Determining Professional Development Needs of School-Based Agricultural Education Teachers for Working with English Language Learners

Abstract

English Language Learners (ELLs) are one of the fastest growing student populations in the United States. However, teachers, including school-based agricultural education (SBAE) teachers, report being underprepared to teach ELLs. Skills needed to teach ELLs were identified and categorized using Coady et al.'s model for preparing effective teachers of ELLs. The purpose of this study was to describe current SBAE teacher perceptions and needs related to strategies for working with ELLs in the agriculture classroom. This was accomplished through a Borich needs assessment using an online survey of Texas SBAE teachers. Less than half of respondents reported receiving training in 37 out of the 41 ELL teaching strategies. The greatest professional development need was communication with ELLs and their parents. The results of this study were consistent with previous research, which reported SBAE teachers received little training in working with ELL students. When examining teachers' competence for working with ELL students, there were no teaching and learning strategies where teachers felt more than somewhat competent. Professional development should be provided to help improve teachers' communication with ELL students and their parents, and teacher preparation programs should provide experiences to allow preservice teachers to work with ELL students.

***Keywords*:** English language learners; professional development

Introduction

The number of English Language Learners (ELLs) in U.S. classrooms has drastically increased in recent years. The term English Language Learner refers to students whose first language is not English, and as of 2015 there were 4.8 million ELL students, with five states seeing increases of over 40% between 2009 and 2015 (USDOE, 2022). ELL students possess diverse backgrounds, languages, socioeconomic statuses, family support, literacy levels, and cognitive abilities (Short & Echevarria, 2005), however, the vast majority (77.8%) of ELL students in the United States have identified as Hispanic or Latino, and Spanish was the most common language spoken at home (USDOE, 2022).

Because of their lack of English proficiency, many ELL students struggle to meet academic demands (Roy-Campbell, 2013), and many have a pattern of underachievement and low retention rates (Coady et al., 2011; Khong & Saito, 2014). In 2000 the dropout rate for Latino and Hispanic youth was 22.4%, more than twice the national average (Janzen, 2008). While the causes for underachievement are multidimensional, one critical issue has been a lack of teacher preparation (Janzen, 2008). Nearly 90% of teachers have worked with ELL students, however, less than 30% felt prepared to teach ELL students (Barajas et al., 2020; Karabenick & Noda, 2004). Moreover, school-based agricultural education (SBAE) teachers have also reported a lack of confidence for educating and developing educationally relevant relationships with ELL students (Roy-Campbell, 2013; Salem, 2021; Vommi & LaVergne, 2016). When teachers lack the confidence to educate ELL students, they will be less likely to meet the students' needs (Hansen-Thomas et al., 2014).

Teachers need specific preparation and professional development to educate ELL students effectively and equitably (Short & Echevarria, 2005). However, little professional development

designed to assist teachers who work with ELL students has been available (Gándara et al., 2005). Only eight percent of states require specific ELL training, thus leading to underprepared teachers with a lack of foundational knowledge surrounding ELL issues (Coady et al., 2011; Hansen-Thomas et al., 2014; Roy-Campbell, 2013). Khong and Saito (2014) illuminated the need to better prepare teachers for working with ELL students, stating, "The biggest institutional obstacle for ELL teachers has been inadequate in-service and pre-service training" (p. 214). Preservice teachers who worked with ELL students during student teaching indicated this was the most helpful component of their preservice teacher preparation program and these experiences were positively related to their ability to effectively teach ELL students (Coady et al., 2011). According to Hansen-Thomas et al. (2014), preservice and current educators need to have the opportunity to develop a specialized set of skills and teaching strategies to be more effective in working with ELL populations. Nonetheless, teachers' lack of professional development regarding working with ELLs has resulted in many teachers depending upon their own knowledge gained through personal experience working with students (Khong & Saito, 2014).

In addition to teacher preparation, having teachers who represent students' diverse backgrounds is important. However, the rapid growth of student linguistic and cultural diversity in our educational system has not resulted in a proportionate increase in representation of teachers with similar linguistic and cultural backgrounds (Hansen-Thomas et al., 2014). According to the National Center for Education Statistics (2022), the K-12 teacher population has remained overwhelmingly White. The trend has been similar in SBAE where Vincent et al. (2012) reported teacher demographics have not kept pace with the changes in student demographics. This is unfortunate, as students showed greater academic advances when taught by a teacher who spoke their same language compared to students with teachers who lacked bilingual/multilingual abilities (Gándara et al., 2005).

While ELL students have been one of the fastest growing populations in the United States, there has been a lack of exploration regarding the ELL student experience in SBAE (Vincent & Torres, 2015). According to the American Association for Agricultural Education's ([AAAE] 2017) Standards for SBAE Teacher Preparation Programs, SBAE teachers should create fair and equitable classroom environments to build positive rapport with students, parents, stakeholders, and community members. Nevertheless, ELL students face unique barriers to participation in SBAE because of social perceptions and unawareness of classroom and FFA program norms (Barajas et al., 2020). Due to lack of preparation, Vommi and LaVergne (2016) reported many SBAE teachers indicated a desire to receive training working with English Language Learners. Consequently, working with ELL students is an area SBAE teacher preparation programs and professional development providers should address. However, for SBAE teacher preparation programs and professional development providers to make progress in this area, the specific skills teachers need to work with ELL students must be identified, thus, leading to the need for this study.

