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*A Compilation of Survey Data and Focus Group Findings:
Texas Elementary Teachers' Views of Needed Professional
Development to Support Mathematics Instruction for English
Language Learners*

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Background

The Texas State University System Mathematics for English Language Learners Project (TSUS MELL) is a multiyear effort focusing on developing instructional resources designed to increase the effectiveness of mathematics instruction for students who are English Language Learners (ELL). This is a partnership between the Texas State University System, its component universities, and the Texas Education Agency established to identify common issues associated with teaching mathematics to ELL students, develop tools and training for educators keying classroom practice frameworks to these issues, and develop guidance for policymakers about how to more effectively assist ELL students and teachers in increasing proficiency in mathematics.

Introduction to the Lamar University Project

The primary goal of this product is to support mathematics instruction for English Language Learner (ELL) students in Texas through citing elementary teachers' perceptions of needed professional development in this area. Such professional development training needs include, but are not limited to, in-service training, supportive instructional resources and tools, and implementation of specific professional development programs. The aforementioned perceived training needs were ascertained through the collection and analysis of data from two key resources: survey data and focus group findings.

An interview form survey was distributed to teachers in every region of the state of Texas, with emphasis on areas with high populations of ELL students. 101 of the surveys distributed were returned and analyzed. Select elementary teachers, some of whom completed the survey, were invited to participate in small focus group interviews. Lamar University (LU) hosted a total of three focus groups throughout the state, including focus groups in Central Texas, South Texas, and Southeast Texas. The number of participants in each focus group varied, ranging from seven to eleven participants. The analysis of data collected from the surveys and focus groups has contributed to the development of a record of teachers' insight on needed professional development for supporting instruction for ELL students.

The project's targeted audience was elementary teachers who were currently teaching or had taught a significant number of ELL students. However, the project coordinators also interviewed other educators, including elementary ELL/ESL teachers who taught no specific content discipline, curriculum coordinators, and school administrators. A previous study, which focused on the perceived professional development needs of secondary mathematics teachers, was completed prior to this project. A brief comparison of the two groups is presented later in the paper.

A Summary of Survey Data Findings

As a first step in identifying elementary teachers' perceived professional development needs to better support mathematics instruction for their ELL students, survey packets (with three surveys in each packet) were mailed to 270 randomly selected elementary schools throughout the state of Texas, including each of the 20 Texas Education Service Areas. 105 of the surveys were returned. Each packet in the January 2006 distribution was addressed directly to the school's principal with a cover letter requesting that the principal distribute the survey to one to three of the school's teachers who teach mathematics to a significant population of ELL students. Below is a brief summary of survey questions and corresponding responses, along with data plots that represent responses from selected questions. A copy of the survey form, with letters, can be found in Appendix A. Complete transcribed comments are in Appendix B.

1. *What do you see as your school's greatest training need for enhancing mathematics instruction for ELL students?*

Question #1 was a free response item seeking comments about the school's greatest training need for enhancing mathematics instruction for ELL students. The 101 responses can be grouped into 6 broad categories, with some cross-category responses. The largest category, with 45 responses were requests for specific teaching techniques to help ELL students succeed in mathematics, with special attention on realigning the curriculum, providing needed training on manipulative usage, and providing ready-made mathematics activities to use in classrooms with ELL students. Fifteen comments dealt directly with language and/or vocabulary, including vocabulary training for teachers, training on understanding how ELL students learn, and methods to assist students learning new vocabulary. More than ten responses implied concerns about administrative issues such as requiring teachers to attend workshops, hiring teachers qualified to teach ELL students, more time for planning, and motivation for teachers to look kindly upon ELL students. Four responses focused on students themselves, suggestions included placing students in special classes or providing smaller class sizes for teachers of ELL students. Only two comments were requests for authentic ways to assess ELL students' abilities and needs and four comments indicated a need for improving parental involvement and teacher collaboration.

2. *Do you hold any specialized credentials for instructing ELL students?*

Question #2 requested specific information about credentials related to teaching ELL students. Almost 81% of the teachers who responded hold either Bilingual certificates, ESL certificates, or Bilingual/ESL certificates.

3. *Does your school have an employed ELL teacher on staff?*

4. *Do you think it is necessary for your school to employ an ELL teacher?*

Responses to Questions #3 and #4 implied that 40% of the responders' schools had no ELL teacher on staff, while 71% of the responders felt that their schools should fill this

position. Comments on Question #4 indicated that classroom aides proficient in Spanish, as well as school based ELL coordinators would be extremely beneficial. Additionally, it was suggested that ELL advisors should be full time and proficient in teaching the content areas, specifically mathematics.

5. *Have you received any training or professional development in working with ELL students?*
6. *If yes, how helpful was the training?*

Questions #5 and #6 requested information about previous professional development experienced by the responders. 87% of the responders indicated that had received professional development, ranging from a half-day program to extensive workshops. Of those who have experienced professional development, 27% found the programs to be very helpful and 31% found the experiences to be somewhat helpful.

7. *Approximately how many ELL students do you currently teach?*
 1. 0
 2. 1-10
 3. 10-20
 4. 20-30
 5. more than 30
8. *Rank the population size of the ethnic background of ELL students you currently teach, with 1 representing the largest population).*

Question #7 asked about how many ELL students are typically enrolled in a responder's classes. 10 responders reported more than 30 students per school year, 21% reported having 20 to 30 students in classes, 20% reported having 10 to 20 students in classes, and 26% reported having 1 to 10 students in classes. Responses to Question #8 indicated that 97% of the ELL students in responders' classrooms are Hispanic.

9. *In comparison to the general student population of your school, how well do your ELL students perform in mathematics?*
 - 3 = very well, 2 = similar, and 1 = not as well

In Question #9, responders were asked to compare the achievement of their ELL students with the rest of their students. Only 8% of ELL students outperform other students, while 46% perform about as well as other students. Comments on this question mentioned language and economic disadvantages for many students.

