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Culturally and Linguistically Diverse Decision-Making: Development of a Survey Tool

Abstract

It has been projected that by 2020 one out of three children will originate from a culturally and linguistically diverse (CLD) population (Rogers & Lopez, 2002). Thus, school psychologists are called to reexamine and modify their service-delivery methods to better meet the needs of CLD populations (Guerrero & Leung, 2008). The purposes of this study were: (1) to identify what a CLD problem-solving process looks like in the daily practices of school psychologists; (2) identify the impact of perceived value and skill level on the frequency of implementation practices of a CLD problem-solving model; and (3) identify if personal characteristics impact implementation practices of a CLD problem-solving model. Feedback from an expert panel was used to validate the content of a newly developed CLD problem-solving survey. An in-state procedural pilot study was conducted using a sample of state association members. The primary dissertation study was a revised version of the in-state procedural study using a larger, more representative sample of school psychologists identified in states with large CLD populations. Ratings for perceived value, skills level, and frequency of implementation practices were collected. Methods of analyses included: (1) item analyses; (2) descriptive statistics; and (3) multiple regression. A factor analysis was used to evaluate the underlying factors of the newly developed CLD problem-solving process. Results are expected to better assist trainers with the improvement of professional development trainings related to CLD competencies of school psychologists.

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DEVELOPMENT OF A SURVEY TOOL

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Chapter One: Introduction

It has been projected that by 2020 one out of three children will originate from a culturally and linguistically diverse (CLD) population (Rogers & Lopez, 2002). In response, school psychologists are called to reexamine and modify their service-delivery methods to better meet the needs of CLD families and students (Guerrero & Leung, 2008). It can be argued that doing so requires three developmental stages: (1) finding value in a CLD problem-solving model; (2) developing the skills needed to service CLD populations; and (3) implementing a CLD problem-solving model in daily practice. In the face of the global growth of diversity, the National Association of School Psychologists (2006) has assisted with meeting these needs through the development and implementation of training and practice standards that aim to better guide the daily practices of school psychologists. These practices serve as a cornerstone for school-based service delivery and have taken form in a problem-solving model.

According to the National Association of School Psychologists (NASP; 2003), culture is defined as behaviors that include, but are not limited to, the cognitive, communicative, and social patterns exhibited by an individual or group. These factors further embody the rules for living and are thought to reflect individuals' ideals, values, and beliefs (Ortiz, Flanagan & Dynda, 2008). Thus, it is argued that individuals and subgroups with a culture that deviates from the culture of a larger group, commonly

referred to as the mainstream culture, are thought to be culturally and linguistically diverse (CLD) (Ortiz, Flanagan, & Dynda, 2008). Because these differences impact students' abilities to succeed, problem-solving models have been implemented within schools to help guide service delivery methods provided by support services. Problem-solving models have been found effective for guiding individualized instruction and delivery of services with marginal populations, such as students with special needs and second language learners (Reschly, 2008).

While researchers have defined the problem-solving stages of a generic problem-solving model (Adelman & Taylor, 2008; Burns, Wiley, & Viglietta, 2008; Kratochwill, 2008; Pluymert, 2008), they have failed to provide a tailored model that better helps with the identification and evaluation of the unique and individual differences of CLD populations. Rather, researchers have focused on identifying key strategies that serve as example methods to improve the generic problem-solving approach. Examples include methods for improving communication and stakeholder relationships (Braden & Joyce, 2008; Burns et al., 2008; Lopez, 2008; Miranda, 2008; Rogers & Lopez, 2002), consideration for culturally sensitive assessment methods (Lidza & Macrineb, 2001; McCloskey & Athanasiou, 2000; Lopez, 2008; Vanderwood & Nam, 2008), and various questions that can better enhance the evaluation of a problem-solving process from a CLD perspective (Brown, 2008; Kratochwill, 2008; Pluymert, 2008; Roger, Ingraham, Bursztyne, Cajigas-Segredo, Esquivel et al., 1999). While it is acknowledged that no one model addresses all CLD factors, Guerrero and Leung (2008) argue that the principles of cultural awareness should be used as a framework for decision-making. Overall, it can be argued that the current research may be helpful for one to tailor one's own practices;

however, it fails to provide a clear CLD model to guide best practices related to problem-solving with CLD populations. In turn, from a best practices perspective, it is argued that taking a closer look at what a CLD problem-solving model should look like in daily practice as well as further identifying factors that can potentially impact the frequency of implementation practices of such a model is warranted.

Purposes of the study and research questions

There are three purposes of the present study that align with three research questions. These research questions are outlined in the following section.

Purpose I. The first purpose of this study was to evaluate what a CLD problem-solving model looks like in the daily practices of school psychologists. As common within professional fields of practice, the National Association of School Psychologists has put forth great effort towards developing professional standards to guide the daily practice of school psychologists as outlined in *School Psychology: A Blueprint for Training and Practice III* (NASP, 2006). In turn, the professional guidelines of the association were used as a cornerstone for the development of a CLD problem-solving model. A literature review was conducted to identify examples of CLD strategies utilized by school psychologists in professional practice in order to better identify key strategies that reflect a CLD problem-solving model. Given the paradigm shift from a diagnostic model centered on the testing and evaluation needs of schools to a problem-solving approach (Christ, 2008), attention was given to the methods implemented within the model across the problem-solving stages.

Five stages of a problem-solving model were identified: (1) establishing relationship; (2) problem identification; (3) problem analysis; (4) plan development and

implementation; and (5) plan evaluation (NASP, 2006). Items were then developed that reflected CLD strategies across the problem-solving stages. An expert panel of seasoned school psychologists that work with CLD populations was identified in an effort to validate the content of the survey to ensure that the targeted strategies reflect the daily practices of school psychologists and the knowledge base of school psychologists with expertise in the CLD domain. Feedback was then used to further improve the development of the survey content used for this study; thus providing an outline of a CLD problem-solving model.

An in-state procedural study using a sample of practicing school psychologists was then used to evaluate the utility of the newly developed survey. Internal consistency of items was evaluated and found to be good. The expected sample size was obtained and respondents provided no comments regarding the utility or friendliness of the survey. It was determined that the survey was procedurally sound and no additional changes to items were made.

Following, a primary dissertation study using a larger, more representative sample of school psychologists who service students and families from CLD backgrounds was conducted. As later discussed, CLD strategies related to CLD competencies were identified in the literature. It was argued that the CLD strategies identified aligned with the five stages of a problem-solving process. Using skill ratings as the selection variable, an exploratory factor analysis with varimax rotation was used to ensure each factor accounted for as much of the variance as possible. The first research question addressed by the primary dissertation study was as follows:

Research Question 1. Using an exploratory factor analysis, do the CLD strategies outlined in the literature align with the five stages of a CLD problem-solving model based on reported skill ratings?

Purpose II. The second purpose of the study was to identify if perceived value and skill influenced the frequency of implementation practices associated with the outlined CLD problem-solving model. School psychologists are more likely to implement strategies perceived as valuable (Fowler & Harrison, 2001; Chafouleas, Riley-Tillman & Eckert, 2003; Sawyer, Porter, Lehman, Anderson & Anderson, 2006; Stoiber, & Vanderwood, 2008). This also occurs when they have developed skills (competencies) related to CLD practices (Brown, 2008; Pluymert, 2008). Using perceived value and skill as the independent variables, multiple regression was to identify the impact on frequency of implementation ratings. This was the focus of Research Question 2.

Research Question 2. Do perceived value and perceived skills (competencies) predict frequency of implementation of self-reported CLD practices?

Purpose III. The third purpose of this study was to determine if the implementation of CLD problem-solving strategies was affected by personal characteristics. Aligning with the research on this topic (Chafouleas et al., 2003; Kratochwill, 2008; Stoiber & Vanderwood, 2008), three personal characteristics were identified: ethnicity, experience working with CLD populations, and years of experience working as a school psychologist. Ethnicity was expected to be a predictor for differences in practice based on the assumption that those representing CLD populations themselves may have a different experience as a school psychologist. For example, a school psychologist that is fluent in a native language of a family from a CLD background may

be more successful developing a relationship and ensuring open communication (Ortiz et al., 2008); thus resulting in more frequent CLD practices. School psychologists with experience working with CLD populations were also expected to implement CLD strategies more frequently. This is because implementation practices in districts with high CLD populations may have policies and standards that target such population needs. Moreover, it was expected that these individuals have received more specialized training aimed at developing CLD competencies (Armistead, 2008; Stoiber & Vanderwod, 2008). It has also been found that school psychologists that work longer with particular populations are more comfortable providing services to these populations, and possibly increase service effectiveness (Wille, McFarland, & Archwamety, 2009).

Lastly, it was expected that the frequency of implementation practices may be affected by the total number of years of professional service as a school psychologist. It is often agreed that learning is a life-long process, and that developing the awareness, knowledge, and skills related to day to day practices happens over time (Falender, Cornish, Goodyear, Hatcher, Kaslow, et al., 2004). More seasoned professionals might be expected to have developed stronger competencies and skills related to CLD practices, thus, they are more likely to implement particular practices compared to less experienced colleagues (Curtis, Hunley, & Grier, 2002). It is also likely that these individuals are more likely to have experienced the evolving changes of professional standards and practices, thus having developed more refined competencies as related to population needs (Oakland & Jimerson, 2008; Stoiber & Vanderwood, 2008). Using the personal characteristics as independent variables, multiple regression was to identify the impact on frequency of implementation ratings. Research Question 3 is as follows:

Research Question 3: Do ethnicity, experience working with CLD populations, and overall experience as a school psychologist predict the frequency of implementation of self-reported CLD strategies?

Defining key terms.

A list of key terms defined for this study is provided next and may be found in Appendix A. Initial attention is given to defining school psychologists as targeted mental health professionals. Following, a generic problem-solving model of service delivery is defined. As this study focused on outlining how a generic problem-solving model could be enhanced by the incorporation of CLD strategies, culture and culturally and linguistically diverse are defined. Given the purposes of the study, more in-depth reviews of a problem-solving model and CLD strategies are provided in the next chapter. Lastly, perceived value and skill level (competency) were evaluated to identify the impact on implementation practices. Thus, definitions for the concepts are also provided.

Defining SPs a targeted population. School psychologists serve as one of the primary support service providers in schools. According to the National Association of School Psychologists (2003), a school psychologist is highly trained in psychology and education and must be state certified and/or licensed to work as a school psychologist. Areas of training include, but are not limited to, data-based decision making, consultation, prevention, and intervention. School psychologists work closely with parents, educators, and other professionals to ensure that all children succeed in school and at home. As of 2006, it was estimated that there were approximately 166,000 psychologists in the United States, with approximately 29% of those practitioners serving in educational institutions (Department of Labor, 2007). An additional 21% of

psychologists were employed as mental health practitioners. Approximately 34% were self-employed, with a remaining 8% classified as professional workers. Between 2006 and 2016, employment of psychologists is projected to increase by 15% as a result of an increased demand of psychological services in settings such as schools, hospitals, and mental health centers (Department of Labor, 2007). With this projected increase in students from CLD backgrounds, it is important to further evaluate how the field is adapting to and meeting this need. For the purposes of this study the target population was state licensed school psychologists that worked within a public school system servicing school-aged children. Attention was not given to type of degree (i.e., MS, EdS/SSP, PhD) because of the different requirements for licensure by state. Thus, it was expected that a state licensed or credentialed school psychologist meet the necessary requirements for practice as a school psychologist.

Problem-solving model of service delivery. A problem-solving model of service delivery has been outlined in the School Psychology: A Blueprint for Training and Practice III (NASP, 2006) to align with the daily implementation practices of school psychologists. The recent paradigm shift from a diagnostic model to a problem-solving model was further promoted by the reauthorized Individuals with Disabilities Education Act (IDEA 2004). In the reauthorization of IDEA (2004), practitioners were called to use a response to intervention (RTI) approach to better determine the needs of all students, with focus on students with disabilities. As commonly acknowledged an RTI approach is largely carried out using a problem-solving model (Christ, 2008; NASP, 2006). Problem-solving includes three basic processes: identifying a problem, generating a solution, and implementing a solution to the problem (D’Zurilla, Nezu, & Maydeu-Olivares, 2004).

School psychologists progress through a school-based problem-solving model by engaging in four problem-solving stages. These stages include problem identification, problem analysis, plan implementation, and plan evaluation (Burns et al., 2008; Kratochwill, 2008; Rosenfield, 2008; Sladeczek, Madden, Illsley, Finn & August, 2006). Also often implemented, but not commonly included within general problem-solving models, is a stage that focuses on establishing relationships. Given that these competencies require strong interpersonal skills, it is argued that an effective problem-solving model must then incorporate a stage devoted to implementing those skills required to establish relationships (Allison & Upah, 2008; Kratochwill, 2008). The current study defined a general problem-solving process as a model of service delivery that includes five stages: (1) establishing relationships; (2) problem identification; (3) problem analysis; (4) plan implementation; and (5) plan evaluation.

Culture. As reported by Ortiz and colleagues (2008), culture includes the attitudes, perceptions, and behaviors of individuals and groups. Similarly, the National Association of School Psychologists (NASP; 2003) defines culture as behaviors that include, but are not limited to, the cognitive, communicative, and social patterns exhibited by an individual or group. Overall, these components are best observed in how they contribute to and define the unique and shared experiences among individuals and groups (Ortiz et al, 2008). Also, it is thought that learned behaviors of an individual are typically learned and shared within the family system and reflects the social heritage of the culture (NASP, 2003). Examples include religious practices, values regarding interpersonal relationships, and language (Hover & Patton, 2005; Ortiz et al., 2008). Building upon this definition, it is then argued that American mainstream culture is

reflective of the historical traditions, behaviors, and social values and beliefs of White Europeans. In turn, mainstream culture can be defined as the attitudes, perceptions, and behaviors of the American population.

Culturally and linguistically diverse (CLD). Ortiz and colleagues (2008) report that culturally and linguistically diverse (CLD) refers to one's origin from a unique developmental and social background. Development is defined across physical, emotional, cognitive, and social domains. Race and ethnicity are often identified as characteristics that help develop an understanding of similarities and differences observed across and among groups. Race can be defined as the perceived differences in biological inheritance (Lin & Kelsey, 2000), and extended to differences in appearance and behavior (Oppenheimer, 2001). Ethnicity can be defined as a social construct that includes the perceived differences seen by the self and others (Oppenheimer, 2001); and has been used to refer to the culture of a group (Betancourt & Lopez, 1993). Ethnic group membership is often thought to be characterized by shared social and cultural traditions derived from a common history (Lin & Kelsey, 2000). However, Ortiz and colleagues (2008) remind school psychologists that the sharing of a common ethnic background or ethnic group membership and race does not always represent a shared experience. Rather, race and ethnicity are two distinct characteristics often associated with understanding an individual's cultural background and experiences based on their distinct differences in meaning. As social and cultural traditions are more related to the unique experiences of an individual, ethnicity was identified as a potential predictor of professional practices. For the purposes of this study, ethnicity was defined as the group membership of an

individual that reflects a shared social and cultural background based on a common history.

Another factor often associated with CLD is socioeconomic status (SES), which is defined by variables that include parent educational, parent occupational, and the family financial status. However, the implications of SES have been thought to extend to an individual's own occupational and educational aspirations, selection of social networks, and social roles. It is concluded that SES is also an important factor for understanding CLD populations. With CLD reflecting a more defined definition of culture, it can be argued that individuals and groups with a culture that deviates from that of the mainstream American culture are thought to originate from a CLD population (Ortiz et al., 2008). As the current study aims to identify appropriate practices of service delivery when working with a variety of populations, the term CLD is preferred compared to previous labels (i.e., multicultural). This draws attention to cultural and linguistic differences that can reflect both race and ethnicity. It also provides a greater understanding of the needs of CLD populations. CLD was selected to better capture unique differences that are thought to provide a more inclusive view of a student's needs. The current study defined CLD populations as individuals whose culture deviates from the majority population. CLD strategies were defined as strategies that deviate from the mainstream culture and align with the culture of a CLD population.

Perceived value and skills. Perceived value is defined as some level of importance (Cleary, 2009), and has been linked to the development of competencies relevant to daily practices (Connerly & Pedersen, 2005). This level of importance extends to that of moral nature as related to the respect for human dignity and justice (Fagermoen,

1997); meaning, there is value in doing what is right for a student. There is also work value that applies to the satisfaction one gets from the action of helping or doing.

Fagermoen (1997) argued that both moral and work values strongly guide professional identity and professional practices.

Connerley and Pedersen (2005) purposed a three-stage developmental sequence that serves as a foundation for skill (competency) development. In brief, one must first develop awareness, and then knowledge as related to a concept or action. Knowledge must be gained prior to learning skills necessary to implement the awareness and knowledge previously learned. For example, if an individual is learning a CLD strategy, he or she must first have an awareness of the strategy. Then, the individual must learn more about how the strategy relates to a particular population and/or purpose. By learning about the strategy and the purpose for the strategy, one can then apply the knowledge learned towards skill development and implementation of practices. For this study, perceived value was defined as level of importance. Perceived skill was defined as the level of awareness, knowledge, and/or skills related to a particular CLD strategy in a problem-solving process.

Development of a CLD problem-solving process.

In light of the increase in global diversity across schools, it is argued that there is a need for school psychologists to better understand how a generic problem-solving model might be enhanced by the inclusion of CLD practices and competencies, thus creating a CLD problem-solving process. However, not much is known about how CLD problem-solving might be reflected in the daily practices of school psychologists. Reflective of the recent paradigm shift from a diagnostic model to a response to

intervention model, practitioners would benefit from understanding how CLD practices might be implemented and what factors may influence implementation of CLD strategies within a response to intervention problem-solving model. Thus, the outcomes from this study were expected to provide recommendations for professional development training standards related to CLD practices for school psychologists.

Chapter Two: Literature Review

A review of literature centered on the topic of a CLD problem-solving model is provided in Chapter 2. While little research was found outlining a CLD problem-solving model, research is reviewed that provides an outline of key practices and strategies that can contribute to a CLD problem-solving model.

Overview of the chapter.

An in-depth overview of a general problem-solving model reflective of the daily practices of school psychologists is initially presented and key strategies of a CLD problem-solving model are integrated into the global stages of this problem-solving process. In the second section this chapter, two critical factors are outlined that can impact the implementation of CLD within a problem-solving model: perceived value and perceived skill level (competency) (Fowler & Harrison, 2001; Chafouleas, Riley-Tillman & Eckert, 2003; Sawyer, Porter, Lehman, Anderson & Anderson, 2006; Stoiber, & Vanderwood, 2008). Lastly, individual characteristics of school psychologists that can impact such practices will be presented. Three factors were selected: individual culture, years of experience working as a school psychologist, and experience working with CLD populations (Armistead, 2008; Brown, 2008; Oakland & Jimerson, 2008). The final section of this chapter is devoted to a discussion of the potential impact that these factors have on CLD practices within a problem-solving framework.

Defining a general problem-solving model.

As commonly reflected in the literature and accepted by the profession, a successful problem-solving model of service delivery is commonly defined by four phases or stages: (1) Problem Identification; (2) Problem Analysis; (3) Plan Implementation; and (4) Plan Evaluation (Burns et al., 2008; Kratochwill, 2008; Rosenfield, 2008; Sladeczek, Madden, Illsley, Finn & August, 2006). Also often implemented, but not commonly included within general problem-solving models, is a stage that focuses on establishing relationships. It has been estimated that school psychologists spend as much as 20 percent of their time engaging in consultation practices (Wnek et al., 2008). Given that these competencies require strong interpersonal skills, it is argued that an effective problem-solving model must then incorporate a stage devoted to implementing those skills required to establish relationships (Allison & Upah, 2008; Kratochwill, 2008). The five stages of a generic problem-solving model are presented in Table 1 and further elaborated in the next sections.

Table 1
Five Domains of Problem-Solving Model

Stage 1: Establishing Relationship
Stage 2: Problem Identification
Stage 3: Problem Analysis
Stage 4: Plan Implementation
Stage 5: Plan Evaluation

Establishing relationships. The first stage, *establishing relationships*, focuses on developing and maintaining working relationships with students, families, and school staff members. It can be argued that many of the skills required for establishing relationships within a therapeutic setting mirror those required to build effective team member relationships (Kratochwill, 2008; McGivern et al., 2008). McGivern and

colleagues (2008) add to this notion by outlining moderating factors, mediating factors, and barriers to intervention that require consideration when developing and maintaining a helping relationship.

Moderating factors are defined as variables that have the potential to impact outcomes prior to the initiation of an intervention and include client factors, helper attributes, and interactive factors. Examples include client coping style and expectations, helper attributes such as genuineness and trustworthiness, and interactive factors such as gender and culture. Since these factors potentially impact problem-solving outcomes, it can be argued that school psychologists must attend to these variables in an effort to better establish a foundation for a helping relationship. Mediating factors are defined as variables that directly impact intervention outcomes. Examples include client factors such as active participation and self-efficacy; helper strategies such as communication strategies and self-disclosure; and interactive factors such as goal consensus and collaboration. Attention and consideration must also be given to these factors because they mediate the maintenance of relationships, which can directly influence outcomes of a problem-solving process. Lastly, barriers to intervention can be defined as variables that directly influence outcomes. For example, client and consultee barriers include logistical factors such as scheduling difficulties and transportation needs. Helper barriers include a lack of knowledge and training needed to facilitate the problem-solving process. Lastly, interactive barriers include background experiences such as previous conflicts experienced in team settings. Since these factors are often identified as barriers, it can also be argued that these factors also function as moderating and mediating factors that impact the establishment of relationships (McGivern et al., 2008).

In an effort to better identify and address moderating and mediating factors as well as barriers to intervention, Rosenfield (2008) outlines the importance of strong communication and listening skills to the establishment of relationships. It is argued that a skilled consultant or team member must be aware of how their own communication patterns as well as the communication patterns of other team members affect the problem-solving process. Furthermore, it is argued that strong listening skills enable team members to better understand the information contributed as well develop a well-rounded understanding of a targeted problem. Overall, a school psychologist skilled in establishing relationships is expected to experience less resistance, be more readily accepted by team members, and increases the probability of ensuring a successful intervention. Once a collaborative team is established, there can be a transition to the next stage (Kratochwill, 2008; McGivern et al., 2008).

Problem identification. The second stage, *problem identification*, is the most critical stage of the problem-solving process according to Kratochwill (2008). The focus is to define a targeted problem for which a student has been referred (Burns et al., 2008). This stage is created for future development and implementation of an intervention plan (Kratochwill, 2008). According to Burns et al. (2008), team members identify a problem in a meaningful and measurable way which provides a targeted problem. A review of quantitative and qualitative data is used to provide understand a student's strengths and weaknesses as well as help determine if a discrepancy exists between current and expected performance. More specifically, the difference between "what is" and "what should be" is established. Often, the expectation for "what should be" is reflective of

academic, social, and behavioral expectations. Additional focus is given to understanding how social and academic competencies relate to a problem (Kratochwill, 2008).

According to Kratochwill (2008), additional tasks in this stage include identifying assessment techniques to further analyze the problem. This includes identifying progress-monitoring tools that can be used to collect intervention data at the baseline, intervention, and evaluation phases of implementation (August, Francis, Hsu, & Snow, 2006; Kratochwill, 2008; Pluymert, 2008). This also establishes goals of the problem solving process. For example, outcome intervention expectations may be established to reflect improvement in district benchmark scores (Pluymert, 2008). Additional consideration is given to establishing the logistics of the problem-solving process, such as timelines for meetings and data collection phases as well as identifying a list of team members that may be involved in future stages of the process (e.g., teachers, administration, family members). Overall, the problem identification stage reflects the importance of strong collaborative efforts and planning of future stages. Once those efforts are successful, the team is ready to transition to the next stage (Brown, 2008).

Problem analysis. The third stage, *problem analysis* focuses on the potential variables that influence a targeted problem (Kratochwill, 2008; Watson & Sterling-Turner, 2008). In this stage, the team forms hypotheses that are thought to explain the antecedents and consequences of a targeted problem. In turn, baseline data is collected to assist with identifying factors that may be contributing to the problem as well as factors that may lead to some resolution of the problem. Based on the information gathered, the team identifies conditions that lead to goal attainment. For example, a team will determine if a behavior needs to increase or decrease. Antecedents, behaviors, and

consequences are further evaluated to determine appropriate conditions necessary to further goal attainment. As part of the problem analysis stage, goals are developed and outcome objectives are established in relation to the previously identified problem. After the problem is identified and analyzed, teams move to the next stage (Kratochwill, 2008; Watson & Sterling-Turner, 2008).

Plan implementation. The fourth stage, *plan implementation* focuses on development and implementation of a successful intervention plan (Rosenfield, 2008). As previously discussed, teams may discuss possible intervention plans in the problem analysis stage; however, specifics of the intervention are developed during the plan implementation stage (Kratochwill, 2008; Watson & Sterling-Turner, 2008). During intervention development, strategies are similar to those previously discussed in the problem analysis stage and identify factors that can contribute to and/or mediate a targeted behavior. These factors are then incorporated into an intervention plan. Additional effort is given to assigning roles and responsibilities for individual team members, such as identifying who is in charge of collecting progress-monitoring data. The logistics of the plan are finalized to ensure successful implementation (Kratochwill, 2008; Rosenfield, 2008).

Overall, the plan implementation stage is reflective of continuous data collection efforts and collaborative problem-solving (Pluymert, 2008; Rosenfield, 2008). Building upon previously established relationships, strong collaboration skills are needed for team members to engage in data collection using the most effective and efficient methods (Allison & Upah, 2008). For example, a teacher may need assistance with collecting classroom data (Kratochwill, 2008), so the problem-solving team works together to better

ensure that data is continuously collected as outlined by the intervention plan. During data collection efforts, teams also work together to identify any practical problems, such as concerns with treatment integrity (Burns et al., 2008). To assist with these processes, the team conducts a review of short-term and long-term goals. When data suggests a flaw in the design of the intervention plan, teams may then return to prior stages of the problem-solving process before transitioning into the evaluation stage (Kratochwill, 2008; Rosenfield, 2008). In contrast, when more successful outcomes are achieved, teams then move to the final problem-solving stage (Kratochwill, 2008).

Plan evaluation. The final stage, *plan evaluation* focuses on establishing a basis for interpreting intervention outcomes (Burns et al., 2008). As outlined by Kratochwill (2008), previously established outcome criteria are revised and are used to determine if significant change is present resulting in successful outcomes. Additional focus is given to the evaluation of goal attainment, plan effectiveness, and implementation practices. Through consultation, the final goals include evaluating the data and providing conclusions based on the outcome criteria previously established. In some cases, sufficient progress is not reached, and teams may be required to return to earlier stages of the process. However, in successful cases, the team then transitions to determining how the intervention can be phased out or behaviors can be generalized across settings. For example, with academic concerns a school psychologist and teacher may further develop post implementation plans to further ensure that academic progress is maintained. Consultations are also employed to identify alternative data collection methods (Kratochwill, 2008), and work towards termination (Rosenfield, 2008). When interventions are success team members may determine that work is not needed.

However, if the data indicates that a student is unable to benefit from intervention efforts in general education, a referral for special education also may be initiated which may result in a referral to another team process. Even with a special education referral, consultation with problem-solving team members and collaboration efforts often continue (Rosenfield, 2008).

Developing a CLD problem-solving model.

It can be argued that defining a CLD problem-solving model within the context of a school setting in the United States requires the consideration of strategies that guide service delivery provided by school psychologists as support staff members in schools. Attention is thereby warranted to understand and identify strategies that better reflect a CLD model as presented in the research and scholarly literature. The following section focuses on outlining CLD strategies as reflected in each problem-solving stage.

Establishing relationships within a CLD problem-solving model. The first stage of a CLD problem-solving model, *establishing relationships*, focuses on methods used to develop and maintain relationships with all stakeholders when working with CLD populations. Rogers and colleagues (1999) have established that school psychologists must have an awareness of the cultures represented by stakeholders. From a school psychologist's perspective, this includes the evaluation of one's own cultural values and biases as well as the expertise of CLD competencies among school psychologists (Jones, 2008; Miranda, 2008). Miranda (2008) suggests that one should engage in practices that further develop understanding of one's own culture since one's such self awareness has the potential to further impact one's understanding of other cultures. Thus, there is a call

to engage in self exploration that can further protect one from acting upon biases within one's professional practice (Jones, 2008; Miranda, 2008).

Building upon this, school psychologists are encouraged to develop knowledge of other cultures (Kratochwill, 2008). Methods to increase awareness and knowledge include reading literature, biographies, and research. School psychologists are also encouraged to engage in interaction with members of other cultures in order to gain a better understanding of the individual and group experiences. Lastly, it is suggested that one must apply that knowledge in order to further develop one's own understanding and competencies. Therefore, school psychologists are encouraged to put learned knowledge into practice.

School psychologists must expand their own CLD competencies. Methods for expanding those competencies (skills) include attending specialized trainings, reviewing the literature on the topic, and utilizing consultation with school psychologists that have a specialization in the area of CLD populations (Brown, 2008; Kratochwill, 2008). To assist with the generalization of such skills, one can help build CLD competencies among team members by assisting with the day to day operations of the team (Miranda, 2008). Tasks include communicating information to parents, assisting with scheduling team meetings, and/or providing follow-up. From a CLD perspective, this can be an important task in that selecting the most appropriate communication method, and may further build collaboration efforts between families and schools. A family without access to a telephone may best be kept informed through home visits. Other tasks include assisting with the solicitation of qualified interpreter to assist with team meetings (Braden & Joyce, 2008; Lopez, 2008; Rogers & Lopez, 2002). For example, reviewing the training

level of interpreters and assisting with selection of a qualified interpreter for a team meeting is an important role that school psychologists can fill. From another perspective, school psychologists can assist with the professional development of school staff. School psychologists can provide handouts that outline cultural norms, communication patterns, and cultural expectations for a particular CLD background. Other strategies include providing informational presentations during staff meetings and team meetings. The sharing of these skills can further generalize CLD competencies to team members. In turn, it can be argued that by expanding one's own CLD competencies and 'giving psychology away' can further help develop and maintain collaborative relationships within a school setting and build CLD competencies within teams (Burns et al., 2008; Miranda, 2008).

As previously stated, McGivern and colleagues (2008) also argued that attention must be given to the moderating factors that influence this stage. Examples provided include client factors such as active participation and self-efficacy, helper strategies such as communication strategies and self-disclosure, and interactive factors such as goal consensus and collaboration. It can be argued that attention to communication patterns greatly influence outcomes related to these factors (Miranda, 2008). This is especially important for identifying when different communication methods may more effectively guide the collaboration of teams and facilitate team member participation. For example, indirect communication (e.g., encouraging input from a listener) may be more useful when soliciting input from team members, whereas direct communication (e.g., authoritative language) may be more useful when delegating roles and responsibilities.

On a global level, it can be argued that attention to these differences can help ensure that all team members feel that their needs are acknowledged and heard as well as foster trusting relationships among team members (Burns et al., 2008). It can be also argued that utilizing the most appropriate communication patterns can increase the likelihood of team members participating during team members by increasing team member self-efficacy and further engaging in self-disclosure. Additionally, communication can contribute to outcomes related to reaching consensus during various stages of the problem-solving process (McGivern et al., 2008; Rogers et al., 1999). After a review of strategies outlined in the literature, CLD themes created for the *establishing relationships* stage are presented in Table 2.

Table 2

CLD Themes for Establishing Relationships

Awareness of cultural values and biases (<i>self and others</i>)
Awareness and expansion of one's own CLD competencies (<i>skills</i>)
Participation in routine tasks (<i>make phone calls, schedule meetings, etc.</i>)
Awareness and expansion of stakeholders' CLD competencies (<i>professional development of staff</i>)
Facilitate active participation of all stakeholders (<i>establish trust, solicit feedback, etc.</i>)

Problem identification within a CLD problem-solving model. The second stage of a CLD problem-solving model, *problem identification*, focuses on methods that are used to identify a target problem that impacts a CLD student's success at school (Kratochwill, 2008; Watson & Sterling-Turner, 2008). While assessment procedures can be used throughout the various stages of the CLD problem-solving process, particular attention must be given to the appropriate assessment practices used to identify a targeted problem when working with CLD populations (Pluymert, 2008). There are a disproportionate number of minority and CLD students identified for special education

programming (Xu & Drame, 2008). It is especially important for school psychologists to examine referrals within the context of institutional and systematic patterns associated with CLD populations. One way to do this is to seek out consultation from colleges with experience working with CLD populations in order to better understand CLD factors that contribute to referrals (Brown et al., 2008; Rogers et al., 1999). Attention should be given to understanding the relocation and migration processes of students and their social-emotional adjustment in regard to targeted problems (Brown, 2007). Other consideration should be given to the socioeconomic status of the family, physical and mental health of the student, and level of acculturation. The reported targeted problem also should be evaluated in regards to if a behavior is adaptive in reference to environmental settings (Brown, 2007). For example, a student with behavioral concerns may not be referred in a school that reports a high frequency of behavioral problems, whereas a school with less behavioral concerns may more readily attend to nonconforming behavior patterns of students (Burns et al., 2008; Pluymert, 2008; Rogers et al., 1999; Sawyer et al., 2006; Vanderwood & Nan, 2008). Thus, it is important to consider contextual factors impacting behavior and the impact of biculturalism.

