TEACHING ENGLISH LANGUAGE LEARNERS SCALE (TELLS): A STUDY OF VALIDITY AND RELIABILITY

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Abstract

This paper describes the confirmatory factor analysis, validity, and reliability data collection stage of the development of a scale to measure mainstream teachers’ self-efficacy beliefs for teaching ELL (English Language Learner) students. Data were collected from 708 K through 12 teachers and pre-service teachers with varying degrees of training specific to teaching ELL students. Using confirmatory factor analysis, a 23 item scale consisting of two factors instruction and assessment (14 items) and native language support and resources (9 items) was assessed for model fit. The data were not a good fit for the hypothesized two factor model (CFI = .82, RMSEA=.12). Additionally, the scale was positively correlated with social desirability. However, the scale maintained adequate convergent and discriminant validity with measures of culturally responsive teaching self-efficacy, multicultural teaching competencies, satisfaction with life, and self-esteem. The scale also demonstrated strong internal consistency and test-retest reliability.
Chapter 1: Introduction

Student achievement in public schools is of increasing concern in the United States (U.S.), as evidenced by legislation such as the No Child Left Behind Act of 2001 (NCLB) and the investment of 97 billion dollars in Education by the American Recovery and Reinvestment Act of 2009. If states are to receive federal funding for schools, this Act requires them to develop assessments in basic skills which are given to all students in certain grades. The most recent reauthorization of No Child Left Behind expands the requirement of reporting on the achievement of specific underserved groups, including English Language Learners (ELLs). This particular group of students is important due to their increasing numbers in the schools (Aud et al., 2010), inadequate educational opportunities (Gándara, Maxwell-Jolly, & Rumberger, 2008), and low achievement in comparison to native English speakers (National Center for Education Statistics, 2009).

Terminology and Definitions

ELL, which stands for English Language Learner, is one of many common acronyms used to describe people who are learning English as a second language. Other common labels used for people acquiring English as an additional language include Limited English Proficient (LEP), Dual Language Learners (DLL), English as a Second language (ESL), speakers of languages other than English (LOTE) and culturally and linguistically diverse (CLD) students. In this project, the term English language learners will be used because this is the preferred term in education and is a more positive, strength-focused term in comparison to labels that are deficit focused, such as limited English proficient.
**ELL Student Population Growth**

It is evident that the overall number and percentage of children learning English as a second language in the U.S. is increasing. According to Census data, people over the age of five years who spoke English less than “very well” grew from 4.8 percent in 1980, to 6.1 percent in 1990, and to 8.1 percent in 2000 (Shin & Bruno, 2003). Data from the 2008 Census show approximately 20% of youth aged 5 to 17-years spoke a language other than English at home, and 5% spoke English less than “very well”. Capps and colleagues (2005) utilized State Education Agency survey data and found that approximately 6% of school children (PK-12) in the U.S. were considered ELLs in 2000; this percentage was even higher among elementary students. Previously, ELL students accounted for only 3% of secondary age students and 5% of elementary age students in the 1980s (Capps et al., 2005).

The population of children learning English as a second language is continuing to increase. According to data from the 2007 American Community Survey (ACS) the amount of homes in which a language other than English spoken in the home increased by 140% from 1980 – 2007. In comparison, the amount of homes in which English is spoken in the home increased by 20% in the same time period. During this time, some languages have decreased (e.g. Polish, Italian) while others increased (e.g. Spanish, Russian, Vietnamese). Additionally, the National Center for English Language Acquisition (2010) reports the number of ELL students has jumped by 57% over the past ten years.

School administrators have reported a higher number of children who speak English with difficulty than represented in Census data; however, administrators reported
primarily on elementary school students. They reported that 11% of elementary school students were English language learners in 2007–08, higher than the 8% reported in 1999–2000 (Aud et al., 2010). Overall, 11% of Kindergarten through 12th grade students were considered ELL in the 2007-2008 school year according to National Center for Education Statistics (2009). More than half (55% and 67%) of all schools and public schools, respectively, in the U.S. in the 2007-2008 school year had at least one ELL student enrolled (NCES, 2009). Further, while the amount of all pre-K-12 students increased by 8.5 percent, from 46 million in 1997-1998 to 49.9 million in 2007-2008, the number of ELL students increased by 53.2 percent (from 3.5 million to 5.3 million) in the same period (Batalova & McHugh, 2010).

The population of students learning English as a second language is very heterogeneous; however, there are a number of trends. First, English language learners are commonly younger: according to Census data, more young children (5-9 years old) speak a language other than English at home and speak English with difficulty (7%) than older children (10 – 17 years old; 4%) (Aud et al., 2010). This pattern holds across most demographic and socioeconomic characteristics (Aud et al., 2010). Also, most ELLs speak Spanish: approximately seventy-five percent of people who speak English with difficulty speak Spanish (Aud et al., 2010).

Another trend in the growing number of students who are learning English as a second language, is that many are U.S. born or have parents who were born in the U.S. (Capps et al., 2005). In 2000, 59% of PK-5th grade ELL students were U.S. born children of immigrants while 18% were children of parents born in the U.S. Similarly, 29% of 6th – 12th grade ELL students were children of parents born in the U.S.; however, 44% were
foreign-born (Capps et al., 2005). It is challenging to speculate why the percentage of foreign-born ELL students is so much higher at the secondary level. Recent data matches this trend showing 43% of children aged 5- to 17- years who speak a language other than English at home were native-born (ACS, 2009).

Importantly, the states with the most ELL students are not the states with the fastest growing population of ELL students (Batalova & McHugh. 2010; Capps et al., 2005). Between 1990 and 2000 the ELL student population grew most rapidly in the Southeast, Midwest, and interior West (Capps et al., 2005). Recently, states with the largest percentages of PK – 12 ELL enrollment in 2007-2008 included Nevada, California, Arizona, Texas, Colorado, Washington, Florida, Illinois, and New York. In comparison, the states with the largest percent growth included South Carolina, which grew more than 800 percent between the 1997-1998 and 2007-2008 school years, Indiana, which grew by more than 400 percent, as well as Nevada, Arkansas, North Carolina, Virginia, Delaware, Georgia, Alabama, and Kentucky, all growing by more than 200%. Nevada is the only state to appear in both categories.

Thus, families with children for whom English is a second language are moving to a wider variety of places in the U.S. than they have in the past; the educational institutions within these communities may be unprepared for them. There is potential for new populations of ELL students in these areas to be less effectively taught because of the teachers’ lack of experience teaching them and lack of preparations and training for working with ELL students.
**Ecological Context**

There are many opportunities to improve outcomes for ELL students, reduce their struggles in school, and improve their academic achievement. Ecological factors such as school and teacher characteristics, state and district policies, placement in special education, and parent engagement can all be changed to enhance educational achievement. These factors are described in an effort to demonstrate the impact of contextual factors on ELL students’ success.

**Socioeconomic status.**

ELL students are also more likely than native speakers of English to live in poverty. High percentages of poor (10%) and near-poor (8%) 5- to 17-year-olds speak a language other than English at home and speak English with difficulty. In contrast, 3% of non-poor 5- to 17-year-olds speak English with difficulty (Aud et al., 2010). Five year estimates from the American Community Survey (2005 to 2009) indicate that 18% of 5- to 17-year olds who speak a language other than English at home were below poverty compared to 13% of all 5- to 17-year olds. Economic poverty is an important aspect to consider among students as statistics from NCES demonstrate that students from families with low incomes have a higher drop-out rate (9.0%) than those from medium (3.5%) or high (2.0%) income families (2008).

**School characteristics.**

Another important factor for students learning English as a second language is the school they attend. According to school administrators, the percentage of students at high-poverty schools who were considered to have difficulty speaking English was over five times greater than that at low-poverty schools, at both the elementary and secondary
school levels in the 2007–08 school year (Aud et al., 2010). Approximately 25% of students attending high-poverty elementary schools were identified as ELL, while 4% of students attending low-poverty elementary schools were ELL. At the secondary level, about 16% of students attending high-poverty schools were identified as ELL, while 2% of students attending low-poverty schools were considered ELL (Aud et al., 2010).

Further, some researchers (e.g., Gándara, Maxwell-Jolly & Rumberger, 2008) have found that the characteristics of the schools ELL students attend are inequitable. Particularly in California, Gándara and colleagues reported that ELL students experience inequitable access to appropriately trained teachers, segregation into schools and classrooms that put students at high risk for failure (limited exposure to native speakers of English), inequitable access to appropriate assessment, and inadequate instruction time for their learning goals. Additionally, there are inadequate professional development opportunities for teachers and inequitable access to instructional materials and adequate facilities (Gándara et al., 2008). Awareness of the inadequacies of the schools that ELL students are more likely to attend provides opportunity for improving academic outcomes for ELLs by improving their schools and educational experience.

Parents and education.

Parents are also an important aspect of students’ educational experience. Approximately half of all ELL students have parents who did not obtain a high school degree (Capps et al., 2005). Parents’ educational history has been linked to engaging in learning activities with their children (Fuligni & Fuligni, 2007), academic motivation, and educational aspirations (Plunkett & Bamaca-Gomez, 2003). Additionally, parents of ELL students often have less direct involvement in their children’s schooling. This is
important because researchers (e.g., Weiss, Dearing, Mayer, Kreider, & McCartney, 2005) continue to find evidence of the positive impact of parental involvement on students’ academic achievement. Tasks such as helping with homework have been shown to increase academic motivation (Plunkett & Bamaca-Gomez, 2003), yet many parents of ELL students may have difficulty with such tasks. Due to factors such as linguistic and cultural differences, expectations, and schools’ welcoming of parents of ELLs, many parents struggle to be involved in their child’s education both in school and at home. This is another area of opportunity for improving educational outcomes, because teachers can help eliminate risks and improve outcomes by making school a warm environment for parents, encouraging parent participation in various forms, and demonstrating respect and value for all parents.

**Teacher preparation.**

ELL students pose a potential challenge to all teachers because of teachers’ lack in training to teach ELLs. Many teachers in the U.S. are unprepared to teach ELL students (Calderon, 2006); this is especially problematic because many ELL students spend a significant portion of their day with mainstream teachers. Less than 20% of the 56% of public school teachers in the U.S. who have at least one ELL in their class are certified to teach ELLs (Waxman, Tellez, & Walberg, 2006). Also, less than 1/6th of teacher preparation programs for mainstream teachers in elementary or secondary education required preparation for teaching ELL students (Menken & Antunez, 2001). Many teachers themselves report they feel under-prepared to work with ELL students; only 32% of teachers report feeling “very well-prepared” to address the needs of students from culturally diverse backgrounds (NCES, 2001).
Further, teachers are less likely to participate in professional development that focuses on addressing the needs of students from different cultural backgrounds. Only 26% of all public school teachers reported participating in professional development that addressed the needs of ELLs (NCES, 2001). The majority of these teachers (68%) spent between one and eight hours in this type of professional development (NCES). A recent study by consulting firm Eduventures further suggests that new teachers feel unprepared to teach ELL students ("Rookie educators," 2009). In a survey of 1,504 teachers and 130 administrators nationwide who started working in the last five years, almost half said that they felt ill-equipped to teach ELLs. However, only one-third said they would like to receive professional development to teach those students.

Teachers of ELL students need to be prepared to appropriately handle the cultural and linguistic differences of their students. Numerous authors (e.g., Gay, 2000, 2010; Irvine, 1990; Ladson-Billings, 1994; Nieto, 2008) advocate for culturally responsive teaching. Culturally responsive teaching is an approach to teaching which 1) uses students’ cultural knowledge, experiences, prior knowledge, and learning preferences to facilitate teaching and learning, 2) designs culturally compatible classroom environments by incorporating students’ cultural orientations, 3) uses a variety of assessment techniques to demonstrate learning, and 4) helps students maintain their cultural identity, native language, and connection to their culture while providing knowledge and skills to function in mainstream culture (Siwatu, 2007). Siwatu indicates that preparing of culturally responsive teachers involves transforming pre-service teachers’ multicultural attitudes, increasing their culturally diverse knowledge base, and equipping them with the skills to effectively teach culturally diverse students.
While culturally responsive teaching could be one component of teaching ELL students who come from diverse cultural backgrounds, it is not sufficient. Specialized training is required in addition to culturally responsive teaching to address the linguistic diversity among students. Teachers need a great deal of knowledge and skills to appropriately teach students who are learning English as a second language. In addition to being culturally responsive, teachers must have specific competencies regarding language, linguistics, and second language acquisition. Finally, teachers must be knowledgeable about appropriate strategies for instruction and assessment and be able to utilize a variety of resources.

**Disproportionality.**

Another important contextual factor to consider is disproportionality among ELL students in special education. District and school staffs encounter difficulty determining whether an ELL student should be identified for special education services (Zehler, Fleischman, Hopstock, Pendzick, & Stephenson, 2003). As a result, ELL students experience disproportionate representation in special education. The rate of special education identification for ELL students varies greatly by district (Zehler et al., 2003). For example, Zehler and colleagues found that districts with 99 or fewer ELL students had higher rates of identification of those students in special education than did districts with 100 or more ELL students nationwide. This trend was present in findings from Arizona where districts with higher proportions of students identified as ELL were less likely to have disproportionality in special education generally (Sullivan, 2011). Sullivan also found poverty, as indicated by the proportion of students receiving free or reduced-price lunch, was inversely related to disproportionality in speech-language impairment.
Studies of disproportionality find conflicting results, perhaps due to the differences seen across districts and states. Zehler and colleagues (2003) found ELLs were typically being underrepresented in special education. In contrast, Sullivan (2011) found ELL students were generally overrepresented in special education in her State. Similarly, both studies found ELLs were underrepresented in the special education category of emotional disability.