Literature Review

To identify skills needed by SBAE teachers for working with ELLs, a review of literature was conducted revealing a multitude of skills teachers lacked or skills needing to be taught during teacher preparation programs or professional development. Skills related to communicating with ELL students and their parents were the most frequently cited challenges for teachers (Gándara et al., 2005; Hansen-Thomas et al., 2014; Khong & Saito, 2014; Salem, 2021). Other communication challenges included understanding the speech and writing of ELLs, changing the negative perceptions of SBAE among parents of ELLs, and speaking the language of ELLs (Barajas et al., 2021; Gándara et al., 2005; Salem, 2021). A study of early career SBAE teachers in Texas also

found participants needed to strengthen skills in developing relationships with ELL students, developing relationships with bilingual or multilingual colleagues, using translation software, creating culturally aware and inclusive lessons, and providing language-centric experiences for ELL students (Salem, 2021).

Lucas and Grinberg (2008) recommended teachers be able to determine ELL students' literacy levels, the language spoken in the students' home, and English proficiency level. However, teachers reported challenges accomplishing these tasks since ELL students possess a wide range of academic and English language proficiencies (Gándara et al., 2005). Furthermore, teachers should familiarize themselves with students' cultural background and first language spoken (Lucas & Grinberg, 2008; Lucas & Villegas, 2011). Additional challenges included the time required to teach ELL students the subject matter and English language proficiency while finding tools to teach and assess ELLs (Gándara et al., 2005; Khong & Saito, 2013).

According to Hansen-Thomas et al. (2014), specialized skills are needed to engage ELL students in the classroom and accelerate their literacy development. Short and Echevarria (2004) recommended teachers in all subject areas identify the language demands of their course content, plan language objectives for all lessons, emphasize academic vocabulary development for ELLs, activate and strengthen background knowledge of ELLs, and provide feedback on ELL students' language use in class. Related to literacy development, being able to scaffold English language learning using a variety of strategies is also a skill needed by teachers of ELLs (Lucas & Villegas, 2011; Villegas et al., 2018).

Specific to SBAE, Barajas et al. (2020) pointed out several issues regarding the teaching of ELL students. First, they reported ELL students perceived an unwelcoming environment in SBAE classrooms toward Latin culture (Barajas et al., 2020). They also suggested SBAE teachers needed to understand social perceptions and patterns of ELLs in the classroom, manage seating proximity of ELLs to the teacher, and encourage social participation of ELLs with others in the classroom.

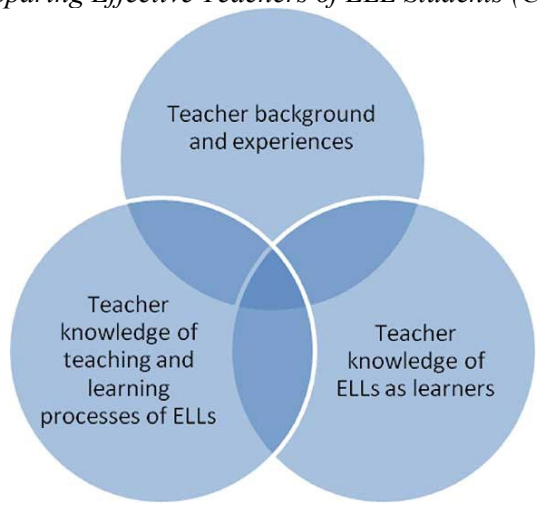
Several studies provided characteristics possessed by teachers who have been considered high quality teachers of ELL students. These teachers provide opportunities for oral and written language practice (Verplaetse, 2008), develop materials to aid ELL students' comprehension and modify lesson plans to meet the individual needs of ELL students (Brower & Korthagen, 2005; Menken & Antuñez, 2001), assess the language and literacy development of ELL students (Abedi et al., 2004; Brower & Korthagen, 2005), implement cooperative learning and grouping strategies between ELLs and other classroom students (Brower & Korthagen, 2005), and identify the cultural and linguistic identities needed to facilitate learning (Cummins, 2001).

Theoretical/Conceptual Framework

This study was grounded in Self-Efficacy Theory (Bandura, 1986) and Coady et al.'s (2011) conceptual Model for Preparing Effective Teachers of ELL Students. Coady et al. (2011) based their model (Figure 1) in the literature concerning pedagogical skills, dispositions, and knowledge possessed by quality teachers of ELL students. They proposed the preparation of effective teachers of ELL students could be informed and influenced by three broad, interrelated dimensions including, (a) teacher preparation, background, and experiences; (b) teacher knowledge of teaching and learning processes with ELLs; and (c) teacher knowledge of ELL students.

