

**Effective Strategies for Assessing ELL Students at the Elementary Level**

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**Abstract**

The purpose of this capstone is to help teachers identify challenges in assessment for English language learners and provide strategies that can be used to mediate those challenges. The goal is to provide strategies for teachers that can be implemented in the mainstream classroom through modifications and accommodations. The literature review shows that there are linguistic and cultural biases in assessments that hinder the success of ELLs. Assessments are written for students who speak English as their first language which present a problem to ELLs. Without the understanding and ability to recognize these biases, ELLs will continue to fall behind compared to their English-speaking peers. This capstone offers a Professional Development in order to present this issue to educators and provide opportunity to modify assessments in a new lens. This PD provides strategies for teachers to recognize these biases in their own assessments and modify to be more accommodating to ELLs. The end goal for teachers is to begin the new school year with assessments that are valid and accommodating to assess ELLs.

*Keywords:* Assessment, ELL, bias, accommodation, modification

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## Chapter 1

### Problem Statement

English language learners face many challenges in schools' today, and it is important for teachers to have the resources and knowledges to overcome these challenges. Through my experience as a 3<sup>rd</sup> grade English as a New Language (ENL) teacher, I have had the opportunity to look at all aspects of schooling through the lens of a student who is still learning the English language. I have also considered the different experiences these students have and the lack of background knowledge when compared to their peers. I have seen English Language Learners (ELLs) struggle when it comes to assessments across subjects because they are stuck on the language of the question or have no background knowledge on the topic. However, this does not mean that they are not capable of producing the skill or knowledge that assessments are trying to assess. It is crucial that as teachers we are creating assessments that are accommodating of English language learners and the possible linguistic and cultural barriers they may have.

In today's population in schools, we are continuing to see an exponential rise of ELLs in public schools. The National Center for Educational Statistics Data reports that 21% of school enrollment for ages 5 to 17 are English language learners (Li & Peters, 2020). With this growing population, there is more of a need for all teachers to be equipped with the knowledge and strategies to support them. ELL students are bringing diverse linguistic and cultural experiences to the classroom that teachers need to accommodate. In addition, ELL students do not come with the same language and background knowledge as their English-speaking peers. This poses a problem when it comes to assessments in school.

The No Child Left Behind Act of 2001 has required assessments and education to meet a variety of inclusion requirements for students with limited English proficiency (Abedi et al., 2004). This aligns with the policy that we need to give all students an equal opportunity to

demonstrate their knowledge and skills through assessments. However, this does not consider the issue of assessment items, delivery, format, etc. that also poses a threat to the success of ELLs. Teachers should be trained to create assessments with criteria that consider the linguistic abilities and possible restraints of these students. Only 10 percent of states in the US give special training on scoring the work and assessments of English language learners (August, 1997). Without these strategies, there are negative consequences for ELLs in terms of assessment scores within school districts. This causes testing scores of the overall ELL population to be lower which does not give a reflection of students' true ability in the content area. This leads teachers to viewing all ELLs as "struggling" or not capable of success in academic content areas.

In this capstone, I will be using several key words and terms to address my overarching question. LEP will refer to limited English proficiency, those students who are still learning the English language. I will use the word accommodation to define a change in the way a student is given access to information or the way they complete an assigned task, in this case assessment. I will also be using validity which is an assessment term that considers the ability of the assessment to measure what it intends to measure. Reliability refers to the accuracy of the outcome of an assessment, including all of the factors that may go into the score of an assessment.

The overarching question I want to address in this capstone is: How can elementary educators create assessments to accommodate the linguistic and cultural needs of ELLs to inform and enhance instruction? The professional development will help train teachers to look at assessments through the lens of an English language learner and accommodate accordingly. It will be offered to K-6 classroom teachers, support staff, and administrators.

**Significance of the Problem**

There are many issues to consider when we think about how teachers can assess English language learners through the lens of their linguistic and cultural experiences. To start, assessments are constructed and normed for the students who are native English speakers (Abedi, 2004). English language learners are at a significant disadvantage in assessments because of the different cultural and linguistic experiences they have. This leads teachers to creating assessments that ELLs struggle with because of the language demands and background knowledge it requires. Many assessments reflect a content, linguistic, and cultural bias towards English language learners because they reflect the knowledge and language function of the dominant English culture (August, 1997). Because of this, students who do not reflect that culture cannot show their true knowledge of the content because of the assessment bias.

Not only is the lack of appropriate assessment detrimental to ELLs, but it also makes the assessment relatively low in validity and reliability. It is essential that teachers using assessments meet standards of validity and appropriateness for the children you are assessing. If an assessment does not take into account the language functions and cultural backgrounds of the students taking the assessment, then the test is not valid. In addition, if there is an inconsistency in who is scoring the test and how it is scored, this will affect the reliability of the test. This is a more complex issue because depending on the assessment, these scores can result in the incorrect placement of a student and inaccurate data at the school and district level.

Lastly, classroom teachers use assessments to inform their instructional practices and accommodations in the classroom. If assessments given are not reliable or valid, they give teachers inaccurate scores on individual students which in turn skews the informing of instructional practices. If ELLs, score lower on certain content, teachers may re-visit and re-teach

information that is not necessary. In addition, accommodations and modifications given will not be best fit for these students and could potentially harm their academic success.

### **Purpose**

The professional development I am going to offer is going to ask teachers and administrators to relook at their assessments in the lens of an English language learner. In the first session, we will look specifically at the data and the history behind assessment. This will also include the challenges that English language learners face with these assessments. I will highlight the significance of this problem in our school and in the district. We will identify the hidden linguistic and cultural biases in different assessment questions. Given assessment examples, participants will work together to modify to a more language and culturally friendly assessment. Participants will receive information and support on the language of test items such as word familiarity, sentence length, sentence structures, comparative sentences, etc. using Abedi and Lord (2001) seven indicator's of linguistic complexity. Teachers will look at the extensive background knowledge required in assessment questions and reflect if this is knowledge all students have, including ELLS. Teachers will be collaborating with the teachers around them to work with samples of assessment questions, rewriting them, and discussing the challenges these learners face. In addition, the second day will have an opportunity for teachers to bring in their own assessments from their classroom and modify them with their new knowledge of linguistic and cultural biases.

The goal of this professional development is for teachers to be more apt to looking for the linguistic and cultural biases that may be in their assessments. The hope is that with this new information, they will go back to their assessments and look at the items and format through this

lens. Teachers will also have gained more knowledge on this population of learners so they can be better suited to support them in all aspects of teaching.