Either trend is problematic for ELLs. Underrepresentation in special education means there are many ELL students in the mainstream classroom that may require additional services but are not provided them because their academic problems are considered to be a confound of their limited proficiency in English. Overrepresentation in special education is also concerning. These students may be placed in special education because of their limited English proficiency, rather than in spite of it (Zehler et al., 2003). Zehler and colleagues (2003) also found that ELL students in special education are less likely than ELL students in general to receive extensive ELL services, and more likely to be instructed in English. Further, they found instructional programs for ELL students in special education are not aligned with State content/performance standards to the same extent as instructional programs for special education students in general (Zehler et al., 2003).

Inappropriate placement can have a negative affect on students, especially when they are still acquiring English. On the other hand, those students who require special education but are left in the general education setting may receive English language services but continue to struggle and experience failure in school due to an undetected
disability. Left unchecked, both of these situations have potential to steer students towards leaving school.

Some researchers suggest schools play an important role in dropout rates, to such a degree that students may be “pushed-out.” These researchers suggest that the organization and structure of schools needs to be examined and relationships between students and teachers need to improve in order to keep all students in school (Lee & Burkam, 2003). Some of the specific reasons that have been suggested for the occurrence of school dropout among ELL students in particular include: a lack of appropriate courses, feelings of isolation and lack of belonging, and frustration with falling behind academically (Garcia, Arias, Harris Murri, & Serna, 2010).

**ELL Student Achievement**

In this context, ELL students have less positive educational outcomes than their native English speaking peers. For example, the dropout rate for some ELL students is much higher than that of non-ELL students. According to the American Community Survey (2007), for all language groups, a larger proportion of students who did not complete high school reported limited English-speaking ability than for those who reported speaking English “very well.” The National Council of La Raza (2007) reports that 59% of Hispanic ELL students do not graduate; in contrast, a lower percentage (17%) of Hispanic non-ELL students do not graduate. In the 2003 to 2004 school year the total event dropout rate in the U.S., the percentage of all public school students in grades 9 through 12 who dropped out of school between one October and the next, was 3.9% (NCES, 2007). Among White students, 2.9% left school. In comparison, 6.4% of Black, 5.9% of Hispanic, and 7.2% of American Indian or Alaskan Native students left school.
The only minority group with a lower drop-out rate than White students was the Asian/Pacific Islander group at 2.5%. Data were not available for the drop of rate of ELL students nationwide. Incidentally, ELL students also report lower academic self-efficacy than native speakers of English (LeClair, Doll, Osborn, & Jones, 2009).

Also, data indicate that in 2007, ELL students performed behind non-ELL students in reading (NCES, 2009). Seven percent of 4th grade ELL students performed at or above Proficient and 30 percent performed at or above Basic. Meanwhile, 34% of 4th grade non-ELL students performed at or above Proficient and 69% performed at or above Basic. The same trend is also apparent among 8th grade students (NCES, 2009). It is important to note that not all ELL students were assessed; among fourth graders, ELL students represented approximately 9% of students assessed and among 8th graders, ELL students represented approximately 6% of the students assessed. NCES states that approximately 2% of ELL students were not assessed in 2007. Additionally, the validity of such assessments for ELL students has been questioned (Rhodes, Ochoa, & Ortiz, 2005).

**Teachers’ Self-Efficacy**

The way in which teachers respond to challenges such as having one or more linguistically diverse students in the classroom, will vary based upon the teacher’s beliefs about her/his ability to perform appropriate tasks effectively. These beliefs are referred to as teachers’ self-efficacy (TSE). Self-efficacy is one’s belief in her/his ability to effectively carry out a task. It is theorized to be formed and altered by personal experiences, seeing or hearing experiences of others, verbal reinforcement, affective states, and integrating information about efficacy (Bandura, 1977). Thus, teachers’ self-
efficacy in terms of working with ELL students will be impacted by how much and what type of experiences they have teaching ELL students or observing others teach, the amount and type of training they receive, their feelings about teaching ELL students, and what they know about effectively teaching ELL students.

Bandura’s model of perceived self-efficacy theorizes that perceived self-efficacy affects an individual’s behavior via performance, persistence, and choice to approach or avoid. Thus, it is expected that teachers will behave differently in the classroom based on their level of self-efficacy for teaching. According to Bandura’s theory, a teacher will excel or fail, persevere or burn out, and rise up to or shy away from challenges in part because of what she believes she is able to do.

Both theory and research suggest teachers’ self-efficacy affects teacher and student variables. Research suggests teachers’ self-efficacy is correlated with the ability to implement classroom management strategies successfully (Woolfolk & Hoy, 1990; Woolfolk, Rosoff, & Hoy, 1990), the ability to work longer with struggling students (Ashton & Webb, 1986; Gibson & Dembo, 1984), and willingness to try new strategies (Ghaith & Yaghi, 1997; Guskey, 1998). There is also evidence that self-efficacy and teacher burnout are negatively correlated (Brouwers & Tomic, 2000; Egyed & Short, 2006; Schwarzer & Hallum, 2008b; Skaalvik & Skaalvik, 2010).

Research suggests teachers’ self-efficacy may be correlated with student variables such as achievement (Ashton & Webb, 1986; Caprara, Barbaranelli, Steca, & Malone, 2006; Muijs & Reynolds, 2002) and motivation (Alderman, 1999; Midgley, Feldlaufer, & Eccles, 1989). Additionally, students’ academic efficacy, efficacy to meet others’ expectations, and self-regulatory efficacy decline as teachers’ self-efficacy declines
Teachers’ self-efficacy beliefs are also correlated to students’ academic engagement (Good & Brophy, 2003) and other student outcomes (Ross, Hogaboam-Gray, & Hannay, 2001).

An important aspect of teachers’ self-efficacy beliefs is that they are amenable to change. Self-efficacy development is a component of teacher training programs (e.g., Howard, Horne, & Jolliff, 2001). Furthermore, brief training and intervention has been shown to increase teachers’ self-efficacy for teaching culturally and linguistically diverse students (Tucker et al., 2005). Accurate measurement of teachers’ self-efficacy beliefs can help determine the effectiveness of interventions for increasing self-efficacy beliefs and consequent student and teacher outcomes.

Teacher Self-Efficacy Measurement

Current teacher self-efficacy scales such as the widely used Teacher Efficacy Scale (TES; Gibson & Dembo, 1984), have been questioned due to doubts about its validity (Brouwers & Tomic, 2003; Denzine, Cooney, & McKenzie, 2005; Henson, 2002; Tschannen-Moran, Woolfolk-Hoy, & Hoy, 1998). This concern calls into question the validity of findings using the TES. Further, many of the studies cited could be improved upon and up-to-date studies about teacher self-efficacy need to be completed. These studies should use clear definitions of teacher self-efficacy and measure the construct with instruments that produce scores that are reliable and valid. There is a clear need for better measures in order to verify the accuracy of previous studies and add to knowledge about teacher self-efficacy with continuing research.

In addition to the potential problems with popular self-efficacy scales, there is some variation as to the level of specificity teacher self-efficacy should be measured.
Existing scales range from examining general self-efficacy beliefs about teaching overall to specific beliefs about ability to teach a certain subject domain (e.g., science) or group of students (e.g., students with a learning disability). Many researchers argue context and specificity are important aspects in teacher self-efficacy. However, few scales exist to measure self-efficacy for teaching in certain areas, situations, or with specific populations.

Another limitation of teacher self-efficacy scales is that they ask teachers to base their responses on their experiences in their current classroom. Teachers’ responses may vary based on the type of students they consider when they respond to an item. For example, a teacher may report higher levels of confidence for working with one type of student, but lower levels for working with another type of student. Currently, little information exists on the demographic characteristics of students for which teachers have high and low self-efficacy, or what aspects of teaching these students they find more challenging. A more specific teaching self-efficacy scale which examines a subset of students could provide useful information on teachers’ confidence for working with students with specific needs in the classroom and can inform both teacher training and practice.

To date, two measures to assess perceived multicultural competencies among teachers are available: the Culturally Responsive Teaching Self-Efficacy Scale (Siwatu, 2007) and Culturally Responsive Teaching Outcome Expectancy (Siwatu) scale. No measure exists to evaluate teacher competencies for working specifically with ELL students. Due to increasing rates of immigration in the U.S. and the high likelihood that teachers everywhere will encounter students for whom English is their second language,
a scale that focuses on this student population is important and timely.

Recently, the Teaching English Language Learners Scale (TELLS; Strawsine, 2009) was created to measure teachers’ self-efficacy beliefs regarding their ability to effectively teach students learning English as a second language. The TELLS is structured on a clearly operationalized definition of teacher self-efficacy and is grounded in both theory and research regarding general scale development and self-efficacy scale development. The results of the initial scale development study identified a two-factor structure for the scale: *instruction and assessment* and *native language support and resources*. The data demonstrated strong internal consistency on the overall scale and each factor. A mild correlation was found between the factors as well. The TELLS allows researchers and practitioners to examine teachers’ self-efficacy in regards to ELL students specifically, rather than in the context of all students. In the future, this scale could provide data that can be used to determine the association between teachers’ self-efficacy and student achievement, specifically among the ELL population. Additionally, it will allow comparisons to be made across different types of teacher self-efficacy. The TELLS could also be used to identify areas in which teachers feel they need better initial instruction and/or professional development in regards to teaching ELL students. At the current stage in development, additional validity studies using the TELLS are needed to assess the psychometric properties of this instrument’s scores.

**Purpose of Current Study**

The purpose of this study was to build upon the previous study by gathering validity and reliability data to support the TELLS, a scale that measures teachers’ individual beliefs in their capability to perform effective tasks in order to successfully
teach English language learners in their mainstream classroom. Specifically, the study examined factor stability, temporal reliability, and convergent and discriminant validity in a diverse sample of teachers. The hypotheses were: 1) the data will confirm the two factor model of the TELLS using confirmatory factor analysis; 2) TELLS scores will be stable after a 4-week time period; 3) TELLS scores will positively correlate with measures of convergent validity (multicultural teaching skills and multicultural teaching self-efficacy); and 4) TELLS scores will not correlate with measures of discriminant validity (self-esteem, social desirability, and life satisfaction. This scale will measure teachers’ self-efficacy for working with the specific population of ELL students and provide more detailed information about areas in which teachers believe they require more training.

Chapter 2: Literature Review

The rise of English language learners in U.S. public schools is well documented (NCELA, 2010). Due to various contextual, or ecological, risk factors described in the introduction, ELLs often have poor academic outcomes in comparison to native English speakers (e.g. Kohler & Lazarin, 2007). Schools and teachers have a great opportunity to improve outcomes for ELLs; however, mainstream teachers are not well prepared for welcoming and teaching ELLs in their classroom (Calderon, 2006; Waxman, et al., 2006). Such lack of preparation can create low self-efficacy for teaching ELLs among teachers, which can influence both student and teacher outcomes such as academic achievement and burnout. Currently, no scales exist to measure teachers’ self-efficacy for effectively teaching ELLs.
The purpose of this chapter is to provide a background of the literature for the reader to better understand the competencies required to teach linguistically diverse students and how to measure teachers’ beliefs in their abilities to teach English language learners. This is done by outlining the requisite cultural, linguistic, and other teaching competencies. Then, self-efficacy is discussed from social cognitive theory framework. Finally, a historical overview and analysis of teacher self-efficacy measurement is provided and current directions in teacher self-efficacy research are summarized. By the end, the reader will have a strong grasp of the elements that are critical to include in a teacher self-efficacy scale for teaching ELLs.

**Teacher Competencies**

Teaching ELL students in any setting requires competencies and skills in which few mainstream teachers are trained. Teachers need to be prepared for both cultural and linguistic differences between themselves, the students, and their families to successfully teach all students (Banks, 1991; Banks & Banks, 2005; Echevarría, Vogt, & Short, 2008; Gay, 2010; Nieto, 2008). Mainstream teachers of ELL students must develop knowledge, skills, and awareness regarding second language learning, language and culture as a medium in teaching and learning, and setting explicit linguistic and cultural goals (de Jong & Harper, 2005). This requires that teachers enhance their multicultural, linguistic, instructional, and assessment competencies so that such competencies can be integrated into their classrooms as well as the work that they do outside of the classroom.

**Multicultural competency.**

Students who are learning English as a second language come from a variety of backgrounds. It is important for teachers to be competent in integrating the cultures of
their students into the classroom in a way that demonstrates appreciation and capitalizes on the perspectives of all students to benefit the classroom community. Indeed, scholars (August, Shanahan, & Escamilla, 2009) call for multicultural competencies in teaching and support the integration of cultural diversity in the classroom (Gay, 2010). Additionally, research has shown that culture influences expectations, and low or negative expectations for performance have negative effects on achievement (Good & Brophy, 2003).

To provide multiculturally competent teaching, numerous models of multicultural education have been proposed. The models most strongly advocated for are what Taylor and Quintana (2003) label “comprehensive multicultural education”. These models go beyond acknowledging and accepting differences and emphasize the value of diverse cultures (Banks, 1991; Banks & Banks, 2005; Gay, 2000, 2010; Nieto, 2008).

There are many commonalities that can be found among the culturally responsive pedagogy models (Siwatu, 2007). Siwatu describes culturally responsive pedagogy as an approach to teaching with four clear features. The first feature is that it uses students’ cultural knowledge, experiences, prior knowledge, and individual learning preferences to facilitate teaching and learning. Culturally responsive pedagogy also incorporates students’ cultural orientations to design compatible classroom environments. Additionally, culturally responsive pedagogy provides students with multiple opportunities to demonstrate what they learn using a variety of assessment techniques. It provides students with knowledge and skills required to function in the mainstream culture while helping them maintain their cultural identity. Examples of such culturally responsive teaching competencies include teaching students about their cultures’
contributions to science and identifying ways that the school culture is different from students’ home cultures. Siwatu posits that to create culturally responsive professionals, teachers need to transform their attitudes to better align with multiculturalism, increase their knowledge base of cultural diversity, and equip themselves with skills needed to effectively teach culturally diverse students.

Other authors (e.g. Taylor & Quintana, 2003; Washington, 2003) also have suggestions about what it means for a teacher to be multiculturally competent. Knowledge is a key component of multicultural competency across scholars. Some of the specific cultural knowledge that teachers should know are the histories associated with students’ cultural identities and how the classroom culture affects learning for all students (Taylor & Quintana) and an understanding of how racism, discrimination, and stereotyping affects instruction, the family, religious, and social practices of their students, and the history of the religious and social practices of their students (Washington).