Figure 1

Conceptual Model for Preparing Effective Teachers of ELL Students (Coady et al., 2011)



The first dimension, teacher preparation, background, and experiences, focused on two specific areas of teachers' background, including professional and personal experiences (Coady et al., 2011). Coady et al. touted the importance of ELL-specific training received during preservice teacher programs, stating teachers who have received such training and "obtain the professional preparation necessary to learn their craft can make informed pedagogical decisions and advocate for their ELLs" (p. 225). Subsequently, Coady et al. indicated this first dimension included teachers' personal experiences such as, fluency in a foreign language, international travel, sustained intercultural interactions, open-mindedness, and positive attitudes. However, for the purpose of this study, participants were only asked about their professional background related to training in specific skills connected with teaching ELL students.

The second dimension, knowledge of teaching and learning processes with ELLs, described teachers' experience with and understanding of various pedagogical skills related to teaching ELLs. Skills within this dimension included teachers' understanding of languages and language acquisition (Wong-Fillmore & Snow, 2000); ability to make lessons linguistically accessible (Lucas & Grinberg, 2008); expertise in developing materials and modifying lessons for ELL students (Brower & Korthagen, 2005; Menken & Antuñez, 2001); capacity to utilize strategic cooperative learning and grouping tactics (Brower & Korthagen, 2005); proficiency at providing opportunities for oral and written language practice (Verplaetse, 2008) and assessing language and literacy development (Brower & Korthagen, 2005). Additional skills in this area consisted of teachers' ability to integrate intercultural competence and cross-cultural communication into their teaching (Lucas & Grinberg, 2008).

The last dimension, teacher knowledge of ELL students, characterized the personal knowledge teachers possess about their ELL students, including their culture, first language, language spoken at home, written and oral proficiency levels with English, and literacy levels (Lucas & Grinberg, 2008). Cholewa (2009) suggested, while effective teachers of ELL students may not know and understand the aspects regarding all students' cultures and language, they are willing to learn and connect their curriculum and teaching to each student individually.

Bandura (1986) described self-efficacy as an individual's level of confidence in their ability to perform a certain task. High levels of self-efficacy indicate confidence to complete the task, while low levels of self-efficacy indicate lower levels of confidence. An individual's self-efficacy can be influenced by three factors: mastery experiences, vicarious experiences, and social persuasion. According to Bandura, all three factors can help build self-efficacy, however, mastery experiences have been noted as the strongest predictors of self-efficacy. Mastery experiences are those experiences where an individual has previously been successful at a task. Vicarious experiences are those where an individual has been able to witness a peer have success with a certain task, and lastly, social persuasion is where an individual has been given messages of encouragement by someone regarding their ability to complete the task. This study focused on teachers' previous ELL training as an opportunity for self-efficacy to be built and self-efficacy was approximated as teachers' perceived competence for each skill.

The three previously described dimensions influencing the preparation of effective ELL teachers were applied to this study by describing SBAE teachers' training and perceptions of importance and competence within each dimension. For the first dimension, participants indicated training received related to specific ELL teaching skills. Dimensions two and three were described by asking teachers about their perceptions of the importance and competence in performing skills for working with ELL students. Based on responses received for each dimension, needs will be assessed to plan for future preservice teacher training and providing professional development for practicing teachers, thereby helping to prepare effective SBAE teachers of ELL students.

Purpose and Objectives

The purpose of this study was to describe current SBAE teacher perceptions of and needs related to strategies for working with English language learners in the agriculture classroom. The following objectives guided our study:

1. Determine SBAE teacher training status related to working with ELL students.
2. Describe SBAE teachers' perceived importance of and competence in strategies for working with ELL students.
3. Determine SBAE teachers' professional development needs for working with ELLs.

Methods

We used a descriptive, survey design to achieve the purpose and objectives of this study. This type of study was chosen because it can be used to summarize characteristics of individuals or groups (Fraenkel et al., 2023). The population of interest for this study was SBAE teachers in Texas. All SBAE teachers who were members of the state agriculture teachers' association (N = 2,172) served as the accessible population for sampling purposes. According to Krejcie and Morgan (1970), a sample of 327 teachers was needed to describe the population. Based on response rates from previous survey studies published using this same population, we anticipated a low response rate (20%) with this population. In an attempt to overcome this limitation, oversampling was used (Doss et al., 2022). Based on the estimated response rate of 20%, we determined a sample of 1,635 teachers should be contacted to reach the needed sample size of 327 teachers. Simple random sampling was used to select participants (n = 1,635) to create an email contact list using the state agriculture teachers' association directory.