When evaluating referrals, it is important to utilize appropriate assessment instruments that are sensitive to CLD differences (Lopez, 2008), especially when evaluating a student's difficulties in the context of learning difficulties or second language development (Lopez, 2008; Vanderwood & Nam, 2008). Attention should be given to the normative data associated with prescribed standardized instruments; if they are not representative, then alternative assessment techniques should be utilized. Researchers have also found that nontraditional assessment methods, such as dynamic

assessment and curriculum-based assessment, can be used to provide a more complete and valid evaluation of CLD concerns (Lidza & Macrineb, 2001; McCloskey & Athanasiou, 2000). Often assessment methods such as curriculum-based assessments may provide alternative evidence of communication patterns since they may best reflect culturally bound behavior rather than low verbal ability. After a review of strategies outlined in the literature, CLD themes created for the *problem identification* stage are presented in Table 3.

Table 3
CLD Themes for Problem Identification

Implementation of appropriate assessment practices
Consideration of institutional and systemic patterns
Consideration of relocation and migration experiences
Consideration of access/utilization of medical and mental health resources
Consideration of contextual factors impacting behavior
Consideration of biculturalism impact
Implementation of appropriate assessment instruments

Problem analysis within a CLD problem-solving model. The third stage of a CLD problem-solving model, *problem analysis*, focuses on methods used to analyze a targeted problem and to develop an appropriate intervention (Watson & Sterling-Turner, 2008). Initially, it is important to develop interventions that address the systemic factors associated with the educational success of CLD students (Rogers et al., 1999). For example, it is commonly acknowledged that intervention plans are more successful when they account for the strengths and weaknesses of the curriculum, instructional practices, and school programs (Brown, 2007). This requires CLD competencies related to the instructional components of learning (Hoover & Patton, 2005; Pluymert, 2008; Rogers et al., 1999). To do so, it may be helpful for teams to initiate a series of meetings to analyze the curriculum in the context of the targeted problem. Building upon this, it is helpful to

account for CLD characteristic by comparing the targeted behavior to that of a comparative group while also considering the impact of prior schooling experiences (Lopez, 2008; Vanderwood & Nam, 2008). For example, one may compare a second language learner to a class of second language learner students to determine the extent of language proficiency. In other cases, one may want to compare out of seat behavior for one student to the average number of times that the students in a class are out of their seats. Doing so is expected to assist teams with analyzing the magnitude of a targeted behavior in relation to a particular CLD population.

Moreover, skills in this stage require that school psychologists are familiar with the research on the topic of problem analysis in relation to CLD characteristics that can guide teams towards the integration of strategies to best meet the needs of CLD students (Brown, 2008; Kratochwill, 2008). It is important to know that factors that contribute to the establishing relationship stage are especially important to the collaborative efforts among team members in regard to problem analysis (Allison & Upah, 2008; McGivern et al., 2008). School psychologists may need to engage in consultation services with colleagues that work frequently with CLD populations that exhibit similar problems which helps ensure that a team analyzes other cultural sources of information in relation to the identified problem. Additional consultations can be used to further explore assessment procedures that assist with analyzing the impact of socio-cultural, environmental, political, experiential, and language-based factors that impact success of CLD students. Obtaining this information is expected to help teams more effectively develop and implement appropriate CLD interventions that accurately represent the needs of students (Allison & Upah, 2008; Brown, 2007; McGivern et al., 2008). After a review

of strategies outlined in the literature, CLD themes created for the *problem analysis* stage are presented in Table 4.

Table 4

CLD Themes for Problem Analysis

Analyses and identification of appropriate CLD intervention plans
Analyses of systemic factors impacting educational success of CLD students
Analyses of instructional components of learning and prior schooling experiences
Analyses of other cultural sources of information
Analyses of assessment procedures
Development and implementation of appropriate CLD interventions plans

Plan implementation within a CLD problem-solving model. The fourth stage of a CLD problem-solving model, *plan implementation*, focuses on the methods needed to develop and implement interventions for CLD populations (Brown, 2008). Parent participation is most critical to the development and implementation of an effective CLD intervention plan (Burns et al., 2008). It is argued that parent participation helps build student buy-in to a CLD intervention plan and further strengthen family-school collaboration efforts. To ensure active parent participation with CLD families, it is argued that a successful approach requires the establishment of trust and expressing value for the perspective and input of families. Family members can be assigned responsibilities and tasks such as collecting background information that includes information on cultural customs and prior successful culturally-based strategies used in the home and in previous educational settings (Hoover & Patton, 2005). In reference to the customs and beliefs of one's culture, parents can help lend insight to the success of previous culturally-based strategies. Strategies that include a behavior chart that utilizes rewards and consequences that are valued in the home setting and align with one's cultural beliefs may be more appropriate and have a higher success rate (Pluymert, 2008). This information can help

ensure the receptiveness of a student and further increase outcomes related to progress monitoring in the home setting. From another perspective, a planner strategy may be more successful when a family has limited contact with teachers but has high buy-in to the support of educational staff. This strategy can help establish a meaningful method of communication that aligns with the cultural routines of the family and requires the active participation of the student. Other general tasks related to parent participation can include attendance at problem-solving meetings, providing information on past and current academic functioning, assisting with intervention development and implementation, and participating in the final decision-making process. Overall, plans are more successful when parents are provided an opportunity to participate in a CLD problem-solving process (Burns et al., 2008).

It is also important for school psychologists and other team members to be knowledgeable about current research on successful CLD practices and attend to the impact of CLD factors as they relate to the school and home setting. Attention may be needed to address factors such as intolerance and/or racism within institutions. Other consideration should be given to the cultural customs that may not align with the school norms (Hoover & Patton, 2005; Sawyer et al., 2006). It can further be argued that implementing successful culturally-based strategies related to the plan implementation stage require a strong knowledge base, repertoire of skills, and experience with applications of such skills in order to most effectively meet the needs of students (Brown, 2008; Kratochwill, 2008; Rogers et al., 1999). In addition to family input, this includes being aware of the appropriateness of assessment and progress monitoring methods used in the home and school setting as reflected in the current research. After a review of

strategies outlined in the literature, CLD themes created for the *plan implementation* stage are presented in Table 5.

Table 5
CLD Themes for Plan Implementation

Assignment of parent tasks and responsibilities
Implementation of successful and culturally sensitive culturally-based strategies
Implementation of interventions that account for CLD factors
Implementation of appropriate assessment and progress monitoring methods

Plan evaluation within a CLD problem-solving model. The fifth stage of a CLD problem-solving model, *plan evaluation*, focuses on the methods used to evaluate intervention plans (Brown, 2008; Kratochwill, 2008; Pluymert, 2008). There are a number of factors that must be evaluated prior to reaching a conclusion related to problem-solving outcomes (Brown, 2008; Kratochwill, 2008; Pluymert, 2008). While many evaluation strategies are reflective of a general problem-solving process, it is important to evaluate all aspects of the process from a CLD perspective and within the context of targeted CLD populations. From a practical standpoint, it is important to evaluate the data in the context of the intervention plan design (Burns et al., 2008); meaning, attention is needed to assess whether a plan was appropriate. It may be important to consider if a plan was too weak to deal with the magnitude of a targeted behavior problem with consideration of CLD factors. Other consideration should be given to the tools selected for data collection purposes (Pluymert, 2008). Frequency measures using intervals of time may not be the most appropriate method and it may have been more beneficial to collect frequency measures on a continuous basis at first, and then transition into an internal method. The team may have failed to solicit input from

other teachers or CLD community members involved with a student (Adelman & Taylor, 2008). Further evaluation of CLD factors impacting behavior may be needed.

Initially it is important for teams to review information and data in the most comprehensive and clear way. Methods that can ensure a comprehensive understanding among team members include, but are not limited to, the use of graphs and/or translated reports (Rogers et al., 1999). Once teams are fully aware and understand the information and data, it is important to address the success of the plan in relation to adherence, quality, and responsiveness (Lopez, 2008; Pluymert, 2008). For adherence, team members are called to evaluate how well an intervention plan was delivered across settings in relation to how the plan was designed and outlined (Adelman & Taylor, 2008). A plan in which weekly planner checks were not conducted both at home and school may show little adherence to the implementation practices of such a plan. Similarly, a plan in which general observations were collected by a school staff member versus a structured observation conducted by a school psychologist may decrease the quality of service delivery when observations serve as a key data collection method (Pluymert, 2008).

Responsiveness of team members may best be evaluated using consultation feedback (Rogers et al., 1999). If a parent indicates that he or she did not believe in the quality of an intervention, conclusions of poor responsiveness may be made. Following, teams evaluate data in reference to plan goals and objectives to determine if positive outcomes were achieved. When positive outcomes are achieved, teams establish maintenance and/or generalizing strategies to help ensure the problem does not reoccur. Other times, a student is not responsive to a CLD intervention. It is also important to ensure that a comprehensive approach for information and data collection is utilized

when a comprehensive evaluation is needed (Adelman & Taylor, 2008; August et al., 2006; Burns et al., 2008; Kratochwill, 2008). Teams are encouraged to further review the assessment techniques utilized and reevaluate if alternative techniques are needed prior to a referral. Additional review of cultural factors should be conducted and alternative assessment techniques may be needed to further evaluate the targeted problem and provide additional information for the evaluation process (e.g., dynamic, developmental, and curriculum-based assessments) (Brown, 2007; Lidza & Macrineb, 2001; McCloskey & Athanasiou, 2000; Watson & Sterling-Turner, 2008; Ortiz et al., 2008). After a review of strategies outlined in the literature, CLD themes created for the *plan evaluation* stage are presented in Table 6.

Table 6
CLD Themes for Plan Evaluation

Implementation of methods to ensure a comprehensive understanding of outcomes
Evaluation of plan appropriateness (<i>adherence, quality, responsiveness</i>)
Evaluation of plan success as related to goals, objectives, and targeted outcomes
Return to earlier CLD problem-solving stage(s) (<i>if needed</i>)
Establishment of plan maintenance and/or generalizing strategies

Final review of CLD problem-solving stages. As a review, the five stages of a CLD problem-solving model are provided below in Table 7.

Table 7

Five Domains of a Culturally and Linguistically Diverse Problem-Solving Model

Establishing Relationship: Identified as the first stage of a CLD problem-solving model. Focuses on methods used to develop and maintain relationships as CLD stakeholders.

Problem Identification: Identified as the second stage of a CLD problem-solving model. Focuses on methods used to identify a targeted problem that impacts student success. Specific attention is given to assessment procedures used to identify a targeted problem with CLD populations.

Problem Analysis: Identified as the third stage of a CLD problem-solving model. Focuses on methods used to analyze targeted problems and then select and/or develop appropriate interventions for CLD populations.

Plan Implementation: Identified as the fourth stage of a CLD problem-solving model. Focuses on methods used to implement interventions for CLD populations.

Plan Evaluation: Identified as the fifth stage of a CLD problem-solving model. Focuses on methods used to evaluate intervention plans and implementation practices when working with CLD populations.

Predictors of implementation practices.

The roles and functions of school psychologists are always evolving (Christ, 2008; Fowler & Harrison, 2001; Wnek, Klien, & Bracken, 2008). This may best be reflected by the notation that school psychologists' training has a half-life of approximately 5 to 10 years (Fowler & Harrison, 2001). Meaning, the training received today may not apply to the needs of schools and students five years from now. In an effort to better develop more effective and appropriate professional development experiences, researchers have demonstrated that the perceived value and skill level of school psychologists can predict the implementation practices of school psychologists

(Chafouleas et al., 2003; Fowler & Harrison, 2001; Sawyer et al., 2006; Stoiber, & Vanderwood, 2008). Thus, this section will focus on further exploring the extent to which perceived value and skill level impact the daily practices of school psychologists.

Defining perceived value. To begin, it is important to provide some understanding of perceived value. Perceived value has been defined as some level of importance (Cleary, 2009). Value has been linked to motivation and behavior; meaning, one is more likely to do something when the action is valued (Kim & Omizo, 2003; Roeser, Eccles, & Sameroff, 1998; Wigfield & Eccles, 1994). Value extends to that of moral nature as related to the respect for human dignity and justice (Fagermoen, 1997); meaning, there is value is doing what is right for a student. There is also work value that applies to the satisfaction one gets from the action of helping or doing. Fagermoen (1997) argued that both moral and work values strongly guide professional practices. Other researchers have shown that values also predict work satisfaction (Kim & Omizo, 2003; Wigfield & Eccles, 1994). Based on the research, value is closely related to the desire to further learn about a specific competency area relevant to practice. In turn, it is argued that value in one's professional identity extends to one's professional practices.

Defining perceived skills (competency). Connerley and Pedersen (2005) present a three-stage developmental sequence that serves as a foundation for developing skills specifically related to CLD competencies. The first stage, awareness, pertains to gaining an awareness of one's own culture. It is argued that one cannot fully gain knowledge of culture without prior exploration of one's own cultural self-awareness. This relates to the self-exploration and self-evaluation of one's own culture presented by Miranda (2008). Moreover, this stage is characterized by the need to also become aware of cultural

differences and similarities across populations (Connerley & Pedersen, 2005). Connerley and Pederson (2005) argue that knowledge is essential to further develop CLD competencies. The second stage, knowledge, pertains to the accumulation of information that leads to a better understanding of the cultural assumptions related to different cultures. Lastly, the third stage, skills, is characterized by the ability to utilize facts and information gained in the knowledge stage and those skills in daily practice. The basic assumptions of this model hinge on the acceptance that the stages are continuous and evolving. Similar to the purposes of professional development, this development model mirrors the ever changing need to build CLD competencies (Connerley & Pedersen, 2005). It is concluded that skill level is best defined by the levels of one's awareness, knowledge, and skill level in relation to CLD competency areas.

Evidence that perceived value and skill can impact practice. In an effort to evaluate the relationship between these factors, Chafouleas and colleagues (2003) conducted a study in which they evaluated the acceptability of three assessment procedures as a method to improve reading: brief experimental analyses, normed referenced assessments, and curriculum-based assessments. The sample consisted of 188 school psychologists (65% female and 35% male) who were members of the National Association of School Psychologists (NASP). More than two-thirds of the sample reported four or more years of experience as a school psychologist. The aim was to identify how new procedures can gain acceptance, and in turn, be implemented as useful methods of assessment. Participants were randomly assigned to one of the three conditions (methods) and were assigned to read an assessment packet. Ratings for degree of training and use in relation to techniques were collected. Decisions to employ a

method strongly correlated with level of training. Approximately 70% of participants reported little to no training in new experimental and analyses methods which aligned with approximately 78% reporting that they did not use the method. It was concluded that those with strong training in an assessment procedure were more likely to implement those practices.

Similarly, Stoiber and Vanderwood (2008) evaluated the extent of use, value, and competency as related to the day to day practices of school psychologists. The sample consisted of 115 school psychologists (70% female and 30% male) from an urban school district. Approximately 57% reported 6 or more years of experience working as a school psychologist. Participants were asked to rate their beliefs in relation to current use, importance of practice, and level of competence. They also ranked their priorities for professional development. As expected, consultation yielded one of the highest mean ratings for use, importance, and competency providing evidence that these skills serve as a foundation to most day to day practices specifically related to the establishing relationships stage of a problem-solving model. School psychologists in the study reported higher ratings for assessment procedures, such as intellectual assessments and clinical-personality assessments, which align well with the problem analysis stage of the problem-solving process. Given the higher level of skill development for plan development and plan intervention, it is not surprising that school psychologists reported lower ratings for tasks related to intervention work. For these tasks, mean ratings ranged from 'somewhat common' to 'pretty common'. Examples included classroom-based interventions, therapeutic interventions, and primary/secondary prevention. Lastly, skills that aligned most with the evaluation stage, such as program planning/evaluation and

monitoring of programs were rated the lowest for use and also were noted for lower importance and competency. When evaluating the need for further developing areas with low skill level, those practice with lower mean ratings for competency were more frequently reported as priorities for professional development. Overall, it was concluded that practices are strongly related to the value of such methods and perceived competency level, or skill level, of the school psychologist. Moreover, school psychologists are calling for additional training in less developed skill areas.

Lastly, a study conducted by Fowler and Harrison (2001) provided additional support for these conclusions. The researchers surveyed 235 school psychologists (75.3% female and 24.7% male) working in schools. More than half of the sample reported 6 to 21 years of experience. Participants were administered a newly developed continuing professional development (CPD) survey to gain insight into perceptions about current professional development needs that included 40 items defined as components of a comprehensive psychological service delivery model. School psychologists reported a higher need for more specialized services related to intervention-based services, whereas there was a lower reported needed for assessment skills for evaluation purposes, which align with most program training requirements. School psychologists also reported they were more likely to implement practices in which they perceived they possessed a high skill level for. Moreover, there were significant group differences for perceived value, suggesting that professional development needs are related to the value of particular skills. Interestingly, as outlined by both of these studies, skills that align with a high reported competency level align well with those required for a diagnostic model, whereas these perceived areas of need, such as intervention support, are more related to a

problem-solving approach. In light of the changing needs of the profession, this further suggests that skills in later stages of the problem-solving process may require more intensive, future professional development.

As reflected in the outcomes of these studies, there is clear evidence that perceived value and skill level can predict the reported frequency of new practices. Aligning with the model of skill development as presented by Connerley and Pedersen (2005), a developmental process may underlie the development of new CLD competencies and practices. Within that model, skills may develop in a step-wise process fashion and this developmental process may be reflected by the stages presented in the new CLD problem-solving model proposed here. However, no evidence was found to specifically support this conclusion. Thus, it is argued that more research is needed to further evaluate these relationships in order to provide practical recommendations for the future training opportunities for school psychologist.

Personal characteristics that can impact implementation practices.

Many researchers have attempted to identify if personal characteristics impact the frequency of implementation practices, but have provided little to no evidence of this assumption (Chafouleas et al., 2003; Fowler & Harrison, 2001; Sawyer et al., 2006; Stoiber, & Vanderwood, 2008). Despite this lack of evidence, accounting for personal characteristics, such as ethnicity, years experience as a school psychologist, and prior experiencing working with CLD populations is essential to ensuring that professional training is well received and incorporated into daily practices (Brown, 2008).

Ethnicity as a predictor. For the purposes of this study, ethnicity has been defined as the group membership of an individual that reflects a shared social and cultural

background based on a common history (Betancourt & Lopez, 1993; Lin & Kelsey, 2000; Oppenheimer, 2001; Ortiz et al., 2008). As social and cultural traditions are more related to the unique experiences of an individual, it is argued that ethnicity may be a potential predictor of implementation practices for CLD strategies. One reason is that skill development is a sequential process that accounts for the relationship between exposure and experience. It is argued that individuals who identify with an ethnic group other than the mainstream culture have more exposure and experience interacting and working with various ethnic or CLD populations (Roberts, Borden, Christiansen, & Lopez, 2005; Wille, McFarland, & Archwamety, 2009). In turn, it is argued that they would be more likely to implement strategies that align with the cultural needs of CLD populations (Wille et al., 2009).

Years of experience as a predictor. One can argue that the number of years of experience working as a school psychologist may also serve as a predictor of implementation practices. Since the beginning of school psychology, the field has undergone much change (Fagan, 2008). Training programs and professional development services have been developed and implemented in an effort to continuously address those changing needs with training improvements. It would be assumed that school psychologists with more training will have developed stronger competencies related to daily practices (Curtis, Hunley, & Grier, 2002). In turn, it can be argued that those with more experience have been exposed to more change and professional development opportunities. However, again, there is little research to support the notion that years of experience predict implementation practices (Chafouleas et al., 2003; Fowler & Harrison, 2001; Sawyer et al., 2006; Stoiber, & Vanderwood, 2008).

Experience working with CLD populations as a predictor. Brown (2008) argues that providing a climate of respect for prior general and personal experience during training sessions is important to facilitate cooperation and participation. The idea behind this assumption is that by respecting prior experiences, participants are more likely to feel valued and to participate more fully in professional development opportunities. It is also argued that the sharing of prior experiences can provide a meaningful context for learning new material and also increase one's motivation to learn and further develop skills. Building upon this, the sharing of prior experiences by school psychologists who have experience working with CLD populations as well as personal experiences related to their own ethnicity can be extremely valuable to targeted CLD training (Connerley & Pedersen, 2005). One idea for this is that school psychologists from CLD backgrounds are able to relate more easily to students from similar CLD backgrounds based on their shared experiences.

Despite limited prior work, it is important to evaluate such personal characteristics in relation to perceived value, skill level, and frequency of implementation of CLD practices in order to gain a better understanding of how to facilitate such practices in the future. Since such personal characteristics have not been evaluated in terms of working within a CLD problem-solving model, more research is needed to evaluate the potential impact on reported value and use of CLD problem-solving strategies.

Review of research questions.

As a review, the research questions to be addressed in the present study include:

1. *Research Question 1. Using an exploratory factor analysis, do the CLD strategies outlined in the literature align with the five stages of a CLD problem-solving model based on reported skill ratings?*
2. *Research Question 2: Do perceived value and perceived skills (competencies) predict frequency of implementation of self-reported CLD practices?*
3. *Research Question 3: Do ethnicity, experience working with CLD populations, and overall experience as a school psychologist predict the frequency of implementation of self-reported CLD strategies?*

Chapter Three: Methods and Results

Survey Development

The first purpose of this study was to identify what CLD problem-solving practices of school psychologists as reflected in the research and literature. Once such practices were identified, a pilot survey was developed to validate these practices. The following section outlines the initial development of the survey method, validation of the survey in a pilot survey, and the results associated with developing the survey for the main study.

Development of pilot survey content. As previously stated, there is a growing population of culturally and linguistically diverse (CLD) students in our school systems (Rogers & Lopez, 2002). It is argued that school psychologists need to reexamine and modify their service-delivery methods to better meet the needs of CLD families and students (Guerrero & Leung, 2008). To begin, an initial review of past and present standards set forth by the profession was conducted to identify guidelines pertinent to CLD competencies. Next, a review of the literature was conducted to identify examples of CLD strategies exhibited by school psychologists in professional practice. Given the recent paradigm shift from a diagnostic model to a problem-solving approach, this study focused on CLD strategies that are pertinent to a problem-solving model.

Attention was given to the problem-solving model outlined in *School Psychology: A Blueprint for Training and Practice III* (NASP, 2006), which identifies five stages of a problem-solving model: (1) Establishing Relationship; (2) Problem Identification; (3) Problem Analysis; (4) Plan Implementation; and (5) Plan Evaluation. Based on a thorough review of the literature key themes for each stage was derived and are presented in Table 8.

Table 8
CLD Themes for the CLD Problem-Solving Stages

CLD Problem-Solving Stages	CLD Themes
Establishing Relationships	<p>Awareness of cultural values and biases (<i>self and others</i>)</p> <p>Awareness and expansion of one's own CLD competencies (<i>skills</i>)</p> <p>Participation in routine tasks (<i>make phone calls, schedule meetings, etc.</i>)</p> <p>Awareness and expansion of stakeholders' CLD competencies (<i>professional development of staff</i>)</p> <p>Facilitate active participation of all stakeholders (<i>establish trust, solicit feedback, etc.</i>)</p>
Problem Identification	<p>Implementation of appropriate assessment practices</p> <p>Consideration of institutional and systemic patterns</p> <p>Consideration of relocation and migration experiences</p> <p>Consideration of access/utilization of medical and mental health resources</p> <p>Consideration of contextual factors impacting behavior</p> <p>Consideration of biculturalism impact</p> <p>Implementation of appropriate assessment instruments</p>
Problem Analysis	<p>Analyses and identification of appropriate CLD intervention plans</p> <p>Analyses of systemic factors impacting educational success of CLD students</p> <p>Analyses of instructional components of learning and prior schooling experiences</p> <p>Analyses of other cultural sources of information</p> <p>Analyses of assessment procedures</p> <p>Development and implementation of appropriate CLD interventions plans</p>

Plan	Assignment of parent tasks and responsibilities
Implementation	Implementation of successful and culturally sensitive culturally-based strategies Implementation of interventions that account for CLD factors Implementation of appropriate assessment and progress monitoring methods
Plan Evaluation	Implementation of methods to ensure a comprehensive understanding of outcomes Evaluation of plan appropriateness (<i>adherence, quality, responsiveness</i>) Evaluation of plan success as related to goals, objectives, and targeted outcomes Return to earlier CLD problem-solving stage(s) (<i>if needed</i>) Establishment of plan maintenance and/or generalizing strategies

Five key themes were identified for the first stage, *establishing relationships*, which focuses on methods used to develop and maintain relationships with all stakeholders when working with CLD populations (Brown, 2008; Braden & Joyce, 2008; Burns et al., 2008; Kratochwill, 2008; Jones, 2008; Lopez, 2008; McGivern et al., 2008; Miranda, 2008; Rogers & Lopez, 2002; Rogers et al., 1999). Seven key themes were identified for the second stage of a CLD problem-solving model, *problem identification*, which focuses on methods that are used to identify a target problem that impacts a CLD student's success at school (Brown, 2007; Brown et al., 2008; Kratochwill, 2008; Lidza & Macrineb, 2001; McCloskey & Athanasiou, 2000; Pluymert, 2008; Rogers et al., 1999; Sawyer et al., 2006; Vanderwood & Nan, 2008; Watson & Sterling-Turner, 2008; Xu & Drame, 2008). Six key themes were identified for the third stage, *problem analysis*, which focuses on methods used to analyze a targeted problem, and then select or develop an appropriate intervention (Allison & Upah, 2008; Brown, 2007; Brown, 2008; Hoover & Patton, 2005; Kratochwill, 2008; Lopez, 2008; McGivern et al., 2008; Pluymert, 2008; Rogers et al., 1999; Vanderwood & Nam, 2008; Watson & Sterling-Turner, 2008). Four

key themes were identified for the fourth stage, *plan implementation*, which focuses on the methods used to develop and implement interventions for CLD populations (Brown, 2008; Burns et al., 2008; Hoover & Patton, 2005; Pluymert, 2008; Rogers et al., 1999; Sawyer et al., 2006), five key themes were identified. Lastly, five key themes were identified for the fifth stage, *plan evaluation*, which focuses on the methods used to evaluate intervention plans and identifying and implementing alternative approaches for service delivery (Adelman & Taylor, 2008; August et al., 2006; Brown, 2007; Brown, 2008; Burns et al., 2008; Kratochwill, 2008; Lidza & Macrineb, 2001; Lopez, 2008; McCloskey & Athanasiou, 2000; Ortiz et al., 2008; Pluymert, 2008; Rogers et al., 1999; Watson & Sterling-Turner, 2008).

The key CLD themes for each stage were used as a guide for item development. A minimum of one survey item was developed for each key theme across the five problem-solving stages. Rogers and colleagues (1999) summarized the knowledge base for psychological services provided by school psychologists and provided practical illustrations to expand the understanding of application for practices. The summary reflected work conducted with racially, ethnically, culturally, and linguistically diverse individuals and groups. Referencing this format, each item on the pilot survey was elaborated with an example illustration. Examples illustrations found in the literature and professional experience with self and others were used to guide the development of illustrations. The final pilot survey consisted of 27-items and illustrations. See Table 9 for a list of all pilot survey items and example item illustrations.

Table 9
 Survey Items and Illustrations by CLD Problem-Solving Domain

Survey Item and Illustration	CLD Problem-Solving Domain
<i>Account for one's own cultural values and biases when working with CLD populations.</i> For example, be aware and knowledgeable of one's own identity groups and how this impacts our values, our worldview, and views of others when working with CLD populations.	Establishing Relationships
<i>Acknowledge one's limits in CLD competencies (expertise).</i> For example, acknowledge a lack of experience working with special populations, such as students/families of Haitian decent, and seek consultation from colleagues who have more experience working with such populations.	Establishing Relationships
<i>Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.</i> For example, identifying the most appropriate way to communicate with stakeholders from CLD backgrounds, such as email, telephone calls, written communication, and/or home and community visits in their native language when possible.	Establishing Relationships
<i>Demonstrate culturally sensitive verbal and nonverbal communication skills.</i> For example, monitor, understand, and interpret direct and indirect communication of CLD populations.	Establishing Relationships
<i>Inform school staff members of CLD factors that can affect decision-making process.</i> For example, provide staff members with handouts on communication patterns (e.g., second language acquisition patterns) and cultural norms associated with a particular CLD population.	Establishing Relationships
<i>Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter.</i> For example, review the training level of interpreters, assist with selection of a qualified interpreter for a team meeting, and take part in the briefing and debriefing process with the interpreter.	Establishing Relationships
<i>Examine referrals within the context of institutional and systemic patterns associated with CLD populations.</i> For example, identify factors that may contribute to the misidentification of problematic behaviors exhibited by different CLD populations.	Problem Identification
<i>Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations.</i> For example, consider how malnutrition associated with low SES populations can impact a student's mood and energy level in relationship to a targeted concern.	Problem Identification
<i>Understand the limitations and pitfalls associated with the prescribed</i>	Problem Identification

use of standardized instruments that have not been normed or validated with CLD populations. For example, implement alternative assessment methods (e.g., dynamic, ecological) and consider the implications of diagnostic results that provide information about language proficiency.

Assess a CLD student's biculturalism to identify a targeted concern. For example, exhibit caution when interpreting a CLD student's infrequent or brief responses as it may be evidence of a low verbal or limited English proficiency level.

Problem Identification

When identifying a targeted behavior, consider the situations and domains in which a behavior is manifested. For example, observe a target behavior, such as language, across multiple settings and obtain input from family and cultural consultants on how to interpret the behavior according to a student's own cultural/linguistic background.

Problem Identification

Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior. For example, consider a CLD student's adjustment experiences in the native country and experiences occurred during the flight period and early resettlement stages.

Problem Identification

Seek out consultation experiences to identify an appropriate intervention plan for CLD populations. For example, consult with an expert that works frequently with CLD populations to gain information on effective intervention plans for CLD populations.

Problem Analysis

Consider cultural sources of information that relate to culture specific confirming data. For example, analyze a behavior by using a CLD comparative comparison group.

Problem Analysis

Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students. For example, analyze information about the impact of socio-cultural, environmental, political, experiential, and language-based factors related to CLD students' prior performance and future success.

Problem Analysis

Develop interventions that reflect an appropriate tier level of support for CLD populations. For example, develop a targeted intervention that meets a CLD student's needs when in Tier 2 of the CLD decision-making process and determine if a student's placement at a more intense level of intervention is a result of CLD factors.

Problem Analysis

Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern. For example, consider the impact of instruction of language, consistency of schooling, and type of curriculum previously implemented in other school settings.

Problem Analysis

Implement interventions that take into account CLD factors. For

Plan Implementation

example, use an intervention that accounts for tolerance and/or racism within a school that a CLD student attends.

Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student. For example, assign a CLD family member an active role in collecting progress monitoring data within the home setting. Plan Implementation

Implement culturally sensitive approaches that are acceptable to CLD populations. For example, implement an intervention plan that incorporates cultural customs when they align with a student's level of acculturation and current practices. Plan Implementation

Implement culturally sensitive approaches and strategies that meet the needs of CLD populations. For example, implement intervention plans that have demonstrated success in the professional literature for CLD populations. Plan Implementation

Implement nontraditional methods to collect data that best address a CLD student's needs. For example, conduct home visits to gather progress-monitoring data, maintain consultation efforts with CLD families, and collect community members' perspectives on progress. Plan Implementation

Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process. For example, use translated forms in order to provide Spanish speaking parents an opportunity to collect data at home. Plan Implementation

Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results. For example, use graphs and/or translated reports using stakeholders' native language to ensure a clear evaluation and understanding for all team members and CLD families. Plan Evaluation

Evaluate the impact of cultural factors on the delivery of interventions. For example, identify to what degree the intervention plan was delivered across settings as outlined and designed. Plan Evaluation

Evaluate the acceptability of CLD stakeholders. For example, evaluate consultation data in order to determine the level of responsiveness and satisfaction of all CLD stakeholders involved in the process. Plan Evaluation

Use CLD strategies that can assist with maintenance and/or generalization of the intervention. For example, help team members establish follow-up consultations with CLD parents and community member to establish continuous evaluation efforts for future evaluation purposes. Consider barriers for parents related to poverty, language, and other CLD factors to assist with follow-up plans and support accordingly. Plan Evaluation

Validation of pilot survey content. Survey pretesting has been a method to evaluate the validation of survey content (Presser, Couper, Lessler, Martin, Martin, Rothgeb et al., 2004). Pretesting ensures that potential problems related to survey questions and items are identified and corrected to avoid issues that may impact the reliability of results (Presser et al., 2004; Reynolds & Diamantopoulos, 1998). Presser and colleagues (2004) pointed out that the most frequently used method is conventional pretesting which involves interviewing a small sample and obtaining feedback during a debriefing stage. It is thought that a small number of interviews are sufficient for identifying problems with questions and items, but little evidence supports this notion. Cognitive interviews can also be used, but can be time consuming and less cost effective. Behavior coding is used to evaluate respondents' behavior and responses (Presser et al., 2004; Presser & Blair, 1994), but also can be less cost effective and responses can be affected by social desirability bias (Reynolds & Diamantopoulos, 1998).

An alternative form of pretesting is expert panels which involve sampling a small number of professionals that meet established criteria for expertise and asking them to review a survey and qualitatively provide feedback. Participation is often voluntary and requires no incentives (Presser & Blair, 1994). Expert panels have been identified as the most cost effective and productive methods for validating survey content compared to conventional pretests, cognitive interviews, and behavior coding (Presser & Blair, 2004). This is because expert panelists are able to provide more information related to the cause of a problem and potential solutions for improvements. More specifically, it has been argued that expert panelists are more knowledgeable about a targeted topic and can

consider items in a broader context (Reynolds & Diamantopoulos, 1998), which can better guide survey improvements.