Scholars also place importance on teachers’ awareness and understanding. Teachers need to have a clear sense of their own cultural identity as well as an awareness of their knowledge, understanding, and skills (Taylor & Quintana, 2003). Teachers’ self-understanding of culture, understanding the cultures of others, and understanding the relationship between academic and multicultural competence is vital (Washington, 2003). Examples of the things teachers must understand are: their own cultural heritage, how their personal background influences their instruction, the lives of their students, that all teaching is cultural, and the importance of teaching critical thinking skills.
Less attention has been given to the skills that teachers need to be culturally competent. Teachers need to have innumerable skills such as the ability to use multic culturally based curriculum, instructional methods, and materials. Effective communication with all students is also essential (Taylor & Quintana, 2003). A critical issue is that skills are not clearly addressed as a competency. Washington (2003) incorporates beliefs into his model of multicultural competency stating that teachers must believe in themselves as competent teachers, their students, and that all children can learn.

Some scholars clarify that cultural competency needs to be addressed at multiple levels. Taylor and Quintana assert that multicultural competency requires social awareness at the individual (educator), classroom (curriculum and instruction), and institutional (administration, policy) levels. Meanwhile, other scholars (e.g. Washington, 2003) remain focused on skill development at the individual level.

**Linguistic Competency.**

While multicultural competency is an important aspect to teaching any student, additional, unique competencies are required for teaching students learning English as a second language. Teachers need to be knowledgeable about language, linguistics, second language acquisition and the many ways learning a second language can add to the difficulties students with different cultural backgrounds face.

The scope of what teachers need to be taught about language to effectively teach ELL students is under debate (McGraner & Saenz, 2009). There are many aspects of language that may be important for teachers to know about. Some scholars call for an expansive increase in teacher knowledge (e.g. Fillmore & Snow, 2000), while others
propose a limited but viable solution (e.g. Teaching English to Speakers of Other Languages [TESOL], 2008). Fillmore and Snow (2000) state teachers need to know about oral and written language to communicate clearly, determine if intervention is needed, support language development, validly judge students’ abilities, and make informed decisions about curriculum. In regards to oral language, Fillmore and Snow argue that teachers need to know: 1) the basic units of language including phonemes, morphemes, words, phrases, sentences, and discourse; 2) what is and is not “irregular”; 3) how vocabulary is acquired and structured; 4) if vernacular dialects are different from “bad English” and if so how; 5) what academic English is; and 6) why acquisition of English by non-native speakers has not been universally successful. Teachers also need to know how written language contrasts with oral language as well as understand spelling complication and structuring narrative and expository writing. In comparison, TESOL (2008) posits that school personnel should know basic issues of second language acquisition, bilingualism, the difference between social and academic language proficiency, and the roles language and culture play in learning. While they differ on the depth of knowledge teachers should acquire for working with ELL students, there is overlap in the basic areas of second language acquisition, academic language, and the roles of language and culture in learning.

One language area that is essential for teachers of ELL students is to know the difference between social and academic language. Scholars argue that academic language is critical for academic success (Coleman & Goldenberg, 2009). Social language has been called Basic Interpersonal Communicative Skills (BICS) and includes the aspects of language that allows one to interact with peers and other people in the community.
Another language area for teachers of ELL students to be knowledgeable about is language acquisition. Teachers need to be aware of the phases of language acquisition and the typical differences seen within students acquiring an additional language. For example, teachers of ELL students should know that listening skills typically develop before speaking skills, so students may be silent for an extended period of time and may understand what is being taught, but may not actively participate in class discussions (Crawford & Krashen, 2007; Díaz-Rico, 2008). Teachers should also be aware of the many factors that affect the second language acquisition process, including socio-economic background, motivation, personality, and willingness to make mistakes (Lightbown & Spada, 2006).

Teachers should also be aware of the importance of maintaining students’ native languages. Higher levels of academic achievement in second generation immigrant students have been linked to the maintenance of their native languages (Portes & Rumbaut, 2001). Additionally, multiple studies have found that reading proficiency in the primary language is correlated with higher achievement in English (August, et al., 2009). Concepts and skills learned in one’s first language will transfer to one’s second language; the words to describe them need only be learned (Collier, 1994). Similarly, literacy skills in one’s native language help with literacy in a second language, thus
students should be able to use their primary language in class to help aid comprehension in English (Crawford & Krashen, 2007; Verplaetse & Migliacci, 2008).

**Instructional Strategies.**

It is also important for teachers to be aware of teaching strategies that work for ELL students. Certain specific instructional strategies have evidence for being effective with students learning English as a second language. However, there have been inconsistent recommendations for what type of language teachers should use and how they should use it when teaching ELLs. Some researchers support teachers making content comprehensible by speaking at a slower pace or with exaggerated enunciation (Reyes & Vallone, 2008). In addition, they suggest that teachers adjust their spoken language by using simpler vocabulary words or grammatically uncomplicated sentences that match or are slightly higher than students’ ability to comprehend oral language (Reyes & Vallone, 2008). In contrast, other teacher educators recommend that teachers should maintain an authentic pace and tone, but increase the number of pauses in their spoken language to allow time for comprehension (Verplaetse & Migliacci, 2008). Other researchers believe that simplifying or otherwise adapting language provides inadequate input for ELLs (Walqui & DeFazio, 2003).

Gersten and colleagues agree that simplifying language is a disservice to ELL students, stating “the problem with regularly giving English learners a diet of familiar reading material is that the academic texts of assessments and most content areas remain unfamiliar” (2007, p. 19). Simplifying text generally refers to shortening sentences and deleting irregular forms, which makes the text less authentic and actually makes clarifying the meaning more difficult. However, a text that amplifies uses more explicit
language with redundancies that flows similar to how one would speak. Rather than over-simplifying the material, teachers should focus on amplifying the lesson to provide for richer learning experiences so students are working with adapted text but still learning grade level content, rather than simplifying the language (Walqui & DeFazio, 2003).

Gersten and colleagues (2007) recommend that teachers develop students’ academic language to promote their success in literacy and English language acquisition. To do this, academic vocabulary must be taught (McGraner & Saenz, 2009). Additionally, students will benefit from instruction in the following academic language tasks: expressing an opinion, asking for clarification, soliciting a response, reporting a group’s or partner’s idea, disagreeing, affirming, predicting, paraphrasing, acknowledging ideas, offering a suggestion, or holding the floor (Ballantyne, Sanderman, & Levy, 2008). Educators must ensure they teach expressive language as well so that ELL students can answer questions, participate in discussions, and be successful at showing what they know on assessments (Lightbown & Spada, 2006). For specific teaching strategies, it has been suggested that to assist students in expressing themselves in an academic context, teachers can provide sentence starters that incorporate academic vocabulary. The sentence starters should be used for writing and also for oral language, to provide multiple opportunities for reinforcing the new vocabulary (Ballantyne, et al., 2008).

Additional skills necessary for teachers of ELL students have been reported. McGraner and Saenz (2009) stated that teachers need to be able to structure and facilitate classroom discourse about academic content, use explicit and systematic instruction, provide purposeful, consistent, systematic feedback, and effectively use visuals.
Correspondingly, Coleman and Goldenberg (2009) suggested that a combination of explicit teaching and opportunities for meaningful and authentic communication helps promote learning a second language. Genesee and colleagues (2006, pp. 139-140) also reported, "The best recommendation to emerge from our review favors instruction that combines interactive and direct approaches.” In line with the skills McGraner and Saenz suggested, research also supports the use of graphic organizers (i.e., T-charts, brainstorming webs) when appropriate or visual representation in addition to verbal explanations to enhance the material (Verplaetse & Migliacci, 2008).

Another strategy that has some evidence behind it is pair work. Gersten and colleagues (2007) suggested that pair work is a very effective organization strategy that enables peers to assist each other. However, research is inconsistent regarding how to pair students with regards to English proficiency.

**Classroom Environment.**

Learning a second language can affect students’ behavior, social skills, and academic performance. Curran (2003) provided a number of suggestions for teachers to manage their classrooms with linguistically diverse students. She stressed the importance of understanding the perspective of ELL students and the natural responses to being immersed in a second language. For example, laughter, silence, fatigue, first language use, and anger are all natural responses among students learning English. Curran provided examples in which teachers can address some of these responses; for example, when students are using their first language and the teacher does not know what they are discussing, the teacher can ask the students if they are on-task, rather than asking them to speak English. Additionally, the teacher could try to learn their students’ native languages
to demonstrate the teacher’s acceptance of students using their preferred language in the classroom.

**Assessment.**

Scholars consistently call for more research on the assessment of ELL students due the dearth of information on the subject (August, et al., 2009). However, there are suggestions for appropriate assessment. First, instead of relying on one test format that is only indicative of a small representation of that student’s ability, teachers should consider a wider sample of work (Crawford & Krashen, 2007; Díaz-Rico, 2008). Scholars have suggested that teachers perform ongoing assessment using observational notes, checklists, rating scales, student work samples, curriculum based measurement and portfolios.

There are also suggestions for appropriate assessment accommodations. Research is not definitive regarding accommodations; however, scholars suggest consistency and comfort level with the accommodation strategies are important (August, et al., 2009). For example, if students are not familiar with using dictionaries, providing them during a test may actually be counterproductive.

**Resources.**

Teachers also need to be aware of and be able to effectively utilize resources to effectively teach ELL students. Han and Bridglall (2009) argue that research suggests school resources and learning environments are important for mainstream and ELL students (e.g. August & Shanahan, 2008; Suárez-Orozco & Suárez-Orozco, 2001). In their own work, Han and Bridglall found that school-level factors explained at least one third of the reductions in the differences in children’s academic performance after
considering child, family, and school characteristics. Additionally, they found the availability of ESL/bilingual aides was important to children’s reading trajectories and having a teacher who only spoke English in the classroom was significantly associated with slower growth in reading and math. They also found that schools offering more Title I services (e.g., extending learning time before and/or after school for targeted children, family literacy services) and services for ESL families (e.g., translators available for parent–teacher conferences, outreach workers to assist families enrolling children) allowed ELL children to improve their math scores faster than their English-speaking peers.

Teachers must also view parents as resources because parental involvement in education is positively correlated with students’ academic achievement (Weiss et al., 2005). Parents can be involved in education through direct contact with school personnel and indirectly at home by talking with their children about school. Parents need to be made to feel as though they have something to offer the school or have an area in which they can be an expert to increase direct involvement (Perez, 2001). Scholars also promote that teachers can encourage parents to read to their children in the home language and conduct exploratory activities in the home language to increase cognitive development (Díaz-Rico, 2008).

**Teacher Preparation**

Currently, many teachers in mainstream classrooms are not trained to have the aforementioned competencies to teach ELL students. A limited amount of programs require preparation for mainstream teachers to teach ELL students: less than 1/6th of teacher preparation programs for mainstream teachers in elementary or secondary
education required preparation for teaching ELL students (Menken & Antunez, 2001). Only 32% of teachers reported feeling “very well prepared” to address the needs of students from culturally diverse backgrounds (NCES, 2001) and teachers with a higher percentage of ethnically diverse students in their classrooms demonstrated lower teaching self-efficacy in science than teachers with a higher percentage of White students (Moseley & Taylor, 2011). Some estimates suggest only 8% of teachers are multiculturally competent (Taylor & Quintana, 2003). Additionally, few teachers participate in professional development aimed at addressing the needs of ELL students and those who do participate, often earn few hours. A recent study by consulting firm Eduventures suggests that new teachers felt unprepared to teach ELL students (“Rookie educators,” 2009). In a survey of 1,504 teachers and 130 administrators nationwide who started working in the last five years, almost half said that they felt ill-equipped to teach ELLs. However, only one-third said they would like to receive professional development to teach those students. Teachers with limited preparation are likely to have low self-efficacy in the areas they feel unprepared. To understand this further, we must examine self-efficacy in the framework of social cognitive theory.

**Social Cognitive Theory**

Social cognitive theory is based upon triadic reciprocal causation, or the idea that humans function such that behavior, internal personal factors, and environmental events all have influence upon the others (Bandura, 1986). Internal personal factors include cognitive, affective, and biological process within the person. Social cognitive theory defines the nature of people in terms of basic capabilities, which represent the interaction of behavior, internal personal factors, and the environment. From a social cognitive
framework, a teacher’s behavior is influenced by the environment they are in as well as their thoughts, feelings, and physiological processes. For example, teachers may chose to avoid calling on ELL students because they lack resources in their environment to help them, they think they can’t answer their question, they are nervous, and their heart is racing.

Bandura (1986) outlined five basic human capabilities in his social cognitive theory. The first, symbolizing, is the ability to use symbols as a means of altering and adapting our environment. Using symbols allows people to give meaning to experiences, generate and plan action, and create ideas which transcend the senses. Forethought, or the ability to plan for the future, is another basic capability which allows people to motivate themselves. Humans also have vicarious capabilities, or the ability to learn by observation. Examples of this can be seen when a teacher models proper behavior and the student learns this behavior or when a person learns from watching media sources. The ability to self-regulate is also basic to humans. Behavior is motivated and regulated by internal standards and self-evaluation. The last capability is self-reflection; this allows people to analyze their experiences and think about their own thought process. It enables people to understand, monitor, and change their thoughts, as well as judge their own capabilities (efficacy). The way people judge their capabilities influences what they do, how much effort they invest, how long they persevere, anxiety, and self-assurance.

**Self-efficacy.**

Bandura (1997) stated that placing self-efficacy beliefs in the framework of social cognitive theory allows for the integration of diverse findings. Self-efficacy is an element that can be placed in humans’ basic capability of self-reflection, as it requires a person to
judge their own capabilities. Using social cognitive theory as the framework for self-efficacy specifies other aspects of the self such as aspiration, outcome expectations, perceived opportunity and constraints, and personal efficacy, which allows for a more integrated picture of the self (Bandura).