This study utilized a researcher created instrument, which consisted of 41 items relating to teachers' strategies for working with and knowledge of ELL students. Individual items were crafted

based on our review of literature. To establish content validity, two members of the research team independently reviewed the list of identified items and collapsed similar items into single items. After this step, the research team discussed any discrepancies and solidified a final list of items. The first section of the instrument asked participants to indicate *yes* or *no* on whether they had received training on specific strategies related to working with ELLs, which aligned with the first dimension of Coady et al.'s (2011) model. The second section of the instrument was a modified version of the Borich Needs Assessment Model (Borich, 1980). Participants were asked to rate their perceived level of importance for each of the 41 strategies for working with ELLs on a five-point Likert-type scale (1 = *Not Important* to 5 = *Very Important*) as well as their perceived competence (1 = *Not Competent* to 5 = *Very Competent*). This second section of the instrument aligned with dimensions two and three of Coady et al.'s (2011) model. The final section of the instrument consisted of 12 demographic questions used to describe the sample and their current practices related to teaching and working with ELL students.

After Institutional Review Board (IRB) approval was received from Texas A&M-Commerce, a pilot test was conducted with preservice SBAE teachers enrolled in junior and senior level agricultural education courses (n = 13). Since our research objectives would require reporting on individual items, a test-retest coefficient of stability was the appropriate measure of reliability for this study (Warmbrod, 2014). Students in the pilot test completed an initial questionnaire and two weeks later completed the retest questionnaire. Seven useable responses were received for both administrations and a stability coefficient of r = .81 was calculated.

Following the pilot test, selected teachers were sent an email invitation to participate with a link to an online Qualtrics questionnaire. Four subsequent reminder emails were sent according to conventions set by Dillman et al. (2014); a total of 117 usable responses was received for a 7.16% final response rate. Since our goal of 327 responses was not met, readers should not generalize results beyond those who responded in this study. Nonetheless, "Studies yielding valid results of interest to the profession from a specific groups [sic] of respondents, regardless of their generalizability, can add to the body of knowledge and assist researchers as they design and conduct research" (Johnson & Shoulders, 2017, pp. 310-311), thus, this study serves as a good baseline for researchers interested in exploring this topic. We also did not control for nonresponse error, since results will not be generalized beyond study participants.

All data from completed responses were exported into a Microsoft Excel spreadsheet where descriptive statistics were calculated for demographic items and objectives one and two. Objective three required the calculation of mean weighted discrepancy scores (MWDS) for each item. According to Borich (1980, p. 39) "The process of identifying training needs can be conceptualized as a discrepancy analysis that identifies the two polar positions of *what is* and *what should be*." In the case of our study the *what is* was perceived competence and the *what should be* was perceived importance. Based on this data, discrepancy scores (DS) were calculated for each item and each participant by subtracting perceived competence from perceived importance. Weighted discrepancy scores (WDS) were then calculated by multiplying DS for each item and participant by the average perceived importance for all participants combined. Finally, a MWDS was calculated for each item by summing weighted discrepancy scores for all participants and dividing by the number of observations. MWDS were then ranked where the greatest positive value had the highest priority need for professional development (Borich, 1980). All nonresponse items from incomplete questionnaires were excluded from calculations where appropriate, resulting in inconsistent sample sizes for each item.

Findings

Of the 83 participants who responded to demographic questions, 63.86% were female. A majority of participants identified as White/Caucasian (90.36%), while 6.02% were Hispanic/Latino, 1.2% were Black/African American, 1.2% were Native American, and 1.2% reported Multi/Biracial. Teachers were mostly traditionally certified (78.31%), while 21.69% reported gaining certification through alternative means. A majority of respondents described their school location as rural (56.63%), while 32.53% reported suburban and 10.84% reported urban. Teachers had an average of 13.30 (*SD* = 10.62) years of teaching experience.

Most (95.18%) teachers were fluent only in English, however 4.82% of respondents reported also being fluent in Spanish. When describing their students, participants reported an average of 16.58% of the students in their courses were ELLs. Teachers could select all that applied for languages spoken by ELLs. Spanish (*f* = 79) was reported most frequently followed by Vietnamese (*f* = 6), Korean (*f* = 5), German (*f* = 5), Portuguese (*f* = 2), Chinese (*f* = 2), Arabic (*f* = 2), French (*f* = 1), and Italian (*f* = 1). When participants were asked if they were required by their school to do anything extra for ELL students such as modifying lesson plans, creating language objectives, and providing supports, a majority said 'yes' (53.57%). A majority (78.31%) also indicated they would be interested in attending professional development related to working with English language learners in the SBAE program.

The first objective of this study was to determine SBAE teacher training status related to working with ELL students. Teachers most frequently (75.21%) reported receiving training for general teaching strategies for ELLs. The next most frequently reported item was modifying lesson plans to meet individual ELLs' needs (56.41%). Teachers reported receiving training on using translation software (13.68%) and on changing ELL parents' negative perceptions of agricultural education (12.96%) least frequently. Refer to Table 1 for a complete breakdown of training received on strategies for working with ELLs.