Pilot survey procedure with expert panel. An expert panel was selected to assist with the validation of each survey item. All expert panelists were licensed as school psychologists, working as school psychologists for more than 10-years, and had a minimum of 10 years experience working with children from CLD populations. Participation was solicited via personalized email communication and a total of four expert panel members that met the inclusion criteria agreed to provide feedback on the initial survey content. All four expert panel members were emailed a review document consisting of all items and illustrations and were requested to complete and return the document via email. While panel members were provided the option to request a hard copy of the review document, all declined. Panel members were not aware of each other's participation; thus, each panel member completed the review form independently. For each survey item, panel members were asked four questions as outlined in Table 10. A copy of the instructions for each expert panel member can be found in Appendix B-1; a copy of all items and example illustrations may be found in Appendix B-2.

Question one was designed to get panelists to gauge how well an item fit into a respective problem-solving stage. Feedback from questions was intended to get panelists to provide their impressions of whether or not items and illustrations reflected best CLD practices in the profession. Question three was designed to gather qualitative information rather than a yes or no response to questions one and two and to get specific ideas about more appropriate terminology if an item or illustration was not reflective of best

practices. Panel members were asked to provide feedback related to item redundancy and semantic issues.

Table 10
Questions for Each Survey Item

-
1. Does this question best fit in this stage of the CLD problem-solving process? If not, which stage does it best reflect?
 2. Does this question reflect a CLD characteristic of a CLD problem-solving process?
 3. If possible, would you provide an example that may be better than the one provided?
 4. Comments and feedback
-

Pilot survey results from expert panel. Three of the four expert panel members returned the draft version of the survey. Results associated with each question are presented first, followed by a general description of how the results led to good revisions for the final survey version. A list of items reviewed by the expert panel and final revisions made for the pilot survey items is listed in Appendix C.

Question 1. The first question asked, “Does this question and example best fit in this stage of the CLD problem-solving process? If not, which stage does it better reflect?” The criterion to determine if a question should be moved to another stage was based on recommendations of two or more experts ($n \geq 2$). Using the established criterion, feedback indicated that all items were appropriately placed in the establishing relationships, problem identification, plan implementation, and plan evaluation stages. For the problem analysis stage one item was moved to the problem identification stage and one item was moved to the plan implementation stage.

Question 2. The second question asked, “Does this question and example reflect a CLD characteristic of a CLD problem-solving process?” Feedback for this question was intended to elicit a ‘yes’ or ‘no’ response. However, feedback also yielded feedback that best aligned with Questions 3 and 4. Meaning, experts often provided general comments

and/or examples that aligned with a respective item. Overall, only one item was identified as not reflecting a CLD characteristic of a CLD problem-solving process as indicated by a 'no' response. The example was reworded to reflect feedback from Question 4. When general comments and/or examples were provided, the researcher reviewed the feedback and reworded examples to better reflect the recommendations when needed. Additional feedback from the advisor was also considered for rewording of questions.

Question 3. The third question asked, "If possible, would you provide an example that may be better than the one provided?" Overall, the experts provided a total of 22 examples across the CLD problem-solving stages. In most cases, examples reflected modifications to the example provided. For example, "For example, assisting with scheduling team meetings, telephone conferences, and/or written communication" was recommended to be changed to "Assisting with scheduling team meetings, telephone conferences, etc., while informing parents of the steps taken and reasons why." The final phrasing of the example was as follows: "Assisting with scheduling team meetings, telephone conferences, and/or written communication with students, families, and community members and providing information on the steps of the problem-solving process." In other cases, additional examples were provided. These examples were reviewed and changed on a case by case basis using the clinical judgment of the researcher and feedback from the advisor.

Question 4. The fourth question asked, "Please provide any other items and/or examples for this particular problem-solving stage." Similar to the feedback gained for Question 3, much feedback was reflective of suggestions for modifications and rewording. Examples of rewording included "add handouts on second language

acquisition” and “or community member parents consider a stakeholder.” Again, feedback was reviewed by the researcher and examples were changed on a case by case basis.

Question 5. The review document also provided the option to provide general feedback and comments at the end of the document. Only one expert provided comments. Feedback included a recommendation to add an additional question under the establishing relationships stage related to understanding of the meeting process from the perception of mainstream culture and CLD populations. Based on a comparison of other items that stage as well as consideration for scale purpose and length, it was concluded that this item was not needed. An additional recommendation was made in reference to the ability to address the impact of individual qualities of CLD group on the CLD problem-solving process. It was determined that while this is an important question, the recommendation reflected a global question that was best reflected by the specific scale items on the survey. Lastly, there was one recommendation for an item that evaluated the impact of cultural differences within a supervisee-supervisor relationship. While this is an important question, it was determined that it did not align with the purposes of this project which focuses more on implementation practices of school psychologists when working with CLD populations.

Summary of validation for pilot survey content with expert panel. A revised item pool was created using the feedback from the expert panel. Additional feedback and recommendations from the dissertation committee and researcher’s advisor were taken into account. It was concluded that the content was validated through the revisions and

modifications to survey items and illustrations. The final pilot survey consisted of 27-items.

In-state procedural pilot study

The first purpose of this study was to better identify what a CLD problem-solving model looks like in the day to day practices of school psychologists. An in-state procedural study was conducted to validate the utility of the survey prior to dissemination for the primary dissertation study. To describe the sample eight demographic questions were added and are listed in Appendix D. Questions asked about participants' gender, age, degree status, school district setting, and employment status. To further address the third research questions, participants were also asked to indicate their ethnicity, estimate how many years they had been practicing as a school psychologist, and estimate the percent of time they spend servicing students and families from CLD populations. Survey items for value, skill, and frequency were evaluated for reliability and descriptive statistics were used look at mean ratings.

Participants for in-state procedural pilot study. The population for the in-state procedural pilot study was practicing school psychologists identified as members of the Colorado Society of School Psychologists (CSSP). Permission to conduct a pilot study was requested from the President of the CSSP in July of 2009 and approval was obtained in the form of a letter of collaboration between the researcher and association outlining the following stipulations: (1) an email including a brief paragraph announcing the study with a link the survey will be provided; (2) all data will be collected and maintained by the researcher; and (3) a summary article of the study will be provided for the association newsletter. The letter was submitted, reviewed, and approved by the University of

Denver Institutional Review Board for the Protection of Human Subjects in August of 2009.

The President of the Colorado Society of School Psychologists (CSSP) sent out the survey email to all members of the association (N = 478) in August of 2009. As indicated on the survey, participation was restricted to practicing school psychologists that were members of CSSP and met district guidelines for employment. Participation was anonymous. Completion of the survey took approximately 10-minutes. The survey email (Appendix E) included a link to the online survey that included the project information sheet (Appendix F). An initial email soliciting participation was sent out on August 13, 2009. Due to a poor response rate, a follow-up email was requested and sent out on September 1, 2009. Data collection ceased at the end of September, 2009. Missing data was not a concern as only 100% completed surveys were analyzed.

A total of 41 participants responded (9% response rate), with only 30 responding to all questions (Male = 6, Female = 24). More than 75% of the population identified as European-American/Caucasian. The majority of the sample was 40-59 years of age and approximately 57% held a specialist degree (SSP/EdS/MS+30). Over 90% of participants worked in a suburban or urban district. Most of the respondents indicated that they practice full-time. When asked about the utility of example illustrations paired with survey items, 93.3% reported yes. A full review of demographics is presented in Table 11.

Table 11
Demographics for In-State Procedural Pilot Study

Demographic Item	Frequency	n
Ethnicity		
European-American/Caucasian	90.0%	27
African-American/Blacks	3.3%	1
Hispanic/Latino	3.3%	1
Asian American	3.3%	1
Native American	0.0%	0
Pacific Islander	0.0%	0
Age		
20-29 years	13.3%	4
30-39 years	23.3%	7
40-49 years	26.7%	8
50-59 years	26.7%	8
60-69 years	10.0%	3
Degree		
Master's	13.3%	4
Specialist	56.7%	17
Doctorate	30.0%	9
School District Setting		
Suburban	46.7%	14
Urban	46.7%	14
Rural	6.7%	2
Employment		
Full-time	80.0%	24
Part-time	20.0%	6

Participants were also asked to report the number of years they have practiced as a school psychologist. Findings indicated that more than a third of the sample was early career professionals with less than 6-years of experience (see Figure 1). As seen in Figure 2, more than two-thirds of participants reported that they spend 40% or more of their time servicing these populations.

Figure 1. Number of Years Practicing as a School Psychologist by the Number of Responses.

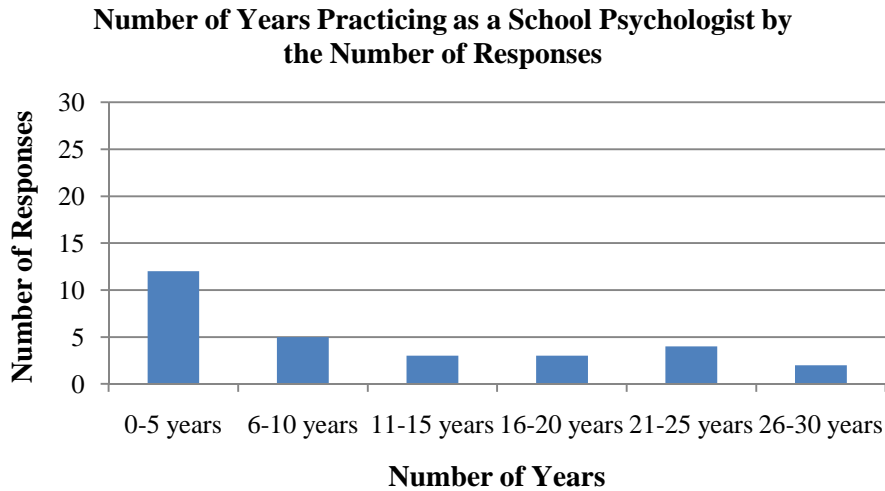
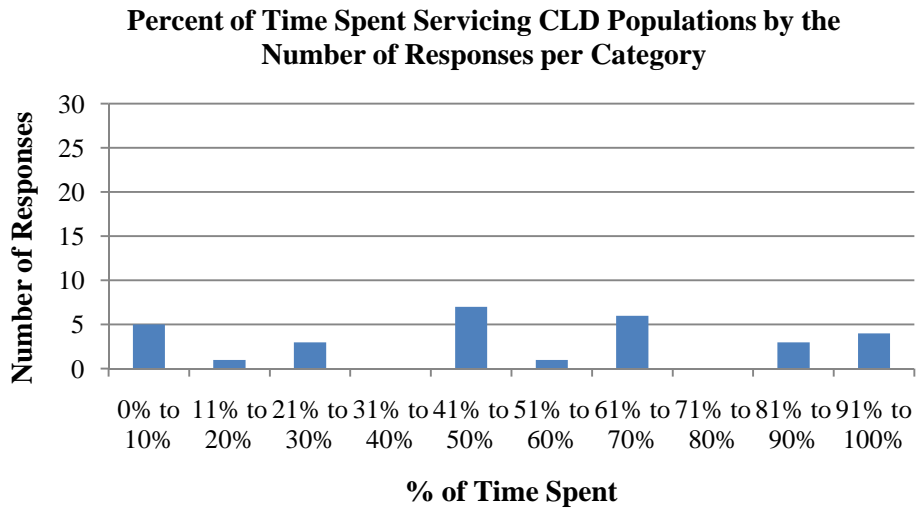


Figure 2. Percent of Time Spent Servicing CLD Populations by Number of Responses per Category



Procedure for in-state procedural pilot study. Kaplowitz, Hardlock, and Levine (2004) report that electronic surveys are becoming more frequently used as methods for data collection. Advantages over pencil and paper surveys include cost savings associated with printing and mailing fees, while time savings are associated with being able to gain more immediate responses. It is also argued that there is a time savings associated with data entry as data are more easily transferred into statistical software. Some argue that

electronic surveys result in a greater response rate (Kiernan, Kiernan, Oyler, & Gilles, 2005), while others disagree (Shih, & Fan, 2008). Fan and Yan (2010) point out three factors that similarly effect response rates for web and mail surveys. Higher response rates are achieved when a survey is sponsored by an academic or governmental agency and participants are more likely to respond to surveys that are of high interest and require less time to complete. In comparison, several factors impact response rates and include the presentation of a web survey (e.g., too long, poorly worded lack of visual appeal). Additional challenges include contact delivery modes, especially when participants have limited Internet access or coverage. Gruwell and Littleton (2010) suggest personalizing announcements, including a detailed cover letter, sending reminder emails, and following up with a phone call to improve response rates. Overall, researchers acknowledges that there are differences in response rates when comparing mail and electronic surveys, with some finding those differences as nonsignificant (Deutskens, Ruyter, & Wetzels, 2006; Fleming & Bowden, 2009; Kaplowitz, Hardlock, & Levine, 2004; Kiernan et al., 2005).

Data were collected using Survey Monkey, electronic survey data collection software. Survey Monkey was chosen because it is accessible to the general population, the reduction in time for data collection, and cost effectiveness. The in-state pilot study survey was designed to collect item ratings for perceived value, skill level, and frequency of implementation. As previously discussed Connerley and Pedersen (2005) outline a three-stage developmental sequence in relation to the obtainment of cross-cultural skills related to counseling and is composed of three factors: awareness, knowledge, and skill level. It is argued that failure to address each development stage results in inadequate training required to adequately service CLD populations. Given the similarities of the

roles and functions for counselors and school psychologists, this model was adopted to develop a scale that evaluates perceived skill level. Each level builds upon the development and implementation of previous development stages; meaning, lower ratings indicate less skill whereas higher ratings indicate a more developed skill base of CLD strategies. Rating response options are presented in Table 12.

Table 12
Skill Level Rating Options

1 = *Beginning Level*: An awareness of the method and recognize the importance of it; however, you have little to no understanding of the purpose and/or effectiveness of the method.

2 = *Trained Level*: An awareness of the method as developed from your coursework and/or professional development trainings. You have some understanding of the purpose and/or effectiveness of the method and recognize the importance of the method.

3 = *Skilled Level*: An awareness and ability to apply the method. You understand the purpose and effectiveness of the method, but there are times in which you experience difficulty executing the method with proficiency.

4 = *Expert/Specialist Level*: An awareness and ability to apply the method. You understand the purpose and effectiveness of the method and can implement the method with proficiency.

Rating options were created to identify if participants perceived each strategy as valuable to daily practice. A five-point rating scale with 1 = not at all valuable to 5 = very valuable was developed. It was determined that a five-point scale provides a continuum for value, with a mean rating of 3 indicating some value with a 5-point option for no value. It was also hoped that the midpoint rating, 3 = Somewhat valuable, would decrease the likelihood of socially desirable responses. Higher ratings are expected to indicate a higher value whereas lower ratings indicate a lower value. The scale was

reviewed by five faculty members and feedback resulted in modifications to the rating descriptions (Table 13).

Table 13

Value Rating Options

1 = *Not at all valuable*: The strategy has no value in daily practice.

2 = *Not very valuable*: The strategy has little value in daily practice.

3 = *Somewhat valuable*: The strategy has some value in daily practice.

4 = *Valuable*: The strategy does have value in daily practice.

5 = *Very Valuable*: The strategy has a lot of value in daily practice.

A basic five-point rating scale was developed to reflect the frequency of implementation practices. With the understanding that implementation practices may vary on a case by case basis, items required participants to estimate the implementation rate based on daily practices. To decrease the level of difficulty associated with estimating for respondents, frequency ratings were divided into equal intervals of 25%. Aligning with the quartiles and to ensure that participants had an option for a 0% response, a 5-point rating scale was developed. Lower ratings indicate fewer implementation practices whereas high ratings indicate more frequent implementation practices (Table 14).

Table 14

Prevalence Ratings for Implementation Practices

1 = *Never*: You never practice the skill in day to day practice.

2 = *Rarely*: You practice the skill 25% of the time in day to day practice.

3 = *Sometimes*: You practice the skill 50% of the time in day to day practice.

4 = *Often*: You practice the skill 75% of the time in day to day practice.

5 = *Always*: You practice the skill 100% of the time in day to day practice.

Data collected using Survey Monkey were downloaded into an Excel file, then pasted into SPSS (Statistical Package for Social Sciences, Version 16.0) a statistical software program. All other data were coded into the appropriate variables.

Results for in-state procedural pilot study. The internal consistency of items was evaluated using estimates of Cronbach's alpha. Results were as follows: value = .973; skill level = .973; and frequency of implementation = .948; results indicate good reliability. The desired sample was obtained suggesting that participants were able to complete the survey with no reported concerns. It was concluded that the survey was procedurally sound.

An overview of item ratings for perceived value, skill level, and frequency of implementation are presented in Table 15 using mean scores and stand deviations. For perceived value (1 = Not Valuable to 5 = Valuable), all item means were relatively high (mean range = 4.13 to 4.87) suggesting that participants perceived the CLD strategies as valuable to the daily practices of a CLD problem-solving model. "*Consider cultural sources of information that relate to culture specific confirming data*" yielded the lowest mean (4.13), whereas "*Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern*" yielded the highest mean (4.87). More variability was observed for perceived skill level (1 = Beginning to 4 = Expert). Mean scores for all items except two showed a Trained skill level (mean range = 1.93 – 3.00). "*Consider cultural sources of information that relate to culture specific confirming data*" yielded the lowest mean of 1.93 (Beginning), whereas "*Understand the limitations and pitfalls associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations*" yielded the highest mean of 3.0 (Skilled). Mean rating scores for frequency of implementation (1 = 0% to 5 = 100%) ranged from 2.20 to 4.20. Only two strategies (item 18 and 21) were implemented at least 75% of the time in daily practice. "*Consider cultural sources of information that*

relate to culture specific confirming data” yielded the lowest mean of 2.20 (25% to 50%), whereas “*Account for one’s own cultural values and biases when working with CLD populations*” yielded the highest mean of 4.20 (more than 75%).

Table 15
Means and Standard Deviation for Value, Skill, and Frequency of Implementation for the In-State Procedural Pilot Study.

Item	Value	Skill	Frequency	Problem-Solving Stage
	M (SD)	M (SD)	M (SD)	
Acknowledge one’s limits in CLD competencies (expertise).	4.73 (.52)	2.77 (.73)	3.23 (1.04)	Establishing Relationships
Inform school staff members of CLD factors that can affect decision-making process.	4.67 (.55)	2.53 (.90)	3.17 (1.23)	Establishing Relationships
Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.	4.70 (.75)	2.60 (1.04)	3.57 (1.38)	Establishing Relationships
Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter.	4.47 (.90)	2.30 (1.06)	2.87 (1.43)	Establishing Relationships
Account for one’s own cultural values and biases when working with CLD populations.	4.67 (.76)	2.93 (.78)	4.20 (.85)	Establishing Relationships
Demonstrate culturally sensitive verbal and nonverbal communication skills.	4.73 (.64)	2.60 (.86)	3.77 (1.10)	Establishing Relationships
Understand the limitations and pitfalls associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations.	4.80 (.48)	3.00 (.87)	3.83 (1.23)	Problem Identification

Assess a CLD student's biculturalism to identify a targeted concern.	4.70 (.65)	2.90 (.76)	4.10 (1.03)	Problem Identification
When identifying a targeted behavior, consider the situations and domains in which a behavior is manifested.	4.67 (.67)	2.53 (.94)	3.10 (1.16)	Problem Identification
Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern.	4.87 (.43)	2.80 (.92)	3.67 (1.12)	Problem Identification
Examine referrals within the context of institutional and systemic patterns associated with CLD populations.	4.63 (.61)	2.77 (.90)	3.47 (1.07)	Problem Identification
Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations.	4.63 (.67)	2.60 (.86)	3.23 (.94)	Problem Identification
Consider cultural sources of information that relate to culture specific confirming data.	4.13 (1.04)	1.93 (.98)	2.20 (1.26)	Problem Analysis
Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior.	4.57 (.90)	2.37 (.96)	3.03 (1.50)	Problem Analysis
Seek out consultation experiences to identify an appropriate intervention plan for CLD populations.	4.83 (.46)	2.63 (.76)	3.47 (1.28)	Problem Analysis
Develop interventions that reflect an appropriate tier level of support for CLD populations.	4.67 (.71)	2.47 (.94)	3.33 (1.42)	Problem Analysis
Use a comprehensive assessment process to analyze a targeted	4.83 (.46)	2.70 (.92)	3.60 (1.28)	Problem Analysis

concern when working with all CLD students.

Implement culturally sensitive approaches and strategies that meet the needs of CLD populations.	4.77 (.50)	2.40 (.97)	3.00 (1.05)	Plan Implementation
Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process.	4.70 (.65)	2.43 (1.04)	2.73 (1.17)	Plan Implementation
Implement nontraditional methods to collect data that best address a CLD student's needs.	4.60 (.67)	2.53 (.82)	2.47 (.97)	Plan Implementation
Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student.	4.63 (.67)	2.43 (.90)	2.73 (1.26)	Plan Implementation
Implement culturally sensitive approaches that meet the needs of CLD populations.	4.57 (.68)	2.43 (.94)	2.87 (1.20)	Plan Implementation
Implement interventions that take into account CLD factors.	4.63 (.67)	2.50 (.94)	3.40 (1.28)	Plan Implementation
Evaluate the acceptability of CLD stakeholders.	4.30 (.88)	2.07 (.98)	2.33 (1.03)	Plan Evaluation
Evaluate the impact of cultural factors on the delivery of interventions.	4.63 (.67)	2.40 (.93)	2.83 (1.09)	Plan Evaluation
Use CLD strategies that can assist with maintenance and/or generalization of the intervention.	4.83 (.46)	2.50 (.73)	3.27 (1.17)	Plan Evaluation
Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results.	4.80 (.48)	2.53 (1.11)	2.97 (1.13)	Plan Evaluation

Note. Table outlines a full list of survey items without illustrations grouped into the appropriate problem-solving stage. Items were randomly ordered for data collection. Items in bold represent items with the lowest reported skill level ratings. M = mean scores; SD = standard deviation. N = 30.

Summary of procedural pilot study. As previously noted, 93.3% of respondents indicated that the item illustrations were helpful. No concerns were reported by participants and the internal consistency of items was interpreted as good. No additional changes to the survey items were made. Item means for perceived value were consistently high, whereas more variability for skill (competency) and implementation practices was observed. Approximately 44% of all items (n = 12) yielded Beginning to Trained skill levels (mean range = 1.93 – 2.50). Fifty-eight percent (n = 7) of the strategies are implemented less than 50% of the time in daily practice. A total of 41.67% (n = 5) of items align with the plan implementation stage suggesting that participants have the least amount of skill development in this area. In comparison, participants reported low skill development for only one item for in the *establishing relationships* stage and one item for *problem identification* stage suggesting that participants perceived that they possessed more competencies related to strategies in these stages. As thought, skill level predicted frequency of implementation. This suggests that school psychologists are more likely to implement CLD strategies when they perceive that they have more competencies associated with a particular practice. Given the consistency for high value ratings, perceived value was not a significant predictor; suggesting that perceived value does not impact the likelihood of implementation practices related to CLD strategies.

Primary Dissertation Study

The primary dissertation study was a replication of the procedural in-state pilot study using a larger, more representative sample of school psychologists. A recap of the research questions is provided below.

- *Research Question 1.* Using an exploratory factor analysis, do the CLD strategies outlined in the literature align with the five stages of a CLD problem-solving model based on reported skill ratings?
- *Research Question 2:* Do perceived value and perceived skills (competencies) predict frequency of implementation of self-reported CLD practices?
- *Research Question 3:* Do ethnicity, experience working with CLD populations, and overall experience as a school psychologist predict the frequency of implementation of self-reported CLD strategies?

Participants for primary dissertation study. The population for the primary dissertation study consisted of practicing school psychologists who were state association members in states with large CLD populations. Census data from the United States Census Bureau (2007) was used to identify CLD population categories as well as states in relation to the percentage of each CLD populations. The largest CLD population by ethnicity for the top 10 states was identified; a total of 23 were identified and presented in Table 16.

Table 16
CLD Population by State

State	CLD Population				
	American Indian and Alaskan Native	Asians	Blacks	Hispanic	Pacific Islanders
Alaska	3.8%	-	-	-	-
Arizona	12.6%	-	-	25.3%	-
California	12.2%	35.2%	6.2%	32.4%	30.3%
Colorado	-	-	-	17.1%	-
Connecticut	-	-	-	9.4%	-
Florida	-	2.9%	7.4%	16.8%	-
Georgia	-	-	7.1%	-	-
Hawaii	-	4.3%	-	-	26.2%
Illinois	-	4.2%	5.2%	12.3%	-
Louisiana	-	-	4.1%	-	-
Maryland	-	-	4.4%	-	-
Massachusetts	-	2.3%	-	-	-
Montana	2.7%	-	-	-	-
Nevada	-	-	-	19.7%	3.2%
New Jersey	-	5.0%	-	13.3%	-
New Mexico	8.1%	-	-	42.1%	-
New York	2.8%	10.0%	8.5%	15.1%	-
North Carolina	4.0%	-	5.0%	-	-
Oklahoma	12.4%	-	-	-	-
Texas	4.0%	5.8%	6.9%	32.0%	4.9%
Utah	-	-	-	-	3.4%
Virginia	-	2.7%	4.0%	-	-
Washington	3.4%	3.2%	-	-	5.7%

Note. Colorado was included in the list of states as it was used for the procedural pilot study and represented a large CLD population. Only six states with high population numbers for Pacific Islanders were identified.

Permission to conduct a primary dissertation study was requested via email from the President of the 23 school psychology state associations in December of 2009.

Contact information was obtained by visiting state associations' websites.

Communication was not established and/or maintained with five of the states. The

California Association of School Psychologists required the purchase of an address list which was not purchased. With the exception of California, all associations that declined participation had an opportunity to review the project information sheet and survey.

Twelve of the 23 states (including Colorado) agreed to participate and provided a letter of collaboration outlining the same agreement as used in the procedural pilot study. A list of state associations by status of approval is provided in Table 17.

Table 17. State Association by Status of Approval for Primary Dissertation Study

State Associations	Status of Approval
Alaska School Psychologists Association	Declined
Arizona Association of School Psychologists	Approved
California Association of School Psychologists	Declined *
Colorado Society of School Psychologists	Approved
Connecticut Association of School Psychologists	Approved
Florida Association of School Psychologists	Approved
Georgia Association of School Psychologists	N/A
Hawai'i Association of School Psychologists	N/A
Illinois School Psychologist Association	Approved
Louisiana School Psychological Association	N/A
Maryland School Psychologists' Association	Declined
Massachusetts School Psychologists Association	Approved
Montana Association of School Psychologists	N/A
Nevada Association of School Psychologists	Approved
New Jersey Association of School Psychologists	Approved
New Mexico Association of School Psychologists	N/A
New York Association of School Psychologists	Approved
North Carolina School Psychology Association	Approved
Oklahoma School Psychological Association	Declined
Texas Association of School Psychologists	Declined
Utah Association of School Psychologists	Approved
Virginia Academy of School Psychologists	Declined
Washington State Association of School Psychologists	Approved

Note. Communication was not established and/or maintained with states marked with N/A. California (*) required a purchase of the association's database and denied voluntary participation.

A survey email was sent by each approved school psychology association with the exception of Illinois and Nevada in which a copy of the survey email was posted on the association website. As indicated on the survey, participation was restricted to practicing school psychologists that met district guidelines for employment and practiced as a school psychologist. Participation was anonymous. Completion of the survey took approximately 10-minutes. The survey email is provided in Appendix E; the project

information sheet is provided in Appendix F. No corrections were needed for missing data as only 100% completed surveys were analyzed.

The additional 30 respondents from the in-state procedural study were added to the final sample. Three participants originated from states that were solicited for participation, but did not provide approval. It was concluded that those surveys were completed during the consideration process that took place by each association. One additional participant came from Wyoming, New Hampshire, and Pennsylvania (n=3). It was assumed that those individuals held a membership from one of the approved state associations and/or lived in a bordering state. Because completion of the survey signified consent to participate and to maximize sample size, all six participants were included for analyses purposes.

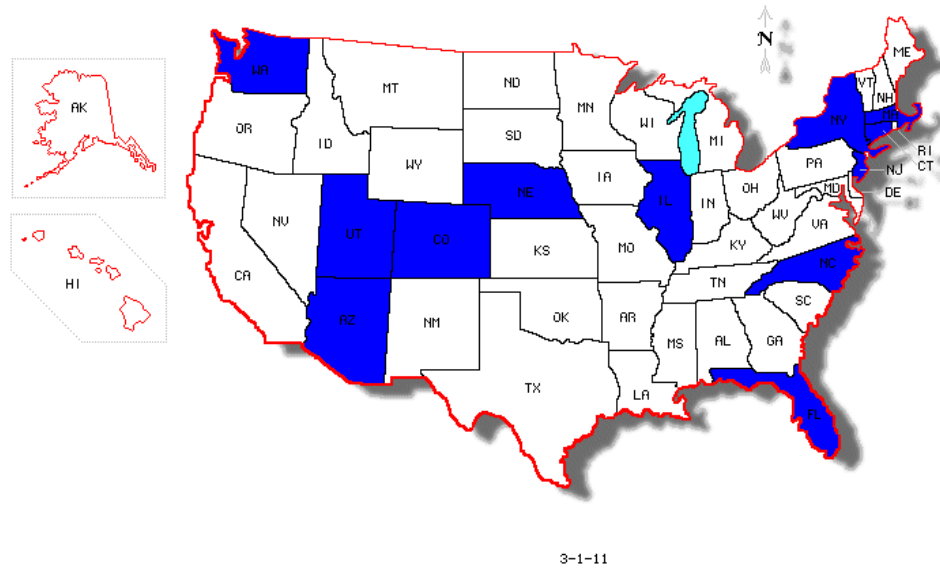
A total of 318 attempted to participate, with 232 responding to all questions (completion rate = 73%; 78.4% female and 21.6% male). Similar to findings from the in-state procedural pilot, more than 80% reported European-American/Caucasian for ethnicity and more than 45% of participants were between the ages of 40 and 59 years. More than half of the sample held a specialist degree (SSP/EdS/MS+30), while more than 80% were employed full-time. A total of 82.7% reported that the item illustrations were helpful. A full review of demographics is presented in Table 18. A visual representation of state membership as indicated by consent to participate is presented in Figure 1.

Table 18
Demographics for Primary Dissertation Study

Demographic Item	Frequency	n
Gender		
Female	78.4%	182
Male	21.6%	50
Ethnicity		
European-American/Caucasian	82.3%	191
African-American/Blacks	3.4%	8
Hispanic/Latino	8.2%	19
Asian American	1.7%	4
Native American	0.9%	2
Pacific Islander	0.9%	2
Other	2.6%	6
Age		
20-29 years	13.4%	31
30-39 years	29.7%	69
40-49 years	17.2%	40
50-59 years	27.2%	63
60-69 years	12.1%	28
70 or older	0.4%	1
Degree		
Master's	13.4%	31
Specialist	54.3%	126
Doctorate	32.3%	75
School District Setting		
Suburban	46.6%	108
Urban	32.8%	76
Rural	20.7%	48
Employment		
Full-time	84.5%	196
Part-time	15.5%	36
State Association Membership		
Arizona	24.1%	56
Colorado	12.9%	30
Connecticut	2.2%	5
Florida	17.2%	40
Illinois	0.4%	1
Massachusetts	3.9%	9
Maryland	0.4%	1
Nevada	0.9%	2
New Hampshire	0.4%	1
New Jersey	7.8%	18
New York	6.9%	16
North Carolina	8.2%	19
Pennsylvania	0.4%	1
Utah	7.8%	18
Virginia	0.9%	2
Washington	5.2%	12
Wyoming	0.4%	1

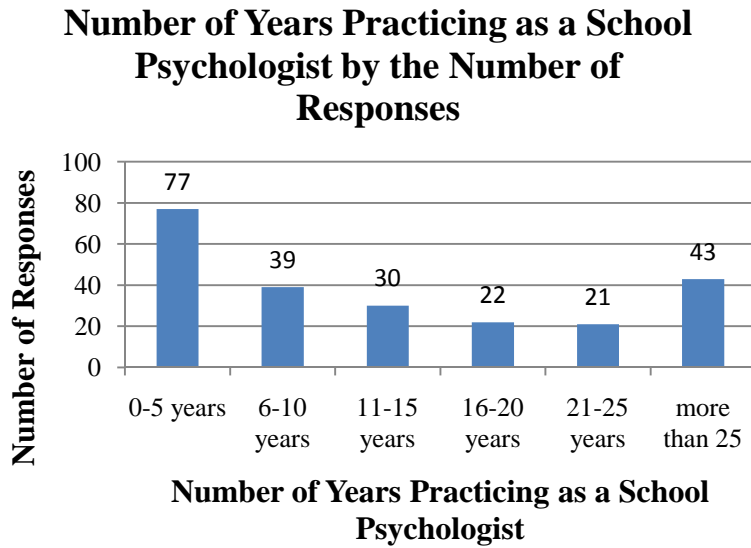
Figure 3. Visual Representation of State Membership as Indicated by Consent to Participate.