### **Conclusion**

The English language learner population is continuing to grow exponentially, and all teachers should be trained to support them in the classroom. Many assessments in schools today are created with the dominant population in mind and don't account for possible cultural and linguistic barriers. English language learners who are capable across content areas are failing because of other assessment factors such as test format or language on the test. My professional development will train teachers to creating assessments that are language friendly and that truly capture the knowledge and skills they are trying to measure. In turn, this will better inform instruction and give more accurate scores for placement and data of these learners.

In this Capstone, I will be addressing this issue and how teachers can create assessments that are accommodating to English language learners. In Chapter 2, I will be presenting the research on assessments and the outcomes they have for ELLs. Chapter 3 will include the plans for the professional development and how these plans will mediate this problem at hand. In Chapter 4, I will revisit the main takeaways of this capstone along with the implications for both teachers and students. All professional development materials will be included in the appendices.

### **Chapter 2: Literature Review**

According to Shin and Ortman (2011) the number of ELLs is still increasing and will make up 40% of our K-12 school population by the year 2030. With these increasing numbers and the implementation of No Child Left Behind (NCLB), achievement across content areas for ELLs should be on the rise. One characteristic that poses a double disadvantage for ELLs is that their academic English is below grade level. This forces them to learn content and be assessed that requires them to communicate and demonstrate in a language that is not fully developed



(Brown, 2005). Teachers of ELLs need to be educated on assessment issues and equipped with strategies that can help mediate. This literature review will unpack these issues in assessment and offer strategies in the classroom that can mediate them.

### **Achievement Gaps**

The National Assessment of Educational Progress (NAEP, 2023) reports improvements for ELLs. However, the data continues to show that ELLs are significantly behind compared to their peers in assessments. In a study done by Polat et. al (2016), researchers used math and reading achievement scores from NAEP data in 2003-2011 from grades 4 and 8. This data provided a national sample of around 20,000 students of both genders and different ethnicities. Looking first at reading scores, ELLs were consistently lower in scores when compared to their non-ELL counterparts. Reading in English is naturally a more challenging task for these students which shows in both the achievement gap during this time and the trajectory scores of these students. On the other hand, mathematics scores showed similar patterns of an achievement gap. Average math scores for ELLs students were significantly lower for both Grade 4 and Grade 8 in the period between 2003-2011. It is also important to note that non-ELLs increased their mean scores in both math and reading where ELLs remained stagnant or a declining trajectory. These numbers consistently showed that ELLs scores, across content areas, are declining despite the implementation of NCLB while non-ELLs continued a growth.

This study used large samples of data that showed several issues with assessment that are not related to the content, rather the outside factors of assessment. In addition, it highlights that even with the implementation of NCLB, ELLs are still not able to demonstrate their content knowledge due to the linguistic differences on the assessment (DelliCarpini, 2009). Students who speak English as their first language and are carrying the background knowledge of the majority, appear to be succeeding, and improving their assessment scores. This just shows the significance

of training teachers to creating assessments that truly capture the content knowledge and skills students have rather than their English proficiency.

### **Outcomes of Assessment for ELLs**

Dusett (2012) emphasizes that negative assessment outcomes may result in referring ELLs to special education services. Dusett conducted a study in three different Western New York school districts. The author surveyed 17 general and special education teachers from these districts using a Likert scale questionnaire containing 27 items. Findings from this study indicated that teachers often refer ELLs to special education services because of their low achievement on testing. The survey also reported that teachers never referred students because of lack of motivation, rather the outcomes of achievement and language issues.

Ultimately, assessments are not contributing to the achievement gap by not fully capturing the skills and knowledge of ELLs because of linguistic and cultural biases. In turn, biases are affecting the overall scores on assessments resulting in misclassification of special education or other related services. It is important to keep in mind that ELL students need 5 to 7 years to fully become fluent in academic English, which puts them at a disadvantage when it comes to assessment (Noble et al., 2014).

### **Linguistic Validity**

One challenge that affects ELLs is the language of assessments. This includes how questions are written such as the vocabulary used, the structure of the questions, and other complex language features that are unfamiliar to ELLs. Several studies examine the fairness of assessments that are administered in English are truly valid in measuring a skill or knowledge of ELLs (Buono and Jang, 2021). Linguistic validity issues are attributed to the complex language of questions and directions on assessments which leads to confusion and misinterpretation of ELLs.

***Language-Related Assessment Factors***

Elosua (2016) conducted a study to describe and quantify possible language variables that can play a role in unfair scoring. This study was conducted in the Basque Autonomous Community, where both Spanish and Basque co-exist, and included 16,270 students enrolled in 4<sup>th</sup> grade. Elosua looked at two different mathematical competence tests and used a differential item functioning (DIF) to look at language-related factors. Variables included the language of the students and the dominant language of the school, if it was a public or private school, and the overall socio-economic status. The math assessment given was equivalent in the items but were given in Basque and Spanish versions. The best performance on the assessment was the Basque-Basque group followed by the Spanish-Spanish group, both groups speaking the same home language as the language of the school. The findings also showed the negative impact on students' academic performance for those who have a different family language than what is spoken at school. Since Basque, is the dominant language, and Spanish being the next spoken language, the scores from the Basque group were higher.

Elousa's findings could also indicate why language variables play a role in English-dominant school when testing ELL students since students who spoke the dominant language of the school and community outperformed the other students. We can attribute language as an adverse DIF on assessment scores. The author suggests assessing with different language versions of tests and really look at the differential item functioning or DIF. This means teachers and educators should create assessments with these social and linguistic factors in mind. This way teachers can more accurately assess students across content areas by improving validity of these assessments.

*Indicators of Linguistic Complexity*

Buono and Jang (2021) examined the validity and fairness of standardized achievement tests, specifically the outcome of those assessments for 2000 ELLs. The study used Abedi and Lord's (2001) seven indicators of complexity with a grade 6 math assessment. The seven indicators included unfamiliar math-specific vocabulary, passive voice items, excessive nouns or adjectives, conditional and relative clauses, complex question phrases and abstract presentations. 28 of the multiple-choice items were scored for the purpose of this study. From the item content analysis, 11 of those questions indicated complex language components. These items contained language that measured a secondary skill or knowledge associated with language ability rather than the math concepts. 14 different indicators of complex language components were found in those 28 items, some of them having more than one. In addition, in a DIF analysis, 7 of those 11 items were working against ELLs with abstract presentations, passive voice, unfamiliar vocab and excessive wording.