In Bandura’s earlier writings about self-efficacy he used the term “perceived self-efficacy”, which he regarded as “judgments of how well one can execute courses of action required to deal with prospective situations” (1982, p. 122). More simply, perceived self-efficacy included judgments about one’s ability to successfully carry out an action that is required to produce an outcome. Importantly, Bandura differentiated efficacy expectations from outcome expectations. Outcome expectations refer to a person’s estimate that a given behavior will lead to certain outcomes; efficacy expectations refer to the belief that one can successfully do the behavior required to produce the outcomes (1977). More recently, Bandura (1997) called perceived self-efficacy a generative capability, stating it is “concerned not with the number of skills you have, but with what you believe you can do with what you have under a variety of circumstances.”

According to Bandura (1997), self-efficacy beliefs vary on three dimensions; level, generality, and strength. The level of the self-efficacy belief refers to the extent to which efficacy beliefs persist from simple to the most difficult demands within an area of functioning. Thus, a teacher’s self-efficacy may decrease as teaching tasks become more difficult. Generality of efficacy beliefs refers to the amount a person’s efficacy beliefs extend across ranges of different activities or domains. Teachers’ self-efficacy may differ across teaching different subjects or students and various teaching tasks. Finally, strength
is the amount a person holds onto their efficacy beliefs. An efficacy belief may be weak and thus easily negated by instances of inefficacy or it could be strong and held onto even when it may not be accurate. For example, a teacher with a high level, but weak strength in their self-efficacy may be more affected by an experience where she is unable to teach a student.

These dimensions of self-efficacy are important in measurement. Specifically, the generality of self-efficacy beliefs is important in identifying the level of specificity self-efficacy should be measured. Self-efficacy beliefs are specific to both tasks and situations (Bandura, 1997). Yet in measurement, it is often unclear what level of specificity needs to be examined. For example, in teacher self-efficacy it is not clear if self-efficacy should be measured generally across subjects, students, and grade levels or if it should be measured specifically for different subjects such as math and science, students such as those with disabilities or English language learners, grade levels, or tasks. If teachers’ self-efficacy beliefs do not generalize from native English speaking students to English language learners as research suggests (Siwatu, 2007), then teachers’ self efficacy for teaching English language learners needs to be measured specifically. In addition, measures would be most useful if they could identify the level and strength of an individual’s self-efficacy beliefs.

Bandura named a variety of possible sources of self-efficacy beliefs (1997), including inactive mastery experience, vicarious experience, verbal persuasion, integration of efficacy information, and physiological and affective states. Information from these sources is selected, interpreted, and integrated by a person into appraisals of their own personal efficacy. Interventions for altering teachers’ self-efficacy would focus
on these sources of self-efficacy beliefs as well as how the individual interprets and integrates information from those sources in order to establish their personal self-efficacy beliefs.

Enactive mastery experiences are experiences that the individual is personally involved in, such as a teacher helping a new English language learner create an excellent science project. Bandura stated enactive mastery experiences are the most influential source of efficacy information due to their authenticity to the person. When an individual has successful mastery experiences their self-efficacy for similar experiences becomes stronger, while failure typically undermines self-efficacy. However, individuals who experience only easy successes can be easily discouraged when failure occurs. Resilient self-efficacy requires experiences in overcoming obstacles successfully. Importantly, self-efficacy beliefs which are based on performance depend on how the individual assesses personal and situational contributors to their performance as well as their preconceptions of their capabilities, perceived task difficulty, effort expended, external aids, pattern of success and failure, circumstances of the performance, and the way the experience is remembered.

When people view someone else’s performance and structure their self-efficacy beliefs on what they see that person do, it is called vicarious experience. People often appraise themselves in relation to the attainments of others such that when they think they rank high in a group, their self-efficacy increases, whereas if they believe they rank low in a group, their self-efficacy decreases. Modeling is an aspect of vicarious experience in which an individual determines if they are able to complete a task based on the performance of someone similar to themselves. For example, pre-service teachers may
see a first year teacher successfully handle a class disruption, giving the pre-service teachers belief in their ability to do the same. Modeling is especially effective when people are uncertain about their own capabilities and can even overcome the impact of direct experience in some conditions.

Verbal persuasion is essentially encouragement that an individual can carry out a task successfully. Positive verbal persuasion increases and sustains an individual’s effort, which makes one more likely to succeed or have an enactive mastery experience that is positive. One must be careful when using verbal persuasion because if it is unrealistic the individual’s self-efficacy may be undermined.

Self-efficacy can also be influenced by an individual’s physiological and affective states. Specifically, self-efficacy can be increased by enhancing physical status, reducing stress and negative emotions, and correcting misinterpretations of bodily states. More of an effect on self-efficacy will be noticed if the individual directions more attention inward on themselves rather than to external inputs because it is the cognitive appraisal of these states which affects self-efficacy.

It is important to not confuse self-efficacy with similar constructs, such as self-concept, self-esteem, outcome expectation, and controllability (Bandura, 1997). Although self-concept largely reflects self-efficacy beliefs, it is a more general view of the self which takes into account other variables. Self-esteem is also likely related to self-efficacy; however, its focus is on one’s judgments of self-worth. Outcome expectations and controllability are often measured on self-efficacy scales, sometimes inadvertently. This makes it even more imperative to differentiate them from self-efficacy. An outcome expectation is what one thinks will likely result from a certain action. This is distinct
from self-efficacy as it only concerns the result of an action, not the ability to perform an action under different conditions. For example, teachers could believe that forming positive relationships with students will improve their academic performance, regardless of their ability to form positive relationships. Controllability refers to how much control one believes she has over the possible outcome. For example, teachers could believe no matter what they do, they will not be able to affect a student’s view of school. This construct is extremely important as it can affect how much efficacy beliefs shape outcome expectancies and how much outcome expectancies add incrementally to the prediction of performance (Bandura).

**Teacher Self-Efficacy**

Self-efficacy can vary across settings and tasks. One particular type of self-efficacy that has been examined is teachers’ self-efficacy – a teacher’s belief in their ability to carry out effective teaching tasks (Dellinger, Bobbett, Olivier, & Ellett, 2008). Teacher self-efficacy has traditionally been challenging to define. According to one of Bandura’s recent definitions, teacher self efficacy is “teachers’ beliefs in their personal efficacy to motivate and promote learning in their students” (1997, p. 214). However, researchers provide various other definitions of teacher self-efficacy in their studies (e.g. Gibson & Dembo, 1984; Soodak & Podell, 1996).

There is specific criticism in teacher self-efficacy research, particularly in regards to measurement. Klassen, Tze, Betts, and Gordon (2011) indicate that using measures which are not conceptually rigorous is a serious problem in teacher efficacy research. They found two key measurement concerns in their review of teacher self-efficacy research. The first problem is a focus on measuring intentions or current ability rather
than capability. The second concern is that self-efficacy measures have a misconceptionalized focus on outcome expectancy. The researchers assert that findings from studies using flawed measures can lead to misleading conclusions. They further voiced concern over the various definitions of the construct leading to a loss of precision, predictive power, and theoretical distinctiveness.

**Measures of Teacher Self-Efficacy.**

The measurement of teacher self-efficacy began when the authors of the original RAND studies opted to put two additional questions on their scale: “When it comes right down to it, a teacher really can’t do much because most of a student’s motivation and performance depends on his or her home environment” and “If I try really hard, I can get through to even the most difficult or unmotivated students.” These questions were thought to measure teacher’s outcome expectations, which the creators also called teaching efficacy and personal teaching efficacy, respectively; in combination the questions were believed to measure teacher self-efficacy. This led to teacher self-efficacy being viewed as a two factor construct including outcome expectations and efficacy. The researchers based their construct of teacher self-efficacy in Rotter’s (1966) construct of locus of control.

Following the RAND studies, Ashton and Webb (1986; 1983) attempted to align the construct of teacher self-efficacy with the social-cognitive theoretical perspective of self-efficacy detailed by Bandura. They posited a bi-directional meditational model in which teachers’ sense of efficacy influences and is influenced by teacher behavior, student behavior, and student achievement. They further hypothesized that students’
sense of efficacy serves as a mediator in the relation between teachers’ self-efficacy and student achievement. (Ashton & Webb, 1986).

**Teacher Efficacy Scale.**

After initial interest in teacher self-efficacy was peaked, researchers began attempting to measure the dimensions of the construct. Gibson and Dembo (1984) developed the most commonly used measure to date, the Teacher Efficacy Scale (TES) based on Ashton and Webb’s conceptual model. In developing the TES, Gibson and Dembo conducted a principal factor analysis on their initial item pool, eliminated items with poor variability, and retained items that that “loaded clearly on one of the substantial factors” (p. 571). However, it is unclear how the substantial factors where determined. After the scale was revised, they completed another principal factor analysis with elementary school teachers. Gibson and Dembo concluded that two substantial factors emerged from their factor analysis which appeared to correspond with Bandura’s dimension of self-efficacy. The first factor represented “a teacher’s sense of personal teaching efficacy, or belief that one has the skills and abilities to bring about student learning” (p. 573). The second factor represented “a teacher’s sense of teaching efficacy, or belief that any teacher’s ability to bring about change is significantly limited by factors external to the teacher…” and corresponded with Bandura’s dimension of outcome expectancy (p. 574). They advised for future research to be conducted with a revised scale with fewer factors because only 16 of the original 30 items resulted in acceptable reliability coefficients. They also recommended construct validation be investigated across different populations and settings.
A clear definition of teacher self-efficacy is never provided by Gibson and Dembo (1984). In fact, they do not use a consistent word to describe what they measured, using teacher efficacy, teacher sense of efficacy, teaching efficacy, and personal teaching efficacy. However, they attempt to align it with Bandura’s conceptualization of self-efficacy. Thus, they identify outcome expectancy as the degree teachers believed a student could be taught given environmental conditions and self-efficacy as the teacher’s belief in their abilities to bring about student change.

**Criticism of the Teacher Efficacy Scale.**

Since Gibson and Dembo’s advisement for future research on the TES, some of their calls have been met. Due in part to its popularity, researchers began evaluating the validity of the TES in the early 1990s. Numerous researchers have evaluated the original TES and question its validity (e.g. Brouwers & Tomic, 2003; Denzine, et al., 2005; Henson, Kogan, & Vacha-Haase, 2001). From these evaluations, researchers have come to revise the original TES and create new measures to evaluate teacher self-efficacy.

Confirmatory factor analyses of the TES resulted in a variety of factor models and interpretations of those models. When Brouwers and Tomic (2003) tested the various hypothesized factor models of the TES, none of the hypothesized models fit, leading them to conclude the instrument in its current state “is not suitable for obtaining precise and valid information about teacher efficacy beliefs” (p. 78). Denzine and colleagues (2005) also evaluated the validity of the dimensions of the TES. Using confirmatory factor analysis to evaluate the goodness-of-fit for two theoretical models of the TES, they rejected both models. However, a re-specified model with three dimensions: self-efficacy beliefs, outcome expectations, and external locus-of-causality fit well. This caused the
authors to question the use of the TES and the interpretation of studies purporting to measure teachers’ self-efficacy beliefs, given that they might be measuring other constructs as well.

Other researchers (e.g. Henson, Kogan & Vacha-Haase, 2001) have examined the reliability of the TES. They found that the reliability coefficients fluctuated greatly for a variety of measures of self-efficacy, including the TES, especially for the TES’ personal teaching efficacy (PTE) and general teaching efficacy (GTE) subscales. Based on their findings, Henson and colleagues concluded the TES should be revised “with an eye to measurement integrity”.

Researchers have revised the TES as well (e.g. Deemer & Minke, 1999; Soodak & Podell, 1996; Woolfolk & Hoy, 1990). It has been adapted for use with prospective teachers (Woolfolk & Hoy, 1990), to focus on classroom management situations (Emmer & Hickman, 1991), and to include students’ emotional and behavioral problems (Soodak & Podell, 1996). Some of these revisions and the factor analyses of those scales have led researchers to suggest there may be a third dimension to teacher-self-efficacy.

**Recent TSE Measures.**

More recently, new teacher self-efficacy scales have been developed. For example, the Classroom and School Context Teacher Self-efficacy Scale (CSC-TSES) (Friedman & Kass, 2002) was developed in Israel using a framework from the United States. This scale focuses on the school and classroom contexts because variables such as school climate, principal behavior, sense of community among staff, and school decision making procedures are believed by the authors to be important to the teacher’s sense of personal efficacy. The scale examines teaching activities, interrelations with students,
parents, colleagues, and the principal, and organizational functioning. Using confirmatory factor analysis, the authors found two factors, the classroom context and the school context. Based on their results the authors posited a new definition of teacher self efficacy: “teacher’s perception of his or her ability to (a) perform required professional tasks and to regulate relations involved in the process of teaching and education students (classroom efficacy), and (b) perform organizational tasks, become part of the organization and its political and social processes (organizational efficacy)” p. 684.

The Ohio State Teacher Efficacy Scale (OS-TES) is one of the more common scales currently in use (Tschannen-Moran & Woolfolk-Hoy, 2001). This scale was created using items from Bandura’s unpublished scale and additional items developed in a seminar class. This scale marks an improvement from previous scales. It specifically measures teacher self-efficacy beliefs rather than simply teacher efficacy. However, it did not use exploratory factor analysis at its inception as is recommended in scale development (Worthington & Whittaker, 2006). A confirmatory factor analysis of the scale yielded a three factor solution with the factors consisting of instructional strategies, classroom management, and student engagement. The authors concluded scores on this scale have demonstrated evidence of reliability and validity with samples of pre-service and in-service teachers.

Researchers are also developing teacher self-efficacy measures in other countries. The Norwegian Teacher self-efficacy scale (Skaalvik & Skaalvik, 2007) identifies six dimensions of teacher self efficacy: Instruction, Adapting Education to Individual Students' Needs, Motivating Students, Keeping Discipline, Cooperating With Colleagues and Parents, and Coping With Changes and Challenges. It was designed based on
Bandura’s recommendations for self-efficacy scale development and common expectations for teachers in Norway. The creators of this measure used exploratory and confirmatory factor analysis methods as suggested by Worthington and Whittaker (2006); however, they used the techniques on the same sample, and a clear definition of teacher self-efficacy is not provided in the development of their scale.