State Associations by Approval



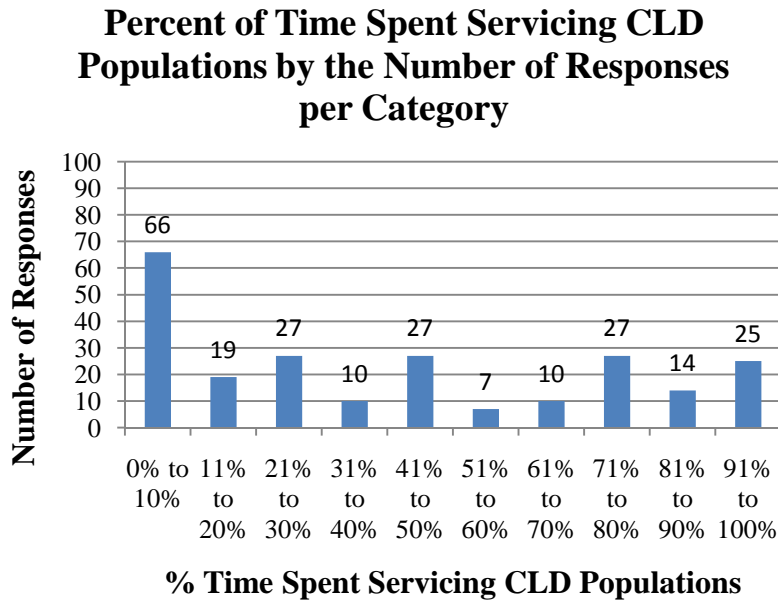
Participants were also asked to report the number of years they have practiced as a school psychologist. Unlike data from the in-state procedural pilot study, nine participants reported half-years for experience (e.g., 3 ½). All totals with half-years were rounded down (e.g., 3 ½- to 3-years experience). Approximately one-third of the sample was identified as early career professionals with less than 6-years of experience (see Figure 3).

Figure 4. Number of Years Practicing as a School Psychologist by the Number of Responses.



Three respondents provided ranges for the percent of time spent servicing students and families from CLD backgrounds. When ranges were provided, the lowest percent was coded (e.g., 50-75% to 50%). As seen in Figure 4, a little more than one-half of participants reported that they spend 40% or more of their time servicing these populations.

Figure 5. Percent of Time Spent Servicing CLD Populations by Number of Responses per Category



Procedure for primary dissertation study. No changes were made to the in-state procedural pilot survey; the same survey items, illustrations, and ratings scales were used for the primary dissertation study. An additional demographic question was added at the end of the survey to identify participants' state of membership. Data were collected using Survey Monkey, electronic survey data collection software. Data collection began in December of 2009 and a reminder email was sent in April of 2010. The survey was closed on June 1, 2010. All responses were anonymous.

Results for primary dissertation study. Similar to the in-state procedural pilot study, data collected using Survey Monkey was downloaded into an Excel file, then pasted into SPSS (Statistical Package for Social Sciences, Version 16.0) a statistical software program. Following, all data were coded into the appropriate variables. The internal consistency of items was evaluated using estimates of Cronbach's alpha. Similar to results from the in-state procedural pilot, results for internal consistency were as

follows: value = .958; skill level = .974; and frequency of implementation = .965. Again, it was concluded that the survey was procedurally sound.

An overview of item ratings for perceived value, skill level, and frequency of implementation are presented in Table 19 using mean scores and stand deviations. For perceived value (1 = Not Valuable to 5 = Valuable), all item means were relatively high (mean range = 4.04 to 4.75) suggesting that participants perceived the CLD strategies as valuable to the daily practices of a CLD problem-solving model. “*Evaluate the acceptability of CLD stakeholders*” yielded the lowest mean (4.04), whereas “*Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern*” yielded the highest mean (4.75). More variability was observed for perceived skill level (1 = Beginning to 4 = Expert). Mean scores for all items except two showed a Trained skill level (mean range = 1.98 – 2.77). The two exceptions had the lowest mean scores of 1.98: “*Consider cultural sources of information that relate to culture specific confirming data*” and “*Evaluate the acceptability of CLD stakeholders.*” In comparison, the highest mean score (2.77) was for “*Account for one’s own cultural values and biases when working with CLD populations.*” Mean rating scores for frequency of implementation (1 = 0% to 5 = 100%) ranged from 2.25 to 3.88. Based on mean scores, fourteen of the strategies were consistently implemented at least 50% of the time in daily practice. The lowest mean score (2.25) was for “*Implement nontraditional methods to collect data that best address a CLD student’s needs,*” whereas the highest mean score (3.88) was for “*Account for one’s own cultural values and biases when working with CLD populations.*” Interestingly, “*Evaluate the acceptability of CLD stakeholders*” had the lowest reported value and skill, but not implementation rating.

Table 19

Means and Standard Deviation for Value, Skill, and Frequency of Implementation for the Primary Dissertation Study.

Item (Item Number)	Value	Skill	Frequency	Problem-Solving Stage
	M (SD)	M (SD)	M (SD)	
Acknowledge one's limits in CLD competencies (expertise). (#3)	4.60 (.70)	2.54 (.88)	3.13 (1.18)	Establishing Relationships
Inform school staff members of CLD factors that can affect decision-making process. (#14)	4.54 (.75)	2.42 (.92)	3.00 (1.23)	Establishing Relationships
Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations. (#17)	4.57 (.63)	2.44 (.93)	3.13 (1.28)	Establishing Relationships
Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter. (#19)	4.37 (.88)	2.08 (1.04)	2.59 (1.42)	Establishing Relationships
Account for one's own cultural values and biases when working with CLD populations. (#21)	4.61 (.66)	2.77 (.87)	3.88 (1.09)	Establishing Relationships
Demonstrate culturally sensitive verbal and nonverbal communication skills. (#22)	4.59 (.68)	2.44 (.96)	3.53 (1.20)	Establishing Relationships
Understand the limitations and pitfalls associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations. (#25)	4.71 (.59)	2.74 (.93)	3.66 (1.30)	Problem Identification
Assess a CLD student's biculturalism to identify a targeted concern. (#18)	4.72 (.53)	2.73 (.93)	3.69 (1.20)	Problem Identification
When identifying a targeted behavior, consider the situations and domains in which a behavior is	4.58 (.70)	2.38 (.97)	3.02 (1.34)	Problem Identification

manifested. (#11)				
Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern. (#9)	4.75 (.51)	2.72 (.89)	3.61 (1.21)	Problem Identification
Examine referrals within the context of institutional and systemic patterns associated with CLD populations. (#6)	4.62 (.62)	2.59 (.89)	3.34 (1.18)	Problem Identification
Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations. (#2)	4.59 (.66)	2.48 (.88)	3.02 (1.14)	Problem Identification
Consider cultural sources of information that relate to culture specific confirming data. (#15)	4.09 (.98)	1.98 (.97)	2.31 (1.24)	Problem Analysis
Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior. (#20)	4.30 (.91)	2.02 (1.00)	2.62 (1.42)	Problem Analysis
Seek out consultation experiences to identify an appropriate intervention plan for CLD populations. (#23)	4.55 (.72)	2.45 (.92)	3.11 (1.29)	Problem Analysis
Develop interventions that reflect an appropriate tier level of support for CLD populations. (#27)	4.44 (.87)	2.18 (.95)	2.91 (1.32)	Problem Analysis
Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students. (#13)	4.63 (.66)	2.55 (.92)	3.35 (1.26)	Problem Analysis
Implement culturally sensitive approaches and strategies that meet the needs of CLD populations. (#1)	4.58 (.70)	2.33 (.89)	2.94 (1.14)	Plan Implementation

Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process. (#7)	4.48 (.84)	2.30 (.95)	2.74 (1.26)	Plan Implementation
Implement nontraditional methods to collect data that best address a CLD student's needs. (#10)	4.22 (.88)	2.11 (.93)	2.25 (1.15)	Plan Implementation
Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student. (#16)	4.12 (.99)	2.19 (.95)	2.41 (1.23)	Plan Implementation
Implement culturally sensitive approaches that are acceptable to CLD populations. (#26)	4.44 (.78)	2.21 (.96)	2.85 (1.31)	Plan Implementation
Implement interventions that take into account CLD factors. (#24)	4.46 (.84)	2.25 (.95)	2.94 (1.34)	Plan Implementation
Evaluate the acceptability of CLD stakeholders. (#12)	4.04 (1.01)	1.98 (.92)	2.30 (1.14)	Plan Evaluation
Evaluate the impact of cultural factors on the delivery of interventions. (#8)	4.49 (.75)	2.34 (.94)	2.86 (1.22)	Plan Evaluation
Use CLD strategies that can assist with maintenance and/or generalization of the intervention. (#4)	4.56 (.71)	2.33 (.85)	2.98 (1.19)	Plan Evaluation
Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results. (#5)	4.58 (.77)	2.43 (.97)	3.05 (1.32)	Plan Evaluation

Note. Table outlines a full list of survey items without illustrations grouped into the appropriate problem-solving stage. Item numbers are provided in parentheses. Items were randomly ordered for data collection. Items in bold represent items with the lowest reported ratings. M = mean scores; SD = standard deviation. N = 232.

Using skill ratings as the selection variable, an exploratory factor analysis was used to identify if the CLD strategy items aligned with the five stages of the CLD problem-solving model. To conduct a factor analysis, an adequate sample size is needed. The current sample consisted of 232 participants and is considered fair, whereas 300 or more is considered good (Tabachnick & Fidell, 2007). Varimax rotation was used to ensure that as much of the variance as possible was accounted for by each factor. Kaiser-Meyer-Olkin (KMO) was used to measure the sampling adequacy. The KMO was .972 and was satisfactory. Bartlett's Test of sphericity was significant ($p = .000$), providing evidence that the correlation matrix was not an identity matrix. A test of assumptions indicated linearity and no outliers. Also, correlations were greater than .30 suggesting that multicollinearity was not a concern. Correlations were moderately strong and ranged from .403 (Item 3 and 7) to .747 (Item 24 and 26) (Table 20). The weakest correlation was noted between strategies that related to establishing relationships and data collection. In comparison, the strongest correlation was noted between strategies that related to interventions that account for CLD factors and are deemed acceptable to CLD populations. It is concluded that the strength of the correlations infers that a factor structure exists.

Table 20
 Exploratory Factor Analysis Correlation Matrix using Skill Level

Skill Item	Skill Item													
	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	1.000													
2	.647	1.000												
3	.602	.600	1.000											
4	.678	.634	.587	1.000										
5	.650	.559	.440	.578	1.000									
6	.609	.658	.520	.635	.642	1.000								
7	.591	.515	.403	.536	.660	.576	1.000							
8	.617	.622	.546	.665	.639	.657	.595	1.000						
9	.575	.577	.546	.555	.632	.687	.586	.619	1.000					
10	.598	.556	.477	.595	.608	.629	.584	.584	.622	1.000				
11	.665	.644	.564	.631	.626	.674	.608	.682	.646	.672	1.000			
12	.635	.594	.475	.599	.588	.622	.624	.705	.581	.628	.699	1.000		
13	.639	.577	.560	.628	.623	.722	.583	.633	.682	.630	.684	.616	1.000	

Table 20 (Continued)
 Exploratory Factor Analysis Correlation Matrix using Skill Level

Skill Item	Skill Item												
	1	2	3	4	5	6	7	8	9	10	11	12	13
14	.656	.657	.574	.656	.604	.725	.584	.686	.647	.601	.746	.705	.727
15	.620	.557	.520	.576	.593	.589	.529	.624	.561	.502	.675	.679	.588
16	.550	.561	.498	.567	.606	.591	.575	.644	.561	.614	.622	.638	.577
17	.568	.533	.482	.542	.599	.625	.557	.551	.619	.602	.653	.586	.677
18	.600	.522	.587	.523	.525	.679	.499	.564	.695	.549	.625	.525	.608
19	.550	.428	.487	.548	.471	.531	.461	.533	.533	.527	.540	.547	.522
20	.565	.472	.478	.557	.507	.605	.508	.548	.528	.560	.580	.555	.601
21	.567	.582	.580	.534	.474	.625	.434	.511	.551	.463	.583	.524	.599
22	.596	.520	.532	.573	.537	.577	.530	.534	.575	.556	.650	.576	.586
23	.552	.535	.537	.581	.492	.637	.498	.511	.602	.515	.566	.576	.660
24	.609	.588	.469	.628	.489	.615	.497	.587	.519	.504	.626	.595	.578
25	.599	.498	.546	.577	.590	.695	.543	.583	.635	.536	.638	.595	.674
26	.629	.498	.506	.628	.531	.596	.492	.611	.493	.568	.631	.609	.578
27	.581	.510	.500	.572	.546	.649	.450	.648	.575	.558	.603	.600	.627

Table 20 (Continued)
 Exploratory Factor Analysis Correlation Matrix using Skill Level

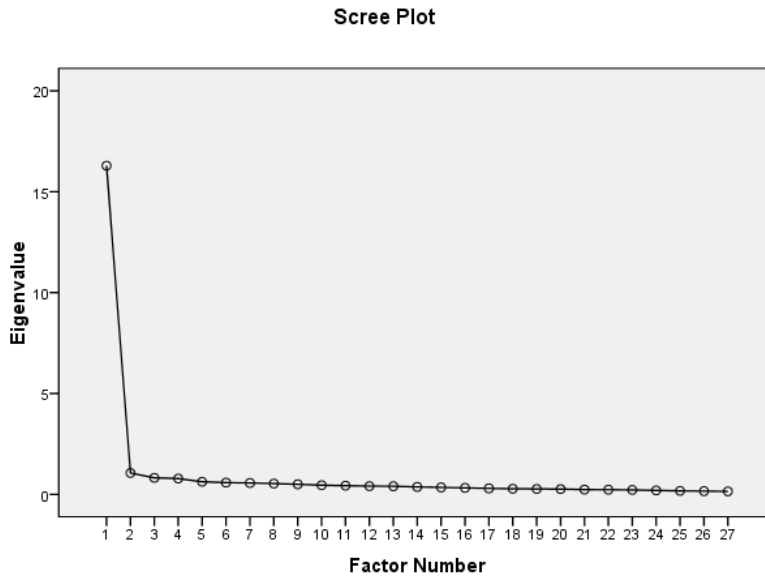
Skill Item	Skill Item													
	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14	1.000													
15	.687	1.000												
16	.615	.598	1.000											
17	.721	.559	.590	1.000										
18	.631	.527	.540	.599	1.000									
19	.623	.551	.502	.565	.612	1.000								
20	.660	.577	.530	.634	.639	.585	1.000							
21	.679	.554	.556	.574	.602	.536	.558	1.000						
22	.668	.578	.544	.675	.634	.632	.630	.671	1.000					
23	.685	.560	.498	.556	.568	.551	.587	.621	.567	1.000				
24	.656	.572	.554	.599	.573	.572	.648	.579	.614	.621	1.000			
25	.679	.574	.546	.616	.643	.547	.596	.626	.646	.560	.613	1.000		
26	.668	.598	.558	.613	.595	.570	.651	.579	.655	.523	.747	.693	1.000	
27	.625	.650	.579	.590	.529	.561	.554	.524	.512	.538	.601	.652	.612	1.000

Using a Kaiser's criterion, two factors had eigenvalues equal to or greater than 1.0 (Table 21). Approximately 60% of the variance was accounted for by Factor One; an additional 4% was accounted for by Factor Two. In comparison, only one factor was identified using Cattell's scree plot (see Figure 5).

Table 21
Initial Eigenvalues and Percent of Variance Accounted for Factor One and Two.

Factor	Initial Eigenvalues		
	Total	Percent of Variance	Cumulative % of Variance
1	16.29	60.34	60.34
2	1.064	3.94	64.28

Figure 6. Scree Plot for Exploratory Factor Analysis with Skill



Results from the factor analysis were used to see if items pulled together closely enough to determine if a latent construct existed; that latent construct being CLD problem-solving. Two potential factors were identified using eigenvalues, whereas only one factor was identified using scree plot results. As more than two-thirds of the variance was accounted for by Factor One and a relatively small amount was accounted for by

Factor Two, it was concluded that only one true factor existed. Factor loadings are presented in Table 22. A cut-off of .30 was used to explore factor loadings (Tabachnick & Fidell, 2007). All item correlations for Factor One were greater than .30 and ranged from .325 (Item 5) to .712 (Item 22). Using the cut-off of .30, all items cross loaded. However, increasing the cut-off to .40, 21 of the 26 items cross loaded. It was determined that using a pool of the six remaining items (Items 5, 7, 19, 20, 21, 22) would not be sufficient for further analyses. Also, no meaningful construct was identified using a qualitative analysis of the remaining six items. Rather, it was argued that all items shared the same conceptual meaning of CLD problem-solving. In turn, it was concluded that only one factor existed and that Factor One represented a model of CLD problem-solving model.

Table 22
Factor Matrix for Skill.

Item	Factor Loadings by Factor	
	Factor 1	Factor 2
Item 1: Implement culturally sensitive approaches and strategies that meet the needs of CLD populations.	.790	-.077
	.734	-.136
Item 2: Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations.	.680	.067
	.772	-.059
Item 3: Acknowledge one's limits in CLD competencies (expertise).	.747	-.290
	.824	-.043
Item 4: Use CLD strategies that can assist with maintenance and/or generalization of the intervention.	.705	-.255
	.791	-.218
Item 5: Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results.	.773	-.090
	.745	-.177
Item 6: Examine referrals within the context of institutional and systemic patterns associated with CLD populations.	.833	-.112
	.789	-.172
Item 7: Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process.	.814	-.045
	.866	.056
Item 8: Evaluate the impact of cultural factors on the delivery of interventions.	.762	-.046
	.743	-.148
Item 9: Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern.	.778	.071
	.763	.169
Item 10: Implement nontraditional methods to collect data that best address a CLD student's needs.	.706	.190
	.750	.213
Item 11: When identifying a targeted behavior, consider the situations and domains in which a behavior is manifested.	.738	.239
	.773	.232
Item 12: Evaluate the acceptability of CLD stakeholders.	.737	.133
	.767	.191
Item 13: Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students.	.790	.128
	.777	.191
Item 14: Inform school staff members of CLD factors that can affect decision-making process.	.750	.001

	.790	-.077
Item 15: Consider cultural sources of information that relate to culture specific confirming data.	.734	-.136
	.680	.067
Item 16: Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student.	.772	-.059
	.747	-.290
Item 17: Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.	.824	-.043
	.705	-.255
Item 18: Assess a CLD student's biculturalism to identify a targeted concern.	.791	-.218
	.773	-.090
Item 19: Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter.	.745	-.177
	.833	-.112
Item 20: Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior.	.789	-.172
	.814	-.045
Item 21: Account for one's own cultural values and biases when working with CLD populations.	.866	.056
	.762	-.046
Item 22: Demonstrate culturally sensitive verbal and nonverbal communication skills.	.743	-.148
	.778	.071
Item 23: Seek out consultation experiences to identify an appropriate intervention plan for CLD populations.	.763	.169
	.706	.190
Item 24: Implement interventions that take into account CLD factors.	.750	.213
	.738	.239
Item 25: Understand the limitations and pitfalls associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations.	.773	.232
	.737	.133
Item 26: Implement culturally sensitive approaches that are acceptable to CLD populations.	.767	.191
	.790	.128
Item 27: Develop interventions that reflect an appropriate tier level of support for CLD populations.	.777	.191

Note. Table outlines factor loadings for Factor One and Factor Two. Items in bold represent items that did not crossload using a cut-off of .40.

Table 23
Rotated Factor Matrix for Skill.

Item	Factor Loadings by Factor	
	Factor 1	Factor 2
Item 1: Implement culturally sensitive approaches and strategies that meet the needs of CLD populations.	.506	.612
Item 2: Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations.	.425	.615
Item 3: Acknowledge one's limits in CLD competencies (expertise).	.530	.432
Item 4: Use CLD strategies that can assist with maintenance and/or generalization of the intervention.	.506	.586
Item 5: Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results.	.325	.732
Item 6: Examine referrals within the context of institutional and systemic patterns associated with CLD populations.	.554	.611
Item 7: Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process.	.320	.677
Item 8: Evaluate the impact of cultural factors on the delivery of interventions.	.408	.712
Item 9: Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern.	.485	.609
Item 10: Implement nontraditional methods to collect data that best address a CLD student's needs.	.404	.651
Item 11: When identifying a targeted behavior, consider the situations and domains in which a behavior is manifested.	.512	.667
Item 12: Evaluate the acceptability of CLD stakeholders.	.439	.678
Item 13: Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students.	.546	.606
Item 14: Inform school staff members of CLD factors that can affect decision-making process.	.654	.571
Item 15: Consider cultural sources of information that relate to culture specific confirming data.	.508	.570
Item 16: Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD	.422	.629

student.

Item 17: Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.	.602	.498
Item 18: Assess a CLD student's biculturalism to identify a targeted concern.	.660	.418
Item 19: Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter.	.635	.363
Item 20: Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior.	.682	.378
Item 21: Account for one's own cultural values and biases when working with CLD populations.	.692	.351
Item 22: Demonstrate culturally sensitive verbal and nonverbal communication skills.	.712	.380
Item 23: Seek out consultation experiences to identify an appropriate intervention plan for CLD populations.	.617	.425
Item 24: Implement interventions that take into account CLD factors.	.679	.405
Item 25: Understand the limitations and pitfalls associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations.	.650	.466
Item 26: Implement culturally sensitive approaches that are acceptable to CLD populations.	.685	.412
Item 27: Develop interventions that reflect an appropriate tier level of support for CLD populations.	.532	.528

Note. Table outlines factor loadings for Factor One and Factor Two. Items in bold represent items that did not crossload using a cut-off of .40.

Using value ratings as the selection variable, an exploratory factor analysis using Varimax rotation was conducted. Kaiser-Meyer-Olkin (KMO) was used to measure the sampling adequacy. The KMO was .950 and was satisfactory. Bartlett's Test of sphericity was significant ($p = .000$), providing evidence that the correlation matrix was not an identity matrix. A test of assumptions indicated linearity and no outliers. Also,

correlations were greater than .30 suggesting that multicollinearity was not a concern. Correlations ranged from weak to moderately strong and ranged from .276 (Item 2 and 27) to .656 (Item 8 and 11) (Table 24). The weakest correlation was noted between strategies that related to problem identification and plan analysis; a strong correlation would have been expected as analysis links to the process of identifying a problem and developing an intervention. In comparison, the strongest correlation was noted between strategies that related to plan evaluation and implementation.

Table 24
 Exploratory Factor Analysis Correlation Matrix using Value Level

Value Item	Value Item													
	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	1.000													
2	.630	1.000												
3	.554	.487	1.000											
4	.570	.579	.472	1.000										
5	.500	.455	.384	.602	1.000									
6	.443	.420	.430	.472	.497	1.000								
7	.411	.431	.384	.501	.559	.485	1.000							
8	.399	.541	.435	.623	.508	.511	.586	1.000						
9	.432	.408	.298	.306	.384	.545	.361	.408	1.000					
10	.365	.527	.285	.535	.429	.411	.507	.543	.368	1.000				
11	.466	.441	.323	.570	.623	.593	.611	.656	.481	.535	1.000			
12	.386	.455	.432	.529	.532	.440	.558	.622	.359	.606	.583	1.000		
13	.462	.483	.355	.527	.431	.524	.472	.578	.519	.488	.594	.511	1.000	

Table 24 (Continued)
 Exploratory Factor Analysis Correlation Matrix using Value Level

Value Item	Value Item												
	1	2	3	4	5	6	7	8	9	10	11	12	13
14	.453	.475	.387	.605	.574	.521	.557	.606	.457	.538	.610	.574	.533
15	.382	.377	.333	.505	.486	.453	.435	.572	.357	.465	.515	.588	.485
16	.338	.370	.289	.486	.422	.387	.559	.611	.346	.553	.558	.618	.469
17	.393	.348	.383	.401	.394	.464	.464	.416	.533	.469	.452	.439	.466
18	.414	.392	.265	.374	.357	.486	.359	.396	.508	.349	.555	.338	.440
19	.395	.354	.394	.451	.359	.458	.346	.388	.458	.425	.395	.479	.533
20	.457	.467	.384	.513	.454	.471	.450	.511	.349	.465	.586	.523	.446
21	.487	.331	.372	.356	.324	.406	.356	.378	.487	.286	.496	.451	.449
22	.415	.462	.386	.495	.479	.412	.461	.581	.425	.424	.589	.505	.464
23	.484	.426	.339	.489	.481	.458	.441	.435	.383	.457	.484	.504	.476
24	.406	.513	.313	.547	.425	.406	.506	.558	.351	.530	.532	.518	.532
25	.449	.324	.326	.432	.468	.430	.435	.453	.426	.390	.532	.402	.533
26	.464	.462	.365	.536	.489	.496	.484	.564	.334	.488	.552	.537	.560
27	.371	.276	.325	.393	.417	.442	.455	.469	.357	.362	.421	.478	.522

Table 24 (Continued)
 Exploratory Factor Analysis Correlation Matrix using Value Level

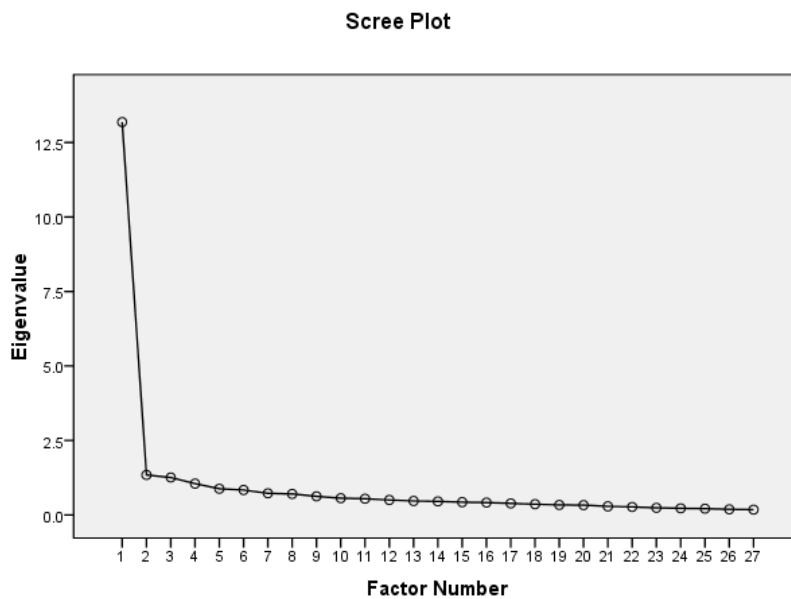
Value Item	Value Item													
	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14	1.000													
15	.566	1.000												
16	.456	.589	1.000											
17	.422	.443	.437	1.000										
18	.403	.397	.405	.471	1.000									
19	.484	.534	.424	.427	.387	1.000								
20	.487	.507	.473	.375	.434	.532	1.000							
21	.423	.432	.391	.431	.568	.452	.475	1.000						
22	.517	.529	.482	.383	.445	.483	.592	.595	1.000					
23	.482	.542	.476	.444	.354	.530	.486	.462	.568	1.000				
24	.469	.547	.551	.458	.407	.457	.548	.516	.571	.592	1.000			
25	.548	.511	.436	.334	.462	.489	.472	.470	.543	.522	.487	1.000		
26	.544	.586	.512	.443	.406	.535	.579	.525	.569	.632	.710	.579	1.000	
27	.418	.528	.446	.481	.362	.430	.353	.431	.397	.467	.496	.550	.533	1.000

Using a Kaiser's criterion, four factors had eigenvalues equal to or greater than 1.0 (Table 25). Approximately 49% of the variance was accounted for by Factor One, 5% accounted for Factor Two and Factor Three (respectively), and an additional 4% accounted for by Factor Four. In comparison, only one factor was identified using Cattell's scree plot (see Figure 6).

Table 25
Initial Eigenvalues and Percent of Variance Accounted for Factors.

Factor	Initial Eigenvalues		
	Total	Percent of Variance	Cumulative % of Variance
1	13.186	48.836	48.836
2	1.342	4.970	53.806
3	1.257	4.654	58.460
4	1.051	3.894	62.354

Figure 7. Scree Plot for Exploratory Factor Analysis with Value



Results from the factor analysis yielded four potential factors using eigenvalues and only one using scree plot results. Similar to the results for skill, approximately half of

the variance was accounted for by Factor One and a relatively small amount was accounted for by each of the remaining factors. Looking at the factor matrix, only four items cross loaded suggesting a simple structure. Rotation was used to add clarity to the structure; however, similar to previous findings for skill 26 of the 27 items cross-loaded when using a cut-off of .30. Item 7 was the exception. Increasing that cut-off to .40 resulted in only 12 items cross-loading; however, several of the remaining items did not appear to greatly differ in strength of loadings. Item deletion of the 12 items was then used to further assist with adding clarity to the factor structure. However, cross-loading continued and subsequent analyses resulted in a dwindling number of items with moderate loadings. Thus, it was concluded that consistent with the scree plot, only one true factor existed. Initial and rotated factor loadings are presented in Tables 22 and 23.

Table 26
Factor Matrix for Value

Item	Factor Loadings by Factor			
	Factor 1	Factor 2	Factor 3	Factor 4
Item 1: Implement culturally sensitive approaches and strategies that meet the needs of CLD populations.	.655	.196	.428	-.232
Item 2: Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations.	.649	-.064	.401	-.132
Item 3: Acknowledge one's limits in CLD competencies (expertise).	.544	.053	.310	-.138
Item 4: Use CLD strategies that can assist with maintenance and/or generalization of the intervention.	.733	-.219	.245	-.102
Item 5: Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results.	.680	-.123	.158	.064
Item 6: Examine referrals within the context of institutional and systemic patterns associated with CLD populations.	.678	.149	.104	.188
Item 7: Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process.	.689	-.193	.045	.179
Item 8: Evaluate the impact of cultural factors on the delivery of interventions.	.761	-.258	.038	.132
Item 9: Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern.	.603	.409	.077	.295
Item 10: Implement nontraditional methods to collect data that best address a CLD student's needs.	.669	-.239	.018	.105
Item 11: When identifying a targeted behavior, consider the situations and domains in which a behavior is manifested.	.782	-.046	.007	.229
Item 12: Evaluate the acceptability of CLD stakeholders.	.736	-.242	-.058	.063
Item 13: Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students.	.723	.074	-.016	.085
Item 14: Inform school staff members of CLD factors that can affect decision-making process.	.741	-.093	.062	.097

Item 15: Consider cultural sources of information that relate to culture specific confirming data.	.717	-.096	-.214	-.044
Item 16: Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student.	.687	-.219	-.192	.108
Item 17: Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.	.623	.153	-.021	.164
Item 18: Assess a CLD student's biculturalism to identify a targeted concern.	.604	.325	-.019	.152
Item 19: Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter.	.651	.150	-.120	-.112
Item 20: Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior.	.698	-.012	-.029	-.132
Item 21: Account for one's own cultural values and biases when working with CLD populations.	.641	.366	-.129	-.106
Item 22: Demonstrate culturally sensitive verbal and nonverbal communication skills.	.721	.050	-.104	-.128
Item 23: Seek out consultation experiences to identify an appropriate intervention plan for CLD populations.	.702	.033	-.130	-.213
Item 24: Implement interventions that take into account CLD factors.	.736	-.085	-.184	-.191
Item 25: Understand the limitations and pitfalls associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations.	.676	.140	-.160	-.067
Item 26: Implement culturally sensitive approaches that are acceptable to CLD populations.	.769	-.034	-.203	-.254
Item 27: Develop interventions that reflect an appropriate tier level of support for CLD populations.	.628	.060	-.199	.009

Note. Table outlines factor loadings for Factor One and Factor Two. Items in bold represent items that did not crossload using a cut-off of .40.

Table 27
Rotated Factor Matrix for Value.

Item	Factor Loadings by Factor			
	Factor 1	Factor 2	Factor 3	Factor 4
Item 1: Implement culturally sensitive approaches and strategies that meet the needs of CLD populations.	.133	.264	.311	.722
Item 2: Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations.	.352	.186	.175	.644
Item 3: Acknowledge one's limits in CLD competencies (expertise).	.211	.200	.207	.535
Item 4: Use CLD strategies that can assist with maintenance and/or generalization of the intervention.	.525	.288	.114	.533
Item 5: Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results.	.504	.226	.247	.375
Item 6: Examine referrals within the context of institutional and systemic patterns associated with CLD populations.	.372	.219	.507	.291
Item 7: Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process.	.611	.223	.261	.236
Item 8: Evaluate the impact of cultural factors on the delivery of interventions.	.677	.285	.220	.277
Item 9: Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern.	.198	.164	.718	.204
Item 10: Implement nontraditional methods to collect data that best address a CLD student's needs.	.599	.265	.178	.235
Item 11: When identifying a targeted behavior, consider the situations and domains in which a behavior is manifested.	.587	.285	.433	.229
Item 12: Evaluate the acceptability of CLD stakeholders.	.624	.370	.180	.220
Item 13: Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students.	.409	.365	.414	.253
Item 14: Inform school staff members of CLD factors that can	.536	.301	.311	.311

affect decision-making process.