The Buono and Jang study breaks down the specific linguistic complexities in assessments that hinder performance for ELLs. Across content areas, assessment items have hidden biases due to the language used in the questions. Abedi and Lord's seven indicators are a great blueprint for teachers to consider when creating assessment items. Classroom teachers should create and modify questions through the lens of a student who does not speak the language and may not have the same experiences their English speaking peers. Items on tests should avoid unnecessary words, such as nouns or adjectives, that are not needed in order to answer the question. Unfamiliar vocabulary and confusing sentence structures can lead to misinterpretations of what the question is asking, ultimately resulting in the chance for an incorrect answer (DelliCaprini, 2009). In addition, abstract presentations, one of the seven

indicators, are details in a question that are not explicitly stated, but inferred (Buono & Jang, 2021). The obscurity in test questions can be avoided by using concrete words and sentences that allow students to visualize what the question is asking. Students learning the language come from different linguistic backgrounds that are very different from English in terms of vocabulary, grammar, and semantics. In order to truly assess all students, teachers need to take into consideration the items on a test, and whether they present biases to ELLs. This will result in improvement of ELLs performance on all assessments and increases the fairness of testing.

### *Open Ended Questions*

With the issue of validity on assessments in elementary school classrooms today, Turkan and Liu (2012) studied the effects of differential item functioning (DIF) on a inquiry-based science assessment. DIF detects validity on test scores between ELLs and non-ELLs and highlight why groups score differently. In this study, a combined total of 1,396 seventh and eighth grade students took a science test. Prior to the assessment, direct instruction on different life science topics was given to all students on topics such as genetics and mitosis. The instruction of these topics was one week long and computer based. The assessment was a low-stakes test for students and was designed to be real-life contexts for students. The assessment contained 16 items: 4 short-answer, 4 multiple choice, and 8 constructed response (CR) items. The CR items on the test were scored based on a 4-point scale and were rated by 2 scorers, increasing the validity of this score. DIF was used to determine the fairness among ELLs and non-ELLs from test items.

Turkan and Liu found that there was DIF for 4 of the 16 items on the test which was significant between groups of students. The two-short answer items were the most difficult for ELLs. In contrast, item 7 showed high achievement among ELLs due to the use of visuals along

with the question. The data also showed that non-ELLs had a higher probability of a correct response compared to the ELL group on the entire test. On the CR item of the assessment, responses from ELLs were rated mostly 2s on the rubric due to the students not being able to reason their answer. Most students answers were correct, but lacked the connection between the content and the question. However, the CR item did give the most opportunity for ELLs to truly show and demonstrate their knowledge of the content, which has implications. Science assessments that are created to favor the mainstream backgrounds and languages, can be confusing for ELLs. However, Turkan and Lie note that the CR items in this assessment showed that while linguistic demands of responding were higher, ELLs had more opportunity to demonstrate ability, skill, and knowledge of scientific concepts. Questions that are open-ended for ELLs allow for more flexibility. The authors conclude from the study that inquiry-based assessments should be an area of further study as this type of assessment creates real-life scenarios that pose challenges, but also opportunities for ELLs.

### **Cultural Validity**

Another challenge in assessment is the cultural experiences of ELLs. Some assessment items require background knowledge of a concept or topic in order to answer the questions. Tests that are written for the English population, do not consider that ELLs do not have these same experiences and knowledge. The study by Greenfield (1997) on this issue showed that culture critically influences how students can express their knowledge and skills. In this study, tests were administered to children living in Senegal. Students were asked to judge whether an amount of water was more, less, or the same when transferring to to another beaker. Children were first asked “Why do you think it is the same (or more, or lesser) amount of water?” (Greenfield, 1997, p. 311). Students were confused and could not give an answer as why they thought that. When the question was changed to “Why is the water the same (or more or less)” (p. 311), students

were able to answer with their explanations. Greenfield argues that this alteration changed students distinction between their own thoughts and what was actually in front of them. The author defines this as mental realism, which is an assessment issue for ELLs. These results illustrated how culture can lead to inaccurate assumptions of misinterpretations.

Solano-Flores and Nelson-Barber (2001) also reported on the issues of cultural validity, which is the effectiveness in which assessment addressed the sociocultural influences that shape a student thinking. Cultural validity also, in turn, affects students' response to assessment items or performance of a skill. In a study with a 4<sup>th</sup> grade student in a science class on erosion, cultural validity is highlighted. The student was asked to look at a before and after picture and circle the letter under the picture of how the river and mountains look after erosion. During the post-exercise interview the girl had no concept of what a mountain was nor had she climbed or hiked on one. Insufficient background knowledge and experience can account for the incorrect responses on assessment, resulting in a lower score. In addition, the score does not accurately show what the student can do, instead it is testing their experiences. It was clear to the authors that now this item on the assessment should be revised because not all students have this background knowledge.

### ***Science Assessment***

Although cultural validity plays a role in assessments, it is difficult to separate culture from language in content area instruction. According to Afitska and Heaton (2019) in science assessments linguistic, social and cultural issues commonly emerge since this content area has unfamiliar vocabulary and requires expansive background knowledge to answer questions. In addition, the structure and wording of items pose an issue on the equity and fairness of the scores. Consequently, ELLs knowledge and abilities are underestimated in assessments (Solano-

Flored & Trumball, 2003). In a study by Aftiska & Heaton (2019) the performance of 485 students both English-native speakers and ELLs, were analyzed based on a standardized summative science assessment. The students, ages 7-11, were enrolled across 5 different schools in the United Kingdom. The first set of analysis framework was science topics of specific age group such as growing plants, magnets, changing states of matter, etc. In the second framework, Aftiska and Heaton looked at the question characteristics on the assessment through given indicators: focus, visual, language production, and difficulty level. First, researchers found that language proficiency had a large, notable effect on performance of assessment. For questions that focused on specific vocabulary, scientific facts, or research procedures, ELLs were less likely to get the answer correct compared to their English dominant peers. Questions that included passive voice, ELLs scored well below their peers. All learners performed better when the assessment items did not ask them to produce active language such as naming, explaining, or describing a process. Lastly, when assessment tasks targeted specific, content vocabulary, there was a gap between ELL and non-ELLs due to a possible lack of vocabulary in English.