The most recent criticism of the current measurement and definition of teacher self-efficacy comes from Dellinger and colleagues (2008). The authors developed a new measure, based on what they believe is a better definition of self-efficacy. Their new measure purports to assess “teachers’ individual beliefs about their own abilities to successfully perform specific teaching and learning related tasks within the context of their own classrooms” (Dellinger et al., 2008, p. 1). The definition they provide for teacher self-efficacy beliefs is “a teacher’s individual beliefs in their capabilities to perform specific teaching tasks at a specified level of quality in a specified situation” (p. 2).

Dellinger and colleagues (2008) examined three studies which used principal components analysis (PCA) to investigate the validity of scale scores with samples of K-6 elementary teachers. All of the studies interpreted some similar factors related to activities including: accommodating individual differences in students, classroom management, and communication and clarification. Some factors were only found by one or two of the studies; these included motivation of students, managing learning routines, and higher order thinking skills.

Researchers concluded that different sections of the TEBS-Self scale are different from the omnibus measures of teacher efficacy that are commonly used. They also
concluded that level and difficulty of task specificity made a difference in designing measures of teachers’ self-efficacy beliefs. Further, they stated that the TEBS-Self is a good model for creating new measures of self-efficacy beliefs that focus on other areas of functioning or for teachers in other countries or cultures.

**TSE Measures for Specific Groups and Contexts.**

With growing awareness of the importance of context, researchers have created instruments for measuring teachers’ self-efficacy in specific teacher environments. One of the most common of these instruments is the Science Teaching Efficacy Belief Instrument (STEBI; Riggs & Enochs, 1990). This scale defines teacher efficacy beliefs as “the extent to which teachers believe they have the capability to positively affect student achievement” (p. 626). The scale was designed after the TES, and in creating the scale, the authors attempted to keep teacher self-efficacy and outcome expectancy as distinct factors, limiting their factor analysis to two factors *a priori*. Items on the scale were altered from the original TES to reflect personal science teaching self-efficacy and science teaching outcome expectations in distinct items. The authors urge users to do a reliability assessment each time the instrument is used.

The STEBI has been modified for use in other contexts as well. The STEBI-CHEM (Rubeck & Enochs, 1991) is an unpublished modification of the STEBI to be used for teachers of chemistry. The MTEBI is also a modification of the STEBI which was tested with pre-service elementary math teachers using confirmatory factor analysis. The authors determined the “MTEBI appears to be a valid and reliable assessment of mathematics teaching self-efficacy and outcome expectancy” based on its consistency with research using the STEBI.
The only scales developed thus far for measuring teachers’ social cognitive beliefs in regards to their cultural competence are the Culturally Responsive Teacher Self Efficacy (CRTSE) and Culturally Responsive Teacher Outcome Expectations (CRTOE) scales (Siwatu, 2007). The CRTSE is designed to elicit “information from pre-service teachers regarding their (beliefs about their) efficacy to execute specific teaching practices and tasks that are associated with teachers who have adopted a culturally sensitive pedagogy” (p. 1091). On this scale, teachers rate how confident they are in their ability to engage in culturally responsive teaching practices. The CRTOE was designed to “assess teachers’ beliefs that engaging in culturally responsive teaching practices will have positive classroom and student outcomes” (p. 1091). Teachers rate the probability that a behavior will lead to a specified outcome on this scale.

The CRTSE and CRTOE scales have specific items which ask about students who are learning English. Some of the lowest item specific means on the CRTSE have been for pre-service teachers’ belief in their ability to “greet English Language Learners with a phrase in their native language” and “praise English Language Learners for their accomplishments using a phrase in their native language.” Similarly, on the CRTOE item means were lowest for pre-service teachers’ belief in the possibility that “encouraging students to use their native language will help to maintain students’ cultural identity.”

Finally, some researchers are examining teacher self efficacy for working with specific groups. One such example is a study (Carlson, Brauen, Klein, Schroll, & Willig, 2002) which examines educators’ self-efficacy for serving students with special needs. They found special education teachers reported high self-efficacy overall but felt least skillful working with ELL students with disabilities.
**TSE for working with ELLs.**

Few researchers have examined teacher self-efficacy for teaching ELL students. Extending upon the work of Carlson and colleagues (2002), Paneque and Barbetta (2006) specifically investigated teacher efficacy of special education teachers of English Language Learners with disabilities. Teacher self-efficacy was measured using the Exceptional Children who are English Learners (EXCEL) Teacher Inventory, which was designed as part of the study following Bandura’s (2006) recommendations. They found a significant difference in perceived efficacy was found with self-reported proficiency in the language of the students, such that proficiency helped predict perceived efficacy. Although Tasan (2001) did not measure teacher self-efficacy for teaching ELLs specifically, she examined the effect of differences in student language backgrounds on the perceived efficacy of public school elementary teachers using a modified version of the TES. Results from this study indicated that teachers have a higher self-efficacy with Standard English speaking students than non-English speakers and even lower self-efficacy with nonstandard English speaking students. Additionally, she suggested that teacher self-efficacy is more fluid that originally believed, meaning that it can be easily changed.

**TSE Correlates.**

While the measurement of teacher self-efficacy has been questioned, researchers have been examining teacher self-efficacy and its correlates for many years. Researchers have found teacher self-efficacy is correlated with teacher and student outcomes. For example, teacher self-efficacy is negatively correlated with job stress and burnout (Betoret, 2009; Brouwers & Tomic, 2000; Egyed & Short, 2006; Schwarzer & Hallum,
2008a; Skaalvik & Skaalvik, 2010). Additionally, teachers’ years of experience appears to have a nonlinear relationship with teacher self-efficacy, increasing from early career to mid-career and then falling afterwards (Klassen & Chiu, 2010).

Teacher self-efficacy is positively correlated with numerous teacher variables. Teachers with high self-efficacy report higher job satisfaction (Caprara, et al., 2006; Skaalvik & Skaalvik, 2010) and motivation to engage in informal learning activities (Lohman, 2006). High self-efficacy teachers use more family involvement practices (Garcia, 2004), whole group instruction (Good & Brophy, 2003), and a wide variety of teaching strategies (Alderman, 1999). Teachers with high self-efficacy report more often than teachers with low self-efficacy that they create classroom climates that support student autonomy (Leroy, Bressoux, Sarrazin, & Trouilloud, 2007). These teachers spend more time with struggling students (Ashton & Webb, 1986; Gibson & Dembo, 1984), demonstrate willingness to try new strategies (Ghaith & Yaghi, 1997; Guskey, 1998), and make fewer referrals to special education (Coladarci & Breton, 1991; Podell & Soodak, 1993). However, recent research suggests that low teacher self-efficacy is associated with a reduction of student referrals to a student support team (Pas, Bradshaw, Hershfeldt, & Leaf, 2010). Teacher self-efficacy is also related to the ability to manage classroom problems (Chacon, 2005) and successfully implement classroom management strategies (Woolfolk & Hoy, 1990; Woolfolk, et al., 1990). Additionally, Brownell and Pajares (1999) found teachers with higher self-efficacy had more success with students with learning and behavior problems than teachers with lower levels of self-efficacy. Recently, researches found evidence that positive affect and self-efficacy beliefs may mediate the
relationship between teaching strategies and job satisfaction (Moè, Pazzaglia, & Ronconi, 2010).

Teachers’ self-efficacy beliefs are related to student variables as well. Students’ academic efficacy, efficacy to meet others’ expectation, and self-regulatory efficacy decline as teachers’ self-efficacy decreases (Stuart, 2007). Teachers’ self-efficacy beliefs are also positively correlated to students’ academic engagement (Good & Brophy, 2003), achievement (Ashton & Webb, 1986; Caprara, et al., 2006; Muijs & Reynolds, 2002), motivation and attitude toward class (Alderman, 1999), and other student outcomes (Ross, et al., 2001).

**Introduction to Current Study**

This study aimed to gather data regarding factor stability, convergent and discriminant validity, and temporal reliability of the Teaching English Language Learners Self-efficacy Scale (TELLS) with a diverse sample of teachers. In total, four hypotheses were examined. First was that the data would confirm the two-factor model of the TELLS using confirmatory factor analysis. Second, was that TELLS scores would remain similar after a 4-week time period. Next, was that TELLS scores would positively correlate with measures of convergent validity (multicultural teaching skills and multicultural teaching self-efficacy). The final hypothesis was that TELLS scores would not correlate with measures of discriminant validity (self-esteem, social desirability, and life satisfaction). Ultimately, this study was geared to providing psychometric data on a scale that could be used to measure mainstream teachers’ self-efficacy for teaching ELL students.
Chapter 3: Method

Participants

Confirmatory Factor Analysis.

Participants were 804 K-12 teachers from different areas of the United States. Overall, 96 cases were excluded due to not providing data for the TELLS portion of the survey, leaving 708 valid participants. Cases with partial missing data on the TELLS, 1-12 missing items, \( n = 67 \) were retained and data were imputed using mean estimation; specifically, linear trend at point utilizing two points (i.e. the mean of the two nearest points of the missing data point for a case) was used to estimate missing TELLS data. Cases with response sets (e.g. a participant who provided the same response to all items on the TELLS) were not deleted; a total of 12 such cases were identified. Utilizing the approximate number of teachers employed in each participating district and minimal TELLS completion, the response rate was estimated to be approximately 30%.

Participants taught K-12 classes; the number of teachers at each grade level ranged from 86 (6th grade) to 139 (10th grade) (\( M = 116, SD = 19.03 \)). Overall, 748 K-5 classes were taught by participants, 265 6th-8th grade classes, and 499 9th-12th grade classes; when added these numbers equal more than the number of total participants because participants reported teaching multiple grades, particularly at the K-5th grade level. Individually, participants represented 306 K-5th grade teachers (43%) and 402 6th-12th grade teachers (57%). Additionally, five participants also taught GED courses.

Participants ranged in age from 21 to 65 (\( M = 37.71, SD = 10.95 \), 25% missing \( n = 245 \)). In the U.S. full time teacher population, 44 percent of teachers are under age 40 (Aud, Hussar, Kena, Bianco, Frohlich, Kemp, & Tahan, 2011). The majority (70%) of
participants were female \((n = 500)\), 15% were male \((n = 106)\), and two participants identified as transgendered; 14% of participants \((n = 100)\) did not report their gender. In comparison to the overall full-time teacher population of the U.S. in 2007–08, approximately 76 percent of public school teachers were female (Aud et al., 2011).

Participants had taught between zero and 40 years \((M = 11.39, \text{SD} = 8.77)\); 16% of participants \((n = 113)\) did not report the number of years they had been teaching. In comparison, public elementary school teachers in the U.S. averaged 13 years of teaching experience in 2007–08 while public secondary school teachers had 14 years of teaching experience, on average, in 2007–08 (Aud, Hussar, Kena, Bianco, Frohlich, Kemp, & Tahan, 2011). Most participants were teaching in Missouri \((59\%, n = 417)\), others taught in Michigan \((14\%, n = 98)\), Arizona \((5\%, n = 35)\), Nebraska \((2\%, n = 12)\), Florida \((2\%, n = 12)\), New York, California, Colorado, Illinois, Kansas, Kentucky, Maryland, North Carolina, Ohio, Pennsylvania, Tennessee, Utah, and Virginia \((\text{less than } 2\% \text{ each}, n < 5 \text{ each})\); 13\% \((n = 92)\) did not report the state in which they taught.

Participants were also asked demographic questions specific to English language learners. First, they were asked about their participation in professional development regarding ELLs. They reported a range from 0 to 1000 hours \((M = 46.91, \text{SD} = 154.14)\); 18% did not report their hours of professional development specific to ELLs \((n = 128)\). Forty-three percent \((n = 249)\) reported having zero professional development hours and 37% \((n = 216)\) reported a low \((1\text{-}25)\) amount of hours. Next, they were asked about their cumulative and current experience teaching ELLs. Teachers reported a cumulative average of having taught 65.54 ELLs \((\text{SD} = 156.13)\); 110 teachers did not report this data \((15.5\%)\). Teachers reported currently teaching an average of 7.53 ELLs \((\text{SD} = 20.46)\);
111 teachers did not report this data (15.7%). Notably, 7% of teachers reported never having taught an ELL student \((n = 50)\) and 23% of teachers reported not currently teaching ELL students. These data demonstrate significant skewness and kurtosis indicating less experience teaching ELLs. Participants’ interest in teaching English language learners on a 1-10 scale was also gauged and results ranged from 1 to 10 \((M = 6.80, SD = 2.59)\).

Additionally, participants were asked about their fluency in other languages; 39% reported they were fluent or somewhat fluent in more than one language \((n = 168)\); 14% \((n = 105)\) participants did not report their fluency in other languages. Of those who were fluent in more than one language, most were fluent in Spanish \((n = 104)\), French \((n = 34)\), American Sign Language \((n = 14)\), and German \((n = 12)\). The remaining languages had less than 10 participants who identified fluency.

**Test-re-test.**

A subset of these participants \((n=60)\) completed the re-test study. Of those 60, 19 cases were deleted due to missing data on the TELLS, leaving 41 cases that were analyzed. Participants in the re-test study were not asked to provide demographic data; however, the data provided in initial responses was utilized to determine the characteristics of the subsample. A range of 5 to 14 teachers taught at each grade \((M=8.31, SD = 3.15)\). Participants ranged in age from 23-60 \((M = 36.94, SD = 10.2)\). In terms of gender, 35 participants identified as female while 6 identified as male. Participants had taught between zero and 28 years \((M = 9.8, SD = 7.21)\). Similar to the initial sample, the majority of participants taught in Missouri \((n = 25, 61\%)\). Others taught in Michigan \((n = 49\%)\).
Teachers had participated in 0-1000 hours of professional development regarding teaching ELLs (M = 64.02, SD = 182). Again, most teachers had participated in no professional development regarding ELLs (n = 21, 51%) and 27% (n = 11) reported a low level of professional development (1-25 hours). Their interest in teaching ELLs ranged from 1-10 (M = 6.39, SD = 2.56). Ten participants (25%) indicated they had fluency in a second language; they spoke Spanish, German, and French as second languages.