10. *Are you aware of the kinds of instructional and assessment modifications that should be used in order to make your lesson content comprehensible to your ELL students?*

In Question #10, approximately 82% of the responders said that they are aware of instructional and assessment modifications, but comments most often mentioned "common sense" and requests for more useful teaching techniques rather than accommodations for ELL students.

11. *Would you support extended day opportunities for ELL students so that they can receive help with their schoolwork and/or participate in extracurricular activities?*

Question #11 asked if teachers would support extended day opportunities so that ELL students could receive help with their schoolwork and/or participate in extracurricular activities. While 90% of the responders felt that such opportunities should be provided and many stated that opportunities are already available, but most comments raised issues of staffing, funding, and/or students with after school jobs.

12. *Would you encourage training on designing alternative assessment tasks and a meaningful assessment plan that uses a diversity of assessment measures to assess ELL students?*

In response to Question #12, 17% of responders did not favor training on designing alternative assessment tasks and a meaningful assessment plan that uses a diversity of assessment measure to assess ELL students.

13. *Would you support providing rigorous professional development to teachers of ELL students with a goal of introducing best practices into mathematics classrooms?*

In response to Question #13, teachers overwhelmingly accepted providing needed professional development to teachers of ELL students, with an emphasis on mathematics.

14. *Are you interested in participating in a teacher focus group where the focal point will be to identify and discuss current secondary mathematics teachers' training needs for enhancing the effectiveness of mathematics instruction for ELL students?*
15. *Are you interested in participating in a week-long summer institute where the focus will be to provide teachers with effective teaching strategies and materials for teaching ELL students?*

Questions #14 and #15 solicited information about teachers' interest in attending focus group sessions and summer workshops for ELL issues. Some of the responders attended Lamar University focus group sessions and some may possibly be invited to attend a summer professional development workshop at Lamar University.

16. *If you could change one thing about your school's approach to educating ELL students, what would it be?*

Questions #16 was a free response item allowing teachers to dream about a change that would improve instruction for ELL students. A final section allowed room for any additional comment that the responder wanted to provide. While many responses in both areas were very similar to those seen in Question #1, many more teachers took this opportunity to make suggestions that should be directed toward administrators. Teachers are concerned about class sizes, the numbers of ELL students in each class, additional faculty and staff to support ELL students in general and Hispanic students in particular, the availability of quality professional development in mathematics for teachers of ELL students, ensuring that everyone within a school becomes invested in helping ELL students, and their own overloaded work schedules. The comments in these sections should be read as they were written – in the teachers' voices. While it is not feasible to

include all these comments here, all transcribed comments from the survey are provided in Appendix B.

Clearly, teachers have strong opinions about mathematics for ELL students. This survey was designed to determine their perceived needs for professional development to assist ELL students achieve at a high level. Survey data are subjective; the questions asked for opinions and desires. It is obvious that relatively few teachers have experienced professional development that they consider valuable and that many teachers desire the chance to do so. The vast majority of teachers want to help their ELL students make adequate progress in mathematics.

A Summary of Three Lamar University (LU) MELL Initiative Focus Groups

Summary of Participant Selection and Data Collection

Focus groups are one means of complementing survey data and are an increasingly popular way to learn about teachers' opinions and attitudes. They are in-depth, qualitative interviews with a small numbers of carefully selected people who are brought together to discuss a particular topic (Morgan, 1988). In order to ascertain teachers' perceived training needs to better support mathematics instruction to their ELL students, LU hosted three focus group interview sessions. The first focus group (FG1) was held in Beaumont, TX, the second (FG2) was held in Round Rock, TX, and the third (FG3) was held in Brownsville, TX.

- FG1: Beaumont, TX; 11 participants from Southeast Texas
- FG2: Round Rock, TX; 7 participants from Central Texas
- FG3: Brownsville, TX; 9 participants from South Texas

Each group offered a unique perspective on identifying the greatest professional development needs in Texas for enhancing mathematics instruction for elementary ELL students. Detailed information on each session is given in the focus group findings section of this report.

Participants for each focus group were selected based on their documented interest expressed in the surveys distributed prior to formation of the focus groups, recommendations made by school principals and vice-principals, and recruitment by LU MELL project investigators based on their prior knowledge of schools with high ELL student populations. As previously mentioned, participants were primarily elementary teachers who were currently teaching or had taught large numbers of ELL students. The composition of each focus group consisted of teachers from different schools and/or school districts. To the extent possible, care was taken to ensure that teachers who knew one another were not recruited for the same sessions because research indicates that focus group participants are generally more open and less guarded with people they do not know (Morgan, 1988).

As potential participants were recruited, each received a brief description of what the group would be about, as well as assurances that their participation was entirely voluntary and that their confidentiality would be protected. Each participant was also paid a small stipend, reimbursed for travel expenses, and provided lunch before the start

of the session. In hopes of ensuring participants were relaxed about the sessions, a comfortable, relaxed atmosphere was created for each of the focus group sessions. Data from each focus group was captured through video recording, audio recording, and manual note taking. The video recording captured both verbal and nonverbal information and did not seem to inhibit any of the participants, audio recording allowed for verbal information to be obtained verbatim, and manual note taking involved publicly capturing the key points of the discussion by handwriting them on easel pads positioned around the room.

Protocol for Focus Groups

All focus groups were conducted by two facilitators. Both facilitators were skilled in maintaining good group dynamics, had the responsibility of keeping the group focused, and ensured the generation of lively and productive discussions about needed professional development for elementary teachers in Texas. Moderating styles were tailored to fit respective groups. However, in general, each 2 hour session began with a general discussion of the purpose of the session, structure of the focus group, anticipated protocol for the session, and an introduction of the three key questions participants were expected to discuss during the session. The questions were formulated by the project researchers based on the project goals. The group then discussed the questions through talking with one another, asking public questions about what they heard, and reacting to one another's comments. The three key questions posed at each session were:

- Question #1:*** *What is good about professional development for teachers of English Language Learners in Texas?*
- Question #2:*** *What aspects of professional development for teachers of English Language Learners in Texas need improvement?*
- Question #3:*** *What do you believe are the greatest professional development needs in Texas for enhancing mathematics instruction for elementary English Language Learner students?*

Each question was purposely phrased in a neutral, open-ended manner in order to secure multiple responses and to ensure that the formulation of the question had no effect on the responses. The questions were carefully sequenced so that the general questions preceded the more difficult ones. Leading questions that suggested the facilitator's opinion or an anticipated answer were avoided. After participants finished discussing Question #1, Question #2 was introduced. Likewise, Question #3 was introduced after the conclusion of the discussion of Question #2. After all questions were discussed, participants were asked to consensually rank the top three responses for each question. The ranked responses, along with other responses, on perceived needs for professional development are discussed in the following section.