To sum it up, the studies presented in the sections as linguistic and cultural validity present several implications for classroom teachers. High-stakes testing can lead to invalid and unfair scoring for learners who are not proficient in the language. Artfiska and Heaton (2019) suggest that we need to look at these indicators that cause ELLs trouble on assessments and rewrite them in a more ELL friendly manner. Classroom teachers can immediately change testing in the classroom by reviewing assessments and looking at each individual question through the lens of ELLs. Teachers should inform their practice by examining the background knowledge the question requires and reflect if this is something students would know. The requirement of active language production not only affected ELLs, but the other students as well,



which acts as an overall classroom assessment implication. Students should be familiar with the type of language production from activities and tasks in the classroom, at a younger age. In addition, the Artfiska and Heaton suggest other opportunities to be assessed such as project-based assessments, performance assessments, and formative assessments in the classroom. This is because these assessments differentiate the product that is being asked of ELLs and can help mediate any cultural invalidity issues. Determining cultural implications will result in a more valid and equal assessment practice for all learners in the classroom.

### **Strategies for Teachers**

There are several strategies that teachers can use to help mediate the linguistic and cultural issues of assessments and be more accommodating to ELLs. Assessments should ultimately mimic what students are used to in the classroom including what is being asked of the student and the language used. Teachers can also provide students with strategies on how to tackle certain complex language questions on assessments such as math word problems. Accommodations for testing, such as translation into the home language, can also help eliminate the confusion and misinterpretation of what is being asked. Lastly, the research presented will offer new forms of assessment that are not traditional paper-and-pencil tests and are more valid in assessing the targeted skill or knowledge.

### ***Dynamic Math Strategy (DSM)***

Orosco (2014) conducted a study with ELLs who may be at risk for math disabilities due to challenging word problems on math assessments. The author notes that ELLs have limited experience with content math vocabulary and lack literacy strategies to improve their word-problem skills. This study aimed to see if a new strategy, dynamic math strategy, would have any influence on this assessment outcomes. The participants of the study were 6 third grade ELLs who were at risk for being classified with a math disability. The dynamic math strategy (DSM)

included instructional practices that build student vocabulary, teach strategies for comprehension and word problem procedures, and use cooperative learning practices. The study was conducted in a 17-session, pull-out program where all participants were given 4-word problems for each session. The word problems used, were similar to those used in daily instruction and were linguistically modified based the language levels. As a result of DSM, all students consistently increased their performance in solving math word problems. Students began showing improvement around session 8. The highest student, Arthur, improved performance to a Level 4, where the rest of the students maintained a Level 3. Orosco reports in the findings a strong correlation between DSM and word problem-solving ability. As ELLs knowledge and practice of DSM strategies went on, their ability to break down and understand vocabulary improved significantly.

Math word-problems have shown difficulty among ELLs due to the high linguistic complexity and background knowledge required (Buono & Eunice, 2021). Most times, ELLs will not show their true content knowledge and mathematical skills, because they do not understand what they are being asked due to the vocabulary or lack of background knowledge. Giving students strategies, such as the DSM intervention program, help ELLs to best tackle these problems on assessments and mediates the linguistic barriers. According to Orosco, the DSM model could also be beneficial for other students, not just ELLs, because it gives mediation support based on individual students' developmental level (Orosco, 2014). Classroom teachers can implement DSM into their regular math instruction to help ELLs and their students be successful on math assessments.

### *Computer Adaptive Strategy*

One answer to how to mediate issues of assessment is introduced as computer adaptive testing as an accommodation (Kopriva, 2008). This type of accommodation is a computer-based version of different tests that are less linguistically complex, but still assess the cognitive demand of the content. Computer-based testing may become difficult when the goals of assessment are more complex, but easier with more basic item targets. Computer-based assessments more accommodating and adaptive towards learners with limited English proficiency. In addition, these adapted versions of testing must still be equal to the difficulty and content that the original assessment does. However, assessments that are computer-based are more accommodating to the language, cultural, and social barriers among testing.

Abedi (2014) encourages computer-based tests for ELLs because it has the potential to implement language accommodations with ease. Computer-based testing (CBT) allows test accommodations such as a recorded screen reader to read aloud directions. Such accommodations are more valid because teachers and administrators could read test directions in a way that emphasizes certain words or hinting at the answer. CBT also allows students needs to be individually met because each test could be adjusted to the language proficiency of the learner. Another study conducted by Abedi (2009) used results of a CBT math test and the results of a paper and pencil tests of 618 ELLs and non- ELL students in fourth grade. Students taking the test had the accommodations of a pop-up glossary, read aloud of test questions, and font change. Results showed that students could better understand directions and used the accommodation options efficiently. Computer-based testing opens the door to individually accommodate for ELLs, without the need of a teacher.

To sum it up, Abedi (2009; 2014) research on computer-based assessments proves to mediate the issue of language on assessments for ELLs. Accommodation that are best for ELL students include those that are based on language and make assessments more linguistically assessable. Dual-language versions of an assessment allows for ELLs to fully understand what is being asked of them and allows them to demonstrate their full knowledge and skills.

Linguistically modified assessment items reduces the chance for misinterpretation and misunderstandings of ELLs on assessment questions. Looking back on the structures and word choice in items on an assessment can make a huge difference in the understanding of ELLs

### ***Informal Assessment***

When we think of the best way to truly assess English Language Learners in the classroom without linguistic, cultural or social bias, many researchers suggest informal assessments. As Pizzo and Chilvers (2016) report, there are several practices that could mediate issues with assessment for English Language Learners. Informal assessment is the umbrella term over performance-based assessment, curriculum-based assessment, and dynamic assessment. Teachers can use different documentation strategies to really assess the content through note taking, checklists, rating scales, work samples from students, and portfolios. These instruments of assessment are more accommodating to English Language Learners and can be administered more frequently than standardized tests. Informal assessment also allows or a more individual score with more specific feedback for students and families.

DelliCarpini and Guler (2013) also note that performance assessment allows teachers to assess students over a period of time, not just from one test. This allows practitioners to truly gather all necessary data of students as well as knowledge and skills to further inform your instructional decisions. Students are able to demonstrate their knowledge through performance of

a task or activity. This is a timely task when it comes to assessment but promotes validity through barriers of ELLS. Performance-based assessment are more authentic of students' true skill and knowledge and take into consideration the linguistic and cultural biases. This type of assessment does require teachers to have knowledge of their student's cultural backgrounds and home languages in order to efficiently assess.