**Procedure**

In this study the TELLS was administered along with five other measures to assess structure, convergent and discriminant validity as well as test-retest reliability of TELLS scores. In total, the survey included 110 items plus demographic questions. This survey took approximately 25 minutes to complete. Data were collected online using a secure web-based survey. School districts and individuals were solicited to participate in the survey. All teachers employed at the participating districts were invited to participate. Districts that participated were from rural (n = 2) and suburban (n = 2) areas of Missouri; one district served approximately 2,500 students, another served 4,500, a third served 5,700 and the largest served 16,800.

Multiple methods for announcing the study and recruiting teachers were used to ensure sufficient participation (Cook, Heath, & Thompson, 2000; Dillman, 2000; Kaplowitz, Hadlock, & Levine, 2004). In addition to emails sent to all teachers from their district, personal emails were sent to friends and acquaintances that worked in or knew someone who worked in school systems. All participants were encouraged to share the
survey with other teachers they knew. Announcements were also posted on social networking sites such as Facebook. Incentives of $25.00 in Amazon gift cards were provided for all participants who completed the survey.

After obtaining teachers’ emails from participating school districts, individual emails were sent announcing the study and soliciting participation. Follow-up emails were sent over the course of two months. All contact contained the URL and used persuasive and encouraging language. Additionally, the online survey was made user-friendly, visually appealing and included a progress bar.

Using the contact information provided by participants when they completed the first survey, a sub-sample of 60 participants who indicated an interest in participating in additional studies was contacted at four weeks following their completion of the survey for the test-retest reliability study. Participants were contacted via email to participate in this portion of the study and an incentive of $5.00 in Amazon.com gift cards was offered. This survey took approximately five minutes to complete.

**Instruments**

**Teaching English Language Learners Scale (TELLS).** The TELLS assesses mainstream teachers’ self-efficacy beliefs for teaching English Language Learners and consists of 23 items. Participants rated their belief in their ability to do certain tasks specific to teaching English language learners on an 11 point Likert type scale ranging from 0 (Certain cannot do at all) to 10 (Certain can do) with another anchor at 5 (Moderately certain can do). English language learners were defined in the survey as any student for whom English was not their primary language. Full scale scores were computed by summing all items and dividing by 23 (the number of items). Scores may
also be computed for each subscale similarly. High scores on the overall scale indicate a high level of belief in an individual’s own ability to teach English language learners. It is important to note that high scores do not necessarily indicate high levels of awareness, knowledge, or skills for teaching English language learners. Subscale and item scores may be more useful for indicating areas in which teachers feel less competent and guiding intervention efforts.

Previously, strong preliminary psychometric data were obtained with a diverse population of teachers using the TELLS (Strawsine, 2009). Using exploratory factor analysis, two factors were determined for the TELLS, instruction and assessment (14 items; \( \alpha = .96 \)) and native language support and resources (9 items; \( \alpha = .92 \)). Sample items from the instruction and assessment factor include teachers’ beliefs in their ability to: “Monitor ELL students’ understanding of directions” and “Use mechanical aids, real objects, music, art, games, and hands-on experience to reinforce ELL students' learning.” Examples from the native language support and resources factor include teachers’ beliefs in their ability to “Praise ELL students for their accomplishments using a phrase in their native language” and “Use members of the community as resources for working with ELL students and their families.” Internal consistency for the overall scale scores was .92. These factors accounted for 46% and 16.6% of the variance in the secondary factor analysis, respectively. The correlation between instruction and assessment and native language support and resources was .37. The internal consistency of the TELLS for this study was .94.

**Culturally Responsive Teaching Self Efficacy (CRTSE).** The CRTSE (Siwatu, 2007) assesses prospective teachers’ “beliefs in their ability to execute specific teaching
practices and tasks that are associated with teachers who are believed to be culturally responsive” (Siwatu, 2007, p.1090). The CRTSE consists of 40 items rated on a Likert-type scale from 0 (no confidence at all) to 100 (completely confident). Examples of items include “I am able to teach students about their cultures’ contribution to science’’ and “I am able to implement strategies to minimize the effects of the mismatch between my students’ home culture and the school culture.” Scores were computed by summing the responses to each item and dividing by the total number of items to generate a CRTSE strength index (Siwatu, Polydore, & Starker, 2009). Higher scores on the scale indicate higher levels of self-efficacy beliefs. Predictive validity for the scale has been established for the CRTSE through observed significant positive correlation with a measure of outcome expectations. Cronbach’s alpha for scale scores on the CRTSE was previously measured at .96 with a sample of pre-service teachers. For this study, Cronbach’s alpha was .98.

**Multicultural Teaching Competencies Scale (MTCS).** The MTCS (Spanierman et al., 2011) assesses participants’ self-reported awareness, knowledge and skills related to working with diverse students. The MTCS consists of 16 items rate on a Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree). Sample items include: “I am very aware of my biases and stereotypes toward other cultures,” “I am knowledgeable about particular teaching strategies that affirm the racial and ethnic identities of all students,” and “I often use teaching techniques that attend to the learning styles of diverse students.” Item responses are averaged with higher scores indicating greater perceived competency. In examining the factor validity of this scale, the chi-square statistic divided by degrees of freedom (1.69) indicated that the two-factor model was a good fit of the
data. The various fit indices (i.e., TLI, IFI, and CFI) also indicated a good fit (.94 to .95), as did the RMSEA (.052) (Spanierman et al., 2011). Scores on the MTCS have been positively correlated with scores on a measure of multicultural teaching attitudes and negatively correlated with scores on a measure of modern racism in an initial validation study. Cronbach’s alpha for full scale and subscale scores has ranged from .78 to .88 with two distinct samples of predominantly White, female pre-service and in-service teachers. For this study, Cronbach’s alpha was .90 for the full scale.

**Balanced Inventory of Desirable Responding (BIDR).** The Impression Management (IM) subscale of the BIDR (Paulhus, 1994) assesses intentional socially desirable responding. The IM subscale consists of 20 items rated on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample items of the IM subscale include “I have received too much change from a salesperson without telling him or her’” and “I have some pretty awful habits.” Scores on the IM subscale are positively correlated with scores on lie scales and role-playing measures such as the Minnesota Multiphasic Personality Inventory Lie subscale, Wiggins’s Social Desirability Scale, and Gur’s Other Deception Scale (Lanyon & Carle, 2007; Paulhus, 1991). Cronbach’s alpha for the IM subscale have ranged from .75 to .80. The scale has been used with a variety of populations including undergraduates, males, females, Caucasian, Asian, and other populations. In the current study, Cronbach’s alpha was .81.

**Satisfaction with Life Scale (SWLS).** The SWLS (Diener, Emmons, Larsen, & Griffin, 1985) measures participants’ self-reported satisfaction with life. It is composed of 5 items rated on a Likert-type scale from 1 (*strongly disagree*) to 7 (*strongly agree*). Examples of items include: “In most ways my life is close to my ideal” and “If I could
live my life over, I would change almost nothing.” Items from the scale are averaged to produce a final score, with higher scores indicating greater satisfaction with life. The SWLS strongly correlates with other measures of subjective well-being and negatively correlates with measures of distress in adult and college student samples (Pavot & Diener, 1993). It has evidence of strong reliability with adult and college student samples with internal consistency coefficient ranging from .79 to .89 (Pavot & Diener). A recent study utilized the SWLS with male and female teachers in China (Chan, 2009). The study found similar reliability (alpha = .83) and validity results; the SWLS was positively correlated with a measure of positive affect and negatively correlated with a measure of negative affect. In the current study, reliability was measured at .97.

**Rosenberg Self-Esteem Scale (RSES).** The Rosenberg Self-Esteem scale (Rosenberg, 1989) is a widely used measure to assess self-esteem. The scale includes 10 items rated on a Likert-type scale ranging from 1 (*strongly agree*) to 4 (*strongly disagree*). Examples of items on this scale include: “I feel that I have a number of good qualities” and “I am able to do things as well as most other people.” Higher self-esteem scores have been found to be negatively correlated with psychological constructs such as depression and anxiety (Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995) among college samples. The scale has demonstrated strong internal consistency ranging from .77 to .88 and test-retest reliability ranging from .82 to .88 (Blascovich & Tomaka, 1993) in college and adult samples. In a recent psychometric study of the RSES, internal consistency was .91 for the overall sample of 18 to over 66 year old adults and ranged from .84 to .94 for sample subgroups based on age, ethnicity, marital status, education, employment, and income. Additionally, scale scores were negatively correlated with
measures of anxiety, depression, and stress (Sinclair et al., 2010). In the current study, Cronbach’s alpha was measured at .88.

**Demographic survey.** A demographic survey was included to gather information on participants’ age, gender, teacher certification, grade level, subject area(s), native language, fluency in other languages, years of teaching experience, number of ELL students currently teaching, and post-secondary training and professional development training for teaching culturally and linguistically diverse students. Additionally, participants’ interest in working with ELL students was assessed.

**Chapter 4: Results**

**Missing Data**

Missing data becomes problematic when more than 20 percent of the data are missing and when there is a pattern to the missing data (Schlomer, Bauman, & Card, 2010). For each of the scales, missing data remained below 20 percent. In order to determine if there was a pattern to the missing data, a dummy variable was created with two values (missing and non-missing). Correlations were examined between this variable and other variables of interest including items on the TELLS, demographic data, and items on other scales included for validity purposes. No significant correlations were found, indicating that missing data were missing at random.

The amount of missing data for items on each scale used on this study was also examined after data missing all items on the TELLS was deleted. For TELLS items, missing data ranged from 0 to 6 cases (<1%) for the items on page one (items 1-11) and 28-32 cases (4%) for page two (items 12-23). The increased missing data on the second page indicates attrition of participants beginning as early as the initial pages of the study,
as the TELLS was anchored first in the survey. The remaining scales were randomized in the survey. The Multicultural Teaching Competency Scale spanned two pages; on the first page (items 1-8) 86-91 cases (12%) were missing data, on the second page (items 9-16) 91-94 cases (13%) had missing data. The longest scale, the Culturally Responsive Teaching Self-efficacy Scale, spanned four pages. For this scale, increasing amounts of data were missing as the scale progressed: page one (items 1-10) has missing data for 72-75 cases (10%), page two (items 11-20) had missing data for 82-85 cases (12%), page three (items 21-30) had missing data for 96-100 cases (14%), and page four (items 31-40) had missing data for 103-106 cases (15%). The Rosenberg Self-Esteem, Satisfaction With Life, and Balanced Inventory of Desirable Responding scales each were contained on individual pages. Of these, the number of cases missing data ranged from 86-90 (12%) on the RSE, 87-91 (12%) on the SWL, and 73-105 (10-15%) on the BIDR.

Additionally, normality of the data was assessed. Examinations of skewness and kurtosis for each scale indicated that the data were normally distributed. Further, multivariate assumptions were met by examination of the mahalanobis distance for each scale.

**Overview**

A confirmatory factor analysis using the maximum likelihood estimation procedure was conducted to examine the fit of the data to the two-factor model of assessment and instruction and native language support and resources found in previous exploratory factor analyses. Reliability was examined using test-retest and internal consistency. Additionally, convergent and discriminant validity was examined by assessing the bivariate correlations between TELLS and other measures. A competing
model strategy (Bollen & Long, 1993) was used by testing the two-factor model against independence and saturated models, using AMOS 19.0. To assess the goodness of fit of the hypothesized model, the Comparative Fit Index (CFI), and root mean square error of approximation (RMSEA) were used as these fit indices are less affected by model misspecifications and less sensitive to sample size than the chi-square statistic (Hu & Bentler, 1998; Martens 2005). Values of relative fit indices such as the CFI which are greater than or equal to .95 indicate a good fit to the data (Schermelleh-Engel, Moosbrugger, & Müller, 2003). For the RMSEA, values within the range of the 90% confidence interval should be approximately .05 or less for a good fit of the data (Schermelleh-Engel et al., 2003). As suggested by Schermelleh-Engel and colleagues (2003), the chi-square statistic divided by the degrees of freedom was also examined; if the ratio is less than two then the model is considered to be a good fit.

Reliability

Test-retest reliability was examined to demonstrate reliability of TELLS scores between the first administration and scores four weeks later. The intraclass correlation coefficient between measures was .44, \( p < .01 \). Additionally, Cronbach’s alpha for the full scale was .94 for the initial and re-test administrations, demonstrating strong internal consistency in this study (See Table 2). On the initial administration, the individual factors also demonstrated reliability: Cronbach’s alpha for the assessment and instruction factor and native language use and resources factor was .95 and .90, respectively. Similarly, on the re-test administration, Cronbach’s alpha for the assessment and instruction factor and native language use and resources factor was .96 and .91, respectively.
Validity

**Confirmatory Factor Analysis.** A confirmatory factor analysis was conducted on TELLS scores using AMOS Version 19.0 to determine if the data fit the hypothesized two-factor TELLS model. An examination of the two factor model found that it was not a good fit to the data (See Table 1 and Figure 1). The initial Comparative Fit Index (CFI) was .82 and root mean square error of approximation (RMSEA) was .12 (90% confidence interval = .11 to .12). Additionally, examination of the chi-square statistic indicated a poor fit; chi-square = 2469.93, df = 229, ratio = 10.79. These results indicate that while better than the independent or saturated models, the hypothesized model was not a good fit.