Findings of Three LU MELL Initiative Focus Groups

The following list summarizes the most frequent responses from focus group participants and hence indicates Texas elementary school teachers' perceptions of needed professional development to better support mathematics instruction for elementary ELL students. A more detailed discussion of each session follows. However, because many

discussions for individual questions overlapped, there are common responses for different questions. Keys points from each focus group session are mapped to each question in Tables 1 – 3.

1. Provide mandatory professional development (for all teachers) specific to improving mathematics instruction for ELL students.
2. Provide mentor/mentee training.
3. Offer follow-up training and/or resources.
4. Offer professional development during the academic year when teachers are able to use and experiment with it – not in the summer.
5. Provide training in mathematics content.

Brief Discussion of Questions and Comparison of Focus Group Findings

Question #1

In response to Question #1, which addressed favorable aspects of professional development for teachers of ELL students, all participants in all sessions agreed that there is limited professional development available specific to mathematics and teaching ELL students. Many teachers commented that they had attended general professional development sessions but the emphasis of these sessions was language or special education – not mathematics. Hence, the participants were unable to answer question one because none had participated in nor had any knowledge of any professional development for teachers of ELL students that was specific to the content area of mathematics. Participating teachers reasoned that advertising for such professional development programs is nonexistent and that no mention of such programs or training had been distributed to districts or teachers in their respective areas.

Question #1: What is good about professional development for teachers of English Language Learners in Texas?

Southeast TX	Central TX	South TX
1. Limited PD available (when available it is tagged onto PD for special learners)	1. Limited PD available (CGI – but not math specific)	2. Limited PD available (Sharon Wells & Investigations)
2. Bilingual visiting teacher informally assisted teachers	2. LU MELL training	-----
3. TABE Conference	-----	-----

Table 1: Question #1 Common Responses From Each Focus Group Session

Question #2

In response to Question #2, which addressed perceived professional development improvement needs, each focus group agreed that the first mode of improvements should entail offering some type of consistent, required professional development specific to teaching mathematics to ELL students. Additional comments in response to Question #2 from FG1 included introducing multi-district professional development sessions for mathematics teachers. Participants expressed interest in communicating with teachers who teach in districts similar to their own and who deal with similar issues. FG1 and FG3 participants also highlighted a need for a consistent professional development program used by teachers in a district. Both groups agreed that often the school district makes constant changes to the professional development program and hence teachers are unable to actually determine its effectiveness or become comfortable using it. Other responses to Question #2 can be reviewed in Table 2.

Question #2: What aspects of professional development for teachers of English Language Learners in Texas need improvement?

Southeast TX	Central TX	South TX
1. Be consistent with implementation of PD programs. Stop jumping around.	2. Offer training specific to mathematics.	1. Offer training for math content preparation and offer variety of training (their district only offers Sharon Wells).
2. PD should not be stressful for teachers to learn and use.	3. Offer training specific to teaching problem solving.	2. Offer more pedagogical training (i.e. training in use of manipulatives, etc.).
3. Develop workshops or PD sessions where community of teachers can share ideas.	3. Attempt to modify/alter current PD to fit needs of ELL students in math classrooms.	3. Stop constant jump from PD program to program.
-----	-----	4. PD should be aligned with TAKS and TEKS requirements.

Table 2: Question #2 Responses From Each Focus Group Session

Question #3

In response to Question #3, which addressed perceived greatest professional development needs, all three focus groups ranked the need for follow-up, resources, and support after receiving professional development. FG2 expressed a need of having a universal professional development program used throughout the district and require all schools to participate in the training. FG3 agreed that all needs discussed were their greatest and hence had difficulty shortening the list. However, FG3 added that professional development should be mandatory for all teachers and should be held on

in-service days. They also agreed that implementing a mentoring program for new teachers of ELL students by veteran teachers would be helpful. FG1 suggested partnering with or frequently observing teachers at schools with high success rates for ELL students.

Question #3: What do you believe are the greatest professional development needs in Texas for enhancing mathematics instruction for secondary English Language Learner students?

Southeast TX	Central TX	South TX
1. Need for follow up resources and support after PD implementation.	1. Need for follow up resources and support after PD implementation.	1. Need for follow-up resources and support after PD implementation.
2. Mandatory PD for <u>ALL</u> teachers.	2. Cross-school PD training, where various schools meet at central location.	2. Mandatory # of hrs of math PD for <u>ALL</u> teachers
3. Partner with, visit, and/or observe teachers at schools using successful programs	3. Offer training focusing on giving elementary teachers more math content. Divide PD sessions by grade levels (EC-1, 2 - 3, 4 - 6).	3. Implement math coach programs (similar to reading coaches) or mentoring program between veterans and novices.
4. Include TAKS related activities for ELL students.	4. Need district recognized and supported PD; Need district supported belief system.	4. Schedule PD during teacher work day and at time period (not end of year) when teachers can use it AND make available PD more accessible to find.