### ***Testing Accommodations***

ELLs continue to be the fastest growing demographics in schools in the U.S. today and presents different challenges for teachers' assessment in the classroom. Clark-Gareca (2016) argues that present day classroom teachers have not experienced such diversity of cultures and languages. Thus, teachers need knowledge and strategies to best accommodate students when it comes to testing. Accommodations that are most beneficial for ELLs in the classroom are those that directly lessen the linguistic complexity of a test and allow ELLs to demonstrate their full ability. Clark-Gareca surveyed 213 elementary teachers, grades K-6<sup>th</sup>, regarding their training in assessment and their implementation of accommodations for ELLs. For the qualitative data in the study, interviews were given individually to 10 of the focal fourth grade teachers to get a more in-depth look at implementation and practices with ELLs. The data collected showed that 83% of teachers reported that they accommodated Beginner level ELLs in assessment situations. On the other end of proficiency levels, 68% for Intermediate, 49% for Advances and 38% of teachers with Monitor level ELLs reported making changes of the testing. Almost 90% of teachers answered yes to giving ELLs more time on assessments at all levels of proficiency. 30% of teachers always gave one-on-one assistance to ELLs either from themselves or another teacher. At all proficiency levels, most teachers responded rarely or never to giving students a translator

or interpreter during an assessment. In addition, bilingual tests were never offered in math or science as an accommodation.

In the findings, Clark-Gareca (2016) discussed how current teachers are supporting ELLs in terms of assessment. The most common accommodation was extra time for students, which is helpful, but does not directly influence the linguistic complexity of tests. Teachers reported that the reason for not using other linguistic accommodations such as translators, bilingual tests, and one-on-one assistance was because they lacked the bilingual resources or knowledge of this type of accommodation. Allowing students to use their home language to translate assessments or help them participate should be implemented as a accommodation. This could mean translating the test into their language, using a bilingual dictionary, or having access to a translator. Clark-Garcea believes that educators are failing ELLs success because classroom teachers cannot supply the correct accommodations for these students to truly show their potential.

These strategies presented by the literature give us many implications to help be more accommodating to ELLs in the classroom. The DSM offers implication that assessments should truly mimic what students are used to from instruction. Linguistic and cultural demands should be the same as the instruction students have experienced. For ELLs, more direct instruction on strategies to help break down linguistically challenging questions, such as word problems, helps them perform better on assessments. In addition, computer-based testing can offer ELLS specific testing accommodations that help mediate both linguistic and cultural validity issues in assessment questions. Informal assessments are another way that teachers can accurately assess the targeted skill or knowledge without language or cultural barriers. All of these strategies can help teachers work towards being more accommodating to cultural and linguistic barriers in assessments to help ELLs succeed in the classroom.

## **Implications and Conclusion**

The findings from the literature pose many implications for teachers who are looking to adapt instruction for the diverse population for English Language Learners. ELLs are making up the majority of the population in elementary schools today and have fallen significantly behind in assessment scores compared to their peers. Both high-stakes and low-stakes testing can generate linguistic validity issues when assessing ELLs due to the linguistic demands of assessments. To best accommodate, teachers need to consider the vocabulary and structure in assessment questions. When writing tests, items should only include words that are necessary for students to understand what is being asked. Content words that are familiar to all types of students such as words that have been introduced to students in class. Test questions should avoid abstract phrases that ask students to think abstractly or infer something from the question. In addition, assessments must consider the cultural validity in demands of background knowledge, unrelated to the skill or knowledge being assessed. Not all students, especially ELLs, share the same experiences and background knowledge as their peers due to language, cultural factors, socioeconomic status, and educational experiences. Therefore, there may be certain concepts that teachers assume all students understand when ELLs have never experienced. For example, a math question that presents a scenario on counting cartons of milk is a culturally biased question. Some students may have no concept of cartons of milk and cannot abstractly visualize this scenario. As teachers, we need to be cautious to both of these biases and create assessments that mediate these issues in assessments

In this review of the literature, there were several strategies discussed to help be more accommodating to the linguistic and cultural needs of ELLs in assessments. Teachers must be open to providing specific accommodations for testing such as bilingual tests or translators. This can mediate the issue that language has on assessments. In combination with the modification of

assessment questions to be less linguistically complex, we should allow students to translate the test back into their native language. As discussed, technology can facilitate translations and serve to create or modify tests for ELLS. Differentiating the format of testing such as using performance-based and informal assessments will also increase the chance that ELLs will be able to completely demonstrate their knowledge or skill ability. In addition, the use of visuals such as pictures and diagrams on assessments can increase the comprehension of the question for ELLs. Finally, the DSM strategy helped highlight the need for assessments in the classroom to directly mirror tasks and activities students have seen or done in instruction. Teachers should be providing instruction to students on how to take assessments and break down questions that may be more linguistically demanding. This review highlighted the many studies done to inform the topic of assessments with test items and formats that promote the achievement of ELLs. In the following chapter, I will be presenting a description and tools of this capstone PD to address the issue of how teachers can create assessments that accommodate the linguistic and cultural needs of ELLs.

### **Chapter 3: Description of the Product and Tool**

In this chapter, I will be presenting my professional development plan for this capstone which was influenced by the literature reviewed in Chapter 2. The issue I am addressing in this PD is how can elementary educators create assessments to accommodate the linguistic and cultural needs of ELLs to inform and enhance instruction. The PD will include a 2-day training given over the summer, both sessions running from 9:00 am to 12:00 pm. The handouts and tools for Day 1 can be found in Appendix A to D and handouts and tools for Day 2 are in Appendix E to G. The goal for these 2 days is to highlight the issue of assessment with ELLs and provide all teachers with strategies and techniques to help mediate the issues. Strategies presented are



proved by the literature to be highly effective in modifying and creating assessments that are accommodating to the cultural, linguistic, and social factors of ELLs. The PD will help teachers to look at assessments through a lens of an ELL and carry this practice into the following school year. All teachers and school personnel must be trained to recognize issues of assessment for ELLs and be given the strategies to mediate them.

### **Day 1 Agenda**

9:00-9:15 Welcome and Introductions

9:30-11:00: PowerPoint Presentation and tools for PD

11:00-11:30: Group Activity

11:30-12:00: Wrap-up

For the first day of the PD, the general goal is to introduce the issue of assessment and highlight the specific cultural and linguistic biases presented by the literature. Participants will be able to recognize these biases through the sample assessment questions given and learn rewrite them in a more ELL friendly manner. The PD consists of several small and whole group discussions to get teachers working together to solve a common goal. This will help reinforce learning targets of Day 1 and allow them to collaborate with their colleagues.