Item 15: Consider cultural sources of information that relate to culture specific confirming data.	.471	.533	.216	.138
Item 16: Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student.	.604	.399	.198	.073
Item 17: Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.	.331	.277	.471	.177
Item 18: Assess a CLD student's biculturalism to identify a targeted concern.	.197	.294	.579	.183
Item 19: Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter.	.232	.510	.328	.225
Item 20: Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior.	.359	.474	.224	.320
Item 21: Account for one's own cultural values and biases when working with CLD populations.	.081	.533	.483	.222
Item 22: Demonstrate culturally sensitive verbal and nonverbal communication skills.	.334	.536	.279	.270
Item 23: Seek out consultation experiences to identify an appropriate intervention plan for CLD populations.	.298	.588	.212	.276
Item 24: Implement interventions that take into account CLD factors.	.410	.611	.153	.232
Item 25: Understand the limitations and pitfalls associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations.	.275	.520	.356	.184
Item 26: Implement culturally sensitive approaches that are acceptable to CLD populations.	.368	.683	.170	.260
Item 27: Develop interventions that reflect an appropriate tier level of support for CLD populations.	.335	.463	.318	.098

Note. Table outlines factor loadings for Factor One and Factor Two. Items in bold represent items that did not crossload using a cut-off of .40.

Lastly, another exploratory factor analysis using Varimax rotation was used to evaluate implementation ratings. Again, Kaiser-Meyer-Olkin (KMO) was used to measure the sampling adequacy. The KMO was .963 and was satisfactory. Bartlett's Test of sphericity was significant ($p = .000$), providing evidence that the correlation matrix was not an identity matrix. A test of assumptions indicated linearity and no outliers. Also, correlations were greater than .30 suggesting that multicollinearity was not a concern. Similar to results evaluating skill, correlations were moderately strong and ranged from .308 (Item 7 and 21) to .749 (Item 24 and 26) (Table 28). The weakest correlation was noted between strategies that related to establishing relationships and plan implementation, whereas the strongest correlation was between two strategies aligning with culturally-responsive plan implementation.

Table 28
 Exploratory Factor Analysis Correlation Matrix for Implementation (Imp.).

Imp. Item	Imp. Item													
	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	1.000													
2	.609	1.000												
3	.533	.563	1.000											
4	.648	.568	.579	1.000										
5	.532	.419	.428	.565	1.000									
6	.514	.549	.554	.604	.565	1.000								
7	.435	.362	.368	.493	.622	.493	1.000							
8	.611	.533	.541	.695	.635	.632	.595	1.000						
9	.511	.549	.534	.537	.522	.677	.441	.579	1.000					
10	.537	.498	.417	.524	.499	.539	.482	.511	.467	1.000				
11	.566	.542	.537	.603	.546	.623	.555	.650	.598	.545	1.000			
12	.536	.484	.428	.563	.605	.525	.549	.646	.526	.544	.682	1.000		
13	.518	.524	.477	.561	.482	.626	.424	.560	.686	.499	.599	.539	1.000	

Table 28 (Continued)
 Exploratory Factor Analysis Correlation Matrix for Implementation (Imp.).

Imp. Item	Imp. Item												
	1	2	3	4	5	6	7	8	9	10	11	12	13
14	.542	.513	.482	.588	.534	.597	.505	.639	.567	.509	.631	.626	.643
15	.532	.432	.391	.512	.526	.511	.436	.586	.525	.415	.608	.557	.530
16	.425	.427	.376	.527	.491	.491	.549	.535	.440	.463	.560	.576	.433
17	.492	.487	.439	.585	.549	.534	.463	.525	.571	.520	.587	.528	.574
18	.500	.512	.495	.521	.480	.575	.387	.497	.647	.447	.516	.427	.605
19	.428	.332	.314	.510	.435	.421	.462	.520	.461	.440	.422	.459	.461
20	.491	.419	.426	.529	.453	.518	.468	.474	.540	.446	.567	.454	.559
21	.452	.472	.441	.461	.376	.446	.308	.442	.507	.314	.470	.392	.482
22	.576	.509	.444	.563	.549	.554	.477	.560	.646	.484	.581	.521	.567
23	.387	.385	.445	.478	.437	.485	.448	.474	.462	.477	.471	.483	.535
24	.499	.495	.387	.537	.386	.475	.448	.588	.535	.459	.580	.540	.525
25	.473	.404	.370	.460	.496	.545	.407	.508	.524	.385	.488	.403	.494
26	.550	.484	.431	.568	.455	.557	.451	.634	.513	.522	.573	.559	.518
27	.524	.441	.395	.558	.502	.489	.460	.617	.512	.448	.591	.540	.511

Table 28 (Continued)
 Exploratory Factor Analysis Correlation Matrix for Implementation (Imp.).

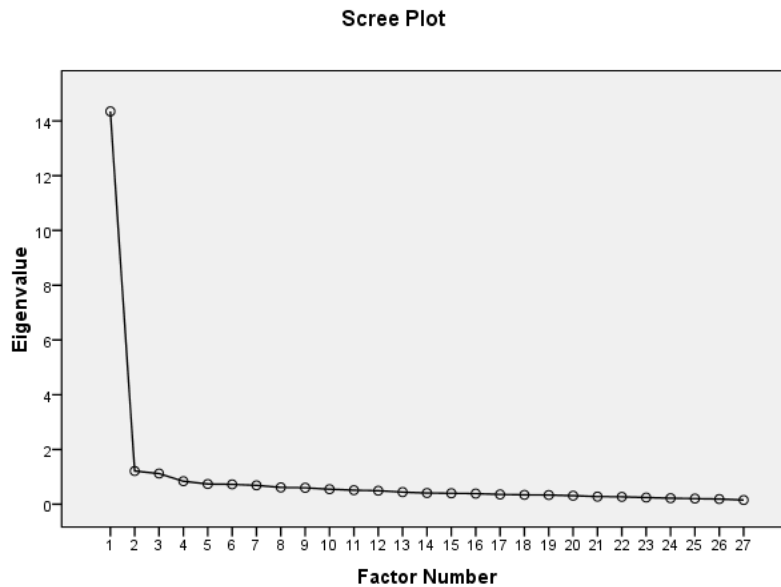
Imp. Item	Imp. Item													
	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14	1.000													
15	.657	1.000												
16	.502	.496	1.000											
17	.536	.476	.555	1.000										
18	.549	.407	.383	.561	1.000									
19	.509	.480	.432	.545	.434	1.000								
20	.547	.517	.410	.503	.581	.532	1.000							
21	.465	.391	.357	.463	.529	.350	.412	1.000						
22	.585	.533	.477	.619	.612	.522	.548	.635	1.000					
23	.525	.445	.440	.494	.497	.435	.474	.491	.532	1.000				
24	.588	.561	.471	.549	.507	.515	.531	.530	.627	.623	1.000			
25	.570	.441	.357	.518	.500	.452	.413	.495	.594	.422	.503	1.000		
26	.613	.556	.517	.515	.429	.565	.548	.491	.583	.537	.749	.637	1.000	
27	.562	.468	.494	.574	.445	.462	.474	.423	.617	.530	.645	.530	.638	1.000

Using a Kaiser's criterion, three factors had eigenvalues equal to or greater than 1.0 (Table 29). Approximately 53% of the variance was accounted for by Factor One with 4% accounted for by Factor Two and Three (respectively). Again, Cattell's scree plot showed only one factor (see Figure 7).

Table 29
Initial Eigenvalues and Percent of Variance Accounted for Implementation.

Factor	Initial Eigenvalues		
	Total	Percent of Variance	Cumulative % of Variance
1	14.348	53.141	53.141
2	1.213	4.492	57.633
3	1.122	4.154	61.787

Figure 8. Scree Plot for Exploratory Factor Analysis with Implementation



As previously stated, results from the factor analysis yielded three potential factors using eigenvalues and only one using scree plot results. Similar to the results for skill, a little less than half of the variance was accounted for by Factor One and a relatively small amount was accounted for by each of the remaining factors. Looking at

the factor matrix, only three items cross loaded suggesting a simple structure. Rotation was used to add clarity to the structure; however, similar to previous findings for skill 26 of 27 items cross-loaded when using a cut-off of .30. Increasing that cut-off to .40 resulted in only 11 items cross-loading; however, a similar pattern of loading as observed with skill and value was observed. Several of the remaining items did not appear to greatly differ in strength, thus adding little clarity to the factor structure. Again, subsequent analyses resulted in continued cross-loading and a dwindling number of items with moderate loadings. In turn, it was again concluded that implementation ratings aligned with one factor. Initial and rotated factor loadings are presented in Tables 30 and 31.

Table 30
Factor Matrix for Implementation.

Item	Factor Loadings by Factor		
	Factor 1	Factor 2	Factor 3
Item 1: Implement culturally sensitive approaches and strategies that meet the needs of CLD populations.	.722	-.005	.135
Item 2: Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations.	.674	.124	.212
Item 3: Acknowledge one's limits in CLD competencies (expertise).	.636	.120	.284
Item 4: Use CLD strategies that can assist with maintenance and/or generalization of the intervention.	.773	-.064	.134
Item 5: Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results.	.706	-.219	.151
Item 6: Examine referrals within the context of institutional and systemic patterns associated with CLD populations.	.762	.058	.210
Item 7: Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process.	.652	-.313	.033
Item 8: Evaluate the impact of cultural factors on the delivery of interventions.	.801	-.199	.067
Item 9: Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern.	.762	.225	.145
Item 10: Implement nontraditional methods to collect data that best address a CLD student's needs.	.665	-.121	.087
Item 11: When identifying a targeted behavior, consider the situations and domains in which a behavior is manifested.	.794	-.112	.089
Item 12: Evaluate the acceptability of CLD stakeholders.	.742	-.286	.040
Item 13: Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students.	.752	.163	.092

Item 14: Inform school staff members of CLD factors that can affect decision-making process.	.786	-.037	-.033
Item 15: Consider cultural sources of information that relate to culture specific confirming data.	.699	-.118	-.058
Item 16: Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student.	.656	-.254	-.014
Item 17: Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.	.738	.026	-.026
Item 18: Assess a CLD student's biculturalism to identify a targeted concern.	.706	.332	.121
Item 19: Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter.	.639	-.067	-.188
Item 20: Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior.	.688	.076	-.040
Item 21: Account for one's own cultural values and biases when working with CLD populations.	.625	.316	-.077
Item 22: Demonstrate culturally sensitive verbal and nonverbal communication skills.	.784	.191	-.120
Item 23: Seek out consultation experiences to identify an appropriate intervention plan for CLD populations.	.665	.068	-.163
Item 24: Implement interventions that take into account CLD factors.	.754	.073	-.394
Item 25: Understand the limitations and pitfalls associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations.	.666	.134	-.142
Item 26: Implement culturally sensitive approaches that are acceptable to CLD populations.	.770	-.034	-.329
Item 27: Develop interventions that reflect an appropriate tier level of support for CLD populations.	.727	-.055	-.212

Note. Table outlines factor loadings for Factor One and Factor Two. Items in bold represent items that did not crossload using a cut-off of .40.

Table 31
Rotated Factor Matrix for Implementation.

Item	Factor Loadings by Factor		
	Factor 1	Factor 2	Factor 3
Item 1: Implement culturally sensitive approaches and strategies that meet the needs of CLD populations.	.473	.484	.286
Item 2: Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations.	.362	.578	.222
Item 3: Acknowledge one's limits in CLD competencies (expertise).	.359	.592	.142
Item 4: Use CLD strategies that can assist with maintenance and/or generalization of the intervention.	.549	.476	.304
Item 5: Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results.	.629	.351	.222
Item 6: Examine referrals within the context of institutional and systemic patterns associated with CLD populations.	.466	.585	.260
Item 7: Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process.	.641	.199	.270
Item 8: Evaluate the impact of cultural factors on the delivery of interventions.	.653	.373	.346
Item 9: Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern.	.324	.654	.345
Item 10: Implement nontraditional methods to collect data that best address a CLD student's needs.	.515	.353	.271
Item 11: When identifying a targeted behavior, consider the situations and domains in which a behavior is manifested.	.587	.434	.342
Item 12: Evaluate the acceptability of CLD stakeholders.	.677	.270	.319
Item 13: Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students.	.353	.582	.370
Item 14: Inform school staff members of CLD factors that can	.498	.411	.452

affect decision-making process.

Item 15: Consider cultural sources of information that relate to culture specific confirming data.	.501	.298	.408
Item 16: Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student.	.588	.212	.323
Item 17: Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.	.423	.426	.432
Item 18: Assess a CLD student's biculturalism to identify a targeted concern.	.203	.675	.354
Item 19: Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter.	.396	.224	.491
Item 20: Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior.	.351	.421	.425
Item 21: Account for one's own cultural values and biases when working with CLD populations.	.121	.513	.468
Item 22: Demonstrate culturally sensitive verbal and nonverbal communication skills.	.303	.503	.565
Item 23: Seek out consultation experiences to identify an appropriate intervention plan for CLD populations.	.315	.336	.511
Item 24: Implement interventions that take into account CLD factors.	.313	.266	.749
Item 25: Understand the limitations and pitfalls associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations.	.270	.389	.508
Item 26: Implement culturally sensitive approaches that are acceptable to CLD populations.	.418	.244	.684
Item 27: Develop interventions that reflect an appropriate tier level of support for CLD populations.	.435	.269	.560

Note. Table outlines factor loadings for Factor One and Factor Two. Items in bold represent items that did not crossload using a cut-off of .40.

The second research question was “*Do perceived value and perceived skills (competencies) predict frequency of implementation of self-reported CLD practices.*” A regression model using perceived value and perceived skill as the independent variables and frequency of implementation as the dependent variable was conducted. Total mean scores were computed for value (M = 4.49, SD = .53), skill (M = 2.37, SD = .72), and frequency of implementation reports (M = 3.01, SD = .91). Approximately 61% of the variance for frequency ratings was accounted for by skill level and value ratings ($\hat{Y}_{\text{Implementation Ratings}} = .110 + .153 \text{ Skill Ratings} + .934 \text{ Value Ratings}$). Meaning, for every unit change in skill (e.g., beginning to trained, trained to skilled, etc.) there is a .153 unit change in frequency of implementation ratings (e.g., 0% to 25%, 25% to 50%, etc.) ($p < .05$). Similarly, for every unit change in value (e.g., valuable to very valuable, etc.), there was a predicted .934 unit increase in frequency of implementation ratings ($p < .05$). Results for R and R² are presented in Table 32; the unstandardized and standardized coefficients are presented in Table 33.

Table 32
Percent of Variance Accounted for by Value and Skill as Predictors

Model	R	R Square	Adjusted R Square
1	.781	.610	.606

Table 33
Regression Model for Total Mean Value and Skill as Predictors of Implementation Ratings

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	.110	.322		.341	.733
Total Mean Value	.153	.076	.089	2.014	.045*
Total Mean Skill	.934	.055	.746	16.939	.000*

* $p < .05$

The third research question was “*Do ethnicity, experience working with CLD populations, and overall experience as a school psychologist predict the frequency of implementation of self-reported CLD strategies.*” A dummy variable was created for ethnicity. Responses for European–American/Caucasian (n = 191) were coded as zero and all other responses (n = 41) were coded as one. A regression model using the dummy variable for ethnicity, years working with CLD populations, and years working as a school psychologist as the independent variables and a mean score for frequency of implementation as the dependent variable was conducted.

Approximately 29% of the variance for frequency ratings was accounted for by the independent variables ($\hat{Y}_{\text{Implementation Ratings}} = 2.13 + .325_{\text{Ethnicity}} + .134_{\text{CLD Time}} + .069_{\text{Years Experience}}$). For respondents who indicated that they are from a CLD background (n = 41), there was a predicted .325 unit increase in frequency of implementation ratings ($p < .05$) when holding the remaining independent variables constant. For every ten percent increase of CLD time spent working with CLD populations, there was a predicted .134 increase in frequency of implementation ratings ($p < .05$) when holding the remaining independent variables constant. Lastly, for every five year increase in years practicing as a school psychologist, there was a predicted .069 increase in frequency of implementation ratings ($p < .05$) when holding the remaining independent variables constant. Results for R and R² are presented in Table 34; the unstandardized and standardized coefficients are presented in Table 35.

Table 34
Percent of Variance Accounted for by Personal Characteristics as Predictors

Model	R	R Square	Adjusted R Square
1	.537	.288	.279

Table 35
Regression Model for Personal Characteristics as Predictors of Implementation Ratings

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	2.126	.122		17.418	.000*
Ethnicity	.325	.135	.137	2.414	.017*
CLD Time	.134	.016	.483	8.476	.000*
Years Practicing	.069	.027	.146	2.609	.010*

* $p < .05$

As value and skill were identified as significant predictors, an independent t-test was used to determine if the difference for value and skill ratings across all items was significant for respondents from CLD backgrounds. A Bonferroni correction that reduced the p-value was used to correct for the multiple analyses. The analyses were deemed an important next step as it was hypothesized that school psychologists from CLD backgrounds were expected to have more value and stronger skill sets related to CLD strategies based on their unique experiences both personally and professionally. For value, the difference was not found to be significant, $t(230) = -1.373, p = .785$. Similarly, the difference for skill also was not significant, $t(230) = 1.318, p = .252$. While a review of means shows higher value and skill ratings, the lack of significance for each variable was not expected. It is also likely that the unequal sample size may have yielded biased results. Table 36 presents the mean and standard deviation for each variable; Table 37 outlines the t-test results.

Table 36
Mean and Standard Deviation for Value and Skill by Ethnicity

Value	N	M	SD
Caucasian/European-American	191	-.03	.69
Other	41	.14	.70
Skill			
Caucasian/European-American	191	-.08	.05
Other	41	.36	.13

Note. Mean (M) and Standard Deviation (SD) is based on z-scores. The category of “Other” represents respondents from CLD backgrounds.

Table 37
Independent Samples T-Tests for Value and Skill by Ethnicity

	F	Sig.	T	Df
Value	.075	.79	-1.373	230
Skill	1.318	.25	-3.337	230

Summary of primary dissertation study. As previously noted, 82.7% of respondents indicated that the item illustrations were helpful. This suggests that the illustrations provided adequate context for understanding. Internal consistency for perceived value, skill level, and frequency of implementation was good (Tabachnick & Fidell, 2007). Item means for perceived value were consistently high, whereas more variability for skill (competency) and implementation practices was observed. More specifically, ratings for skill were consistently rated lowest. All but two item means aligned with a Trained level, with none aligning with a Skilled or Expert level. Moreover, respondents reported that they implemented only 14 of the strategies 50% of the time in practice. As ratings suggest a lack of implementation, it is argued that respondents may benefit from targeted training initiatives to improve CLD competencies.

There were eight items that had low mean skill ratings below 2.25: 1 = Establishing Relationships; 0 = Problem Identification; 3 = Problem Analysis; 3 = Plan Implementation; and 1 = Plan Evaluation. Based on findings, it is argued that respondents

struggle the most with analyzing a problem and developing an effective intervention for CLD populations, whereas strategies used to establish relationships and identify a problem are more developed. While reliability for the two lowest item means was acceptable, it could be argued that respondents were unclear or lack sufficient experience to the true meaning of those items. In turn, the low rating may be more indicative of respondent's confusion or lack of experience in respect to the targeted practices. Lastly and as expected, perceived value and skill level predicted frequency of implementation. This suggests that school psychologists are more likely to implement CLD strategies when they perceive that a strategy is valuable and they have more competencies associated with a particular practice.

Based on the results from the factor analysis, two factors were identified. Factor loadings were strong for Factor One and Factor Two. However, only Factor One was identified as a true factor structure and represented a CLD problem-solving model. Reasons for this decision included the theoretical model development process using research, a relatively small amount of the variance accounted for by the second factor, scree plot results, and a thorough review of factor loadings.

It was further concluded that skill and value ratings were significant predictors of implementation ratings. Meaning, respondents reported that they were more likely to implement a strategy if a strategy was valued and respondents had skill related to implementation practices. Results for skill ratings were similar to those in the procedural pilot study; however, unlike the previous results, value was identified a significant predictor when using a larger population. As expected, ethnicity, experience working with CLD populations, and overall years experience working as a school psychologist

were also significant predictors of implementation ratings. Meaning, respondents who reported being from a CLD background, worked more often with CLD populations, and had more years experience within the profession were more likely to implement CLD populations in daily practice. However, it is important to note that the sample of respondents from CLD backgrounds was small and may not adequately reflect the predictability of ethnicity.

Chapter Four: Overview, Discussion, Limitations and Recommendations for Future Researchers

Overview

The population of children originating from culturally and linguistically diverse (CLD) backgrounds is growing at a rapid pace (Rogers & Lopez, 2002). With an increase of students, there is often an increase in variability of individual needs. School psychologists often serve as primary support service providers for these students because of their specializations and training in services that include data-based decision making, consultation, prevention, and intervention (NASP, 2003). They use their skills to more effectively work with parents, educators, and community members to develop culturally-sensitive supports for students from CLD backgrounds. While researchers have provided some insight as to how strategies align with CLD competencies, they have often failed to present a clear picture of what a CLD problem-solving model looks like in the daily practices of school psychologists. Thus, school psychologists are continuously called to reexamine service-delivery models and adapt practices to the unique needs of CLD populations.

The National Association of School Psychologists (2006) has assisted with meeting these needs by developing and implementing tailored training and practice standards. These practices serve as a cornerstone for school-based service delivery and have taken form in a problem-solving model. Previous researchers have found that these models are effective for guiding individualized instruction and delivery of services with marginal populations, such as students with special needs and second language learners (Reschly, 2008). However, while much research exists to define the problem-solving stages of a generic problem-solving model (Adelman & Taylor, 2008; Burns, Wiley, & Viglietta, 2008; Kratochwill, 2008; Pluymert, 2008), there is much less work regarding a tailored model that better helps with the identification and evaluation of the unique and individual differences of CLD populations.

Without a clear understanding of what CLD problem-solving looks like, school psychologists are often left with little direction on how to best address the unique needs of students from CLD backgrounds. It is argued that this lack of direction is resulting in inadequate services and poor outcomes for student success. This work builds upon previous research to present a more focused outline of how CLD strategies are implemented within a CLD problem-solving process.

A study was developed to create a CLD problem-solving model by aligning generic problem-solving stages with evidence-based CLD strategies. Previous research and professional standards were used to identify evidence-based CLD strategies commonly used by school service providers. A newly-developed survey was created by pairing those strategies with real-world item illustrations to ensure respondent understanding how strategies could be applied in day to day practices. Each item was

then rated on the following: (1) perceived value of the strategy; (2) perceived skill level of the respondent as it related to the strategy; and (3) the frequency of implementation of the strategy as reported by the respondent. Evidence for content validity was provided by use of an expert panel and an in-state procedural pilot study. The expert panel was seen as a reliable approach for capturing valuable data related to current practices and ensuring that those practices were truly reflected within the theoretical model (Presser & Blair, 2004; Reynolds & Diamantopoulos, 1998). The in-state procedural pilot study was then used to further evaluate the utility and practicality of proposed strategies. Lastly, the content structure of the model was evaluated by factor analyses and it was concluded that only one true factor existed: CLD problem-solving.

Research Questions. The research questions in this study were:

1. Using an exploratory factor analysis, do the CLD strategies outlined in the literature align with the five stages of a CLD problem-solving model based on reported skill ratings?
2. Do perceived value and perceived skills (competencies) predict frequency of implementation of self-reported CLD practices?
3. Do ethnicity, experience working with CLD populations, and overall experience as a school psychologist predict the frequency of implementation of self-reported CLD strategies?

Discussion

There are three major points supported by this study. The first major point is that CLD strategies can be aligned with generic problem-solving stages to create a CLD problem-solving decision making process. Second, based on the findings of this study,

school psychologists appear to have significant skill deficits related to CLD practices. Lastly, exposure and experience drive implementation rates of CLD practices; thus, professional development opportunities that attend to exposure and experience as key variables are more likely to increase CLD competencies. In the following section, a more in-depth discussion of these three points is outlined.

The Product of a CLD Problem-Solving Model. Aligning with the first purpose of this study, the researcher provided a unique glance at how a CLD problem-solving model *should* look in the daily practices of school psychologists. In the first research question, a CLD problem-solving model was evaluated in the daily practice of school psychologists. A model was developed by aligning CLD strategies with the five problem-solving stages and consisted of 27-items. Content of the survey was successfully validated based on expert panel feedback. The internal consistency of the measure was determined to be good and it was concluded that the survey was procedurally sound. Skill ratings were then used at the selection variable in an exploratory factor analysis. The current sample consisted of 232 participants and is considered fair, whereas 300 or more is considered good (Tabachnick & Fidell, 2007). Varimax rotation was used to ensure that as much of the variance as possible was accounted for by each factor. The Kaiser-Meyer-Olkin (KMO) was satisfactory and Bartlett's Test of sphericity was significant. Correlations were moderately strong and it was concluded that a factor structure existed. Using a Kaiser's criterion, two factors were identified and approximately 60% of the variance was accounted for by Factor One; an additional 4% was accounted for by Factor Two. In comparison, only one factor was identified using Cattell's scree plot. As more than two-thirds of the variance was accounted for by Factor One and a relatively small

amount was accounted for by Factor Two, it was concluded that only one true factor existed. Using a cut-off of .30 (Tabachnick & Fidell, 2007), there was a pattern of cross loading. Increasing the cut-off and qualitative analysis of items failed to yield an additional meaningful construct.

In turn, it was determined that items shared the same conceptual meaning in a one factor model; that model being CLD problem-solving. It was hypothesized that a breakdown of items into the five stages of problem-solving would occur as the stages are widely recognized and implemented in daily practice. At the time of this study, no previous studies were found using a similar approach to evaluating how a CLD problem-solving model could or should look like in daily practice. While the breakdown did not occur in this study, future research is needed to explore the applicability of the stages using a culturally-sensitive approach to problem-solving. Rather, in this study, the theoretical foundation of the model is strongly supported by evidence-based research in the domain of CLD practices. The strategies did factor into one major domain and could mean that there is support of a major approach that accurately reflects CLD problem-solving techniques. As no other model existed at the time of this study, the model presented is the only model available that more clearly define the roles and functions of culturally-responsive problem-solving teams. While the model does not enhance our knowledge of the underlying process or steps in this framework, it is argued that the model proposed serves as a seminal contribution to the scholarly literature on CLD practices as it provide a unique glance at what CLD problem-solving can look like in the daily practices of school psychologists. It is hoped that other researchers will utilize this

model as a starting point to further build upon the understanding of and applicability of CLD strategies within a culturally-sensitive problem-solving model.

Skill Deficits in CLD Competencies. The second major finding of this study was that school psychologists appear to have significant skill deficits related to CLD practices. In addition to theoretical evidence, it is believed that respondent ratings provided a unique view into what the daily practices actually looked like in a school setting. The second research question was used to determine if perceived value and skill level predict implementation rates of CLD practices. A regression model confirmed this assumption. Approximately 61% of the variance for frequency ratings was accounted for by skill level and value ratings ($\hat{y} = .110 + .153 + .934$). For every unit change in skill level when holding value constant, there was a predicted .153 unit increase in frequency of implementation ratings ($p < .05$), while there was a .934 unit increase in frequency for value when holding skill constant ($p < .05$).

As expected, item means for perceived value were relatively high, whereas more variability was observed in skill ratings. Mean scores for all items except two showed a Trained skill level. As a Trained level only accounted for awareness and knowledge, it was expected that more respondents would have reported a Skilled level as it also accounted for implementation skills. This assumption was partially based on school practices. It was thought that as problem-solving teams are more frequently used in schools, school psychologists have more opportunity to practice and improve CLD skills. Similarly, it was found that only fourteen of the strategies were consistently implemented at least 50% of the time in daily practice. This suggests that school psychologists are not utilizing strategies as often they should.

These results appear to support the model proposed by Connerley and Pedersen (2005) which purports that school psychologists develop competencies in a sequential fashion: awareness, knowledge, and skill-development. It was argued that as most respondents reported lower levels of skill, they were more likely to hold awareness and some knowledge of CLD strategies. More importantly, they did not report high skill levels (i.e., skilled or expert/specialist) which would have been needed to more regularly implement CLD strategies. Rather, low skill ratings may reflect two possible issues: (1) school psychologists have not had sufficient access to appropriate training opportunities to develop adequate CLD competencies; and (2) prior models of CLD training may be insufficient to address gaps in professional practice. Meaning, respondents may have lacked the years experience or experience working with CLD populations needed to increase implementation practices (Curtis, Hunley, & Grier, 2002). More research is needed to explore how a theoretical CLD problem-solving model could be used to enhance current training opportunities, and in turn help fill the gaps in professional practice.

Overall, the findings from this study aligned with previous research in which school psychologists are more likely to implement strategies when valuable (Fowler & Harrison, 2001; Chafouleas, Riley-Tillman & Eckert, 2003; Sawyer, Porter, Lehman, Anderson & Anderson, 2006; Stoiber, & Vanderwood, 2008) and when they have a high level of skill development (Brown, 2008; Pluymert, 2008). While the respondents in this study held a high value of strategies, they clearly indicated a lack of skill development which contributed to low implementation rates. Thus, it was concluded that there is a clear skill deficit related to CLD practices among school psychologists. It is hoped that

trainers in this area will initially evaluate skill levels and then respond with appropriate professional development opportunities to address this skill gap in CLD practices as it relates to culturally-responsive problem-solving.

Profits of Exposure and Experience. The last take away from this study is that exposure and experience drive implementation rates of CLD practices; thus, professional development opportunities that attend to exposure and experience as key variables are more likely to increase CLD competencies. The third research question was used to determine if personal characteristics had an impact on implementation rates of CLD practices. A regression model confirmed this assumption. Approximately 29% of the variance for frequency ratings was accounted for by the independent variables ($\hat{y} = 2.13 + .325 + .134 + .069$). For respondents who indicated that they are from a CLD background ($n = 41$), there was a predicted .325 unit increase in frequency of implementation ratings ($p < .05$) when holding the remaining independent variables constant. For every one percent increase of experience working with CLD populations, there was a predicted .134 increase in frequency of implementation ratings ($p < .05$) when holding the remaining independent variables constant. Lastly, for every one year increase for experience working as a school psychologist, there was a predicted .069 increase in frequency of implementation ratings ($p < .05$) when holding the remaining independent variables constant.

Aligning with previous research findings, the assumption that school psychologists from CLD backgrounds do present a different set of skills compared to those identified from the mainstream culture was supported. Moreover, school psychologists from a CLD background are more likely to implement CLD practices

during the problem-solving process. One reason may be that skill development is a sequential process that accounts for the relationship between exposure and experience. Individuals who identified with an ethnic group other than the mainstream culture have had more exposure and experience interacting and working with various ethnic or CLD populations (Roberts, Borden, Christiansen, & Lopez, 2005; Wille, McFarland, & Archwamety, 2009). While this is not surprising it does support the notion that trainers from CLD backgrounds have the ability to provide a new and fresh perspective to CLD problem-solving. However, it is important to note that the researcher did not determine if specific factors related to ethnicity, such as ethnicity category or language, played a stronger role in that prediction.

Despite the lack of previous research to support the predictability of overall experience for implementation practices (Chafouleas et al., 2003; Fowler & Harrison, 2001; Sawyer et al., 2006; Stoiber, & Vanderwood, 2008), overall experience was found to be a significant predictor in this study. It was found that seasoned school psychologists and those with experience working with CLD populations are more likely to implement CLD strategies. However again, no attention was given to determining the relationship between the amount and type of experience with a particular CLD population and implementation rates. Further research would be needed to determine the impact of such variables. As previously discussed, the field of school psychology has undergone much change over the years (Fagan, 2008). Training programs and professional development services have been developed and implemented in an effort to continuously address those changing needs with training improvements. One rationale for these results is that seasoned practitioners have had more opportunity to practice and develop a wide variety

of skill sets. If true, this should be an important point to consider when selecting trainers for CLD professional development opportunities. More seasoned school psychologists may provide an experienced-based perspective that would tend to further advance the evolution of CLD service delivery for less experienced school psychologists (Allen, Eby, Pottet, Lentz, & Lima, 2004; Smith, McAllister, & Snype Crawford, 2001). Thus, consideration of personal characteristics may provide a means of matching young professionals in their practicum and internship placements to facilitate the development of CLD competencies.

In light of the increase in global diversity across schools, school psychologists need to better understand how CLD practices and competencies can help foster more positive outcomes for students from CLD backgrounds. Reflective of the recent paradigm shift from a diagnostic model to a response to intervention model, practitioners would benefit from understanding how such practices might be implemented and what factors may influence implementation of strategies within a response to intervention problem-solving model. Moreover, findings from the current study point to the need for recruiting more school psychologists from CLD backgrounds to capitalize on the exposure and experience benefits of trainers. Doing so is expected to help the profession begin to reflect the broader population which is served in our public schools and produce more innovative and culturally-responsive strategy adaptations and implementation outcomes. Thus, it is hoped that the outcomes from this study will be used to guide future professional development trainings in the area of CLD practices.

Limitations and Recommendations for Future Researchers

As in any study, limitations can be noted in a variety of ways. The current study outlines limitations in terms of survey development, validation procedures, and sampling as well as provides recommendations for future researchers.

Survey Development. Quantitative methods are often used when there is an assumption that individuals hold a similar understanding of a particular construct, whereas qualitative methods can be used to help researchers gain a better understanding of a construct (Firestone, 1987). For this study, the researcher used qualitative methods (i.e., expert panel) to evaluate the construct and content validity of the newly developed survey. It was assumed that the framework of the survey provided an outline of how school psychologists commonly viewed CLD problem-solving strategies. However, as there was no other survey or model on CLD problem-solving, a comparison could not be made to further substantiate this assumption. Quantitative methods were then used to evaluate respondents' value, skill, and frequency of implementation practices using rating scales.

