.00	.00	.00	-.11	-.14	-.03	-.03
SSA19	**.58**	-.12	-.02	-.09	.10	.02	-.17	.01	-.26	-.08	.01	.17	.01	.06	-.01	-.14	-.04	.00
SSA20	**.36**	-.10	.12	-.17	-.04	.23	.03	.09	.02	-.01	.24	.13	.03	-.01	-.13	-.18	-.01	.04
SSA21	**.49**	.13	.00	**-.38**	.05	.05	-.08	-.11	-.10	.01	-.13	-.24	-.16	.13	.17	-.04	-.14	.13
SSA22	**.44**	.16	**-.31**	.26	.22	.05	.14	-.01	-.04	.15	.04	-.15	-.03	-.09	-.09	-.24	-.11	-.01
SSA23	**.64**	-.12	.03	.05	-.04	.14	-.03	-.09	-.14	.12	.02	.01	.03	-.16	-.06	.01	.01	.13
SSA24	**.49**	.13	-.14	.15	.09	-.11	.07	-.04	.00	-.05	.00	-.11	-.07	-.16	.00	-.22	.04	-.09
SSA25	**.31**	-.11	-.26	.27	-.03	.25	.15	-.09	.18	.07	-.06	.09	-.29	.03	.21	-.17	.21	.01
SSA26	**.67**	-.06	-.08	-.05	-.07	.13	-.05	-.12	.00	.17	.02	.12	-.03	-.02	.04	.11	.21	-.14
CONV1	**.59**	-.03	-.12	-.06	.09	.05	-.15	-.10	-.10	.03	-.09	.20	.07	-.10	.01	-.06	.09	-.10
CONV2	**.57**	.06	-.18	-.09	.12	.03	-.06	.08	.05	-.08	.09	.04	-.13	-.16	.01	.11	.06	.15
CONV3	.09	.11	.06	-.30	.12	.23	.25	.06	-.01	-.01	-.16	.18	-.03	.02	.02	-.04	.08	.02
CONV4	**.57**	-.17	.00	-.13	-.01	.08	.01	.08	-.19	.21	.04	.27	.09	-.19	.20	.00	-.01	-.12
CONV5	**.65**	.10	-.10	-.22	-.02	-.09	.03	.00	-.07	.05	.05	-.07	-.03	-.16	.07	-.01	.00	.05
CONV6	**.61**	-.01	-.08	-.01	.15	.07	**-.35**	.08	-.17	.02	-.07	.08	-.12	.12	-.10	.01	.01	-.02
CONV7	**.61**	.05	-.14	.08	.06	-.06	.05	.27	-.17	.06	.06	-.16	-.04	-.02	-.08	.00	.09	-.02
CONV8	**.58**	.13	-.02	-.17	.13	-.16	.02	.11	-.07	.05	.02	-.16	.00	.11	-.13	-.05	.08	-.12
CONV9	.23	.02	.01	**-.31**	.23	.25	**.33**	.11	-.06	-.16	-.19	.11	.05	.02	-.20	.08	.08	.10
CONV10	**.54**	.08	.02	-.10	-.05	**-.36**	.18	.02	.23	.11	.07	.14	-.10	.01	-.13	-.14	-.14	.04
CONV11	**.66**	-.02	-.04	-.22	-.12	-.17	.04	-.14	.09	.03	-.12	.05	-.05	-.01	.02	.09	-.05	-.07
CONV12	**.63**	.02	-.17	-.12	.02	-.16	.00	-.02	.07	.05	.21	.04	-.14	-.06	-.09	.10	.01	-.08
CONV13	**.46**	.21	-.15	-.30	-.05	-.05	-.03	.11	.06	-.01	**.32**	-.03	-.23	.10	.08	.13	.07	.09
CONV14	**.54**	-.15	-.19	.30	-.29	.00	.00	.00	-.12	.08	.05	.06	-.07	-.03	.05	-.03	-.13	.10
CONV15	**.62**	-.12	-.10	.23	-.27	-.09	-.05	.05	-.13	-.07	.00	.01	.08	.05	-.08	-.03	-.11	.02
CONV16	**.67**	.01	-.19	.23	-.21	.00	.08	.04	-.03	-.05	-.04	.04	.03	-.03	-.08	-.04	.02	.20
CONV17	**.75**	-.04	-.06	.08	-.21	-.01	-.13	-.10	.06	.12	-.15	.10	.17	.04	.09	.03	.01	.07
CONV18	**.53**	-.10	-.25	.16	-.18	.05	-.02	.06	.19	**-.36**	-.02	.04	-.07	.15	.10	-.07	.01	-.02
CONV19	**.62**	.04	-.25	.22	-.10	.11	.10	.05	.23	-.07	-.03	.01	-.15	.19	-.09	.08	.08	.00
CONV20	**.36**	-.09	-.11	.07	-.18	.00	.07	.28	-.03	-.02	-.10	-.01	.07	.06	.01	.15	-.10	-.07
CONV21	**.63**	.00	.02	-.23	-.11	-.09	-.02	-.13	.06	.06	-.10	-.13	-.05	-.03	-.04	-.03	.03	.11
CONV22	**.56**	.07	-.19	.09	.09	-.16	.04	-.21	-.13	.13	-.06	-.17	.02	-.19	-.02	.17	.13	-.04
CONV23	**.68**	.01	-.11	.11	-.21	-.03	-.09	.04	.05	-.09	.02	-.04	.00	-.05	-.01	.08	-.08	-.12
CONV24	**.67**	-.17	.14	-.20	-.01	-.21	-.01	-.14	.14	-.01	-.02	.04	.04	.12	.07	-.04	-.04	-.04
CONV25	**.60**	-.07	.17	-.24	-.10	-.09	-.05	-.19	.12	.08	-.02	.02	.12	.17	.11	.12	-.06	.01
CONN1	**.47**	-.05	-.11	-.10	-.08	.04	-.01	.28	.05	-.05	-.19	-.07	.08	-.06	.18	-.11	-.02	-.06

	Factor																	
Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
CONN2	**.58**	.06	.07	-.27	-.07	.22	.12	.14	.05	-.13	.14	-.18	.10	-.05	.07	.00	-.08	.00
CONN3	**.67**	-.02	-.03	-.16	-.07	.08	.00	.14	-.04	-.17	.01	-.10	.07	.06	.05	-.06	-.06	-.10
CONN4	**.52**	.11	-.23	.02	.07	.01	.01	.16	.01	.11	-.05	-.12	.13	-.02	-.10	.10	.11	-.11
CONN5	**.31**	.19	-.29	-.02	.24	.08	-.19	.10	.24	-.07	.15	-.01	.22	-.08	.03	.12	.09	.02
CONN6	.12	.17	-.25	.05	**.31**	.00	-.25	-.09	.22	-.10	.07	-.08	**.40**	.04	.04	-.12	.09	.22
CONN7	-.23	-.08	.23	-.08	**-.37**	-.05	-.17	.26	-.12	.21	.08	-.09	.00	.08	-.03	-.08	.14	.19
CONN8	.17	.09	-.27	.12	.29	.03	.10	-.21	-.15	-.17	.21	.08	-.02	-.01	.13	.20	**-.33**	.01

Note. Factor loadings > .30 are in boldface; TA = Theme Acceptance; SSA = Support for Self-Awareness; CONV = Conversion; CONN = Connectedness

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