Table 1

Frequency of Training Received by SBAE Teachers Related to Working with ELLs

ELL Teaching/Learning Strategy	*n*	*f*	%
General teaching strategies for ELLs	117	88	75.21
Modifying lesson plans to meet individual needs	117	66	56.41
Engaging ELL students in the classroom	116	64	55.17
Developing relationships with ELL students	108	57	52.78
Providing language centric experiences for students	117	57	48.72
Encouraging social participation of ELLs with others	108	50	46.30
Creating culturally aware and inclusive lessons	117	53	45.30
Providing opportunities for written language practices	117	53	45.30
Implementing cooperative learning between ELLs and others	117	50	42.74
Communicating with ELL students	108	46	42.59
Emphasizing academic vocabulary development	116	48	41.38
Providing opportunities for oral language practice	117	48	41.03
Developing relationships with bi/multi-lingual colleagues	108	44	40.74
Managing seating proximity to the teacher	108	41	37.96
Developing materials to aid comprehension	116	42	36.21
Finding tools to teach and assess ELLs	116	42	36.21
Teaching to a wide range of English language proficiency	117	40	34.19

Teaching to a wide range of academic levels of ELLs	117	40	34.19
Getting to know student cultural background	108	36	33.33
Scaffolding English language learning	116	38	32.76
Activating and strengthening background knowledge	117	36	30.77
Recruiting students who speak a non-English language	108	32	29.63
Understanding student speech and writing	107	31	28.97
Infusing students' culture in the classroom	108	31	28.70
Determining language spoken in the home	108	31	28.70
Communicating with parents of ELL students	108	30	27.78
Determining English proficiency levels	108	30	27.78
Assessing language and literacy development	117	31	26.50
Identifying language demands of your course content	117	30	25.64
Planning language objectives for all lessons	117	30	25.64
Providing feedback on language use in class	117	29	24.79
Determining literacy level	108	25	23.15
Getting to know first language spoken by ELLs	107	23	21.50
Identifying cultural identities to facilitate learning	117	25	21.37
Managing social perceptions and patterns in the classroom	106	22	20.75
Accelerating literacy development	117	23	19.66
Setting aside time to teach ELLs content and EL development	116	19	16.38
Identifying linguistic identities to facilitate learning	117	19	16.24
Speaking the language of ELLs	117	18	15.38
Using translation software	117	16	13.68
Changing ELLs' parents' negative perceptions of AGED	108	14	12.96

The second objective was to describe SBAE teachers' perceived importance of and competence in strategies for working with ELL students. Strategies of greatest importance to SBAE teachers included developing relationships with ELL students ($M = 4.67$) and communicating with ELL students ($M = 4.67$). Setting aside time to teach ELL students content and EL development ($M = 3.91$) and speaking the language of ELLs ($M = 3.52$) were perceived as least important, although these items were still considered *somewhat important* to *important*.

When describing teacher competence in strategies for working with ELLs, teachers were most competent in developing relationships with ELL students ($M = 3.60$) and in encouraging social participation of ELLs with others ($M = 3.51$). Teachers perceived they were least competent in setting aside time to teach ELLs content and EL development ($M = 2.25$) and in speaking the language of ELLs ($M = 1.94$). Means for perceived importance and competence in using each of the strategies for working with ELLs are presented in Table 2.

Table 2

SBAE Teachers' Perceived Importance of Using Teaching and Learning Strategies with ELLs

	Importance		Competence	
ELL Teaching/Learning Strategy	*n*	*M*	*n*	*M*
Developing relationships with ELL students	79	4.67	75	3.60
Communicating with ELL students	79	4.67	74	2.96
Engaging ELL students in the classroom	88	4.53	85	3.00
Encouraging social participation of ELLs with others	79	4.52	75	3.51
Developing relationships with bi/multi-lingual colleagues	78	4.46	75	3.45
Communicating with parents of ELL students	79	4.42	75	2.53

General teaching strategies for ELLs	88	4.41	85	2.81
Changing ELLs' parents' negative perceptions of AGED	79	4.41	75	2.76
Providing opportunities for written language practice	88	4.38	85	2.79
Emphasizing academic vocabulary development	87	4.33	84	2.62
Providing opportunities for oral language practice	88	4.30	85	2.76
Finding tools to teach and assess ELLs	88	4.30	84	2.48
Determining English proficiency levels	79	4.29	74	2.69
Accelerating literacy development	88	4.25	85	2.38
Understanding student speech and writing	79	4.25	75	2.57
Determining language spoken in the home	79	4.25	74	2.97
Providing language centric experiences for students	89	4.24	86	2.92
Implementing cooperative learning between ELLs and others	88	4.24	85	2.94
Identifying language demands of your course content	88	4.24	85	2.74
Developing materials to aid comprehension	88	4.22	86	2.44
Activating and strengthening background knowledge	88	4.22	84	2.64
Getting to know student cultural background	79	4.22	75	3.19
Providing feedback on language use in class	88	4.16	85	2.59
Managing social perceptions and patterns in the classroom	79	4.16	75	2.73
Teaching to a wide range of academic levels of ELLs	88	4.14	85	2.54
Scaffolding English language learning	88	4.14	85	2.39
Determining literacy level	79	4.13	74	2.39
Modifying lesson plans to meet individual needs	89	4.12	86	2.52
Identifying linguistic identities to facilitate learning	87	4.09	84	2.33
Teaching to a wide range of English language proficiency	88	4.08	85	2.42
Planning language objectives for all lessons	88	4.07	85	2.46
Using translation software	88	4.06	85	2.59
Assessing language and literacy development	88	4.06	85	2.26
Identifying cultural identities to facilitate learning	88	4.06	85	2.48
Managing seating proximity to the teacher	79	4.06	75	3.28
Getting to know first language spoken by ELLs	79	4.04	75	2.56
Recruiting students who speak a non-English language	79	4.00	75	3.00
Infusing students' culture in the classroom	79	3.99	75	2.77
Creating culturally aware and inclusive lessons	89	3.94	85	2.55
Setting aside time to teach ELLs content and EL development	88	3.91	85	2.25
Speaking the language of ELLs	89	3.52	86	1.94