Evaluating the current study, it can be argued that a different approach may have better fit the analysis of the data. This is important because evaluating the appropriateness of the statistical model can help strengthen the meaningfulness of the interpretation and application of the results and how they relate to the day to day practices of school psychologists. Value and skill may best be represented as a continuum rather than categorical or ordinal. In turn, a mixed methods approach that used open-ended questions could have been more beneficial to the understanding and impact of these personal characteristics. Aligning with other aspects of this study, qualitative feedback related to

the depth and frequency of professional experience and training could have also been used to better explore the predictability of experience working with CLD populations. Such data may have provided more evidence of construct and content validity. As previously stated, the CLD model may better reflect a continuum of services that does not represent a linear model. In turn, an exploratory factor analysis may not have been the best fit for analyses. Rather, a different approach such as ANOVA may have provided more clarification for group differences as they related to individual characteristics. Prior to replication, researchers are encouraged to further explore the benefits of a mixed methods design to assist with improvements to the proposed CLD problem-solving model.

Additional limitations included the lack of demographic questions gauging the level of participation in school-based problem-solving and exposure to professional development in the area of CLD problem-solving. From a global perspective, it was assumed that more years practicing and more experience working with CLD populations would yield higher ratings of implementation practices. The idea tested here was that higher skill levels may have been more strongly predicted by the amount of CLD training a participant had received and/or the amount of experience each participant had with implementing a problem-solving process in daily practice. This increase would have been observed across items throughout the scale as more experience (years or with populations) would have warranted a greater repertoire of skills. However, data on the amount of CLD training by respondent was not collected. It can be argued that if this data were collected and compared to skill levels, time spent servicing CLD populations or years experience may not have been significant predictors. As these methods were not

used, there is little evidence to support or dispute these concerns. Researchers are encouraged to consider including these demographic questions in future research designs in order to more accurately determine the predictability of personal characteristics.

As used by other researchers (Presser et al., 2004), survey pretesting was used to provide evidence of survey content as well as identify any practical constraints of the survey. Unlike other surveys, the current survey paired CLD strategies with item illustrations. This method resulted in lengthy items which may have deterred participants from completing all items. As items were found to be strongly correlated, it may have been useful to shorten the survey by deleting items. It is expected that these changes would have resulted in a larger response pool for both the in-state procedural and primary dissertation study. However, skill ratings were low across most items and respondents reported that the item illustrations were useful. In turn, it is possible that for many, the completion of the survey resulted in first-hand insight as to what CLD problem-solving entails. Future researchers are encouraged to more thoroughly review the pros and cons of item and survey length before determining the best method for evaluation purposes.

Validation Procedures. Construct validation refers to the ability to use empirical evidence to support inferences based on a particular scale (Dimitrov, 2010). As with new surveys, researchers are encouraged to validate the construct underlying survey items prior to making conclusions that are then often generalized across a particular population. For the purposes of this study, the construct validity was best supported by a thorough review of the literature and professional standards for school psychologists. As there was no accepted model for CLD problem-solving, the generic problem-solving model was used as the initial framework.

Similarly, content validity was addressed through the creation of survey items using research and an expert panel. Initially, survey items were derived from research geared towards CLD strategies and competencies commonly associated with the service delivery methods of school psychologists (Dimitrov, 2010). Following, an expert panel was asked to review items and provide feedback to help gauge the strength of the relationship between the construct of CLD problem-solving and content of survey items. Feedback was also used to determine the applicability of strategies as they related to the real day to day practices of school psychologists. It was assumed that the experts' knowledge and expertise would provide sufficient evidence to support content validity. However, while consideration was given to years experience with CLD populations, no consideration was given to amount of scholarly contributions made by each panelist on the topic of CLD problem-solving. Also, increasing the number of panelists would likely have increased the quantity of feedback while reflecting more variation in theoretical perspectives as they relate to CLD competencies. It is argued that such considerations may yield more thorough feedback and expertise in future studies.

Another limitation was the lack of convergent validity which relates to the strength of correlation between two similar scales (Bäcckman, & Carlstedt, 2010). The idea is that if two scales used to evaluate the same construct strongly correlate, then the newly developed survey is strongly related to the theoretical framework of which it was constructed. At the time of this study there was little to no prior survey on CLD problem-solving. The researcher was unable to identify a similar survey measuring the same construct; thus, convergent validity was not evaluated (Bäcckman, & Carlstedt, 2010). Future methods may include comparing survey results to observation data of real

problem-solving teams in action or by comparing practitioner or supervisor ratings of CLD effectiveness. Researchers are encouraged to evaluate the convergent validity of this survey as other surveys become available. In turn, results may not adequately represent the range of practices implemented by school psychologists around the country.

Sampling. There were limitations to the samples used for the expert panel, in-state procedural pilot study, and primary dissertation study. Participants for the expert panel and in-state procedural pilot study were selected based on convenience and access. While the researcher believed that the expert panelists represented school psychologists with extensive knowledge and skill-base in CLD competencies, solicitation for participation was not advertised to a larger audience of potential participants. Similarly, it is believed that the state association solicited for participation for in-state procedural study demonstrated good effort towards addressing the CLD skill needs of school psychologists. However, there are no data to support that training initiatives and outcomes align with field-based standards. Also, there are also no data to support the level of participation of association members in CLD training opportunities. Lastly, a state comparison was not used to determine if another state association may have produced a more representative population of school psychologists from CLD backgrounds. Rather, the samples are best representative of convenience samples.

For the primary dissertation study, US Census data published in 2007 was used to identify states with large CLD populations: American Indian and Alaskan Native, Asian, Black, Hispanic, and Pacific Islander. States were ordered based on ethnic populations and the top ten states with the highest ethnic populations for each category were solicited for participation. Twelve of the 23 states (including Colorado) opted to participate (52%).

An additional three respondents originated from states that were solicited for initial participation and an additional three responses came from bordering states: Wyoming, New Hampshire, and Pennsylvania. Because completion of the survey signified consent to participate and to maximize sample size, all six responses were included. However, the final sample ($n = 232$) was primarily made up of school psychologists from seven states: Arizona, Colorado, Florida, New Jersey, New York, North Carolina, and Washington. The remaining five of the twelve states has a respondent sample of five or less.

In 2004, Charvat (2005) surveyed state agencies and state leaders across the 50 states to determine the number of practicing school psychologists. He concluded that approximately 29,367 school psychologists work in public schools; approximately 7,916 of those resided in one of the seven states outlined above. Researchers have argued that 57% to 70% of school psychologists hold a national association membership (Hosp & Reschly, 2002; Lewis, Truscott, & Volker, 2008) and less than 25% of the national membership accounts for state association membership (Curtis, Chesno-Grier, & Hunley, 2003). Using Charvat's (2005) data, 25% of the school psychologists from the seven states ($n = 1979$) would yield a response rate of 12% for the primary dissertation study. This calculation is based on the assumption that 25% of the state's population of school psychologists belong to a state association; there are no data to support this assumption. While this response rate is comparable to the 9% for the in-state procedural pilot study, it is significantly lower than other studies surveying state associations (Erchul, Raven, & Ray, 2001; Fagan & Schicke, 1994).

Lastly, the general population of school psychologists is largely represented by women (Canter, 2006; Curtis, Chesno-Grier, & Hunley, 2003; Erchu, Raven, & Ray,

2001; Fagan, 2004; Fowler & Harrison, 2001) holding a Master's or Specialist degree (Hosp & Reschly, 2002; Lewis, Truscott, & Volker, 2008). The primary dissertation study was representative of these estimates. It has also been estimated that less than 10% of school psychologists are from a CLD background (Canter, 2006; Curtis, Chesno-Grier, & Hunley, 2003; Fagan, 2004) and response rates reported in research have ranged from 5% to 11% (Curtis, Hunley, Walker, & Baker, 1999; Fowler & Harrison, 2001; Lewis, Truscott, & Volker, 2008). Unlike previous research, there was a larger response rate for school psychologists from CLD backgrounds (18%) in the primary dissertation study. It is argued that this increased amount of feedback from ethnically diverse individuals provides unique insight to the routine practices of school psychologists from CLD backgrounds. However, it is concluded that future research using a larger, more representative sample is needed to supplement and expand the contributions made by the current study.

Recommendations for Future Researchers

As Guerrero and Leung (2008) argued, no one model accounts for all CLD factors. Rather, it is expected that the theoretical model developed in this study could be used as a starting point. For example, the model might be helpful for enhancing training programs and professional development opportunities aimed at strengthening CLD competencies for school psychologists. It also may help in the development of teaming and collaboration practices often used in school districts that can better serve CLD populations in the future. The problem-solving model proposed here is only one way to initiate greater dialog on the applicability of CLD strategies implemented in the daily practices of school psychologists. To conclude, the following recommendations are

provided in hopes of better assisting trainers with the development of more culturally-responsive training opportunities for school psychologists.

1. To begin, it is important to provide a platform for school psychologists to engage in discussion and training development as it relates to CLD competencies. For example, create a special interest group or committee on the topic to help initiate that discussion. Additional goals of the group may be to identify skill deficits of service providers and develop a list of valuable resources for skill development. Groups should include seasoned and early career school psychologists as well as individuals that represent different cultural groups. It is expected that a diverse group is more likely to produce an extensive and comprehensive list of ideas for training development.
2. Trainers are encouraged to conduct needs assessments aimed at identifying levels of awareness, knowledge, and skills as they relate to CLD practices. A further evaluation of value may also prove to be useful as the research supported the importance of this variable predicting implementation practices. Trainers are encouraged to use this survey or another tool specifically aimed at evaluating CLD practices. Immediate feedback and an overview of next steps should be provided to respondents in hopes of maintaining interest and investment during long-term initiatives.
3. Trainings should be targeted, yet comprehensive. For example, the problem-solving stages could be used as a guide for module development. Initial training may focus on developing skills related to establishing relationships with later trainings may focus on the problem identification stage. Doing so is expected to

help ensure that awareness, knowledge, and skills are developed fully across the domains of CLD practices.

4. While trainings often focus on skill development as it relates to a particular topic, it is also important to provide training on how to facilitate systems change. As previously mentioned, there has been a paradigm shift in the field of school psychology. Low ratings for skill and implementation practices may suggest that not all school psychologists have fully bought into this shift. If true, then it is likely that other school and district staff members share similar skill deficits. Trainers should acknowledge this possible challenge and attend to the skills needed to assist with the skill development of other professionals servicing students and families from CLD backgrounds. Doing so is expected to communicate to trainees a level of acknowledgement for their challenges and frustrations during this time of change. This can also help communicate a high level of perceived support and value for their participation and effort for change.
5. Trainers are encouraged to continuously monitor implementation practices of school psychologists as they relate to CLD strategies prior to and after training opportunities. For example, it may be helpful to provide a list of CLD strategies to school psychologists and request that they track their implementation rates for one week. A similar method may be used to collect additional data at future intervals. Doing so is expected to assist with evaluating baseline and follow-up data more accurately to predict professional development growth outcomes. Small-group of focus-group discussions may also be used to collect data as it relates to other challenges. For example, questions may aim at identify reasons for/against

implementation, supports that facilitate practice and implementation, as well as other unidentified challenges.

6. It was determined that seasoned school psychologists from CLD backgrounds with experience working with CLD populations are expected to provide unique insight into the application of CLD strategies. While theory and research are valuable components to training, trainings that also incorporate the expertise and experience of these individuals are expected to be more beneficial and practical to the application of skills. A good first step to identifying these individuals may be to survey staff members on their areas of interests and experience. One may use the problem-solving stages as a guide for survey development and to better structure feedback as it relates to experience levels across problem-solving domains.
7. Trainers are encouraged to consult and coordinate professional development initiatives with an organization and/or district department that specializes in culturally-responsive practices. It is likely that individuals within these systems hold a great amount of expertise and experience as it relates to culturally-sensitive services provided to a variety of individuals from CLD backgrounds. Doing so can also ensure that trainings best align with professional standards and evidence-based practices commonly supported by the profession.

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Appendix

Appendix A. Defining Key Terms

School Psychologists: Individuals that are state licensed school psychologists and work within a public school system servicing school-aged children.

General Problem-Solving Process: A model of service delivery that includes five stages: (1) establishing relationships; (2) problem identification; (3) problem analysis; (4) plan implementation; and (5) plan evaluation.

Mainstream Culture (i.e., *culture*): The attitudes, perceptions, and behaviors of the American population.

Ethnicity: The group membership of an individual that reflects a shared social and cultural background based on a common history.

Culturally and Linguistically Diverse (CLD) Populations: Populations of individuals whose culture deviates from the majority population.

Culturally and Linguistically Diverse Strategies: Strategies that deviate from the mainstream culture and align with the culture of a CLD population.

Perceived Value: Some level of importance as reported.

Perceived Skill Level (i.e., *skill or competency*): The level of awareness, knowledge, and/or skills related to a particular CLD strategy in a problem-solving process as reported.

Appendix B1. Instructions for Expert Panel Review

Expert Panel Members: Project Information Sheet and Survey Review Form

Thank you for agreeing to serve as an expert panel member for the current study titled, “A Culturally and Linguistically Diverse Problem-Solving Model: Using School Psychologists’ Perceptions to Identify Factors that Impact Daily Practices.” In brief, there are three purposes of this study. The first purpose of this study is to identify what a CLD problem-solving model looks like in the day to day practices of school psychologists. The second purpose of this study is to identify the role that perceived value and perceived skill-base level play in the likelihood of implementation (frequency of implementation) of a CLD problem-solving model. Lastly, the third purpose of this study is to determine if individual differences (e.g., ethnicity, experience working with CLD populations, years of experience) contribute to frequency rates of implementing a CLD problem-solving model. Overall, this study is considered important because it contributes to the need for research to better identify how standards align with the daily practices of school psychologists.

As indicated, the first task is to identify what a CLD problem-solving model looks like in the day to day practices of school psychologists. Thus, a survey was developed to best reflect the different stages of a CLD problem-solving process. School Psychology: A Blueprint for Training and Practice III (NASP, 2006) and the professional literature on the topic served as a foundation for item development. Overall, five stages of a CLD problem-solving model were identified: (1) establishing relationship; (2) problem identification; (3) problem analysis; (4) plan development and implementation; and (5) plan evaluation. While there are a number of factors that reflect the various stages of the

CLD problem-solving model, attention was given to factors that were best represented in the professional literature used to guide item development.

To assist with the final development of the scale, you have been selected as an expert panel member in hopes of gaining your expertise with working with CLD populations. As part of your participation, you have been provided with a copy of the drafted scale. For each item, you will be asked five questions:

1. Does this question and example best fit in this stage of the CLD problem-solving process? If not, which stage does it better reflect?
2. Does this question and example reflect a CLD characteristic of a CLD problem-solving process?
3. If possible, would you provide an example that may be better than the one provided?
4. Please provide any other items and/or examples for this particular problem-solving stage.
5. Please provide any general comments and feedback

Participation is strictly voluntary and is expected to take approximately 30 minutes. The benefits of your participation include contributing to the improvement of CLD competencies among practicing school psychologists. We respect your right to choose not to answer questions that make you feel uncomfortable. If, however, you experience discomfort, you may discontinue your participation by not completing the remaining questions. Your responses will be confidential, meaning that only the researchers will be able to connect your identifying information with your responses. No identifying information will be included in the final study write-up.

For questions and/or concerns, the primary researcher for this study is Janeann Lineman, SSP, who can be reached via email at jlineman@du.edu. This study is under

the supervision of faculty sponsor, Dr. Gloria Miller, Professor, Child, Family, and School Psychology Program with the Morgridge College of Education at the University of Denver, Denver, CO 80208, 303-871-3340, gmiller@du.edu.

You may keep this page for your records. We thank you for your participation!

Appendix B2. Survey Items and Illustrations for Expert Panel Review

Stage 1. Establishing Relationships: “Establishing relationships” has been identified as the first stage of a CLD problem-solving process. Questions in this section focus on methods used to develop and maintain relationships with all stakeholders. Special focus is on working with CLD populations.

Question	Example
Accounting for one’s own cultural values and biases when working with CLD populations.	For example, acknowledging one’s own limits in CLD competencies when working with CLD populations such as populations of Haitian decent.
Establishing relationships with parents by assisting with routine tasks of the CLD problem-solving process.	For example, assisting with scheduling team meetings, telephone conferences, and/or written communication.
Demonstrating culturally sensitive verbal and nonverbal communication skills.	For example, monitoring one’s own direct and indirect communication patterns when working with CLD populations.
Informing school staff members of CLD factors that affect the CLD problem-solving process.	For example, providing staff members with handouts on communication patterns and cultural norms associated with a particular CLD population.
Being aware of the skills needed by qualified interpreters.	For example, reviewing the training level of interpreters and assisting with selection of a qualified interpreter for a team meeting.
Ensuring that frequent communication is used to ensure active participation among all stakeholders when working with CLD populations.	For example, meeting the needs of CLD populations by identifying the most appropriate way to communicate with stakeholders, such as email, telephone calls, written communication, and/or home and community visits.

Stage 2. Problem Identification: “Problem identification” has been identified as the second stage of a CLD problem-solving process. Questions focus on methods that are used to identify a target problem that impacts a CLD student’s success at school. While assessment procedures can be used throughout the various stages of the CLD problem-solving process, specific attention is given to the assessment procedures used to identify a targeted problem when working with CLD populations.

Question	Example
Examining referrals within the context of institutional and systemic patterns associated with CLD populations.	For example, identifying CLD factors that may contribute to the misidentification of problematic behaviors exhibited by different CLD populations.
Considering the impact of poverty on the physical and mental health of CLD populations.	For example, considering how the malnutrition of a student affects mood and energy level in relationship to identifying a targeted problem.
Understanding the limitations and pitfalls associated with the prescribed use of standardized instruments not normed or validated with CLD populations.	For example, using assessment techniques that allow for the most complete and valid assessment possible (e.g., dynamic assessment, developmental assessment, curriculum-based assessment) to identify an appropriate targeted problem for a CLD student.
Having expertise in assessing a CLD student’s biculturalism.	For example, exhibiting caution when interpreting a CLD student’s infrequent or brief responses as evidence of a low verbal ability since it may be a culturally bound behavior.
Use instruments that are sensitive to CLD differences when identifying a targeted problem.	For example, incorporating alternative assessment methods (e.g., dynamic, ecological) and considering the implications of diagnostic results that provide information about language proficiency.
Throughout an assessment, considering the situations and domains in which a behavior is manifested.	For example, accounting for the different situations in which first and second languages are used by a CLD student.

Stage 3: Problem Analysis: “Problem analysis” has been identified as the third stage of a CLD problem-solving process.

Questions focus on methods used to analyze a targeted problem, and then select or develop an appropriate intervention.

Question	Example
Analyzing the relocation and migration processes of CLD students and the effects on the social-emotional adjustment experiences.	For example, considering a CLD student’s adjustment experiences in the native country and experiences occurred during the flight period and early resettlement stages.
Seeking out consultation experiences to help identify an appropriate intervention plan for CLD populations.	For example, consulting with an expert that works frequently with CLD populations to gain information on effective intervention plans for CLD populations.
Considering cultural sources of information in relationship to culture specific confirming data.	For example, analyzing a behavior by using a CLD comparative comparison group.
Analyze the systemic factors associated with the educational success of CLD students.	For example, initiate a series of meetings with team members to analyze the curriculum, instructional practices and school programs to identify how such services impact the success of CLD students.
Implementing knowledge of successful instructional strategies when analyzing a targeted problem for a CLD student.	For example, integrate instructional strategies that meet the needs of CLD populations in the intervention design.
Acknowledge that the assessment process is a comprehensive process when working with all CLD students.	For example, analyze information about the impact of socio-cultural, environmental, political, experiential, and language-based factors that impact success of CLD students.
Implementing interventions that reflect an appropriate tier level of support in the CLD problem-solving process.	For example, implementing a targeted intervention that meets a CLD students needs when in tier 3 of the CLD problem-solving process.

Stage 4. Plan Implementation: “Plan implementation” has been identified as the fourth stage of a CLD problem-solving process. Questions focus on methods used to implement interventions for CLD populations.

Question	Example
Implementation of interventions that account for CLD factors.	For example, using an intervention that accounts for tolerance and/or racism within a school that a student attends.
Include a significant family member in the implementation of an intervention plan for a CLD student.	For example, assigning a parent an active role in collecting progress monitoring data within the home setting.
Implement culturally sensitive approaches that are acceptable when working with CLD populations.	For example, implementing an intervention plan that incorporates cultural customs such as folk methods.
Implement culturally sensitive approaches that have demonstrated effectiveness with CLD populations.	For example, implementing intervention plans that have demonstrated success in the professional literature for CLD populations.
Implement nontraditional methods to collect data that best address a CLD student’s needs.	For example, conduct home visits to gather progress-monitoring data and maintain consultation efforts with CLD families.
Implement progress-monitoring tools that are acceptable to team members involved in the CLD problem-solving process.	For example, use translated forms in order to provide Spanish speaking parents an opportunity to collect data at home.

Stage 5. Plan Evaluation: “Plan evaluation” has been identified as the fifth stage of a CLD problem-solving process. Questions focuses on methods used to evaluate intervention plans as well as identifying and implementing alternative approaches (i.e., information and formal evaluations) for service delivery.

Question	Example
Use a variety of methods to present data to team members in order to ensure a comprehensive understanding of outcome results.	For example, using graphs and/or translated reports to ensure a clear understanding for all team members and CLD families.
Evaluate the adherence of an intervention plan.	For example, identify to what degree the intervention plan was delivered across settings as outlined and designed.
Evaluate the quality of delivery for an intervention plan.	For example, review observations conducted during implementation and evaluate the degree to how well the plan was delivered.
Evaluate the responsiveness of participants.	For example, evaluate consultation data in order to determine the level of responsiveness from all stakeholders.
Evaluate if an intervention plan was appropriate for the targeted problem.	For example, consider if the plan was too weak to deal with the magnitude of a targeted behavior problem.
When an intervention is unsuccessful, returning to an earlier CLD problem-solving stage.	For example, failure may be due to inaccurately identifying cultural factors that impact performance and require you to return to the problem identification stage.
Use strategies to assist with the maintenance of intervention plans.	For example, helping team members establish follow-up consultations with CLD parents and community member to establish continuous evaluation efforts for future evaluation purposes.
Use strategies to assist with generalizing outcomes.	Hold informational meetings with staff members in order to provide comprehensive information on the CLD problem-solving process pertaining to the student of interest.

Appendix C: Survey Items and Illustrations by CLD Problem-Solving Domain

Expert Panel Survey Items	Pilot Survey Items
<p><i>Accounting for one's own cultural values and biases when working with CLD populations.</i></p> <p>For example, acknowledging one's own limits in CLD competencies when working with CLD populations such as populations of Haitian decent.</p>	<p><i>Account for one's own cultural values and biases when working with CLD populations.</i> For example, be aware and knowledgeable of one's own identity groups and how this impacts our values, our worldview, and views of others when working with CLD populations.</p>
<p>No Reference Item</p>	<p><i>Acknowledge one's limits in CLD competencies (expertise).</i> For example, acknowledge a lack of experience working with special populations, such as students/families of Haitian decent, and seek consultation from colleagues who have more experience working with such populations.</p>
<p><i>Establishing relationships with parents by assisting with routine tasks of the CLD problem-solving process.</i> For example, assisting with scheduling team meetings, telephone conferences, and/or written communication.</p>	<p><i>Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.</i> For example, identifying the most appropriate way to communicate with stakeholders from CLD backgrounds, such as email, telephone calls, written communication, and/or home and community visits in their native language when possible.</p>
<p><i>Demonstrating culturally sensitive verbal and nonverbal communication skills.</i> For example, monitoring one's own direct and indirect communication patterns when working with CLD populations.</p>	<p><i>Demonstrate culturally sensitive verbal and nonverbal communication skills.</i> For example, monitor, understand, and interpret direct and indirect communication of CLD populations.</p>
<p><i>Informing school staff members of CLD factors that affect the CLD problem-solving process.</i> For example, providing staff members with handouts on communication patterns and cultural norms associated with a particular CLD population.</p>	<p><i>Inform school staff members of CLD factors that can affect decision-making process.</i> For example, provide staff members with handouts on communication patterns (e.g., second language acquisition patterns) and cultural norms associated with a particular CLD population.</p>

Being aware of the skills needed by qualified interpreters. For example, reviewing the training level of interpreters and assisting with selection of a qualified interpreter for a team meeting.

Ensuring that frequent communication is used to ensure active participation among all stakeholders when working with CLD populations. For example, meeting the needs of CLD populations by identifying the most appropriate way to communicate with stakeholders, such as email, telephone calls, written communication, and/or home and community visits.

Examining referrals within the context of institutional and systemic patterns associated with CLD populations. For example, identifying CLD factors that may contribute to the misidentification of problematic behaviors exhibited by different CLD populations.

Considering the impact of poverty on the physical and mental health of CLD populations. For example, considering how the malnutrition of a student affects mood and energy level in relationship to identifying a targeted problem.

Understanding the limitations and pitfalls associated with the prescribed use of standardized instruments not normed or validated with CLD populations. For example, using assessment techniques that allow for the most complete and valid assessment possible (e.g., dynamic assessment, developmental assessment, curriculum-based assessment) to identify an appropriate targeted problem for a CLD

Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter. For example, review the training level of interpreters, assist with selection of a qualified interpreter for a team meeting, and take part in the briefing and debriefing process with the interpreter.

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Examine referrals within the context of institutional and systemic patterns associated with CLD populations. For example, identify factors that may contribute to the misidentification of problematic behaviors exhibited by different CLD populations.

Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations. For example, consider how malnutrition associated with low SES populations can impact a student's mood and energy level in relationship to a targeted concern.

Understand the limitations and pitfalls associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations. For example, implement alternative assessment methods (e.g., dynamic, ecological) and consider the implications of diagnostic results that provide information about language proficiency.

student.

Having expertise in assessing a CLD student's biculturalism. For example, exhibiting caution when interpreting a CLD student's infrequent or brief responses as evidence of a low verbal ability since it may be a culturally bound behavior.

Throughout an assessment, considering the situations and domains in which a behavior is manifested. For example, accounting for the different situations in which first and second languages are used by a CLD student.

Analyzing the relocation and migration processes of CLD students and the effects on the social-emotional adjustment experiences. For example, considering a CLD student's adjustment experiences in the native country and experiences occurred during the flight period and early resettlement stages.

Use instruments that are sensitive to CLD differences when identifying a targeted problem. For example, incorporating alternative assessment methods (e.g., dynamic, ecological) and considering the implications of diagnostic results that provide information about language proficiency.

Seeking out consultation experiences to help identify an appropriate intervention plan for CLD populations. For example, consulting with an expert that works frequently with CLD populations to gain information on effective intervention plans for CLD populations.

Assess a CLD student's biculturalism to identify a targeted concern. For example, exhibit caution when interpreting a CLD student's infrequent or brief responses as it may be evidence of a low verbal or limited English proficiency level.

When identifying a targeted behavior, consider the situations and domains in which a behavior is manifested. For example, observe a target behavior, such as language, across multiple settings and obtain input from family and cultural consultants on how to interpret the behavior according to a student's own cultural/linguistic background.

Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior. For example, consider a CLD student's adjustment experiences in the native country and experiences occurred during the flight period and early resettlement stages.

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Seek out consultation experiences to identify an appropriate intervention plan for CLD populations. For example, consult with an expert that works frequently with CLD populations to gain information on effective intervention plans for CLD populations.

Considering cultural sources of information in relationship to culture specific confirming data. For example, analyzing a behavior by using a CLD comparative comparison group.

Consider cultural sources of information that relate to culture specific confirming data. For example, analyze a behavior by using a CLD comparative comparison group.

Acknowledge that the assessment process is a comprehensive process when working with all CLD students. For example, analyze information about the impact of socio-cultural, environmental, political, experiential, and language-based factors that impact success of CLD students.

Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students. For example, analyze information about the impact of socio-cultural, environmental, political, experiential, and language-based factors related to CLD students' prior performance and future success.

Implementing interventions that reflect an appropriate tier level of support in the CLD problem-solving process. For example, implementing a targeted intervention that meets a CLD students needs when in tier 3 of the CLD problem-solving process.

Develop interventions that reflect an appropriate tier level of support for CLD populations. For example, develop a targeted intervention that meets a CLD student's needs when in Tier 2 of the CLD decision-making process and determine if a student's placement at a more intense level of intervention is a result of CLD factors.

Analyze the systemic factors associated with the educational success of CLD students. For example, initiate a series of meetings with team members to analyze the curriculum, instructional practices and school programs to identify how such services impact the success of CLD students.

Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern. For example, consider the impact of instruction of language, consistency of schooling, and type of curriculum previously implemented in other school settings.

Implementation of interventions that account for CLD factors. For example, using an intervention that accounts for tolerance and/or racism within a school that a student attends.

Implement interventions that take into account CLD factors. For example, use an intervention that accounts for tolerance and/or racism within a school that a CLD student attends.

Include a significant family member in the implementation of an intervention plan for a CLD student. For example, assigning a parent an active role in collecting progress monitoring data within the home setting.

Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student. For example, assign a CLD family member an active role in collecting progress monitoring data within the home setting.

Implement culturally sensitive approaches that are acceptable when working with CLD populations. For example, implementing an intervention plan that incorporates cultural customs such as folk methods.

Implement culturally sensitive approaches that have demonstrated effectiveness with CLD populations. For example, implementing intervention plans that have demonstrated success in the professional literature for CLD populations.

Implement nontraditional methods to collect data that best address a CLD student's needs. For example, conduct home visits to gather progress-monitoring data and maintain consultation efforts with CLD families.

Implement progress-monitoring tools that are acceptable to team members involved in the CLD problem-solving process. For example, use translated forms in order to provide Spanish speaking parents an opportunity to collect data at home.

Implementing knowledge of successful instructional strategies when analyzing a targeted problem for a CLD student. For example, integrate instructional strategies that meet the needs of CLD populations in the intervention design.

Use a variety of methods to present data to team members in order to ensure a comprehensive understanding of outcome results. For example, using graphs and/or translated reports to ensure a clear understanding for all team members and CLD families.

Implement culturally sensitive approaches that are acceptable to CLD populations. For example, implement an intervention plan that incorporates cultural customs when they align with a student's level of acculturation and current practices.

Implement culturally sensitive approaches and strategies that meet the needs of CLD populations. For example, implement intervention plans that have demonstrated success in the professional literature for CLD populations.

Implement nontraditional methods to collect data that best address a CLD student's needs. For example, conduct home visits to gather progress-monitoring data, maintain consultation efforts with CLD families, and collect community members' perspectives on progress.

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Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results. For example, use graphs and/or translated reports using stakeholders' native language to ensure a clear evaluation and understanding for all team members and CLD families.

Evaluate the adherence of an intervention plan. For example, identify to what degree the intervention plan was delivered across settings as outlined and designed.

Evaluate the responsiveness of participants. For example, evaluate consultation data in order to determine the level of responsiveness from all stakeholders.

Use strategies to assist with the maintenance of intervention plans. For example, helping team members establish follow-up consultations with CLD parents and community member to establish continuous evaluation efforts for future evaluation purposes.

Evaluate the quality of delivery for an intervention plan. For example, review observations conducted during implementation and evaluate the degree to how well the plan was delivered.

Evaluate if an intervention plan was appropriate for the targeted problem. For example, consider if the plan was too weak to deal with the magnitude of a targeted behavior problem.

When an intervention is unsuccessful, returning to an earlier CLD problem-solving stage. For example, failure may be due to inaccurately identifying cultural factors that impact performance and require you to return to the problem identification stage.

Use strategies to assist with generalizing

Evaluate the impact of cultural factors on the delivery of interventions. For example, identify to what degree the intervention plan was delivered across settings as outlined and designed.

Evaluate the acceptability of CLD stakeholders. For example, evaluate consultation data in order to determine the level of responsiveness and satisfaction of all CLD stakeholders involved in the process.

Use CLD strategies that can assist with maintenance and/or generalization of the intervention. For example, help team members establish follow-up consultations with CLD parents and community member to establish continuous evaluation efforts for future evaluation purposes. Consider barriers for parents related to poverty, language, and other CLD factors to assist with follow-up plans and support accordingly.

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outcomes. Hold informational meetings with staff members in order to provide comprehensive information on the CLD problem-solving process pertaining to the student of interest.

Appendix D: Demographic Questions for In-State Procedural Study and Primary Dissertation Study

1. What is your gender?

Male

Female

2. What is your ethnicity?

European-American/Caucasian

African-American/Black

Asian American

Hispanic/Latino

Native American Indian

Pacific Islander

Other

3. What is your age range?

20-29

30-39

40-49

50-59

60-69

70 or older

4. What is your highest degree level?

MS

SSP/EdS/MS + 30

PhD/PsyD/EdD

5. Including your internship year, how many years have you been practicing as a school psychologist? (Please do not count the current academic year.)

[Open-ended question]

6. Estimating, what percentage of your time is spent servicing students and families from culturally and linguistically diverse (CLD) backgrounds?

[Open-ended question]

7. What type of school district do you work in?

Urban

Suburban

Rural

8. Do you work...

Full-Time (5 days/week)

Part-Time (less than 5 days/week)

Appendix E. In-State Procedural Pilot Study and Primary Dissertation Study Email Solicitation for Participation

Dear [*Insert State Association Name*] Members,

I hope you are well! I would like to invite you to participate in a 10-minute survey for a pilot study that aims to develop a culturally and linguistically diverse (CLD) decision-making survey. More information regarding the project and/or contact information for the researcher/faculty sponsor may be found on the online survey.