Table 3: Question #3 Responses From Each Focus Group Session

Comparison of Survey Data of Texas Elementary and Secondary Teachers’ Perceived Professional Development Needs for Improving Mathematics Instruction of English Language Learner Students

Although there was some similarity among the survey data collected from the elementary and secondary teachers, the emphasis from each group was different. The elementary teachers were primarily concerned with receiving professional development on integrating various mathematics teaching strategies, with specific interest on integrating manipulative usage in such activities; the secondary teachers were primarily interested in learning about resources, tools, and techniques that have been proven to be successful. Unlike many of the elementary teachers, the secondary teachers felt confident that they had strong content knowledge and did not consider the need of content training. A comparison of main points from both groups can be found in Table 4.

Secondary Teachers' Responses	Elementary Teachers' Responses
1. Tools and techniques proven to be successful	2. Using manipulatives to teach ELL students mathematics
2. Mathematics specific vocabulary	3. Mathematics specific vocabulary
3. Making training applicable to mathematics	4. Comparing learning styles of ELL students and native English speaking students
4. Team teaching opportunities	5. Incorporation of technology and ready-made activities into lessons
5. Assessment training	6. Differentiation (multiple ways to teach a concept)

Table 4: Comparison of Secondary and Elementary Main Points

Survey Question 2 asked responders if they held any specialized certifications. As Figure 1 shows, few of the secondary teachers did but over three-fourths of the elementary teachers had such certifications.

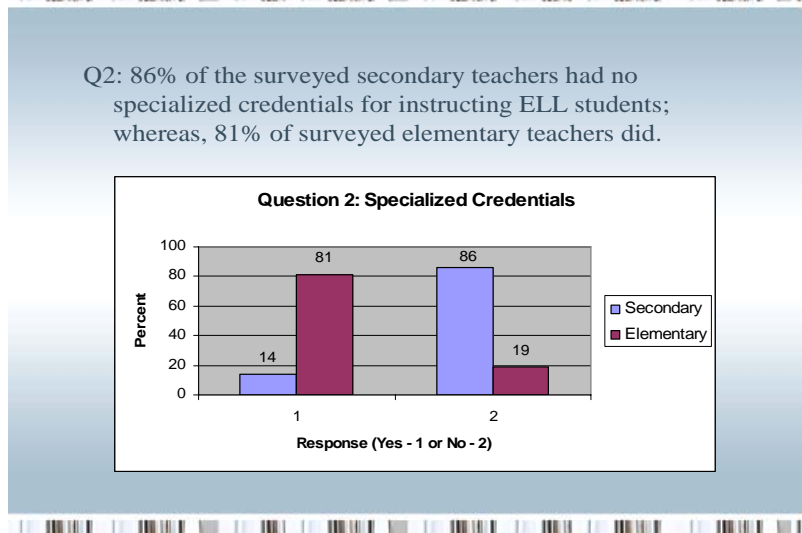


Figure 1: Elementary/Secondary Teachers' Responses to Survey Question 2

Survey Question 5 surveyed the number of teachers who had received any professional development specific to working with English Language Learners students. Again, the elementary teachers were more experienced in this area than the secondary teachers (see Figure 2). Figure 3 shows that low percentages of both groups found the received professional development extremely helpful.

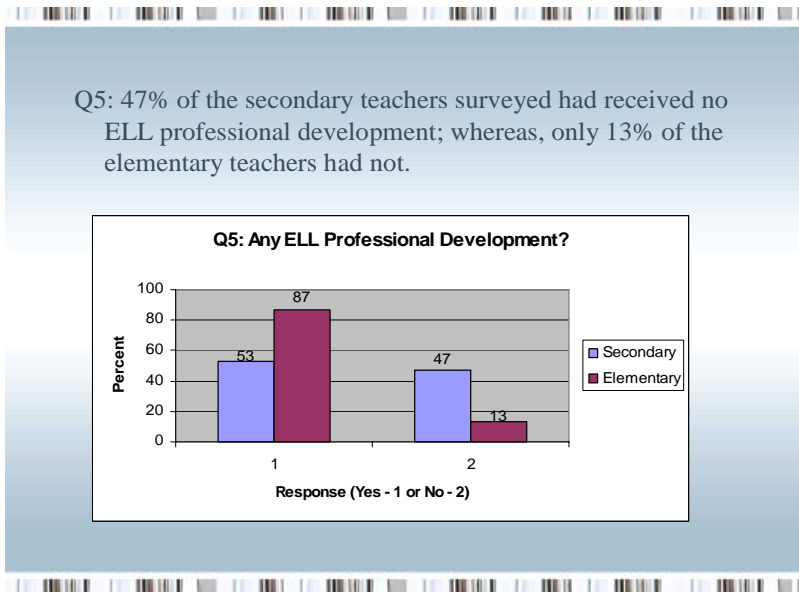


Figure 2: Elementary/Secondary Teachers’ Responses to Survey Question 5

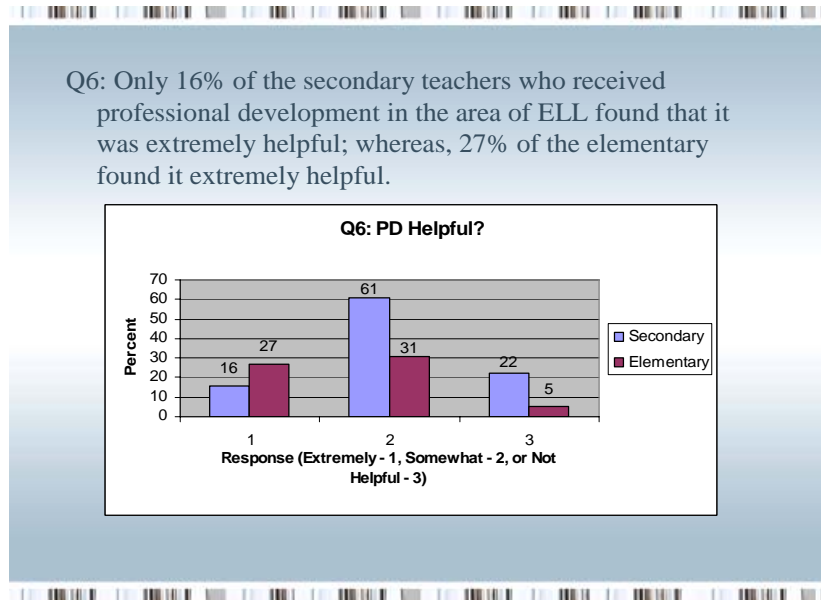


Figure 3: Elementary/Secondary Teachers’ Responses to Survey Question 6

In response to survey Question 9, half of the secondary teachers surveyed indicated that their ELL students do not achieve at comparable levels as their non-ELL students; whereas, only 10% of the elementary teachers surveyed agreed.