Note. Importance Scale: 1 = *Not Important*, 2 = *Of Little Importance*, 3 = *Somewhat Important*, 4 = *Important*, 5 = *Very Important*; Competence Scale: 1 = *Not Competent*, 2 = *Little Competence*, 3 = *Somewhat Competent*, 4 = *Competent*, 5 = *Very Competent*.

The final objective of this study was to determine SBAE teachers' professional development needs for working with ELLs. Items with higher MWDS equated with higher need for professional development. The strategies with the highest MWDS were communicating with parents of ELL students and communicating with ELL students. The lowest needs were in recruiting students who speak a language other than English and managing seating proximity of ELLs to the teacher. Table 3 provides a complete list of professional development needs ranked by MWDS.

Table 3

Ranked Professional Development Needs for Using Strategies for Working with ELLs

ELL Teaching/Learning Strategy	*n*	*MWDS*
Communicating with parents of ELL students	75	8.19
Communicating with ELL students	74	7.95
Accelerating literacy development	85	7.90
Finding tools to teach and assess ELLs	84	7.73
Emphasizing academic vocabulary development	84	7.37
Developing materials to aid comprehension	85	7.35
Assessing language and literacy development	85	7.21
Scaffolding English language learning	85	7.16
Changing ELLs' parents' negative perceptions of AGED	75	7.11
Identifying linguistic identities to facilitate learning	83	7.10
General teaching strategies for ELLs	84	6.98
Determining literacy level	74	6.98
Understanding student speech and writing	75	6.97
Engaging ELL students in the classroom	85	6.93
Providing opportunities for written language practice	85	6.90
Determining English proficiency levels	74	6.78
Teaching to a wide range of English language proficiency	85	6.67
Providing opportunities for oral language practice	85	6.53
Teaching to a wide range of academic levels of ELLs	85	6.53
Activating and strengthening background knowledge	84	6.53
Modifying lesson plans to meet individual needs	86	6.52
Planning language objectives for all lessons	85	6.46
Providing feedback on language use in class	85	6.46
Setting aside time to teach ELLs content and EL development	85	6.35
Identifying cultural identities to facilitate learning	85	6.30
Identifying language demands of your course content	85	6.29
Using translation software	85	5.88
Managing social perceptions and patterns in the classroom	75	5.77
Getting to know first language spoken by ELLs	75	5.76
Speaking the language of ELLs	86	5.48
Providing language centric experiences for students	86	5.47
Implementing cooperative learning between ELLs and others	85	5.44
Creating culturally aware and inclusive lessons	85	5.33
Determining language spoken in the home	74	5.28
Developing relationships with ELL students	75	4.92
Infusing students' culture in the classroom	75	4.63
Encouraging social participation of ELLs with others	75	4.46
Developing relationships with bi/multi-lingual colleagues	74	4.46
Getting to know student cultural background	75	4.16
Recruiting students who speak a non-English language	75	3.89
Managing seating proximity to the teacher	75	2.98

Conclusions, Implications, and Recommendations

Several conclusions can be drawn from the results of this study; however, the limitations must first be recognized. The low response rate resulting in a small sample size is not representative

of the Texas SBAE teacher population, therefore the results of this study are not generalizable to the larger population. The results, conclusions, and recommendations should be approached with caution. The majority of respondents in this study were White, English-speaking females who taught in rural school districts. Just over 15% of respondents' students were considered ELLs who spoke a variety of languages, however, most ELL students were Spanish speakers. Over half of the respondents reported they were required to modify lesson plans for ELL students, and almost two-thirds indicated they would like to have more professional development related to working with ELL students (Vommi & LaVergne, 2016).