Due to the poor-fit, modifications were made to the model to enhance fit (Tabachnick & Fidell, 2007). It is beneficial to test multiple models based upon theory (Martens, 2005; Worthington & Whittaker, 2006). In this study, competing post-hoc models were specified based upon modification index results and theory. Upon examination of the modification indices and expected chi-square change; it was noted that numerous error variances had high correlations, modification indices, and a large chi-square change; therefore, pairs of error variances were correlated on a pair-by-pair basis, provided there was a logical explanation for the correlation. Five pairs which had similar content in their items were correlated. The error variances were correlated for items two and three as both items referred specifically to teachers conducting assessments. Error variances were also correlated for items seven and eight, which refer to using teaching aids. The error variances were correlated for items 16 and 18, which referred to teachers’ use of students’ primary languages. Additionally, the error variance for items 12 and 14
were correlated as they both included using people as support and items five and four were correlated due to their focus on classroom expectations.

After the above described correlations were modified in the model, the CFI improved to .88 and the RMSEA improved to .10 (.09 to .10 90% confidence interval); however, the model did not reach criteria for a good fit. In addition, examination of the chi-square statistic continued to show a poor fit; chi-square = 1758.93, df = 224, ratio = 7.85. Although the modification appeared to improve model fit, it did not reach criteria for a good-fitting model. However, examination of the chi-square difference test (5, N = 708) = 711, p < .01 between models indicated the improvement was significant (Tabachnick & Fidell, 2007). No additional modifications were made due to the lack of logical arguments for modification; for example, all items loaded on the appropriate factors and other error variances with high correlations did not make sense on a theoretical basis.

**Convergent and Discriminant Validity.** Bivariate correlations between TELLS average scores and scores on the CRTSE, which measures culturally responsive teaching self-efficacy and MTCS, which measures multicultural teaching competencies, were examined to determine convergent validity between TELLS scores and measures of culturally responsive teaching self-efficacy and multicultural teaching competencies. The TELLS score was significantly correlated with the CRTSE score at p < .01 (r = .33) and MTCS score at p < .05 (r = .09) providing evidence for convergent validity.

Discriminant validity was also assessed by examining bivariate correlations between TELLS average scores and scores on the BIDR, SWLS, and Rosenberg Self-esteem scale, which measure desirable responding, satisfaction with life, and self-esteem.
The TELLS average scores were significantly correlated at $p < .01$ with the BIDR ($r = .13$), indicating that participants scores were correlated with a socially desirable response style. The TELLS average scores were not correlated with the Rosenberg Self-Esteem Scale ($p > .10$, $r = -.03$) or the SWLS ($p > .10$, $r = .03$). Results indicate that TELLS responses showed correlation with a measure of desirable responding such that those who were more likely to be providing desirable responses achieved higher average scores on the TELLS. However, self-esteem and satisfaction with life were not correlated with TELLS average scores, indicating that the TELLS is not inadvertently evaluating these discriminant factors.

The model fit was also compared across different pre-identified groups using the chi-square difference test. Comparisons were made between teachers at various stages of their career: early, mid, and late; teaching level: elementary or secondary; and level of professional development regarding teaching ELL students: none, low, or high. Significant differences were found in the career groups and professional development groups; no significant differences were found based on teaching level. Amongst the career groups, the chi-square difference was significantly different when the mid and early group (767.81, $p < .01$) as well as mid and late group (355.65, $p < .01$) were compared. The difference between the early and late group was insignificant. In the professional development groups significant differences were noted between the high and low groups (235.71, $p < .05$) and the high and none groups (458.85, $p < .01$).

**Chapter 5: Discussion**

The purpose of this study was to provide additional psychometric support of the two-dimensional TELLS to be used with K-12 teachers. Results from the confirmatory
factor analysis failed to provide a good fit to the two hypothesized subscales of assessment and instruction and native language support and resources. Attempts to modify the model by adding specifications based upon data and theory, such as correlating error variances which made logical sense, improved the model but failed to make the model approach a good fit (Worthington & Whittaker, 2006). However, there was preliminary psychometric support regarding internal consistency, test-retest reliability, as well as convergent and discriminant validity.

Regarding validity and reliability, the TELLS appeared to maintain convergent validity with measures of culturally responsive teaching self-efficacy and multicultural teaching skills, as hypothesized. It also demonstrated evidence of discriminant validity in that responses were not significantly correlated with self-esteem or satisfaction with life. However, responses were correlated with desirable responding. This suggests that participants were more likely to respond desirably and indicate a higher level of self-efficacy for teaching English language learners. Responses remained similar after a four week time period, providing evidence for reliability. This is particularly helpful in considering the potential use of the TELLS as a measure of the effectiveness of training or consultation for teachers regarding English language learners.

There are multiple potential reasons why the 2-factor model may not be a good fit to the data. First, there were multiple potential models which resulted from the statistical analyses of the exploratory factor analysis (EFA). Researchers suggest testing multiple models in CFA in order to be able to select the best-fitting model when multiple models are available (Martens, 2005). However, in this study, only a single two-factor model was chosen after examining statistics and theory in order to find a model that was strong both
conceptually and statistically. It is possible that other models were overlooked during the
EFA procedures due to a lack of conceptual clarity among factors although they were
strong statistically. In the original EFA, 10, 4, 3, 2, and 1-factor solutions were examined
based upon setting a minimum Eigen value of one and examining the scree plot. The one-
factor structure was excluded because it did not make sense theoretically and a unified
interpretation of the items could not be determined. The four-factor solution had four
clear factors; however, most of the items loaded highly on more than one factor. For the
three-factor solution, one factor had only two items and the other factors were unclear.
The two-factor solution which was selected had two clear factors, native language
support and resources and instruction and assessment, which were theoretically congruent
with ELL teaching standards.

Also, considering that scholars have called for the integration of multicultural
teaching competencies (Gay, 2010; Siwatu, 2007), one might expect to find a factor of
multicultural teaching self-efficacy to present itself in a measure of ELL teaching self-
efficacy as English language learners are part of a broader multicultural population;
however, this was not initially found in a clear model during the EFA process. The
positive correlation between the TELLS and CRTSE indicates that there is indeed overlap
in these constructs.

Further, a large percentage of teachers in this sample had a lack of training
regarding teaching ELLs although they had a moderately high interest in working with
ELLs. The finding of a high percentage of teachers who lack training for working with
ELLs is consistent with previous research (NCES, 2001). It is possible that a lack of
training and thus awareness of the skills they should have, led teachers to inaccurately estimate their abilities in this particular area and impact results.

**Limitations**

Results of this study may be limited by the demographics of participants. For example, more than half of the participants in this study were teaching in the state of Missouri, in which there has been growth in the populations of students who are ELL; however, not to the magnitude seen in other states such as Arizona, where only five percent of participants were teaching. This is important because state and local policies change with increasing populations and may influence the utility of some items currently included on the TELLS. For example, policies regarding the use of languages other than English in the classroom may have an impact of teachers’ responses to items regarding the use of students’ native languages.

The amount of training and coursework teachers had for working with ELL students was highly skewed in the negative direction; most participants had little or no prior training. While this may be representative of teachers nationally, a lack of awareness can cause teachers to rate themselves differently in regards to self-efficacy because of lack of prior experience. This idea is supported by findings that suggest teachers’ years of experience has a nonlinear relationship with teacher self-efficacy, increasing from early career to mid-career and then falling afterwards (Klassen & Chiu, 2010). Additionally, almost 40% of participants expressed fluency in another language and participants’ interest in working with ELL students was positively skewed, indicating a potential selection bias. These qualities may impact teachers’ self-efficacy beliefs and cause them to rate themselves differently on the TELLS. Research supports that teachers
with fluency in the students’ primary language express higher self-efficacy than teachers who speak only English (Carlson et al., 2002).

Further, knowledge of specific demographic information about the ELLs that teachers are working with might impact their responses. For example, the primary language of students, level of understanding in English, and number of ELLs in a teacher’s classroom may all impact their feelings of self-efficacy. It has been shown that teachers with a higher percentage of ethnically diverse students in their classrooms demonstrated lower teaching self-efficacy in science than teachers with a higher percentage of White students (Moseley & Taylor, 2011). It is notable then that the amount of experience teachers had working with ELLs in this study was skewed towards minimal experience. This also indicates a potential selection bias of teachers with minimal experience working with ELLs. Other confounding environmental variables, such as socioeconomic status, may also be important to examine as research has shown that school-level factors explained at least one third of the reductions in the differences in children’s academic performance after considering child, family, and school characteristics (Han & Bridglall, 2009). In this study, data were not collected regarding ELL students and limited data regarding environmental variables was collected.

Although recommendations made by Bandura (2006) regarding identifying different dimensions (level, generality, and strength) of self-efficacy were followed in the initial development of this scale, items assessing some of these dimensions may be lacking, adding to the limitations of the current scale. Generality is addressed in the scale because the scale itself is intended for a specific population and identifies specific tasks and types of tasks teachers must perform. Unfortunately, the final scale does not include
enough items that are geared toward measuring the level or strength of teachers’ self-efficacy beliefs for teaching English language learners. It has one item that refers to redirecting ELL students who are persistently off task. While this item might help determine the strength or level of teachers’ self-efficacy beliefs, it is unlikely that minimal items allow for adequate identification of these factors.

Another limitation of this study is that while participants in the initial EFA study included pre-service teachers the current sample includes only those who are currently teaching. While this was done as a method to increase the number of participants in the initial study, it could have significant implications. First, this subsample may have led to results on the EFA that may not have been achieved with a similar sample which did not include pre-service teachers. Similarly, the lack of pre-service teachers in the current sample may impact the chances of the data fitting a model which was developed using pre-service teachers.

Lastly, the selected data imputation method used for missing TELLS items provides another limitation. In this case, missing data points were estimated using linear tend at point with two points. Researchers argue that imputing the mean value into cases often reduces the variance of the variable (Schlomer, Bauman, & Card, 2010). Additionally, they indicate that it can lead to biased means if missing data are not missing completely at random. This method has been strongly advised against for these reasons. Preferred methods have been identified for computing missing data, including multiple imputation and full information maximum likelihood, and should be utilized in future analyses rather than mean substitution (Schlomer, Bauman, & Card, 2010).
Implications

Considering the limitations of the current study, future studies should strategically include teachers with high and low levels of prior training for working with ELLs as well as teachers with minimal interest in teaching ELLs. Additionally, a large enough subset of teachers with fluency in other language should be obtained so that comparisons can be made between teachers who express fluency in more than one language and those who do not. Carlson and colleagues (2002) found a significant difference in perceived efficacy was found with self-reported proficiency in the language of the students, such that proficiency helped predict perceived efficacy; this indicates that it would be important to be able to compare teachers’ and students’ fluency in other languages as well. Further, data regarding the ELLs that teachers have experience working with should be collected. Due to demographic and policy differences across states, future studies should attempt to reach a broader sample of teachers from across the nation as well.

Additionally, when group differences were examined for the TELLS model significant differences were noted. It was found that there were significant differences based on career stage and amount of professional development received. Although the model was not a good fit for any particular group, these differences remain important. Thus, it is important that future research continues to collect this important demographic data and compare group differences.

Often, modification indices are used to modify CFA models; however, when this occurs the perceived CFA becomes exploratory and may be inappropriate (Worthington & Whittaker, 2006). Ongoing development of the TELLS should include a follow-up exploratory factor analysis as poor fit indices and a large number of modifications make
CFA model respecification challenging (Schmitt, 2011). Further, competing models that reflect potential models from prior exploratory factor analysis and that make sense theoretically should be analyzed. For example, a one-factor model of teacher self-efficacy for teaching English language learners may be examined. A four-factor model that divides each factor into unique factors (i.e., native language support and resources as two unique factors) also makes sense on a conceptual level. Further refinement of the scale may require modification to the items selected for the instrument based on the prior study and data collection with a new sample.

**Future Use**

This scale has a variety of potential uses in research and practice settings. In research, the scale could be used to examine the relationship between teacher self-efficacy for teaching English language learners to other variables such as student achievement and teacher burn-out. It could also help identify variables linked to student success. In addition, the scale could be used to compare teachers’ self-efficacy beliefs across different contexts.

The TELLS can be used in many settings to improve education for ELLs. It can help users identify training needs at a variety of levels including pre-service teacher training programs, select schools or districts, and individuals. This can be helpful in developing programs and consulting with schools or teachers. Additionally, the TELLS can be used to evaluate the effectiveness of training programs, professional development, and individual interventions. This scale can greatly increase the capacity for teaching ELLs in the U.S. It should be noted this scale is not intended to be used for employee decision making such as hiring and firing teachers.
**Recommendations**

Due to concerns about the validity of past teacher self-efficacy scales presented in the literature review, it is important to continue research on teacher self-efficacy and the TELLS. More research needs to be conducted to confirm if teachers’ report of their self-efficacy is congruent with what they do in the classroom. Additionally, studies are needed to determine if teachers’ self-efficacy beliefs for teaching English language learners are correlated with students’ academic outcomes and teacher burnout.