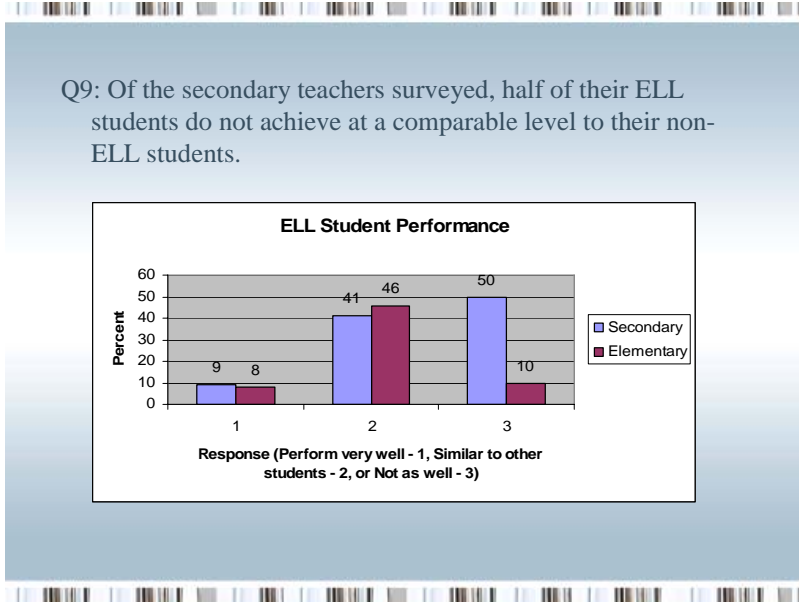


Figure 4: Elementary/Secondary Teachers’ Responses to Survey Question 9

An overwhelming percentage of both groups of teachers agreed that extended day opportunities for ELL students would benefit them in becoming successful in mathematics.

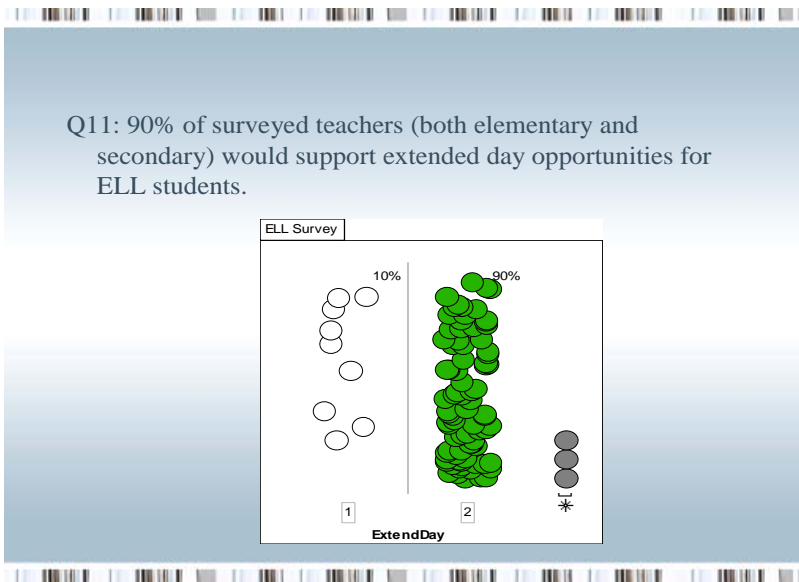


Figure 5: Elementary/Secondary Teachers’ Responses to Survey Question 11

The data indicate that while the perceptions of elementary school teachers concerning their needs for professional development are different from the perceptions of secondary school teachers, both groups are concerned about the achievements of ELL students and willing to accept professional development opportunities.

**Appendix A – Elementary School Mathematics Teachers’ Training Needs for ELL
(English Language Learner) Instruction Survey**

February 3, 2006

Dear Colleague: (Principal)

The prevailing achievement gap in mathematics between the English Language Learner (ELL) student population and non-ELL student population demands immediate action. Lamar University is part of a major funding effort by the Texas State University System (TSUS) to identify teachers’ training needs for enhancing the effectiveness of mathematics instruction for students who are English Language Learners (ELLs). The grant involves five TSUS universities and has a monetary value in excess of \$1,000,000. Our goal is to develop and provide a series of resources for teachers of ELL students throughout the state of Texas that are expected to improve teacher efficacy and ELL student proficiency in the area of mathematics.

We need your school’s help. We are asking that you distribute the surveys included in this packet to a select group of teachers at your school, specifically teachers who have a high enrollment of ELL students in their classes or teachers or other educators who have experience working with ELL students in the area of mathematics. Please encourage the teachers to complete and return the survey. It is important that all teachers selected participate so that results will fairly represent Texas teachers teaching mathematics to ELL students. Also, in helping us identify the specific types of training needs that mathematics teachers and other educators need to improve mathematics instruction, we hope to raise ELL student achievement in mathematics.

Thank you for encouraging your teachers and any other of your school’s educators who have experience working with ELL students in the area of mathematics to complete this survey. Teachers who complete and return surveys by the postmarked deadline may possibly be selected to participate in a paid focus group discussion. **Please ensure returned surveys are postmarked by March 3, 2006.** Pre-addressed, postage-paid envelopes are provided along with the surveys we request that you distribute.