Results of this study were consistent with previous research reporting SBAE teachers had received little training on working with ELL students (Vommi & LaVergne, 2016). Responses showed less than half of participants received training in 37 of the 41 teaching and learning strategies. All teaching and learning strategies listed in this study are needed by effective teachers of ELL students (Coady et al., 2011), so based on the results, most teachers in this study lacked the background, preparation, and experience to be considered effective according to Coady et al.'s (2011) model. Also, out of the top 20 teaching and learning strategies in which teachers received training, only four pertained to teachers' knowledge of ELL students as learners, the remainder related to teaching and learning processes (Coady et al., 2011). Considering Coady et al.'s (2011) model, the participants' training was imbalanced, and they should receive more training in the relational aspects of knowing ELL students as learners. Salem (2021) concurred SBAE teachers should receive more training in relationship development; however, the results of this study would suggest otherwise. Participants agreed the most important skill was developing relationships with ELL learners, but this was the skill with which they felt most competent. This either suggests teachers have been able to navigate relationship building via their classroom experiences with students (Khong & Saito, 2014), or they are unaware of the knowledge they lack regarding building relationships with ELL students.

When examining teachers' competence for working with ELL students, there were no teaching and learning strategies where teachers felt more than *somewhat competent*. Participants' low levels of perceived competence could most likely be related to their reported lack of training (Bandura, 1986). The top two MWDS revealed communication was the most needed area of professional development, which is congruent with previous literature (Gándara et al., 2005; Hansen-Thomas et al., 2014; Khong & Saito, 2014; Salem, 2021). Less than half of teachers received training in either of the skills related to communicating with ELL students or their families, which could explain the decreased levels of perceived competence (Bandura, 1986). Of the top teaching and learning strategies needed for professional development, only two were characteristics of high-quality teachers of ELL students: developing materials to aid in ELL students' comprehension (Brower & Korthagen, 2005; Menken & Antuñez, 2001) and assessing language and literacy development (Abedi et al., 2004; Brower & Korthagen, 2005).

Several recommendations can be made based on the results of this study. First, professional development providers should consider furnishing training to increase teachers' knowledge of the teaching and learning processes associated with ELL students, as well as their knowledge of ELLs as learners. Additionally, professional development should be provided to help improve teachers' communication with ELL students and their parents, as results from this and multiple studies have shown this is the area of most concern for teachers (Gándara et al., 2005; Hansen-Thomas et al., 2014; Khong & Saito, 2014; Salem, 2021). Similarly, teacher preparation programs should provide experiences to allow preservice teachers to work with ELL students. Coady et al. (2011) reported preservice teachers felt this was the most helpful component of their teacher preparation program in preparing them to work with ELL students. Teacher preparation programs should also actively

recruit preservice SBAE teachers from common ELL student groups. Further, research should examine what education preparation programs are currently doing to help prepare students for working with ELL students and determine the most effective ways of training high-quality SBAE teachers of ELLs. Identifying barriers related to working with ELLs in the other sectors of agricultural education such as FFA and SAE would also be beneficial. Qualitative research where SBAE teachers who are known to effectively teach and work well with ELL students should be conducted to identify strategies where other SBAE teachers may be able to improve their skills in working with these populations.

References

Abedi, J., Hofstetter, C. H., & Lord, C. (2004). Assessment accommodations for English language learners. *Review of Educational Research, 74*(1), 1–28. https://doi.org/10.3102/00346543074001001

American Association for Agricultural Education. (2017). *2017-2020 Standards for school-based agricultural education teacher preparation programs.* https://aaaeonline.org /resources/Documents/AAAE%20Teacher%20Education%20Standards%202017.pdf

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Prentice Hall.

Barajas, G., Crump, M. K., Vincent, S. K., & McCubbins, O. P. (2020). ¡Somos nosotros! Lived experiences of Latinx ELL youth enrolled in secondary agricultural education. *Journal of Agricultural Education, 61*(4), 143-155. https://doi.org/10.5032/jae.2020.04143

Borich, G. D. (1980). A needs assessment model for conducting follow-up studies. *Journal of Teacher Education, 31*(3), 39-42. https://doi.org/10.1177/002248718003100310

Brower, N., & Korthagen, F. (2005). Can teacher education make a difference? *American Educational Research Journal, 42*, 153-224. https://doi.org/10.3102/00028312042001153

Coady, M., Harper, C., & de Jong, E. (2011). From preservice to practice: Mainstream elementary teacher beliefs of preparation and efficacy with English language learners in the state of Florida. *Bilingual Research Journal, 34*(2), 223-239. https://doi.org/10.1080/15235882.2011.597823

Cummins, J. (2001). *Negotiating identities: Education for empowerment in a diverse society.* California Association of Bilingual Education Press.

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed-mode surveys: The tailored design method.* (4th ed.). John Wiley & Sons.

Doss, W., Rayfield, J., Lawver, D., & Burris, S. (2022). Determining the effects of response mode and incentives on survey response rates of school-based agricultural education teachers: An experimental study. *Journal of Agricultural Education, 63*(4), 151-167. https://doi.org/10.5032/jae.2022.04151

Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2023). *How to design and evaluate research in education* (11th ed.). McGraw Hill.