To start this PD, I will begin by introducing myself and have each participant also introduce themselves. They will share their name, their position at the school, and their favorite thing to do in the summer. This will put participants at ease and get people comfortable with the group they will be learning with for the next couple days. Then, I will introduce the brief agenda for the day. I will then ask the group the following question: What do you think is the biggest challenge that English language learners face in school today? Participants will respond using the hyperlink on the while their answers anonymously pop up. I will read aloud the answers as they come on the screen. The next question asked will be: What accommodations have you

implemented to support ELLs with assessment? This time, teachers will share with the group they are sitting with, and each group will share out their answers. This will allow teachers to start talking with who they are sitting with and hear from other people in the audience. These questions will help activate existing knowledge for the upcoming presentation.

After the welcome and introductions, the PD will begin with a presentation that introduces the linguistic, cultural, and social issues of assessment for ELLs. The PowerPoint will start with giving participants several statistics of ELL population in school's today. These statistics will show the enrollment of ELLs in schools and the diverse linguistic and cultural experiences they have. The purpose of these statistics is to show the importance of this PD training. These statistics will come from the National Center for Educational Statistics Data mentioned in Chapter 1 (Li & Peters, 2020). After these statistics, I will present the overarching question that participants will be trying to answer along with the learning objectives. This is to show participants what their overall goal is for the PD. Then, I will define the cultural bias assessments have shown through the literature. ELLs do not have the same shared experiences and background knowledges as their English-speaking peers. According to August (1997) many assessment questions reflect a cultural bias towards ELLs because they reflect the language and knowledge of the dominant English culture. The cultural bias in assessments put ELLs at a disadvantage because it negatively affects students' response to assessment items or performance of a skill (Solano-Flores & Nelson-Barber, 2001). The inaccuracy of scores is not because ELLs do not have the target knowledge or skill rather it is because the assessment is biased. This leads ELLs to scoring lower than their English-speaking peers across content areas and incorrectly qualifying for special education or disability services (Orosco, 2014).

After the issue of cultural bias is presented participants will see an example science assessment question that presents a cultural bias (see Appendix A). The example includes a question from Solano-Flores and Nelson-Barber (2001) study with a before and after picture of a mountain. The question shows two pictures, A and B, of mountains before and after erosion. One picture is high and pointy with a narrow river and picture B is a rounded mountain with a wider river. The question asks students to circle the letter of the picture that shows how the river and mountains look now, after erosion. The presenter will read the question and explain to the participants that an individual who had never seen or experienced a mountain before, could misinterpret the question. The students from the study reported that they had never hiked or climbed mountains so she doesn't know what a mountain typically looks like. Next, participants will see a math assessment question (see Appendix A) and ask participants to read the question and discuss with their group what they notice in terms of a cultural bias and how they would re-write this question differently. Then, groups will share out what they talked about and how they re-wrote the question. Before moving on to linguistic biases in assessments, I will ask the group to reflect on their own experiences and recall an assessment they may have given with a cultural bias. The goal is to get participants thinking about their current assessment practices and how they might change their practices in the upcoming school year given the PD.

The next activity will introduce linguistic biases in assessment and their impact on students. Linguistic biases are in almost every assessment and directly affect students answers and responses. Many linguistic biases lead to misinterpretations and confusion on what the question is asking. Assessments should use language that all students are familiar with and have used or heard in the classroom. One consideration I will present to participants as a strategy to accommodate ELLs, is to use content vocabulary and everyday language in the classroom. The

assessment questions should mimic what you have been doing in the classroom, linguistically. As emphasized by Buono and Jang (2021), across content areas, assessment items have language biases hidden in the questions. The presenter will then introduce Abedi and Lord (2001) seven indicators of linguistic complexity to show these hidden biases. Participants will be guided through the seven indicators with an example question that highlights the linguistic bias of the seven indicators. Participants will be able to take notes (see Appendix B) through this part of the presentation to prepare them for the activity. During this portion of the presentation we will discuss why and how this question can cause confusion for ELLs. This will ultimately help participants become more aware of linguistic biases in assessment questions and reflect how the question could be written better. This will help work towards the overall target objective in reflecting and modifying their own linguistic bias in assessment in their own classroom. The list of indicators is a strategy that will ultimately help participants eliminate any bias in their classroom assessments and is more accommodating to ELLS. Once again, participants will be asked to reflect on their own assessment experiences and share out any indicators they may have missed in their own classroom.

After highlighting the issue of linguistic biases the next step will be to describe the group activity. There will be 7 stations set-up around the room. At each station is a sample assessment question from varying grades K-5 (see Appendix C). To mix participants up, they will count off by 7 and go to their corresponding station. There will be copies of the handout underneath the station (see Appendix D). With their new group, participants will move around to each station and identify which of the 7 indicator(s) they observe in the assessment questions. They will then be asked to re-write the question. The group activity allows participants to get up and moving after sitting for some time. The purpose of this activity is to practice how to identify biases and

rewrite them to eliminate this bias. After 30 minutes, participants will return with their handout to their original group. For 10 minutes, they will go around and share their answers and new questions with the group they were sitting with to start the day. This will get them hearing others' ideas that may be different than their own, which will allow them to take away even more from this PD.

To wrap up this session, each participant will be asked to share out one thing they learned from the day. Then, there will be a brief description of what will go during Day 2. In the next day of the PD, participants will learn more strategies that will help them mediate the issue of biases in assessment. In addition, as their "homework", they will bring in one assessment from their classroom to Day 2. They will form new groups and look at their assessments to see if they can find any biases. Participants will be able to collaborate and modify based on their group's discussions.

### **Day 2 Agenda**

9:00-9:15: Check-in

9:15-9:45: Presentation on strategies pt. 2

9:50-10:50: Partner assessment edit

10:50-11:30: Whole Group Share

11:30-12:00: Wrap-up/Google Form

To start Day 2, each participant will be asked to share out their favorite type of candy. The presenter will then go over the agenda for the day. As a small review, participants will play a 5 question Kahoot reviewing topics from the previous day. The top 3 participants will get a candy prize. They can join the Kahoot on their phone or computer with the game code.

After the check-in, the PD will begin with a PowerPoint on more strategies presented in the literature review, that can best accommodate ELLs in assessments. Participants can take

notes as the presenter goes through the strategies (see Appendix E). The first strategy presented will be computer-based testing. Computer-based testing (CBT) can implement several different language accommodations with ease (Abedi, 2014). CBT allows for individual accommodations such as translated tests into home languages, the option for orally read aloud test questions or directions, a pop-up glossary, font changes, etc. This strategy individually can accommodate for varying levels of English proficiency that you may have in the classroom.