If you have any questions pertaining to the survey or goals of the project, please contact:

Dr. Sandra Richardson
Mathematics Department
P.O. Box 10047
Beaumont, TX 77710
400-880-7946 (Office)
richardson@math.lamar.edu

Sincerely,

Sandra Richardson, Ph.D.
Assistant Professor of Mathematics

February 3, 2006

Dear Colleague: (Teacher)

Thank you for participating in this survey. The prevailing achievement gap in mathematics between the English Language Learner (ELL) student population and non-ELL student population demands immediate action. The purpose of this survey is to identify current teachers' training needs for enhancing the effectiveness of mathematics instruction for students who are English Language Learners (ELLs). This project is part of a major funding effort by the Texas State University System (TSUS), involves five TSUS universities, and has a monetary grant in excess of \$1,000,000. The joint effort of all involved affiliates is to develop and provide a series of resources for teachers of ELL students. **We need your help.** It is important that all teachers participate so that results will fairly represent Texas teachers teaching mathematics to ELL students. Teachers who complete and return surveys by the postmarked deadline may possibly be selected to participate in a paid focus group discussion.

Your answers will be kept strictly confidential. Results of the survey will be reported only in summary or statistical form, so that neither individuals nor their schools can be identified.

Thank you again for completing this survey. **Please ensure returned surveys are postmarked by March 3, 2006.** Please use the pre-addressed, postage-paid envelope that is provided to seal your response by this date.

If you have any questions pertaining to the survey or goals of the project, please contact:

Dr. Sandra Richardson
Mathematics Department
P.O. Box 10047
Beaumont, TX 77710
409-880-7946 (Office)
richardson@math.lamar.edu

Sincerely,

Sandra Richardson, Ph.D.
Assistant Professor of Mathematics

Survey of Elementary Teachers' Training Needs for Mathematics Instruction of ELL (English Language Learner) Students

Please answer all questions honestly and candidly by either circling or writing your applicable response. We appreciate all comments. Please include any comments you deem appropriate in the blank space after each corresponding question. Space is allotted for general comments at the end of the survey.

Surveys should be postmarked by March 3, 2006. See cover letter for more detailed information.

Name & Position: _____

School: _____ District: _____

Total years in position: _____ Grade level you teach (if applicable): _____

1. What do you see as your school's greatest training need for enhancing mathematics instruction for ELL students?

2. Do you hold any specialized credentials (such as ESL or ESOL certification, language development specialist, bilingual certificate, etc.) for instructing ELL students?

No

Yes (please specify): _____

3. Does your school have an employed ELL teacher on staff?

Yes No

If yes, how helpful is the employed ELL teacher in helping you better instruct your ELL students in the area of mathematics?

5 = extremely helpful, 3 = somewhat helpful, and 1 = not helpful

5 4 3 2 1

4. Do you think it is necessary for your school to employ an ELL teacher?

Yes No

5. Have you received any training or professional development in working with ELL students?

Yes No

6. If yes, how helpful was the training?
5 = extremely helpful, 3 = somewhat helpful, and 1 = not helpful
5 4 3 2 1

7. Approximately how many ELL students do you currently teach?
0 1-10 10-20 20-30 more than 30

8. Rank the population size of the ethnic background of ELL students you currently teach, with 1 representing the largest population.

____ Hispanic
____ Asian/Pacific Islander
____ Other (please specify _____)

9. In comparison to the general student population of your school, how well do your ELL students perform in mathematics?
5 = very well, 3 = similar, and 1 = not as well
5 4 3 2 1

10. Are you aware of the kinds of instructional and assessment modifications that should be used in order to make your lesson content comprehensible to your ELL students?
Yes No

11. Would you support extended day opportunities for ELL students so that they can receive help with their schoolwork and/or participate in extracurricular activities?
Yes No

12. Would you encourage training on designing alternative assessment tasks and a meaningful assessment plan that uses a diversity of assessment measures to assess ELL students?
Yes No

13. Would you support providing rigorous professional development for teachers of ELL students with a goal of introducing best practices into mathematics classrooms?
Yes No

14. Are you interested in participating in a teacher focus group where the focal point will be to identify and discuss

current teachers' training needs for enhancing the effectiveness of mathematics instruction for ELL students?

Yes No

16. If you could change one thing about your school's approach to educating ELL students, what would it be?

Additional comments are appreciated and welcomed:

Thank you for completing this survey!

Appendix B – Responders’ Comments for the Secondary Mathematics Teachers’ Training Needs for ELL (English Language Learner) Instruction Survey

1. What do you see as your school’s greatest training need for enhancing mathematics instruction for ELL students?

1. Holleman is aware about ELL needs. We’ve been working using current learning/teaching ELL approaches based on researches. However, the Ethno mathematics (Dr. Lara – A&M University) is a method seldom used by a school system as part of the bilingual curriculum. This method develops the reasoning in math for ELL students throughout cultural biases. Besides, increases the parental involvement process on those parents.
2. I believe our greatest training need for enhancing mathematics would be training in the use of manipulatives to teach math. Our need is that basic.
3. Our school’s greatest training need for enhancing mathematics instruction for ELL students in the concept of money, time and temperature.
4. Understanding “how” ELL’s learn vs. native English speakers.
7. A program that teaches all TEKS, of course. A program w/ lots of manipulatives and activities. A program that is student/teacher friendly. It needs to meet TAKS needs, yet needs to be simple enough to encourage students to want learn.
8. More manipulatives in every room.
9. I feel that our school has good materials and manipulatives available, but need training in incorporating technology as well as access to technology.
11. Activities that will help ELL students.
12. How to utilize a more “hands-on” approach to math using manipulatives.
13. Hands-on activities. Materials in their 1st language.
14. My campuses greatest need would be to create smaller groups or classroom sizes. We are fortunate to have a number of resources (workbooks, masters, activities) and manipulatives to use, but are short on human resources. The ratio of my class is 1:24.
15. More parent communication to inform them of the great importance of mathematics in the child’s academic background in order to build a strong foundation.
16. Vocabulary in all subjects. New ways must be found to help the students learn and retain vocabulary for all subjects.
17. The vocabulary/terminology used in standardized test and textbooks is difficult for them due to the lack of exposure.
18. Training in how to improve or increase vocabulary understanding. Students are sometimes confused by common words such as pair, set, join, etc.
19. All teachers in our school need training in math instruction for our high percentage of ELL students. We need strategies and communication skills for our students and their parents.
20. Any training would be good. I haven’t received any math training targeting English Language Learners.
21. Training teachers on hands on activities and organization.
22. Manipulatives!
23. More manipulatives.
24. Bilingual paraprofessional for math tutorials only.
25. How to help our ELL students in math. I know using hands-on and acting out helps, but want more can I do to help my students.