Gándara, P., Maxwell-Jolly, J., & Driscoll, A. (2005). Listening to the teachers of English language learners: A survey of California teachers' challenges, experiences, and professional development needs. *UC Berkeley Joint Publications.* https://escholarship.org/uc/item/6430628z

Hansen-Thomas, H., Richins, L. G., Kakkar, K., & Okeyo, C. (2014). I do not feel I am properly trained to help them! Rural teachers' perceptions of challenges and needs with English-language learners. *Professional Development in Education, 42*(2), 308-324. https://doi.org/10.1080/19415257.2014.973528

Janzen, J. (2008). Teaching English language learners in the content areas. *Review of Educational Research, 78*(4)*,* 1010-1038. https://doi.org/10.3102/0034654308325580

Karabenick, S. A., & Noda, P. A. C. (2004). Professional development implications of teachers' beliefs and attitudes toward English language learners. *Bilingual Research Journal, 28*(1), 55-75. https://doi.org/10.1080/15235882.2004.10162612

Khong, T. H. D., & Saito, E. (2014). Challenges confronting teachers of English language learners. *Educational Review, 66(2*), 210-225. https://doi.org/10.1080/00131911.2013.769425

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*(3), 607-610. https://doi.org/10.1177/001316447003000308

Johnson, D. M., & Shoulders, C. W. (2017). Power of statistical tests used to address nonresponse error in the Journal of Agricultural Education. *Journal of Agricultural Education, 58*(1), 300-312. https://doi.org/10.5032/jae.2017.01300

Lucas, T., & Grinberg, J. (2008). Responding to the linguistic reality of mainstream classrooms: Preparing all teachers to teach English language learners. In M. Cochran-Smith, S. Feiman-Nemser, & D. J. McIntyre (Eds.), *Handbook of research on teacher education: Enduring questions in changing contexts* (3rd ed., pp. 606–636). Routledge. https://doi.org/10.4324/9780203938690

Lucas, T., & Villegas, A. M. (2011). A framework for preparing linguistically responsive teachers. In T. Lucas (Ed.), *Teacher preparation for linguistically diverse classrooms: A resource for teacher educators* (pp. 55–73). Routledge. https://doi.org/10.4324/9780203843239

Menken, K., & Antuñez, B. (2001). An overview of the preparation and certification of teachers working with limited English proficient (LEP) students. Washington, DC: National Clearinghouse for Bilingual Education. https://files.eric.ed.gov/fulltext/ED455231.pdf

National Center for Education Statistics. (2022). *Condition of education: Characteristics of public school teachers*. U.S. Department of Education, Institute of Education Sciences. https://nces.ed.gov/programs/coe/indicator/clr.

Roy-Campbell, Z. M. (2013). Who educates teacher educators about English language learners? *Journal of Literacy and Language Arts, 52*(3), 255-280. https://scholarworks.wmich.edu/

cgi/viewcontent.cgi?article=3087&context=reading_horizons

Salem, M. (2021). A phenomenological investigation into agricultural education teacher preparation student and early career teaching experience. (28772959). [Doctoral dissertation, Texas A&M University-Commerce]. ProQuest.

Short, D. & Echevarria, J. (2005). Teacher skills to support English language learners. *Educational Leadership, 62*(4), 8-13. http://www.sadil.ws/bitstream/handle/123456789/142/Teacher%20skills%20to%20support.pdf?sequence=1&isAllowed=y

United States Department of Education. (2022, July 15). Our nation's English learners: What are their characteristics? https://www2.ed.gov/datastory/el-characteristics/index.html

Verplaetse, L. S. (2008). Developing academic language through an abundance of interaction. In L. S. Verplaetse & N. Migliacci (Eds*.), Inclusive pedagogy for English language learners: A handbook of research-informed practices* (pp.167–180). Lawrence Erlbaum.

Vincent, S. K., Killingsworth, J. L., & Torres, R. M. (2012). Multicultural teaching concerns: A comparison between disciplines at the secondary pre-service level. *Journal of Agricultural Education, 53*(4), 171-186. https://doi.org/10.5032/jae.2012.04171

Vincent, S. K., & Torres, R. M. (2015). Multicultural competence: A case study of teachers and their student perceptions. *Journal of Agricultural Education, 56*(2), 64-75. https://doi.org/10.5032/jae.2015.02064

Vommi, H. K., & LaVergne, D. D. (2016, February 7-9) Analyzing the needs of high school agricultural education teachers towards classroom diversity and inclusion [Poster Presentation]. Southern Region of the American Association for Agricultural Education, San Antonio, TX. http://aaaeonline.org/resources/Documents/Southern%20Region/2016%20Poster%20Session%20Proceedings.pdf#page=88

Warmbrod, J. R. (2014). Reporting and interpreting scores derived from Likert-type scale. *Journal of Agricultural Education, 55*(5), 30-47. https://doi.org/10.5032/jae.2014.05030

Wong-Fillmore, L., & Snow, C. (2000). *What teachers need to know about language*. Office of Educational Research and Improvement. https://files.eric.ed.gov/fulltext/ED444379.pdf