The next accommodation strategy will be the use of performance-based assessments. This type of assessment allows teachers to assess students over a period and truly gather the necessary data to inform instructional decisions (DelliCarpini & Guler, 2013). Performance-based assessments are more authentic and accommodating to ELLs because they can demonstrate knowledge or a skill through a product or performance. Examples of these assessments could be a portfolio of student work across a unit, note taking, checklists or rating scales, or work samples from students. This type of assessment is more low stakes and can eliminate some of the cultural and linguistic biases we've seen in assessments. Participants will be asked: what are some other types of assessment methods you've used in the classroom? If you are trying to assess students' mastery of the skill of measuring, the teacher could walk around during a class measuring activity and take notes of each student. Observing each student measuring gives a more accurate depiction of if the student has mastered this skill and knowledge of the content.

The next strategy presented to help mediate the assessment issue is the dynamic math strategy, which also can be implemented for other content areas. This strategy can be implemented into instruction for all students but will target ELLs to be more successful on certain assessments. The dynamic math strategy targets instruction on content vocabulary and literacy strategies to improve word-problem skills (Orosco, 2014). The importance of this

strategy is to teach students how to read assessment questions such as math word problems and teach strategies for comprehension and procedures. Math word problems have shown the most difficult for ELLs due to the high linguistic complexity and background knowledge it requires (Buono & Eunice, 2021). If students are learning and practicing these strategies in class, they have a better chance at doing well on the assessment. This strategy targets how to take assessments and break apart assessment questions which is helpful for the entire class of students. The presenter will tell participants that a lot of them probably already practice this in their teaching. However, it might work better with small groups of students and more direct instruction on assessment question strategies rather than content. This will help participants thinking about how they can modify their instruction to better accommodate ELLs for assessments, not just changing their assessment questions.

After these brief strategies presentation, participants will have the opportunity to ask any questions or wonders that they may have still either from Day 1 or 2. Then, the presenter will ask participants to take out their assessment that they brought with them today. At this time, participants will review the main learning goal of this PD which is to provide them with the knowledge and tools to be more accommodating in their assessments in the classroom. They will be using what they learned over the 2 days to modify an existing assessment they have. In their groups, they will pair off in 2's or groups of 3's if necessary. Partners will read through their assessment together and make note of any potential biases they see. They can use a colored pen or pencil to make the changes directly on the assessment. After that, they will re-write or type the assessment with new modifications that eliminate the issues they flagged. They will do this for both assessments or 3 assessments if they are in a group of 3. I will tell them that they have an hour to do this so they should take their time and really reflect on the knowledge and strategies

they have learned throughout the PD. They will be encourage them to think about different ways they could assess students that is not a written test such as a performance-based test like we talked about. As groups are working, the presenter will circulate and assist as needed.

After one hour of work time, participants will return to their groups. They will be asked for volunteers to come up and share what they flagged and why. The goal is to focus on the reasoning behind participants' edits to show the thinking towards the learning goal. The presenter can allow as many participants that want to share.

As a wrap-up, participants will complete an online google form with 4 questions about the PD (see Appendix F). The first being one thing they learned over the 2 days. Next, they will be asked to reflect on one way they've been biased in their assessment in the classroom. Third, participants will be asked to reflect on how they are going to use the knowledge and strategies in the classroom for the upcoming school year. For the final question, they will rate how effective the PD was to them and what could be changed to make it better.

## **Conclusion**

The overall goal of this professional development is to address the research question: How can elementary educators create assessments to accommodate the linguistic and cultural needs of ELLs to inform and enhance instruction? During the two day PD, educators will be presented with the hidden cultural and linguistic biases in assessments. Teachers will learn how to review assessment items and modify them to be unbiased to ELLs. In addition, strategies are presented to further change assessment practices to help support ELLs to succeed. This PD helped teachers look through assessments through the lens of ELL and carry these practices into the upcoming school year.

In the next chapter, I will provide a conclusion regarding the issue of cultural and linguistic bias in assessments and how assessments affects ELLs. I will also state implications



for students and teachers from the research in this capstone along with future research suggestions.

## **Chapter 4: Conclusions**

### **Introduction**

The capstone presented here addressed the overarching research question: How can elementary educators create assessments to accommodate the linguistic and cultural needs of ELLs to inform and enhance instruction? The English language learner population is continuing to rise exponentially, creating a linguistic and culturally diverse classroom community. This can pose a problem for teachers who do not have the sufficient knowledge and strategies to support these students in the classroom. Our assessment practices can often present a hidden bias to these students. Assessments in the classroom often reflect the language and existing knowledge of the dominant English-speaking population.

Without the proper assessment accommodations, ELLs will continue to score below their English-speaking peers across content areas. In addition, low scores can result in the misplacement of ELLs to special education and other disability services. Assessments that present this bias result in being relatively low in validity and reliability. It is essential for teachers to be assessing based on the students in the classroom including those with diverse language and cultural backgrounds. This capstone presented assessment strategies and techniques to accommodate for these learners.

### **Conclusion**

From this research, I have concluded that there is a significant achievement gap of ELLs from their English-speaking peers across the content areas. This achievement gap can be attributed to both linguistic and cultural validity issues in classroom teachers' assessment measures. Linguistic complexity of test-items proved to negatively affect ELLs on assessments.

Questions using unfamiliar vocabulary and complex sentence structure affect the ability of ELLs to correctly answer. This is because of a hidden linguistic bias towards this group of students. To mediate this, teachers must carefully review each item on an assessment through a linguistic lens of an ELL. This will result in more fair, reliable assessments and the improvement of ELLs on assessments.

Cultural validity also plays a significant role in this achievement gap due to the different experiences and background knowledge that ELLs have compared to their peers. Assessment questions often require knowledge of a concept or topic in order to answer the question. Because of this, certain items on assessments present a cultural bias to ELLs. To mediate this issue, teachers must consider the group of students and their prior knowledge or experiences. Questions should be reviewed to assess if there is extensive background knowledge or experience needed by the student.

By implementing several teaching strategies and knowledge of this issue, teachers can help ELLs become more successful on assessments. These strategies will help eliminate biases in the classroom through assessments and help teachers to creating truly reliable and valid assessment measures.

### **Implications for Student Learning**

All students will benefit from the implementation of assessment strategies by their teacher. This issue helps teachers to create assessments that truly focus on assessing the knowledge and skill they are targeting. By eliminating any unwanted or confusing information, both linguistically and culturally, all students will be able to demonstrate their full potential. This will help alleviate assessment frustration for students when questions are confusing or have unfamiliar words. Ultimately, the goal is that ELLs will begin to close the achievement gap from their peers and be most successfully in content areas. In addition, the dynamic math strategy

(DSM) emphasizes instruction in the classroom that helps students tackle test-taking strategies on math assessments such as word problems (Orosco, 2014). DSM is efficient for all students in the classroom, not just ELLs. With practice on how to take assessments, all students will be more successful when they take tests. Using diverse assessment measures such as performance-based assessment will aid in success among all types of learners because it allows for assessment over time of each student (Dellicarpini & Guler, 2013). While these strategies and implications directly focus on ELL success, other students in the class will also benefit from assessments that consider language complexity and extensive background knowledge.