26. Our school's greatest need is to have materials and resources aligned with the TEKS ready and available before the school year starts.
27. Math Vocabulary – students often know the computation part of a math problem. They have difficulty understanding mathematical terms.
28. I think it would be beneficial to the ELL students at our school to have more one on one instruction in math. The biggest need I see is that in the third grade the math consist of mostly word problems and ELL students have a hard time reading and understanding what the word problems are asking. (Computer resources.)
29. Total teacher collaboration and complete alignment.
30. We need to make math more hands-on. Proper materials lack at my school.
31. We need more training in teaching strategies for Spanish TAKS.
32. Smaller classes. Math time with ELL teacher learning math vocabulary.
33. My ELL students have a hard time with Math vocabulary. As you know a lot of Math words have no “picture” that can “show” the students the meaning.
34. We have the training, but not the time; overloaded classes.
35. Nothing
36. Differentiation – we need to have multiple ways to learn each objective.
37. Consistent vocabulary taught across the grade levels.
38. Technology implementation/integration throughout other academics and hands-on activities.
39. Staff development for our support staff. An actual ELL mathematics teacher who does the support for struggling students.
40. Mathematics terminology in students' primary language.
41. My school needs to come up with curriculum that addresses the needs of our ELL students and needs to train all teachers or better yet have a specialized ELL teacher.
42. Rather than additional training our teachers need more time to plan and prepare for implementation of known strategies for enhanced learning for all students. Enabling teachers to provide students with individualized learning centers and extensive use of the spoken and written English language would benefit all students.
43. We need more hands-on applications. Also a lot of vocabulary.
44. Creative hands-on techniques to introduce concepts.
45. The school has provided us with a math training program during the summer and other workshops throughout the school year that has proven beneficial.
46. I believe we could benefit of training that will each us simpler ways to teach word problems. We could also use new ideas on how to make math more real and concrete thru the creation by students of different math project. Some training on how to use manipulatives could be useful also.
47. How do we instruct 3 to 4 levels of learning (at the same time) that will best impact our students?
48. I feel that teachers who are working with ELLs should have a plethora of ongoing assessments, instruction materials, intervention tools for those students who don't understand and instructional methods that will allow the ELLs to acquire new content while acquire the second language.
49. More “hands-on” practice and material, teaching techniques to assist low ELL students in understanding more words and phrases in math story problems.

50. Because of the “program” our district has – our teachers need training on how to teach ELLs in class with monolingual English students. Math vocabulary in upper grades is difficult for ELLs.
51. Problem solving strategies. Incorporating math across curriculum. Incorporating centers for math.
52. Language – as a teacher I need to learn their language. Have an aide interpret everyday (money.)
53. Time, personnel for low student. Teacher ratio, money to pay staff, tutorials.
54. A bilingual teacher who is strong in math.
55. I don’t see a need. Our students are (in 3rd grade) receiving their instruction based on the language of the TAKS test they’ll be taking. The ELL students who’ll be taking the test in English are very bright students w/very high achievement.
56. More a question of having the needed supplies, etc.
57. I am pleased with what our school is doing.
58. Workshop specifically designated for ELL students only would be great. I’ve never even seen this yet, though I am sure they’re offered somewhere.
59. More practical application.
60. Appropriate curriculum! In my opinion, our current math book does not align the activities it provides with real life experience so that the students understand the purpose of the instruction.
61. We need more ELL teacher to be trained in mathematics in the lower grades.
64. Spanish material is needed for the recent immigrants at a 5th grade level. 5th grade material.
65. I use the Sharon Wells program and teach it in English. However I have 5 students that leave my room and go to a teacher that presents the Sharon Wells program in Spanish.
66. Our school’s greatest need are materials/books for ELL students.
67. Vocabulary development for math and stronger foundation of math concepts.
68. Training is needed on how to vertically align and implement math curriculum so that it is a school-wide (consistent) effort.
69. Universal district training at campus w/ paraprofessionals at our side and having all necessary materials on hand.
70. Ensuring all math teachers use a systematic hands on approach with repeated opportunity to practice – until mastery is achieved – for each objective.
71. Don’t see much needed training for ELL. Need more training for math tactics.
72. Vocabulary definitions that relate to everyday life and how to incorporate hands on learning activities.
73. More staff development on mathematics instruction for ELL students. We have had lots of language arts training, but not math.
74. The greatest training need for enhancing instruction for ELL students is how to teach them in a way they understand. How are we supposed to model, besides using manipulatives, to the ELL students?
75. Bilingual assessments and curriculum available. TAKS in Spanish for above 6th grade level. Easy to read textbooks, like Saxon.
76. Hands on live experiences.
77. Don’t know. Don’t have any ELL students yet.
78. ESL strategies: Using manipulatives and visuals; modifying the language (vocabulary.)
80. Hands-on activities; assessment modification curriculum.