To participate and read more about the study, please click the link below:
http://www.surveymonkey.com/s.aspx?sm=F_2fbJBpzxhwP0Knsn2D_2bUIA_3d_3d

Your participation is very much appreciated. Thank you in advance for your time and effort!

Sincerely,

Janeann Lineman, NCSP
Doctoral Student
Child, Family, and School Psychology Program
University of Denver
jlineman@du.edu

Appendix F. In-State Procedural Pilot Study and Primary Dissertation Study Project Information Sheet

Development of a Survey: A Culturally and Linguistically Diverse (CLD) Decision-Making Model

You are invited to participate in a 10-minute survey for a study that aims to develop a culturally and linguistically diverse (CLD) decision-making survey. Findings will be used to help districts/states develop trainings to improve the CLD competencies of school psychologists. Participation will involve responding to 29-items and 8 demographic questions. You will be asked to rate your value, skill level, and frequency of implementation in regard to example practices. All responses are anonymous and completion of the survey signifies consent to participate.

Results are expected to contribute to research on CLD decision-making practices. Potential risks are minimal. You have the right to not answer questions that make you feel uncomfortable. If, however, you experience discomfort, you may discontinue your participation by not completing the survey and closing the survey browser.

The study is conducted by Janeann Lineman, SSP, who can be reached via email at jlineman@du.edu, and under the supervision of faculty sponsor, Dr. Gloria Miller, Professor, Child, Family, and School Psychology Program with the Morgridge College of Education at the University of Denver, Denver, CO 80208, 303-871-3340, [gmiller@du.edu](mailto:gmilller@du.edu). If you have concerns or complaints about how you were treated during the research sessions, please contact Dr. Dennis Wittmer, Chair, Institutional Review Board for the Protection of Human Subjects at 303-871-2431 or Sylk Sotto Santiago, Office of Sponsored Programs at 303-871-4052 or write to either at the University of Denver, OSP 2199 S. University Blvd. Denver CO 80208-2121.

You may print this page for your records. Thank you for your participation.

Appendix G. Data Tables

Table 1
Five Domains of Problem-Solving Model

Stage 1: Establishing Relationship

Stage 2: Problem Identification

Stage 3: Problem Analysis

Stage 4: Plan Implementation

Stage 5: Plan Evaluation

Table 2

CLD Themes for Establishing Relationships

Awareness of cultural values and biases (*self and others*)

Awareness and expansion of one's own CLD competencies (*skills*)

Participation in routine tasks (*make phone calls, schedule meetings, etc.*)

Awareness and expansion of stakeholders' CLD competencies (*professional development of staff*)

Facilitate active participation of all stakeholders (*establish trust, solicit feedback, etc.*)

Table 3

CLD Themes for Problem Identification

Implementation of appropriate assessment practices
Consideration of institutional and systemic patterns
Consideration of relocation and migration experiences
Consideration of access/utilization of medical and mental health resources
Consideration of contextual factors impacting behavior
Consideration of biculturalism impact
Implementation of appropriate assessment instruments

Table 4

CLD Themes for Problem Analysis

Analyses and identification of appropriate CLD intervention plans
Analyses of systemic factors impacting educational success of CLD students
Analyses of instructional components of learning and prior schooling experiences
Analyses of other cultural sources of information
Analyses of assessment procedures
Development and implementation of appropriate CLD interventions plans

Table 5

CLD Themes for Plan Implementation

Assignment of parent tasks and responsibilities

Implementation of successful and culturally sensitive culturally-based strategies

Implementation of interventions that account for CLD factors

Implementation of appropriate assessment and progress monitoring methods

Table 6

CLD Themes for Plan Evaluation

Implementation of methods to ensure a comprehensive understanding of outcomes

Evaluation of plan appropriateness (*adherence, quality, responsiveness*)

Evaluation of plan success as related to goals, objectives, and targeted outcomes

Return to earlier CLD problem-solving stage(s) (*if needed*)

Establishment of plan maintenance and/or generalizing strategies

Table 7

Five Domains of a Culturally and Linguistically Diverse Problem-Solving Model

Establishing Relationship: Identified as the first stage of a CLD problem-solving model. Focuses on methods used to develop and maintain relationships as CLD stakeholders.

Problem Identification: Identified as the second stage of a CLD problem-solving model. Focuses on methods used to identify a targeted problem that impacts student success. Specific attention is given to assessment procedures used to identify a targeted problem with CLD populations.

Problem Analysis: Identified as the third stage of a CLD problem-solving model. Focuses on methods used to analyze targeted problems and then select and/or develop appropriate interventions for CLD populations.

Plan Implementation: Identified as the fourth stage of a CLD problem-solving model. Focuses on methods used to implement interventions for CLD populations.

Plan Evaluation: Identified as the fifth stage of a CLD problem-solving model. Focuses on methods used to evaluate intervention plans and implementation practices when working with CLD populations.

Table 8
CLD Themes for the CLD Problem-Solving Stages

CLD Problem-Solving Stages	CLD Themes
Establishing Relationships	<p>Awareness of cultural values and biases (<i>self and others</i>)</p> <p>Awareness and expansion of one's own CLD competencies (<i>skills</i>)</p> <p>Participation in routine tasks (<i>make phone calls, schedule meetings, etc.</i>)</p> <p>Awareness and expansion of stakeholders' CLD competencies (<i>professional development of staff</i>)</p> <p>Facilitate active participation of all stakeholders (<i>establish trust, solicit feedback, etc.</i>)</p>
Problem Identification	<p>Implementation of appropriate assessment practices</p> <p>Consideration of institutional and systemic patterns</p> <p>Consideration of relocation and migration experiences</p> <p>Consideration of access/utilization of medical and mental health resources</p> <p>Consideration of contextual factors impacting behavior</p> <p>Consideration of biculturalism impact</p> <p>Implementation of appropriate assessment instruments</p>
Problem Analysis	<p>Analyses and identification of appropriate CLD intervention plans</p> <p>Analyses of systemic factors impacting educational success of CLD students</p> <p>Analyses of instructional components of learning and prior schooling experiences</p> <p>Analyses of other cultural sources of information</p> <p>Analyses of assessment procedures</p> <p>Development and implementation of appropriate CLD interventions plans</p>
Plan Implementation	<p>Assignment of parent tasks and responsibilities</p> <p>Implementation of successful and culturally sensitive culturally-based strategies</p> <p>Implementation of interventions that account for CLD factors</p> <p>Implementation of appropriate assessment and progress monitoring methods</p>
Plan Evaluation	<p>Implementation of methods to ensure a comprehensive understanding of outcomes</p> <p>Evaluation of plan appropriateness (<i>adherence, quality, responsiveness</i>)</p> <p>Evaluation of plan success as related to goals, objectives, and targeted outcomes</p> <p>Return to earlier CLD problem-solving stage(s) (<i>if needed</i>)</p>

Table 9
 Survey Items and Illustrations by CLD Problem-Solving Domain

Survey Item and Illustration	CLD Problem-Solving Domain
<i>Account for one's own cultural values and biases when working with CLD populations.</i> For example, be aware and knowledgeable of one's own identity groups and how this impacts our values, our worldview, and views of others when working with CLD populations.	Establishing Relationships
<i>Acknowledge one's limits in CLD competencies (expertise).</i> For example, acknowledge a lack of experience working with special populations, such as students/families of Haitian decent, and seek consultation from colleagues who have more experience working with such populations.	Establishing Relationships
<i>Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.</i> For example, identifying the most appropriate way to communicate with stakeholders from CLD backgrounds, such as email, telephone calls, written communication, and/or home and community visits in their native language when possible.	Establishing Relationships
<i>Demonstrate culturally sensitive verbal and nonverbal communication skills.</i> For example, monitor, understand, and interpret direct and indirect communication of CLD populations.	Establishing Relationships
<i>Inform school staff members of CLD factors that can affect decision-making process.</i> For example, provide staff members with handouts on communication patterns (e.g., second language acquisition patterns) and cultural norms associated with a particular CLD population.	Establishing Relationships
<i>Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter.</i> For example, review the training level of interpreters, assist with selection of a qualified interpreter for a team meeting, and take part in the briefing and debriefing process with the interpreter.	Establishing Relationships
<i>Examine referrals within the context of institutional and systemic patterns associated with CLD populations.</i> For example, identify factors that may contribute to the misidentification of problematic behaviors exhibited by different CLD populations.	Problem Identification

<p><i>Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations.</i> For example, consider how malnutrition associated with low SES populations can impact a student's mood and energy level in relationship to a targeted concern.</p>	Problem Identification
<p><i>Understand the limitations and pitfalls associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations.</i> For example, implement alternative assessment methods (e.g., dynamic, ecological) and consider the implications of diagnostic results that provide information about language proficiency.</p>	Problem Identification
<p><i>Assess a CLD student's biculturalism to identify a targeted concern.</i> For example, exhibit caution when interpreting a CLD student's infrequent or brief responses as it may be evidence of a low verbal or limited English proficiency level.</p>	Problem Identification
<p><i>When identifying a targeted behavior, consider the situations and domains in which a behavior is manifested.</i> For example, observe a target behavior, such as language, across multiple settings and obtain input from family and cultural consultants on how to interpret the behavior according to a student's own cultural/linguistic background.</p>	Problem Identification
<p><i>Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior.</i> For example, consider a CLD student's adjustment experiences in the native country and experiences occurred during the flight period and early resettlement stages.</p>	Problem Identification
<p><i>Seek out consultation experiences to identify an appropriate intervention plan for CLD populations.</i> For example, consult with an expert that works frequently with CLD populations to gain information on effective intervention plans for CLD populations.</p>	Problem Analysis
<p><i>Consider cultural sources of information that relate to culture specific confirming data.</i> For example, analyze a behavior by using a CLD comparative comparison group.</p>	Problem Analysis
<p><i>Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students.</i> For example, analyze information about the impact of socio-cultural, environmental, political, experiential, and language-based</p>	Problem Analysis

factors related to CLD students' prior performance and future success.

Develop interventions that reflect an appropriate tier level of support for CLD populations. For example, develop a targeted intervention that meets a CLD student's needs when in Tier 2 of the CLD decision-making process and determine if a student's placement at a more intense level of intervention is a result of CLD factors.

Problem Analysis

Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern. For example, consider the impact of instruction of language, consistency of schooling, and type of curriculum previously implemented in other school settings.

Problem Analysis

Implement interventions that take into account CLD factors. For example, use an intervention that accounts for tolerance and/or racism within a school that a CLD student attends.

Plan Implementation

Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student. For example, assign a CLD family member an active role in collecting progress monitoring data within the home setting.

Plan Implementation

Implement culturally sensitive approaches that are acceptable to CLD populations. For example, implement an intervention plan that incorporates cultural customs when they align with a student's level of acculturation and current practices.

Plan Implementation

Implement culturally sensitive approaches and strategies that meet the needs of CLD populations. For example, implement intervention plans that have demonstrated success in the professional literature for CLD populations.

Plan Implementation

Implement nontraditional methods to collect data that best address a CLD student's needs. For example, conduct home visits to gather progress-monitoring data, maintain consultation efforts with CLD families, and collect community members' perspectives on progress.

Plan Implementation

Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process. For example, use translated forms in order to provide Spanish speaking parents an opportunity to collect data at home.

Plan Implementation

<p><i>Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results.</i> For example, use graphs and/or translated reports using stakeholders' native language to ensure a clear evaluation and understanding for all team members and CLD families.</p>	Plan Evaluation
<p><i>Evaluate the impact of cultural factors on the delivery of interventions.</i> For example, identify to what degree the intervention plan was delivered across settings as outlined and designed.</p>	Plan Evaluation
<p><i>Evaluate the acceptability of CLD stakeholders.</i> For example, evaluate consultation data in order to determine the level of responsiveness and satisfaction of all CLD stakeholders involved in the process.</p>	Plan Evaluation
<p><i>Use CLD strategies that can assist with maintenance and/or generalization of the intervention.</i> For example, help team members establish follow-up consultations with CLD parents and community member to establish continuous evaluation efforts for future evaluation purposes. Consider barriers for parents related to poverty, language, and other CLD factors to assist with follow-up plans and support accordingly.</p>	Plan Evaluation

Table 10

Questions for Each Survey Item

1. Does this question best fit in this stage of the CLD problem-solving process? If not, which stage does it best reflect?
 2. Does this question reflect a CLD characteristic of a CLD problem-solving process?
 3. If possible, would you provide an example that may be better than the one provided?
 4. Comments and feedback
-

Table 11
Demographics for In-State Procedural Pilot Study

Demographic Item	Frequency	n
Ethnicity		
European-American/Caucasian	90.0%	27
African-American/Blacks	3.3%	1
Hispanic/Latino	3.3%	1
Asian American	3.3%	1
Native American	0.0%	0
Pacific Islander	0.0%	0
Age		
20-29 years	13.3%	4
30-39 years	23.3%	7
40-49 years	26.7%	8
50-59 years	26.7%	8
60-69 years	10.0%	3
Degree		
Master's	13.3%	4
Specialist	56.7%	17
Doctorate	30.0%	9
School District Setting		
Suburban	46.7%	14
Urban	46.7%	14
Rural	6.7%	2
Employment		
Full-time	80.0%	24
Part-time	20.0%	6

Table 12

Skill Level Rating Options

1 = *Beginning Level*: An awareness of the method and recognize the importance of it; however, you have little to no understanding of the purpose and/or effectiveness of the method.

2 = *Trained Level*: An awareness of the method as developed from your coursework and/or professional development trainings. You have some understanding of the purpose and/or effectiveness of the method and recognize the importance of the method.

3 = *Skilled Level*: An awareness and ability to apply the method. You understand the purpose and effectiveness of the method, but there are times in which you experience difficulty executing the method with proficiency.

4 = *Expert/Specialist Level*: An awareness and ability to apply the method. You understand the purpose and effectiveness of the method and can implement the method with proficiency.

Table 13

Value Rating Options

1 = *Not at all valuable*: The strategy has no value in daily practice.

2 = *Not very valuable*: The strategy has little value in daily practice.

3 = *Somewhat valuable*: The strategy has some value in daily practice.

4 = *Valuable*: The strategy does have value in daily practice.

5 = *Very Valuable*: The strategy has a lot of value in daily practice.

Table 14
Prevalence Ratings for Implementation Practices

- 1 = *Never*: You never practice the skill in day to day practice.
 - 2 = *Rarely*: You practice the skill 25% of the time in day to day practice.
 - 3 = *Sometimes*: You practice the skill 50% of the time in day to day practice.
 - 4 = *Often*: You practice the skill 75% of the time in day to day practice.
 - 5 = *Always*: You practice the skill 100% of the time in day to day practice.
-

Table 15

Means and Standard Deviation for Value, Skill, and Frequency of Implementation for the In-State Procedural Pilot Study.

Item	Value	Skill	Frequency	Problem-Solving Stage
	M (SD)	M (SD)	M (SD)	
Acknowledge one's limits in CLD competencies (expertise).	4.73 (.52)	2.77 (.73)	3.23 (1.04)	Establishing Relationships
Inform school staff members of CLD factors that can affect decision-making process.	4.67 (.55)	2.53 (.90)	3.17 (1.23)	Establishing Relationships
Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.	4.70 (.75)	2.60 (1.04)	3.57 (1.38)	Establishing Relationships
Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter.	4.47 (.90)	2.30 (1.06)	2.87 (1.43)	Establishing Relationships
Account for one's own cultural values and biases when working with CLD populations.	4.67 (.76)	2.93 (.78)	4.20 (.85)	Establishing Relationships
Demonstrate culturally sensitive verbal and nonverbal communication skills.	4.73 (.64)	2.60 (.86)	3.77 (1.10)	Establishing Relationships
Understand the limitations and pitfalls associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations.	4.80 (.48)	3.00 (.87)	3.83 (1.23)	Problem Identification
Assess a CLD student's biculturalism to identify a targeted concern.	4.70 (.65)	2.90 (.76)	4.10 (1.03)	Problem Identification
When identifying a targeted behavior, consider the situations and domains in which a behavior is	4.67 (.67)	2.53 (.94)	3.10 (1.16)	Problem Identification

manifested.

Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern.	4.87 (.43)	2.80 (.92)	3.67 (1.12)	Problem Identification
Examine referrals within the context of institutional and systemic patterns associated with CLD populations.	4.63 (.61)	2.77 (.90)	3.47 (1.07)	Problem Identification
Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations.	4.63 (.67)	2.60 (.86)	3.23 (.94)	Problem Identification
Consider cultural sources of information that relate to culture specific confirming data.	4.13 (1.04)	1.93 (.98)	2.20 (1.26)	Problem Analysis
Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior.	4.57 (.90)	2.37 (.96)	3.03 (1.50)	Problem Analysis
Seek out consultation experiences to identify an appropriate intervention plan for CLD populations.	4.83 (.46)	2.63 (.76)	3.47 (1.28)	Problem Analysis
Develop interventions that reflect an appropriate tier level of support for CLD populations.	4.67 (.71)	2.47 (.94)	3.33 (1.42)	Problem Analysis
Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students.	4.83 (.46)	2.70 (.92)	3.60 (1.28)	Problem Analysis
Implement culturally sensitive approaches and strategies that meet the needs of CLD populations.	4.77 (.50)	2.40 (.97)	3.00 (1.05)	Plan Implementation

Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process.	4.70 (.65)	2.43 (1.04)	2.73 (1.17)	Plan Implementation
Implement nontraditional methods to collect data that best address a CLD student's needs.	4.60 (.67)	2.53 (.82)	2.47 (.97)	Plan Implementation
Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student.	4.63 (.67)	2.43 (.90)	2.73 (1.26)	Plan Implementation
Implement culturally sensitive approaches that meet the needs of CLD populations.	4.57 (.68)	2.43 (.94)	2.87 (1.20)	Plan Implementation
Implement interventions that take into account CLD factors.	4.63 (.67)	2.50 (.94)	3.40 (1.28)	Plan Implementation
Evaluate the acceptability of CLD stakeholders.	4.30 (.88)	2.07 (.98)	2.33 (1.03)	Plan Evaluation
Evaluate the impact of cultural factors on the delivery of interventions.	4.63 (.67)	2.40 (.93)	2.83 (1.09)	Plan Evaluation
Use CLD strategies that can assist with maintenance and/or generalization of the intervention.	4.83 (.46)	2.50 (.73)	3.27 (1.17)	Plan Evaluation
Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results.	4.80 (.48)	2.53 (1.11)	2.97 (1.13)	Plan Evaluation

Note. Table outlines a full list of survey items without illustrations grouped into the appropriate problem-solving stage. Items were randomly ordered for data collection. Items in bold represent items with the lowest reported skill level ratings. M = mean scores; SD = standard deviation. N = 30.

Table 16
CLD Population by State

State	CLD Population				
	American Indian and Alaskan Native	Asians	Blacks	Hispanic	Pacific Islanders
Alaska	3.8%	-	-	-	-
Arizona	12.6%	-	-	25.3%	-
California	12.2%	35.2%	6.2%	32.4%	30.3%
Colorado	-	-	-	17.1%	-
Connecticut	-	-	-	9.4%	-
Florida	-	2.9%	7.4%	16.8%	-
Georgia	-	-	7.1%	-	-
Hawaii	-	4.3%	-	-	26.2%
Illinois	-	4.2%	5.2%	12.3%	-
Louisiana	-	-	4.1%	-	-
Maryland	-	-	4.4%	-	-
Massachusetts	-	2.3%	-	-	-
Montana	2.7%	-	-	-	-
Nevada	-	-	-	19.7%	3.2%
New Jersey	-	5.0%	-	13.3%	-
New Mexico	8.1%	-	-	42.1%	-
New York	2.8%	10.0%	8.5%	15.1%	-
North Carolina	4.0%	-	5.0%	-	-
Oklahoma	12.4%	-	-	-	-
Texas	4.0%	5.8%	6.9%	32.0%	4.9%
Utah	-	-	-	-	3.4%
Virginia	-	2.7%	4.0%	-	-
Washington	3.4%	3.2%	-	-	5.7%

Note. Colorado was included in the list of states as it was used for the procedural pilot study and represented a large CLD population. Only six states with high population numbers for Pacific Islanders were identified.

Table 17. State Association by Status of Approval for Primary Dissertation Study

State Associations	Status of Approval
Alaska School Psychologists Association	Declined
Arizona Association of School Psychologists	Approved
California Association of School Psychologists	Declined *
Colorado Society of School Psychologists	Approved
Connecticut Association of School Psychologists	Approved
Florida Association of School Psychologists	Approved
Georgia Association of School Psychologists	N/A
Hawai'i Association of School Psychologists	N/A
Illinois School Psychologist Association	Approved
Louisiana School Psychological Association	N/A
Maryland School Psychologists' Association	Declined
Massachusetts School Psychologists Association	Approved
Montana Association of School Psychologists	N/A
Nevada Association of School Psychologists	Approved
New Jersey Association of School Psychologists	Approved
New Mexico Association of School Psychologists	N/A
New York Association of School Psychologists	Approved
North Carolina School Psychology Association	Approved
Oklahoma School Psychological Association	Declined
Texas Association of School Psychologists	Declined
Utah Association of School Psychologists	Approved
Virginia Academy of School Psychologists	Declined
Washington State Association of School Psychologists	Approved

Note. Communication was not established and/or maintained with states marked with N/A. California (*) required a purchase of the association's database and denied voluntary participation.

Table 18
Demographics for Primary Dissertation Study

Demographic Item	Frequency	n
Gender		
Female	78.4%	182
Male	21.6%	50
Ethnicity		
European-American/Caucasian	82.3%	191
African-American/Blacks	3.4%	8
Hispanic/Latino	8.2%	19
Asian American	1.7%	4
Native American	0.9%	2
Pacific Islander	0.9%	2
Other	2.6%	6
Age		
20-29 years	13.4%	31
30-39 years	29.7%	69
40-49 years	17.2%	40
50-59 years	27.2%	63
60-69 years	12.1%	28
70 or older	0.4%	1
Degree		
Master's	13.4%	31
Specialist	54.3%	126
Doctorate	32.3%	75
School District Setting		
Suburban	46.6%	108
Urban	32.8%	76
Rural	20.7%	48
Employment		
Full-time	84.5%	196
Part-time	15.5%	36
State Association Membership		
Arizona	24.1%	56
Colorado	12.9%	30
Connecticut	2.2%	5
Florida	17.2%	40
Illinois	0.4%	1
Massachusetts	3.9%	9
Maryland	0.4%	1
Nevada	0.9%	2
New Hampshire	0.4%	1
New Jersey	7.8%	18
New York	6.9%	16
North Carolina	8.2%	19
Pennsylvania	0.4%	1

Utah	7.8%	18
Virginia	0.9%	2
Washington	5.2%	12
Wyoming	0.4%	1

Table 19

Means and Standard Deviation for Value, Skill, and Frequency of Implementation for the Primary Dissertation Study.

Item (Item Number)	Value	Skill	Frequency	Problem-Solving Stage
	M (SD)	M (SD)	M (SD)	
Acknowledge one's limits in CLD competencies (expertise). (#3)	4.60 (.70)	2.54 (.88)	3.13 (1.18)	Establishing Relationships
Inform school staff members of CLD factors that can affect decision-making process. (#14)	4.54 (.75)	2.42 (.92)	3.00 (1.23)	Establishing Relationships
Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations. (#17)	4.57 (.63)	2.44 (.93)	3.13 (1.28)	Establishing Relationships
Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter. (#19)	4.37 (.88)	2.08 (1.04)	2.59 (1.42)	Establishing Relationships
Account for one's own cultural values and biases when working with CLD populations. (#21)	4.61 (.66)	2.77 (.87)	3.88 (1.09)	Establishing Relationships
Demonstrate culturally sensitive verbal and nonverbal communication skills. (#22)	4.59 (.68)	2.44 (.96)	3.53 (1.20)	Establishing Relationships
Understand the limitations and pitfalls associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations. (#25)	4.71 (.59)	2.74 (.93)	3.66 (1.30)	Problem Identification
Assess a CLD student's biculturalism to identify a targeted concern. (#18)	4.72 (.53)	2.73 (.93)	3.69 (1.20)	Problem Identification
When identifying a targeted behavior, consider the situations and domains in which a behavior is	4.58 (.70)	2.38 (.97)	3.02 (1.34)	Problem Identification

manifested. (#11)

Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern. (#9)	4.75 (.51)	2.72 (.89)	3.61 (1.21)	Problem Identification
Examine referrals within the context of institutional and systemic patterns associated with CLD populations. (#6)	4.62 (.62)	2.59 (.89)	3.34 (1.18)	Problem Identification
Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations. (#2)	4.59 (.66)	2.48 (.88)	3.02 (1.14)	Problem Identification
Consider cultural sources of information that relate to culture specific confirming data. (#15)	4.09 (.98)	1.98 (.97)	2.31 (1.24)	Problem Analysis
Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior. (#20)	4.30 (.91)	2.02 (1.00)	2.62 (1.42)	Problem Analysis
Seek out consultation experiences to identify an appropriate intervention plan for CLD populations. (#23)	4.55 (.72)	2.45 (.92)	3.11 (1.29)	Problem Analysis
Develop interventions that reflect an appropriate tier level of support for CLD populations. (#27)	4.44 (.87)	2.18 (.95)	2.91 (1.32)	Problem Analysis
Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students. (#13)	4.63 (.66)	2.55 (.92)	3.35 (1.26)	Problem Analysis
Implement culturally sensitive approaches and strategies that meet the needs of CLD populations. (#1)	4.58 (.70)	2.33 (.89)	2.94 (1.14)	Plan Implementation

Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process. (#7)	4.48 (.84)	2.30 (.95)	2.74 (1.26)	Plan Implementation
Implement nontraditional methods to collect data that best address a CLD student's needs. (#10)	4.22 (.88)	2.11 (.93)	2.25 (1.15)	Plan Implementation
Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student. (#16)	4.12 (.99)	2.19 (.95)	2.41 (1.23)	Plan Implementation
Implement culturally sensitive approaches that are acceptable to CLD populations. (#26)	4.44 (.78)	2.21 (.96)	2.85 (1.31)	Plan Implementation
Implement interventions that take into account CLD factors. (#24)	4.46 (.84)	2.25 (.95)	2.94 (1.34)	Plan Implementation
Evaluate the acceptability of CLD stakeholders. (#12)	4.04 (1.01)	1.98 (.92)	2.30 (1.14)	Plan Evaluation
Evaluate the impact of cultural factors on the delivery of interventions. (#8)	4.49 (.75)	2.34 (.94)	2.86 (1.22)	Plan Evaluation
Use CLD strategies that can assist with maintenance and/or generalization of the intervention. (#4)	4.56 (.71)	2.33 (.85)	2.98 (1.19)	Plan Evaluation
Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results. (#5)	4.58 (.77)	2.43 (.97)	3.05 (1.32)	Plan Evaluation

Note. Table outlines a full list of survey items without illustrations grouped into the appropriate problem-solving stage. Item numbers are provided in parentheses. Items were randomly ordered for data collection. Items in bold represent items with the lowest reported ratings. M = mean scores; SD = standard deviation. N = 232.

Table 20
 Exploratory Factor Analysis Correlation Matrix for Skill.

Skill Item	Skill Item												
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1.000												
2	.647	1.000											
3	.602	.600	1.000										
4	.678	.634	.587	1.000									
5	.650	.559	.440	.578	1.000								
6	.609	.658	.520	.635	.642	1.000							
7	.591	.515	.403	.536	.660	.576	1.000						
8	.617	.622	.546	.665	.639	.657	.595	1.000					
9	.575	.577	.546	.555	.632	.687	.586	.619	1.000				
10	.598	.556	.477	.595	.608	.629	.584	.584	.622	1.000			
11	.665	.644	.564	.631	.626	.674	.608	.682	.646	.672	1.000		
12	.635	.594	.475	.599	.588	.622	.624	.705	.581	.628	.699	1.000	
13	.639	.577	.560	.628	.623	.722	.583	.633	.682	.630	.684	.616	1.000

Table 20 (Continued)
 Exploratory Factor Analysis Correlation Matrix using Skill Level

Skill Item	Skill Item												
	1	2	3	4	5	6	7	8	9	10	11	12	13
14	.656	.657	.574	.656	.604	.725	.584	.686	.647	.601	.746	.705	.727
15	.620	.557	.520	.576	.593	.589	.529	.624	.561	.502	.675	.679	.588
16	.550	.561	.498	.567	.606	.591	.575	.644	.561	.614	.622	.638	.577
17	.568	.533	.482	.542	.599	.625	.557	.551	.619	.602	.653	.586	.677
18	.600	.522	.587	.523	.525	.679	.499	.564	.695	.549	.625	.525	.608
19	.550	.428	.487	.548	.471	.531	.461	.533	.533	.527	.540	.547	.522
20	.565	.472	.478	.557	.507	.605	.508	.548	.528	.560	.580	.555	.601
21	.567	.582	.580	.534	.474	.625	.434	.511	.551	.463	.583	.524	.599
22	.596	.520	.532	.573	.537	.577	.530	.534	.575	.556	.650	.576	.586
23	.552	.535	.537	.581	.492	.637	.498	.511	.602	.515	.566	.576	.660
24	.609	.588	.469	.628	.489	.615	.497	.587	.519	.504	.626	.595	.578
25	.599	.498	.546	.577	.590	.695	.543	.583	.635	.536	.638	.595	.674
26	.629	.498	.506	.628	.531	.596	.492	.611	.493	.568	.631	.609	.578
27	.581	.510	.500	.572	.546	.649	.450	.648	.575	.558	.603	.600	.627

Table 20 (Continued)
 Exploratory Factor Analysis Correlation Matrix using Skill Level

Skill Item	Skill Item													
	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14	1.000													
15	.687	1.000												
16	.615	.598	1.000											
17	.721	.559	.590	1.000										
18	.631	.527	.540	.599	1.000									
19	.623	.551	.502	.565	.612	1.000								
20	.660	.577	.530	.634	.639	.585	1.000							
21	.679	.554	.556	.574	.602	.536	.558	1.000						
22	.668	.578	.544	.675	.634	.632	.630	.671	1.000					
23	.685	.560	.498	.556	.568	.551	.587	.621	.567	1.000				
24	.656	.572	.554	.599	.573	.572	.648	.579	.614	.621	1.000			
25	.679	.574	.546	.616	.643	.547	.596	.626	.646	.560	.613	1.000		
26	.668	.598	.558	.613	.595	.570	.651	.579	.655	.523	.747	.693	1.000	
27	.625	.650	.579	.590	.529	.561	.554	.524	.512	.538	.601	.652	.612	1.000

Table 21
 Initial Eigenvalues and Percent of Variance Accounted for Factor One and Two.

Factor	Initial Eigenvalues		
	Total	Percent of Variance	Cumulative % of Variance
1	16.29	60.34	60.34
2	1.064	3.94	64.28

Table 22
Factor Matrix for Skill.

Item	Factor Loadings by Factor	
	Factor 1	Factor 2
Item 1: Implement culturally sensitive approaches and strategies that meet the needs of CLD populations.	.790	-.077
	.734	-.136
Item 2: Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations.	.680	.067
	.772	-.059
Item 3: Acknowledge one's limits in CLD competencies (expertise).	.747	-.290
	.824	-.043
Item 4: Use CLD strategies that can assist with maintenance and/or generalization of the intervention.	.705	-.255
	.791	-.218
Item 5: Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results.	.773	-.090
	.745	-.177
Item 6: Examine referrals within the context of institutional and systemic patterns associated with CLD populations.	.833	-.112
	.789	-.172
Item 7: Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process.	.814	-.045
	.866	.056
Item 8: Evaluate the impact of cultural factors on the delivery of interventions.	.762	-.046
	.743	-.148
Item 9: Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern.	.778	.071
	.763	.169
Item 10: Implement nontraditional methods to collect data that best address a CLD student's needs.	.706	.190
	.750	.213
Item 11: When identifying a targeted behavior, consider the situations and domains in which a behavior is manifested.	.738	.239
	.773	.232
Item 12: Evaluate the acceptability of CLD stakeholders.	.737	.133
	.767	.191

Item 13: Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students.	.790	.128
	.777	.191
Item 14: Inform school staff members of CLD factors that can affect decision-making process.	.750	.001
	.790	-.077
Item 15: Consider cultural sources of information that relate to culture specific confirming data.	.734	-.136
	.680	.067
Item 16: Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student.	.772	-.059
	.747	-.290
Item 17: Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.	.824	-.043
	.705	-.255
Item 18: Assess a CLD student's biculturalism to identify a targeted concern.	.791	-.218
	.773	-.090
Item 19: Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter.	.745	-.177
	.833	-.112
Item 20: Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior.	.789	-.172
	.814	-.045
Item 21: Account for one's own cultural values and biases when working with CLD populations.	.866	.056
	.762	-.046
Item 22: Demonstrate culturally sensitive verbal and nonverbal communication skills.	.743	-.148
	.778	.071
Item 23: Seek out consultation experiences to identify an appropriate intervention plan for CLD populations.	.763	.169
	.706	.190
Item 24: Implement interventions that take into account CLD factors.	.750	.213
	.738	.239
Item 25: Understand the limitations and pitfalls associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations.	.773	.232
	.737	.133
Item 26: Implement culturally sensitive approaches that are	.767	.191

acceptable to CLD populations.

	.790	.128
Item 27: Develop interventions that reflect an appropriate tier level of support for CLD populations.	.777	.191

Note. Table outlines factor loadings for Factor One and Factor Two. Items in bold represent items that did not crossload using a cut-off of .40.