Information is still lacking in many areas regarding best practices for English language learners. Continued work needs to occur to identify best practices in areas such as assessment in order to better prepare teachers for working with students of varying levels of English proficiency.
Appendix

Table 1

*Confirmatory Factor Analysis Goodness of Fit Summary*

<table>
<thead>
<tr>
<th>Model</th>
<th>Index</th>
<th>Initial</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chi-square</td>
<td>2469.93</td>
<td>1758.93</td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>229</td>
<td>224</td>
</tr>
<tr>
<td></td>
<td>CFI</td>
<td>.82</td>
<td>.88</td>
</tr>
<tr>
<td></td>
<td>RMSEA</td>
<td>.12</td>
<td>.10</td>
</tr>
<tr>
<td></td>
<td>90% CI of RMSEA</td>
<td>.11-.12</td>
<td>.09-.10</td>
</tr>
</tbody>
</table>

*Note:* CFI = Comparative Fit Index, RMSEA = Root Mean Square Error of Approximation. Chi-square difference ($5, N = 708$) = 711, $p < .01$
Table 2

Correlation and Internal Consistency Among TELLS, Culturally Responsive Teaching Self-efficacy, Multicultural Teaching Competency, Satisfaction with Life, Self-esteem, and Social Desirability

<table>
<thead>
<tr>
<th>Scale</th>
<th>TELLS</th>
<th>CRTSE</th>
<th>MTCS</th>
<th>SWL</th>
<th>RSE</th>
<th>α</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>TELLS</td>
<td>.94</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>CRTSE</td>
<td>.33**</td>
<td>.98</td>
<td>78.27</td>
<td>17.49</td>
<td></td>
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<tr>
<td>MTCS</td>
<td>.09*</td>
<td>.29**</td>
<td>.90</td>
<td>3.95</td>
<td>.81</td>
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<td></td>
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<tr>
<td>SWL</td>
<td>.03</td>
<td>.15**</td>
<td>.16**</td>
<td>.97</td>
<td>5.73</td>
<td>1.09</td>
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<tr>
<td>RSE</td>
<td>-.03</td>
<td>.15**</td>
<td>.16**</td>
<td>.41**</td>
<td>.88</td>
<td>3.56</td>
<td>.45</td>
<td></td>
</tr>
<tr>
<td>BIDR-IM</td>
<td>.13**</td>
<td>.13**</td>
<td>.09**</td>
<td>.18**</td>
<td>.24**</td>
<td>.81</td>
<td>4.76</td>
<td>.87</td>
</tr>
</tbody>
</table>

Note: TELLS – Teaching English Language Learners Scale, CRTSE = Culturally Responsive Teaching Self Efficacy Scale, MTCS = Multicultural Teaching Competency Scale, SWL = Satisfaction With Life scale, RSE = Rosenberg Self-Esteem scale, BIDR-IM = Balanced Inventory of Desirable Responding – Impression Management subscale. *p <.05, **p <.01, two-tailed.
Figure 1. Two-Factor Model with Item Loadings
Teaching English Language Learners Scale (TELLS)

For the purpose of this survey and ELL student is any student whose primary language is not English, regardless of their current academic placements. Following is a list of different activities. After each statement please rate how confident you are that you can do them as of now. Rate your degree of confidence by recording a number from 0 to 10 using the scale given below:

<table>
<thead>
<tr>
<th></th>
<th>Certain Cannot Do At All - 0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Moderately Certain Can Do - 5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>Certain Can Do - 10</th>
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<tbody>
<tr>
<td>1. Monitor ELL students’ understanding of directions.</td>
<td>○</td>
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<td>2. Use ongoing assessment for ELL students.</td>
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<td>3. Perform assessments at a level for ELL students’ language proficiency and current functioning.</td>
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<td>4. Teach classroom expectations to ELL students.</td>
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<td>○</td>
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<td>5. Model classroom tasks for ELL students.</td>
<td>○</td>
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<td>6. Highlight key points for ELL students in some way (outlines, lists, etc).</td>
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<td>7. Provide authentic (accurate) visual aids for ELL students.</td>
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<tr>
<td>8. Use mechanical aids, real objects, music, art, games, and hands-on experience to reinforce ELL students' learning.</td>
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<td>9. Redirect ELL students who are persistently off task.</td>
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<td>10. Plan evaluations that accommodate individual differences among my ELL students.</td>
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<td>11. Use repetition for ELL students.</td>
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<td>Certain Cannot Do At All - 0</td>
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<td>4</td>
<td>Moderately Certain Can Do - 5</td>
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<td>Certain Can Do - 10</td>
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<td>12.</td>
<td>Learn new strategies to use with my ELL students.</td>
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<td>13.</td>
<td>Identify ELL students’ individual English proficiency.</td>
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<td>14.</td>
<td>Post common expectations in the classroom in English for ELL students.</td>
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<td>15.</td>
<td>Use members of the community as resources for working with ELL students and their families.</td>
<td>o</td>
<td>o</td>
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<td>o</td>
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<tr>
<td>16.</td>
<td>Locate materials in ELL students’ native languages.</td>
<td>o</td>
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<tr>
<td>17.</td>
<td>Encourage homework support activities staffed by bilingual teachers, volunteers, etc for ELL students.</td>
<td>o</td>
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<tr>
<td>18.</td>
<td>Learn certain words and phrases in ELL students’ native</td>
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<td>19. Praise ELL students for their accomplishments using a phrase in their native language.</td>
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<tr>
<td>20. Encourage ELL students to use their native language.</td>
<td>[Checkbox]</td>
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<tr>
<td>21. Greet ELL students with a phrase in their native language.</td>
<td>[Checkbox]</td>
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<tr>
<td>22. Pair ELL students with bilingual students who can speak the same language.</td>
<td>[Checkbox]</td>
<td>[Checkbox]</td>
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</tr>
<tr>
<td>23. Provide native language instructional support for ELL students.</td>
<td>[Checkbox]</td>
<td>[Checkbox]</td>
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<td>[Checkbox]</td>
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</tr>
</tbody>
</table>
Using the scale below as a guide, select a number beside each statement to indicate how true it is.

<table>
<thead>
<tr>
<th></th>
<th>Not True - 1</th>
<th>2</th>
<th>3</th>
<th>Somewhat True - 4</th>
<th>5</th>
<th>6</th>
<th>Very True - 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I sometimes tell lies if I have to.</td>
<td></td>
<td></td>
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<tr>
<td>2. I never cover up my mistakes.</td>
<td></td>
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<tr>
<td>3. There have been occasions when I have taken advantage of someone.</td>
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<td>4. I never swear.</td>
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<tr>
<td>5. I sometimes try to get even rather than forgive and forget.</td>
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<td>6. I always obey laws, even if I'm unlikely to get caught.</td>
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<td>7. I have said something bad about a friend behind his/her back.</td>
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<td>8. When I hear people talking</td>
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<td>9. I have received too much change from a salesperson without telling him or her.</td>
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<td>10. I always declare everything at customs.</td>
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<tr>
<td>11. When I was young I sometimes stole things.</td>
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<td>12. I have never dropped litter on the street.</td>
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<td>13. I sometimes drive faster than the speed limit.</td>
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<td>14. I never read sexy books or magazines.</td>
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<tr>
<td>15. I have done things that I don't tell other people about.</td>
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<tr>
<td>16. I never take things that don't belong to me.</td>
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</tr>
</tbody>
</table>
17. I have taken sick-leave from work or school even though I wasn't really sick.

18. I have never damaged a library book or store merchandise without reporting it.

19. I have some pretty awful habits.

20. I don't gossip about other people's business.

<table>
<thead>
<tr>
<th>Culturally Responsive Teaching Self-Efficacy Scale (CRTSE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please rate how confident you are in your ability to engage in the following practices using the scale 0 (no confidence at all) to 100 (completely confident). I am able to...</td>
</tr>
<tr>
<td>1. Adapt instruction to meet the needs of my students</td>
</tr>
<tr>
<td>2. Obtain information about my students’ academic strengths</td>
</tr>
<tr>
<td>3. Determine whether my students like to work alone or in a group</td>
</tr>
<tr>
<td>4. Determine whether my students feel comfortable competing with other students</td>
</tr>
<tr>
<td>5. Identify ways that the school culture (e.g., values, norms, and practices) is different from my students’ home culture</td>
</tr>
<tr>
<td>6. Implement strategies to minimize the effects of the mismatch between my students’ home culture and the school culture</td>
</tr>
<tr>
<td>7. Assess student learning using various types of assessments</td>
</tr>
<tr>
<td>8. Obtain information about my students’ home life</td>
</tr>
<tr>
<td>9. Build a sense of trust in my students</td>
</tr>
<tr>
<td>10. Establish positive home-school relations</td>
</tr>
</tbody>
</table>
11. Use a variety of teaching methods
12. Develop a community of learners when my class consists of students from diverse backgrounds
13. Use my students’ cultural background to help make learning meaningful
14. Use my students’ prior knowledge to help them make sense of new information
15. Identify ways how students communicate at home may differ from the school norms
16. Obtain information about my students’ cultural background
17. Teach students about their cultures’ contributions to science
18. Greet English Language Learners with a phrase in their native language
19. Design a classroom environment using displays that reflects a variety of cultures
20. Develop a personal relationship with my students
21. Obtain information about my students’ academic weaknesses
22. Praise English Language Learners for their accomplishments using a phrase in their native language
23. Identify ways that standardized tests may be biased towards linguistically diverse students
24. Communicate with parents regarding their child’s educational progress
25. Structure parent-teacher conferences so that the meeting is not intimidating for parents
26. Help students to develop positive relationships with their classmates
27. Revise instructional material to include a better representation of cultural groups
28. Critically examine the curriculum to determine whether it reinforces negative cultural stereotypes
29. Design a lesson that shows how other cultural groups have made use of mathematics
30. Model classroom tasks to enhance English Language Learners’ understanding
31. Communicate with the parents of English Language Learners regarding their child’s achievement
32. Help students feel like important members of the classroom
33. Identify ways that standardized tests may be biased towards culturally diverse students
34. Use a learning preference inventory to gather data about how my students like to learn
35. Use examples that are familiar to students from diverse cultural backgrounds
36. Explain new concepts using examples that are taken from my students’ everyday lives
37. Obtain information regarding my students’ academic interests
38. Use the interests of my students to make learning meaningful for them
39. Implement cooperative learning activities for those students who like to work in groups
40. Design instruction that matches my students’ developmental needs
### Multicultural Teaching Competency Scale (MTCS)

Please indicate your agreement with each item below using the scale provided.

<table>
<thead>
<tr>
<th>Item</th>
<th>6 = Strongly agree</th>
<th>5 = Slightly agree</th>
<th>4 = Neither agree nor disagree</th>
<th>3 = Slightly disagree</th>
<th>2 = Disagree</th>
<th>1 = Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I integrate the cultural values and lifestyles of racial and ethnic minority groups into my teaching.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>2. I plan many activities to celebrate diverse cultural practices in my classroom.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>3. I plan school events to increase students’ knowledge about cultural experiences of various racial and ethnic groups.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>4. My curricula integrate topics and events from racial and ethnic minority populations.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>5. I make changes within the general school environment so racial and ethnic minority students will</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
have an equal opportunity for success.

6. I consult regularly with other teachers or administrators to help me understand multicultural issues related to instruction.

7. I rarely examine the instructional materials I use in the classroom for racial and ethnic bias.

8. I often include examples of the experiences and perspectives of racial and ethnic groups during my classroom lessons.

9. I often promote diversity by the behaviors I exhibit.

10. I establish strong, supportive relationships with racial and ethnic minority parents.
<p>| | | | | | | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>11. I am knowledgeable about particular teaching strategies that affirm the racial and ethnic identities of all students.</td>
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<tr>
<td>12. I have a clear understanding of culturally responsive pedagogy.</td>
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<tr>
<td>13. I am knowledgeable about racial and ethnic identity theories.</td>
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<tr>
<td>14. I am knowledgeable of how historical experiences of various racial and ethnic minority groups may affect students’ learning.</td>
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<tr>
<td>15. I understand the various communication styles among different racial and ethnic minority students in my classroom.</td>
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<tr>
<td>16. I am</td>
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</tbody>
</table>
knowledgeable about the various community resources within the city that I teach.

Rosenberg Self-Esteem Scale

Below is a list of statements dealing with your general feelings about yourself. Please select your level of agreement with each statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I feel that I'm a person of worth, at least on an equal plane with others.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>2. I feel that I have a number of good qualities.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>3. All in all, I am inclined to feel that I am a failure.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>4. I am able to do things as well as most other people.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>5. I feel I do not have much to be proud of.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>6. I take a positive attitude toward myself.</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
</tr>
<tr>
<td>7. On the whole, I am satisfied with myself.</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
</tr>
<tr>
<td>8. I wish I could have</td>
<td>○</td>
<td>○</td>
<td></td>
<td>○</td>
</tr>
</tbody>
</table>

84
9. I certainly feel useless at times.
10. At times I think I am no good at all.

Satisfaction With Life Scale (SWL)

Below are five statements that you may agree or disagree with. Using the 1 (strongly agree) – 7 (strongly disagree) scale, indicate your agreement with each item by selecting the appropriate number next to each item. Please be open and honest in your responding.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree - 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Strongly Disagree - 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In most ways my life is close to my ideal.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2. The conditions of my life are excellent.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3. I am satisfied with my life.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4. So far I have gotten the important things I want in life.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5. If I could live my life over, I would change</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</table>
almost nothing.

Consent

If you are a K-12 teacher, I am requesting your help, by completing an online survey. The project, *Teaching English Language Learners Scale (TELLS)*, will create a formal way to measure how teachers feel about teaching students whose primary language is not English. Results of this research could lead to great benefits such as improved teacher preparation programs and professional development for teaching English Language Learners in the mainstream classroom.

The offer of an incentive of a $25 electronic gift card will be given to all respondents who finish the survey and provide their email address. If you chose to provide your email address for this purpose, it will not be linked to your responses. This survey will take approximately 30 minutes to complete.

Your participation is completely voluntary and anonymous. Although unlikely, some questions may make you feel uncomfortable. You may stop participating at any time. You may skip or decide not to answer any questions that make you feel uncomfortable. Your responses are important and we hope that you will agree to participate. However, you are under no obligation to participate if you so choose.

If you have questions regarding your rights as a research participant, contact the Campus Institutional Review Board at the University of Missouri-Columbia at (573) 882-9585.

After reading the consent information above, click below if you wish to participate.

I have read the consent and agree to participate

Yes

No
References


Menken, K., & Antunez, B. (2001). *An overview of the preparation and certification of teachers working with limited English proficient (LEP) students*.


National Center for Education Statistics. (2009). Number and percentage of all schools that had any students with an Individual Education Plan (IEP) or who were limited-English proficient (LEP) and percentage of students with an IEP or who were LEP, by school type and selected school characteristics: 2007–08.


Megan Strawsine Carney was born in Michigan. She studied Psychology and Spanish and Central Michigan University before earning her Master of Arts and Doctorate at the University of Missouri Columbia in School Psychology. Her research interests include scale development and applied research in the areas of culturally and linguistically diverse students as well as culturally and linguistically competent mental health services.