### **Implications for Teaching**

I think many teachers do not see assessments as problematic at first because they lack the knowledge of the issue and strategies to prevent it. When this problem is brought to light, I think all educators will be more apt to looking out for biases in the classroom. Before my own research, I had never thought that something as small as the order of words in questions would be a bias towards ELLs. However, after this research and presented strategies, it is much clearer. The professional development (PD) of this capstone will also aid teachers to analyze other ways they may be biased in their classrooms, outside of assessment.

I hope that educators move forward from this and truly take the time to implement these strategies and implications into their everyday teaching. Students will be more successful when the assessments are created for the entire class. These strategies will enhance their teaching and allow them to use assessments to direct their further instruction. More reliable and valid assessments will give them more valid and reliable student data. In turn, teachers can use this data to create instruction that is centered around what students need.

**Recommendations**

In order to continue the professional growth of teachers, there needs to be more strategies and accommodations to mediate this issue than presented in this capstone. For further research on this topic, I would like to see studies that directly look at the result of changing linguistic and cultural bias in assessment on student performance. I would like to see more research to demonstrate the success of these strategies on non-ELLs as well to see if there could be more implications on the overall field of assessments, not just for ELLs.

**Final Thoughts**

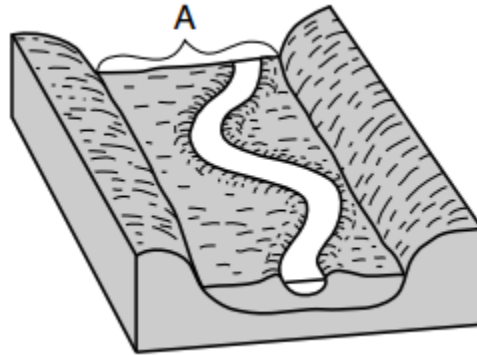
This capstone project presented the linguistical and cultural biases that teachers can have when it comes to assessment. It proved that certain strategies can be implemented to mediate these biases and support ELLs in being successful in school. ELLS will continue to make up the majority of classrooms in the future and teachers need to have these strategies in order to appropriately accommodate them. With this capstone, educators will be able to recognize these biases and reflect on how they can change in their assessment practices.

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**Appendix****Appendix A****Cultural Bias Example Questions****Day 1: Science Example***Activity 1: Cultural Bias Math Example*

The image below shows a valley with a meandering stream running through, labeled A. Which part of the stream would have the most erosion and why?

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*Math Assessment Example*

As Kelly is walking to school, she notices 3 aye-aye hanging from the Traveler's. Each aye-aye is carrying nectar and 4 great big juicy flowers. How many flowers are there in all?

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**Appendix B**  
**Seven Indicator Note Sheet**

<b>Indicator</b>	<b>What is it?</b>	<b>Example</b>
<b>Unfamiliar Vocabulary</b>		
<b>Passive voice</b>		
<b>Long nominal groups</b>		
<b>Conditional Clauses</b>		
<b>Relative Clauses</b>		
<b>Complex phrases</b>		
<b>Abstract presentations</b>		

**Appendix C****Group Activity- Station Cards****Station 1**

**Where do plants and animals reside in aquatic habitats?**

- a) Water**
- b) Land**
- c) Air**

**Station 2**

**Billy was going to take a walk to the grocery store. The store is 4 miles away from Billy's house. Each mile takes Billy 12 minutes to walk. How long will it take Billy to get to the store?**

**Station 3**

Write **Solid, Liquid, or Gas** on the line to indicate what state of matter the image below is in.

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**Station 4**

Suzanne eats 10 chewy, delicious chocolate chip cookies at her brother's birthday party. There were 30 cookies on the table, how many are left?

**Station 5**

**Measure the sea snake below and round to the nearest cm.**

**Station 6**

**If Robert has seven nickels, drops 2 on the ground, and gives 3 to his cousin, will he have enough money to buy an ice cream cone that costs 10 cents?**

**Station 7**

**Together, Sara and Brendan have 40 pencils.**

**Sara says  $\frac{1}{4}$  of the pencils they share are hers.**

**Brendan says 15 of the pencils belong to him.**

**Are they both right? Explain your answer using words or drawings.**

**Appendix D****Group Activity Worksheet****Name(s)** \_\_\_\_\_

**Directions:** Move through the 7 stations and indicate which of the seven indicators of linguistic complexity (Lord and Abedi, 2001) you notice. (Hint: There may be more than one!) Then, rewrite the question to eliminate that indicator.

**Station 1:****Indicator(s):** \_\_\_\_\_**New Question:****Station 2:****Indicator(s):** \_\_\_\_\_**New Question:**

**Station 3**

**Indicator(s):** \_\_\_\_\_

**New Question:**

**Station 4**

**Indicator(s):** \_\_\_\_\_

**New Question:**

**Station 5**

**Indicator(s):** \_\_\_\_\_

**New Question:**

**Station 6**

**Indicator(s):** \_\_\_\_\_

**New Question:**



**Station 7**

**Indicator(s):** \_\_\_\_\_

**New Question:**

**Notes:**

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**Appendix E****5-Question Kahoot**

- 1. What type of biases are hidden in assessments that can be tricky for ELLs?**
- 2. What does it mean to write a question in active voice?**
- 3. What word can be eliminated in this assessment question to make it more ELL friendly?**

Jake and his friend Lucas are walking to the library. They each want to purchase 2 comic books and 3 fiction books. How many books will they have in all?

- 4. How many indicators are in Lord and Abedi (2001) indicators of linguistic complexity?**
- 5. What percentage of school populations will English language learners make up by the year 2030?**

**Appendix F**

**Note Taking Sheet**

<b>Strategy</b>	<b>Definition or Example</b>

**Appendix G****End of PD Questionnaire**

1. What is one thing you learned over the past 2 days about assessment challenges for ELLs?
2. What is one way you have been biased in your ways of assessment in the classroom?
3. How are you going to use this knowledge and strategies presented in your classroom in the upcoming school year?
4. How effective was this PD and what do you think could've been done better?