Table 23
Rotated Factor Matrix for Skill.

Item	Factor Loadings by Factor	
	Factor 1	Factor 2
Item 1: Implement culturally sensitive approaches and strategies that meet the needs of CLD populations.	.506	.612
Item 2: Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations.	.425	.615
Item 3: Acknowledge one's limits in CLD competencies (expertise).	.530	.432
Item 4: Use CLD strategies that can assist with maintenance and/or generalization of the intervention.	.506	.586
Item 5: Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results.	.325	.732
Item 6: Examine referrals within the context of institutional and systemic patterns associated with CLD populations.	.554	.611
Item 7: Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process.	.320	.677
Item 8: Evaluate the impact of cultural factors on the delivery of interventions.	.408	.712
Item 9: Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern.	.485	.609
Item 10: Implement nontraditional methods to collect data that best address a CLD student's needs.	.404	.651
Item 11: When identifying a targeted behavior, consider the situations and domains in which a behavior is manifested.	.512	.667
Item 12: Evaluate the acceptability of CLD stakeholders.	.439	.678
Item 13: Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students.	.546	.606

Item 14: Inform school staff members of CLD factors that can affect decision-making process.	.654	.571
Item 15: Consider cultural sources of information that relate to culture specific confirming data.	.508	.570
Item 16: Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student.	.422	.629
Item 17: Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.	.602	.498
Item 18: Assess a CLD student's biculturalism to identify a targeted concern.	.660	.418
Item 19: Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter.	.635	.363
Item 20: Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior.	.682	.378
Item 21: Account for one's own cultural values and biases when working with CLD populations.	.692	.351
Item 22: Demonstrate culturally sensitive verbal and nonverbal communication skills.	.712	.380
Item 23: Seek out consultation experiences to identify an appropriate intervention plan for CLD populations.	.617	.425
Item 24: Implement interventions that take into account CLD factors.	.679	.405
Item 25: Understand the limitations and pitfalls associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations.	.650	.466
Item 26: Implement culturally sensitive approaches that are acceptable to CLD populations.	.685	.412
Item 27: Develop interventions that reflect an appropriate tier level of support for CLD populations.	.532	.528

Note. Table outlines factor loadings for Factor One and Factor Two. Items in bold represent items that did not crossload using a cut-off of .40.

Table 24
 Exploratory Factor Analysis Correlation Matrix using Value Level

Value Item	Value Item													
	1	2	3	4	5	6	7	8	9	10	11	12	13	
1	1.000													
2	.630	1.000												
3	.554	.487	1.000											
4	.570	.579	.472	1.000										
5	.500	.455	.384	.602	1.000									
6	.443	.420	.430	.472	.497	1.000								
7	.411	.431	.384	.501	.559	.485	1.000							
8	.399	.541	.435	.623	.508	.511	.586	1.000						
9	.432	.408	.298	.306	.384	.545	.361	.408	1.000					
10	.365	.527	.285	.535	.429	.411	.507	.543	.368	1.000				
11	.466	.441	.323	.570	.623	.593	.611	.656	.481	.535	1.000			
12	.386	.455	.432	.529	.532	.440	.558	.622	.359	.606	.583	1.000		
13	.462	.483	.355	.527	.431	.524	.472	.578	.519	.488	.594	.511	1.000	

Table 24 (Continued)
 Exploratory Factor Analysis Correlation Matrix using Value Level

Value Item	Value Item												
	1	2	3	4	5	6	7	8	9	10	11	12	13
14	.453	.475	.387	.605	.574	.521	.557	.606	.457	.538	.610	.574	.533
15	.382	.377	.333	.505	.486	.453	.435	.572	.357	.465	.515	.588	.485
16	.338	.370	.289	.486	.422	.387	.559	.611	.346	.553	.558	.618	.469
17	.393	.348	.383	.401	.394	.464	.464	.416	.533	.469	.452	.439	.466
18	.414	.392	.265	.374	.357	.486	.359	.396	.508	.349	.555	.338	.440
19	.395	.354	.394	.451	.359	.458	.346	.388	.458	.425	.395	.479	.533
20	.457	.467	.384	.513	.454	.471	.450	.511	.349	.465	.586	.523	.446
21	.487	.331	.372	.356	.324	.406	.356	.378	.487	.286	.496	.451	.449
22	.415	.462	.386	.495	.479	.412	.461	.581	.425	.424	.589	.505	.464
23	.484	.426	.339	.489	.481	.458	.441	.435	.383	.457	.484	.504	.476
24	.406	.513	.313	.547	.425	.406	.506	.558	.351	.530	.532	.518	.532
25	.449	.324	.326	.432	.468	.430	.435	.453	.426	.390	.532	.402	.533
26	.464	.462	.365	.536	.489	.496	.484	.564	.334	.488	.552	.537	.560
27	.371	.276	.325	.393	.417	.442	.455	.469	.357	.362	.421	.478	.522

Table 24 (Continued)
 Exploratory Factor Analysis Correlation Matrix using Value Level

Value Item	Value Item													
	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14	1.000													
15	.566	1.000												
16	.456	.589	1.000											
17	.422	.443	.437	1.000										
18	.403	.397	.405	.471	1.000									
19	.484	.534	.424	.427	.387	1.000								
20	.487	.507	.473	.375	.434	.532	1.000							
21	.423	.432	.391	.431	.568	.452	.475	1.000						
22	.517	.529	.482	.383	.445	.483	.592	.595	1.000					
23	.482	.542	.476	.444	.354	.530	.486	.462	.568	1.000				
24	.469	.547	.551	.458	.407	.457	.548	.516	.571	.592	1.000			
25	.548	.511	.436	.334	.462	.489	.472	.470	.543	.522	.487	1.000		
26	.544	.586	.512	.443	.406	.535	.579	.525	.569	.632	.710	.579	1.000	
27	.418	.528	.446	.481	.362	.430	.353	.431	.397	.467	.496	.550	.533	1.000

Table 25
 Initial Eigenvalues and Percent of Variance Accounted for Value.

Factor	Initial Eigenvalues		
	Total	Percent of Variance	Cumulative % of Variance
1	13.186	48.836	48.836
2	1.342	4.970	53.806
3	1.257	4.654	58.460
4	1.051	3.894	62.354

Table 26
Factor Matrix for Factors for Value.

Item	Factor Loadings by Factor			
	Factor 1	Factor 2	Factor 3	Factor 4
Item 1: Implement culturally sensitive approaches and strategies that meet the needs of CLD populations.	.655	.196	.428	-.232
Item 2: Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations.	.649	-.064	.401	-.132
Item 3: Acknowledge one's limits in CLD competencies (expertise).	.544	.053	.310	-.138
Item 4: Use CLD strategies that can assist with maintenance and/or generalization of the intervention.	.733	-.219	.245	-.102
Item 5: Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results.	.680	-.123	.158	.064
Item 6: Examine referrals within the context of institutional and systemic patterns associated with CLD populations.	.678	.149	.104	.188
Item 7: Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process.	.689	-.193	.045	.179
Item 8: Evaluate the impact of cultural factors on the delivery of interventions.	.761	-.258	.038	.132
Item 9: Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern.	.603	.409	.077	.295
Item 10: Implement nontraditional methods to collect data that best address a CLD student's needs.	.669	-.239	.018	.105
Item 11: When identifying a targeted behavior, consider the situations and domains in which a behavior is manifested.	.782	-.046	.007	.229
Item 12: Evaluate the acceptability of CLD stakeholders.	.736	-.242	-.058	.063

Item 13: Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students.	.723	.074	-.016	.085
Item 14: Inform school staff members of CLD factors that can affect decision-making process.	.741	-.093	.062	.097
Item 15: Consider cultural sources of information that relate to culture specific confirming data.	.717	-.096	-.214	-.044
Item 16: Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student.	.687	-.219	-.192	.108
Item 17: Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.	.623	.153	-.021	.164
Item 18: Assess a CLD student's biculturalism to identify a targeted concern.	.604	.325	-.019	.152
Item 19: Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter.	.651	.150	-.120	-.112
Item 20: Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior.	.698	-.012	-.029	-.132
Item 21: Account for one's own cultural values and biases when working with CLD populations.	.641	.366	-.129	-.106
Item 22: Demonstrate culturally sensitive verbal and nonverbal communication skills.	.721	.050	-.104	-.128
Item 23: Seek out consultation experiences to identify an appropriate intervention plan for CLD populations.	.702	.033	-.130	-.213
Item 24: Implement interventions that take into account CLD factors.	.736	-.085	-.184	-.191
Item 25: Understand the limitations and pitfalls associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations.	.676	.140	-.160	-.067

Item 26: Implement culturally sensitive approaches that are acceptable to CLD populations.	.769	-.034	-.203	-.254
Item 27: Develop interventions that reflect an appropriate tier level of support for CLD populations.	.628	.060	-.199	.009

Note. Table outlines factor loadings for Factor One and Factor Two. Items in bold represent items that did not crossload using a cut-off of .40.

Table 27
Rotated Factor Matrix for Value.

Item	Factor Loadings by Factor			
	Factor 1	Factor 2	Factor 3	Factor 4
Item 1: Implement culturally sensitive approaches and strategies that meet the needs of CLD populations.	.133	.264	.311	.722
Item 2: Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations.	.352	.186	.175	.644
Item 3: Acknowledge one's limits in CLD competencies (expertise).	.211	.200	.207	.535
Item 4: Use CLD strategies that can assist with maintenance and/or generalization of the intervention.	.525	.288	.114	.533
Item 5: Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results.	.504	.226	.247	.375
Item 6: Examine referrals within the context of institutional and systemic patterns associated with CLD populations.	.372	.219	.507	.291
Item 7: Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process.	.611	.223	.261	.236
Item 8: Evaluate the impact of cultural factors on the delivery of interventions.	.677	.285	.220	.277
Item 9: Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern.	.198	.164	.718	.204
Item 10: Implement nontraditional methods to collect data that best address a CLD student's needs.	.599	.265	.178	.235
Item 11: When identifying a targeted behavior, consider the situations and domains in which a behavior is manifested.	.587	.285	.433	.229
Item 12: Evaluate the acceptability of CLD stakeholders.	.624	.370	.180	.220

Item 13: Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students.	.409	.365	.414	.253
Item 14: Inform school staff members of CLD factors that can affect decision-making process.	.536	.301	.311	.311
Item 15: Consider cultural sources of information that relate to culture specific confirming data.	.471	.533	.216	.138
Item 16: Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student.	.604	.399	.198	.073
Item 17: Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.	.331	.277	.471	.177
Item 18: Assess a CLD student's biculturalism to identify a targeted concern.	.197	.294	.579	.183
Item 19: Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter.	.232	.510	.328	.225
Item 20: Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior.	.359	.474	.224	.320
Item 21: Account for one's own cultural values and biases when working with CLD populations.	.081	.533	.483	.222
Item 22: Demonstrate culturally sensitive verbal and nonverbal communication skills.	.334	.536	.279	.270
Item 23: Seek out consultation experiences to identify an appropriate intervention plan for CLD populations.	.298	.588	.212	.276
Item 24: Implement interventions that take into account CLD factors.	.410	.611	.153	.232
Item 25: Understand the limitations and pitfalls	.275	.520	.356	.184

associated with the prescribed use of standardized instruments that have not been normed or validated with CLD populations.

Item 26: Implement culturally sensitive approaches that are acceptable to CLD populations.	.368	.683	.170	.260
Item 27: Develop interventions that reflect an appropriate tier level of support for CLD populations.	.335	.463	.318	.098

Note. Table outlines factor loadings for Factor One and Factor Two. Items in bold represent items that did not crossload using a cut-off of .40.

Table 28
 Exploratory Factor Analysis Correlation Matrix for Implementation (Imp.).

Imp. Item	Imp. Item												
	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1.000												
2	.609	1.000											
3	.533	.563	1.000										
4	.648	.568	.579	1.000									
5	.532	.419	.428	.565	1.000								
6	.514	.549	.554	.604	.565	1.000							
7	.435	.362	.368	.493	.622	.493	1.000						
8	.611	.533	.541	.695	.635	.632	.595	1.000					
9	.511	.549	.534	.537	.522	.677	.441	.579	1.000				
10	.537	.498	.417	.524	.499	.539	.482	.511	.467	1.000			
11	.566	.542	.537	.603	.546	.623	.555	.650	.598	.545	1.000		
12	.536	.484	.428	.563	.605	.525	.549	.646	.526	.544	.682	1.000	
13	.518	.524	.477	.561	.482	.626	.424	.560	.686	.499	.599	.539	1.000

Table 28 (Continued)

Exploratory Factor Analysis Correlation Matrix for Implementation (Imp.).

Imp. Item	Imp. Item												
	1	2	3	4	5	6	7	8	9	10	11	12	13
14	.542	.513	.482	.588	.534	.597	.505	.639	.567	.509	.631	.626	.643
15	.532	.432	.391	.512	.526	.511	.436	.586	.525	.415	.608	.557	.530
16	.425	.427	.376	.527	.491	.491	.549	.535	.440	.463	.560	.576	.433
17	.492	.487	.439	.585	.549	.534	.463	.525	.571	.520	.587	.528	.574
18	.500	.512	.495	.521	.480	.575	.387	.497	.647	.447	.516	.427	.605
19	.428	.332	.314	.510	.435	.421	.462	.520	.461	.440	.422	.459	.461
20	.491	.419	.426	.529	.453	.518	.468	.474	.540	.446	.567	.454	.559
21	.452	.472	.441	.461	.376	.446	.308	.442	.507	.314	.470	.392	.482
22	.576	.509	.444	.563	.549	.554	.477	.560	.646	.484	.581	.521	.567
23	.387	.385	.445	.478	.437	.485	.448	.474	.462	.477	.471	.483	.535
24	.499	.495	.387	.537	.386	.475	.448	.588	.535	.459	.580	.540	.525
25	.473	.404	.370	.460	.496	.545	.407	.508	.524	.385	.488	.403	.494
26	.550	.484	.431	.568	.455	.557	.451	.634	.513	.522	.573	.559	.518
27	.524	.441	.395	.558	.502	.489	.460	.617	.512	.448	.591	.540	.511

Table 28 (Continued)

Exploratory Factor Analysis Correlation Matrix for Implementation (Imp.).

Imp. Item	Imp. Item													
	14	15	16	17	18	19	20	21	22	23	24	25	26	27
14	1.000													
15	.657	1.000												
16	.502	.496	1.000											
17	.536	.476	.555	1.000										
18	.549	.407	.383	.561	1.000									
19	.509	.480	.432	.545	.434	1.000								
20	.547	.517	.410	.503	.581	.532	1.000							
21	.465	.391	.357	.463	.529	.350	.412	1.000						
22	.585	.533	.477	.619	.612	.522	.548	.635	1.000					
23	.525	.445	.440	.494	.497	.435	.474	.491	.532	1.000				
24	.588	.561	.471	.549	.507	.515	.531	.530	.627	.623	1.000			
25	.570	.441	.357	.518	.500	.452	.413	.495	.594	.422	.503	1.000		
26	.613	.556	.517	.515	.429	.565	.548	.491	.583	.537	.749	.637	1.000	
27	.562	.468	.494	.574	.445	.462	.474	.423	.617	.530	.645	.530	.638	1.000

Table 29
 Initial Eigenvalues and Percent of Variance Accounted for Implementation.

Factor	Initial Eigenvalues		
	Total	Percent of Variance	Cumulative % of Variance
1	14.348	53.141	53.141
2	1.213	4.492	57.633
3	1.122	4.154	61.787

Table 30
Factor Matrix for Implementation.

Item	Factor Loadings by Factor		
	Factor 1	Factor 2	Factor 3
Item 1: Implement culturally sensitive approaches and strategies that meet the needs of CLD populations.	.722	-.005	.135
Item 2: Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations.	.674	.124	.212
Item 3: Acknowledge one's limits in CLD competencies (expertise).	.636	.120	.284
Item 4: Use CLD strategies that can assist with maintenance and/or generalization of the intervention.	.773	-.064	.134
Item 5: Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results.	.706	-.219	.151
Item 6: Examine referrals within the context of institutional and systemic patterns associated with CLD populations.	.762	.058	.210
Item 7: Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process.	.652	-.313	.033
Item 8: Evaluate the impact of cultural factors on the delivery of interventions.	.801	-.199	.067
Item 9: Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern.	.762	.225	.145
Item 10: Implement nontraditional methods to collect data that best address a CLD student's needs.	.665	-.121	.087
Item 11: When identifying a targeted behavior, consider the situations and domains in which a behavior is manifested.	.794	-.112	.089

Item 12: Evaluate the acceptability of CLD stakeholders.	.742	-.286	.040
Item 13: Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students.	.752	.163	.092
Item 14: Inform school staff members of CLD factors that can affect decision-making process.	.786	-.037	-.033
Item 15: Consider cultural sources of information that relate to culture specific confirming data.	.699	-.118	-.058
Item 16: Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student.	.656	-.254	-.014
Item 17: Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.	.738	.026	-.026
Item 18: Assess a CLD student's biculturalism to identify a targeted concern.	.706	.332	.121
Item 19: Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter.	.639	-.067	-.188
Item 20: Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior.	.688	.076	-.040
Item 21: Account for one's own cultural values and biases when working with CLD populations.	.625	.316	-.077
Item 22: Demonstrate culturally sensitive verbal and nonverbal communication skills.	.784	.191	-.120
Item 23: Seek out consultation experiences to identify an appropriate intervention plan for CLD populations.	.665	.068	-.163
Item 24: Implement interventions that take into account CLD factors.	.754	.073	-.394
Item 25: Understand the limitations and pitfalls associated	.666	.134	-.142

with the prescribed use of standardized instruments that have not been normed or validated with CLD populations.

Item 26: Implement culturally sensitive approaches that are acceptable to CLD populations.	.770	-.034	-.329
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Item 27: Develop interventions that reflect an appropriate tier level of support for CLD populations.	.727	-.055	-.212
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Note. Table outlines factor loadings for Factor One and Factor Two. Items in bold represent items that did not crossload using a cut-off of .40.

Table 31
Rotated Factor Matrix for Factors for Implementation

Item	Factor Loadings by Factor		
	Factor 1	Factor 2	Factor 3
Item 1: Implement culturally sensitive approaches and strategies that meet the needs of CLD populations.	.473	.484	.286
Item 2: Consider the availability and utilization of physical and mental health services when working to identify a targeted behavior for CLD populations.	.362	.578	.222
Item 3: Acknowledge one's limits in CLD competencies (expertise).	.359	.592	.142
Item 4: Use CLD strategies that can assist with maintenance and/or generalization of the intervention.	.549	.476	.304
Item 5: Use a variety of methods to present outcome data to ensure that all team members gain a comprehensive understanding of results.	.629	.351	.222
Item 6: Examine referrals within the context of institutional and systemic patterns associated with CLD populations.	.466	.585	.260
Item 7: Implement progress-monitoring tools that are acceptable to team members involved in the CLD decision-making process.	.641	.199	.270
Item 8: Evaluate the impact of cultural factors on the delivery of interventions.	.653	.373	.346
Item 9: Recognize and address the impact of prior schooling experiences for CLD populations when analyzing a targeted concern.	.324	.654	.345
Item 10: Implement nontraditional methods to collect data that best address a CLD student's needs.	.515	.353	.271
Item 11: When identifying a targeted behavior, consider the situations and domains in which a behavior is manifested.	.587	.434	.342

Item 12: Evaluate the acceptability of CLD stakeholders.	.677	.270	.319
Item 13: Use a comprehensive assessment process to analyze a targeted concern when working with all CLD students.	.353	.582	.370
Item 14: Inform school staff members of CLD factors that can affect decision-making process.	.498	.411	.452
Item 15: Consider cultural sources of information that relate to culture specific confirming data.	.501	.298	.408
Item 16: Include a significant family member (and/or community member) in the implementation of an intervention plan for a CLD student.	.588	.212	.323
Item 17: Establish relationships with stakeholders by using effective communication strategies that ensure participation among stakeholders when working with CLD populations.	.423	.426	.432
Item 18: Assess a CLD student's biculturalism to identify a targeted concern.	.203	.675	.354
Item 19: Assess adequacy of skills needed by qualified interpreters prior to utilizing the interpreter.	.396	.224	.491
Item 20: Analyze the relocation and migration processes of CLD students and the effects on their social-emotional adjustment when identifying a targeted behavior.	.351	.421	.425
Item 21: Account for one's own cultural values and biases when working with CLD populations.	.121	.513	.468
Item 22: Demonstrate culturally sensitive verbal and nonverbal communication skills.	.303	.503	.565
Item 23: Seek out consultation experiences to identify an appropriate intervention plan for CLD populations.	.315	.336	.511
Item 24: Implement interventions that take into account CLD factors.	.313	.266	.749
Item 25: Understand the limitations and pitfalls associated	.270	.389	.508

with the prescribed use of standardized instruments that have not been normed or validated with CLD populations.

Item 26: Implement culturally sensitive approaches that are acceptable to CLD populations.	.418	.244	.684
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Item 27: Develop interventions that reflect an appropriate tier level of support for CLD populations.	.435	.269	.560
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Note. Table outlines factor loadings for Factor One and Factor Two. Items in bold represent items that did not crossload using a cut-off of .40.

Table 32

Percent of Variance Accounted for by Value and Skill as Predictors

Model	R	R Square	Adjusted R Square
1	.781	.610	.606

Table 33
 Regression Model for Total Mean Value and Skill as Predictors of
 Implementation Ratings

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	.110	.322		.341	.733
Total Mean Value	.153	.076	.089	2.014	.045*
Total Mean Skill	.934	.055	.746	16.939	.000*

*p<.05

Table 34

Percent of Variance Accounted for by Personal Characteristics as Predictors

Model	R	R Square	Adjusted R Square
1	.537	.288	.279

Table 35
 Regression Model for Personal Characteristics as Predictors of Implementation
 Ratings

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	2.126	.122		17.418	.000*
Ethnicity	.325	.135	.137	2.414	.017*
CLD Time	.134	.016	.483	8.476	.000*
Years Practicing	.069	.027	.146	2.609	.010*

*p<.05

Table 36
 Mean and Standard Deviation for Value and Skill by Ethnicity

Value	N	M	SD
Caucasian/European-American	191	-.03	.69
Other	41	.14	.70
Skill			
Caucasian/European-American	191	-.08	.05
Other	41	.36	.13

Note. Mean (M) and Standard Deviation (SD) is based on z-scores. The category of “Other” represents respondents from CLD backgrounds.

Table 37
Independent Samples T-Tests for Value and Skill by Ethnicity

	F	Sig.	T	df
Value	.075	.79	-1.373	230
Skill	1.318	.25	-3.337	230

Figures

Figure 1. Number of Years Practicing as a School Psychologist by the Number of Responses.

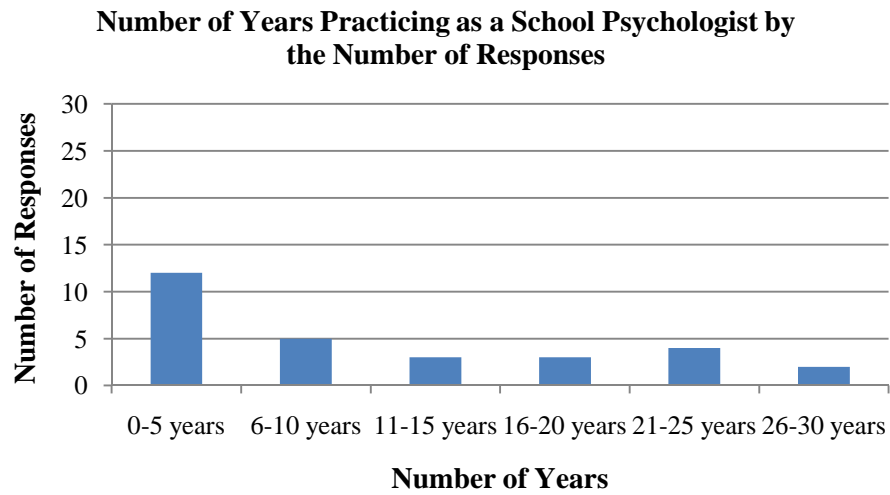


Figure 2. Percent of Time Spent Servicing CLD Populations by Number of Responses per Category

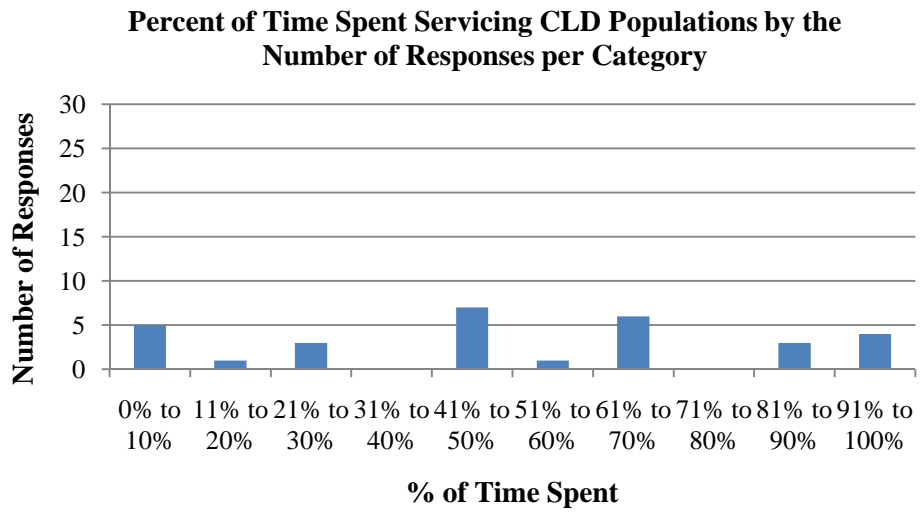
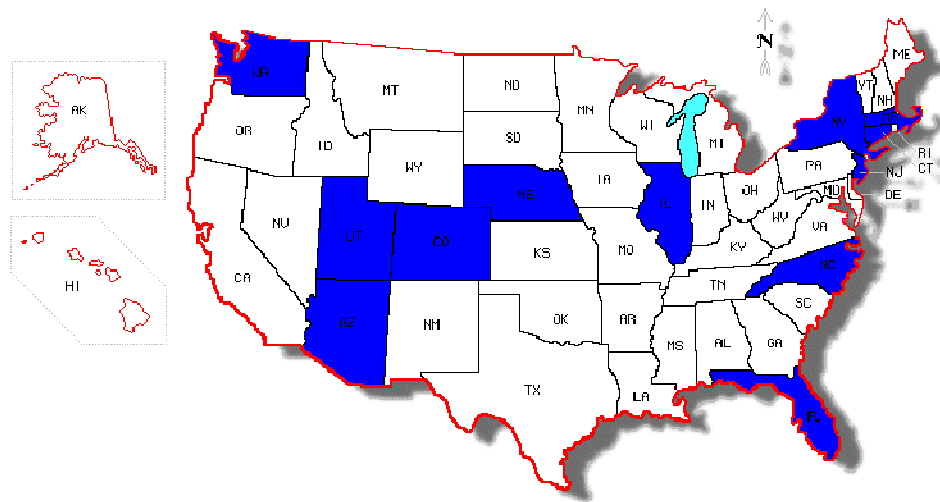


Figure 3. Visual Representation of State Membership as Indicated by Consent to Participate.

State Associations by Approval



3-1-11

Figure 4. Number of Years Practicing as a School Psychologist by the Number of Responses.

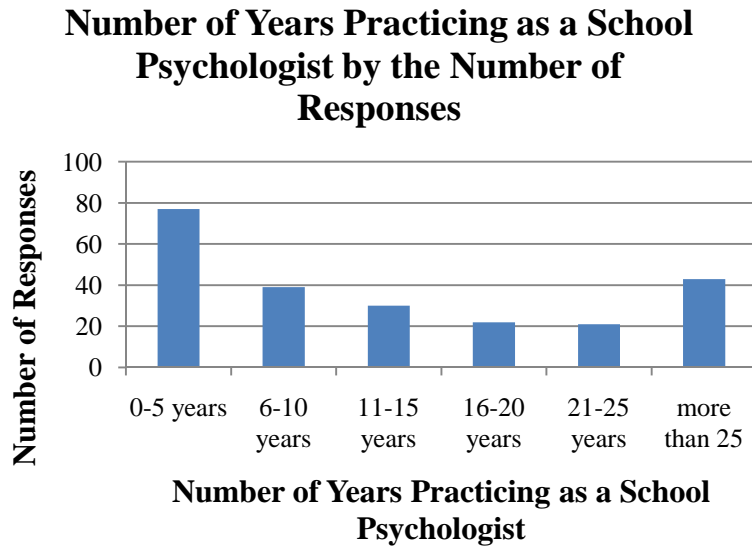


Figure 5. Percent of Time Spent Servicing CLD Populations by Number of Responses per Category

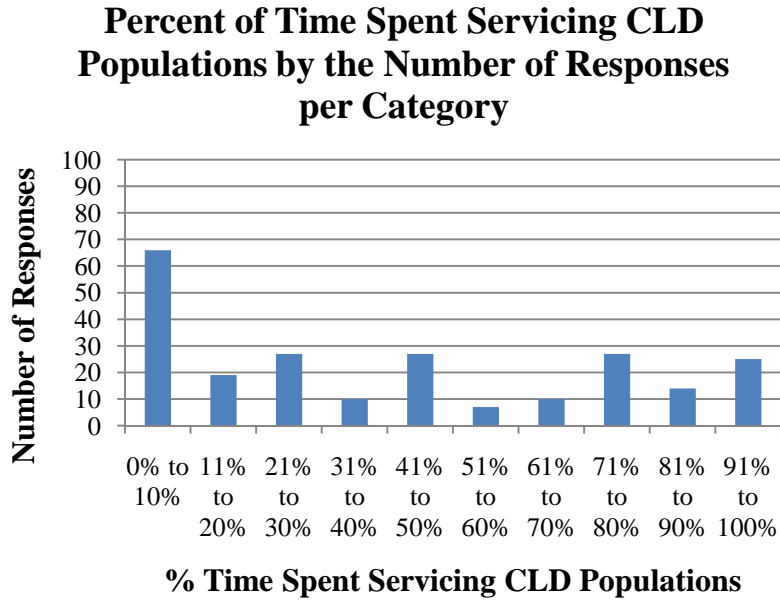


Figure 6. Scree Plot for Exploratory Factor Analysis with Skill

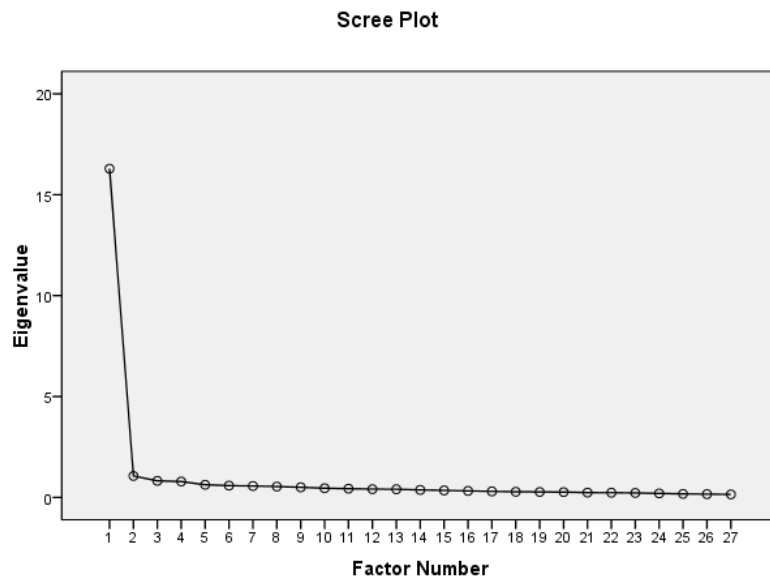


Figure 7. Scree Plot for Exploratory Factor Analysis with Value

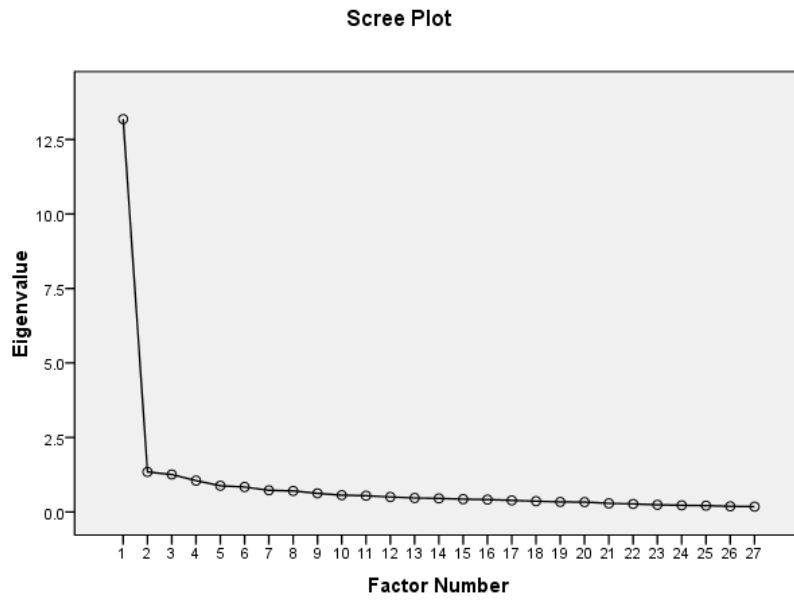


Figure 8. Scree Plot for Exploratory Factor Analysis with Implementation