81. Vocabulary activities that help the student understand the words and the process they need to do that accompany the word.
82. I don't think I need more training. I have the know how now, tools, resources... I need time to put great lessons together. I think many teachers feel this same way.
84. As much resources as the monolingual students. Monolingual students receive better resources and ELL teachers have to find other time consuming resources to maintain equity and adequate instruction.
85. The newer teachers need training in using manipulatives to teach the basic math skills. We all could use training on alternative methods to teach these students to make math more understandable.
86. Mathematics specialize and more hands on training classes.
87. Teaching specific techniques to use with ELL students, and which manipulatives to use. This would really be helpful to new, first year teachers.
88. English language learners generally score lower on state assessments so we need training on how to make our students more successful in mathematics.
89. How to successfully integrate ASL (academic second language) into content areas such as math and training for teachers of how to integrate ASL into content areas. Also training for teachers on how to change parents/students attitudes.
90. Concentrate on students who have not had school. Some of our students come to this country with no prior schooling and need a way to catch up.
92. My school's greatest training need for enhancing math instruction for ELL is to have more manipulatives and more training on the math games to help the ELL students learn the concept or objectives in math for that particular day.
93. Our need as I see it is not training but to have our materials and resources already aligned to our state's TEKS prior to start of the school year.
94. All math teachers should be ESL trained so that students can benefit from it.
95. We need more manipulatives in each classroom and training on how to use those manipulatives with the students. Only a few people can go a year from the whole school.
96. At this time we are satisfied with our training for math teachers.
97. Manipulatives – teachers need to use concrete objectives.
98. Understanding and teaching the language of mathematics – Second language students respond well when taught using manipulatives but sometimes make too many generalizations about the language use in story problems. Ex: more and more than.
100. I feel that as a campus, our principal has worked very hard to make sure that our teachers help our students build a strong foundation on numbers and concepts to enhance our mathematics instruction for our ELL students as well as our other students.

3. Does your school have an employed ELL teacher on staff? If yes, how helpful is the employed ELL teacher in teaching in helping you better instruct your ELL students in the area of mathematics?

1. Yes. It is demonstrated by research that the emotional center is crucial in the learning process and it is directly linked to the frontal lobes (cognition). Since the main stimulus for an ELL comes first from interactions associated with his/her home language; a certified teacher in bilingual, ESL, or ESOL plays an important roll with his/her empathy and awareness during the CALP process.

7. Yes. I am extremely fortunate to work in a grade level where my co-workers collaborate on a daily basis.
8. Yes. Not helpful. I haven't ask or been approached to help problem solve.
9. Yes. Extremely helpful. I am an ELL teacher.
12. No. All bilingual teachers are self-contained.
13. Yes. Somewhat helpful
14. No. But any extra assistance would be welcomed.
21. Yes. We have an ESL math specialist
23. No. We have bilingual teachers.
25. Yes. Extremely helpful. We work very closely withy our ELL teacher. She is the best!
26. No. We could use a math specialist
29. No. We do not have specified ELL instructor – there are at least 2 bilingual teachers per grade.
36. Yes. Somewhat helpful. Because I have ESL certification, I usually do the lessons in the classroom.
42. Yes. Somewhat helpful. The teacher is knowledgeable and willing to share. However, time limitations do not allow for a great deal of exchange.
43. Yes. Extremely helpful. I am the bilingual teacher along with others. Program set up differently.
47. Yes. No helpful. Does not instruct math
49. Yes. Extremely helpful. 80% of our teachers are ESL certified.
50. Yes. Called bilingual teachers. It's just me for 3rd grade – no other help.
52. Yes. Not helpful. I do have an aide that interprets 3 days a week.
55. Yes. Extremely helpful. Having the ESL/Bilingual certification myself helps my students achieve at higher levels. Even though my students are ELLs, they are given their core instruction in their native language.
58. No. I think we may have ESL trained teachers, and do have several bilingual teachers, but not one teacher designated for ELL assistance.
60. No. Our school has 1 bilingual teacher per grade level but not 1 person responsible as a resource.
61. Yes. Extremely helpful. The ELL teacher is able to translate any unfamiliar concepts form Spanish to English.
62. Yes. Extremely helpful. The ELL teacher transitions students into the English language by using handson, visuals and translating.
64. Yes. Not helpful. He is the only one that teachers those students.
65. No. However we have teachers who hold bilingual certificates and teach bilingual classes.
68. Yes. Extremely helpful. We have several. We support each other and network to better meet the needs of students.
70. Yes. I have no trouble instructing my ELL students and therefore do not seek assistance.
71. No. Get help from Spanish teacher to help students understand
73. No. We have an ESL teacher who focuses on language arts, but none to help with math.
75. Yes. Not helpful. I do have an aide who is bilingual and helps to translate for my 1st year newcomers.
78. Yes. I'm the only ELL teacher at both campuses.
82. Yes. I am an ELL teacher at this school
84. Yes. Very helpful. Accelerated reading pull-outs provide an addition to rather than instead of.

- 87. Yes. Extremely helpful. If we ask, ideas are given to help us with instruction
- 88. No. Every teacher that serves English language learners is bilingual or ESL certified in our school.
- 93. No. I believe it would benefit our school if we had a person like a reading specialist but for math to come in and give extra help when needed.
- 95. Yes. Not helpful. They don't have enough time with their schedules to help us in math.
- 96. Yes. I am the ESL Teacher
- 98. No. We have a bilingual lead teacher who usually helps with reading.
- 99. No. There is not a pull out program but an all English instructional classes
- 100. Yes. Extremely helpful. Our school has several ELL teachers on staff which makes it very helpful because the ELL teachers have been trained to work with ELL students.

4. Do you think it is necessary for your school to employ an ELL teacher?

- 1. Yes, I do. He or she will help kids to learn math objective by using bilingual/ESL strategies and also reinforce understanding through their home language.
- 2. Yes, if the ELL person is well trained and motivated; otherwise, no. We have enough warm bodies on campus.
- 3. No. Our school already has an ELL teacher.
- 4. Yes. Our population is such that it is essential for our campus to employ ELL teachers to serve the students.
- 7. Yes. School is all about education. I am very patriotic towards my country and feel that everyone should speak one language, but in order for that to happen it is imperative that we have bilingual teachers.
- 12. No. All teachers teach in both English/Spanish in the classroom
- 13. Yes. This person gives support to our ESL students.
- 14. Yes. Yes, it would be an assist to employ an ELL teacher to assist with math instruction. The ELL students abilities at math are not equal to their grade level. Many are behind a year or two in math instructional function.
- 15. No. Already present on campus
- 16. Yes. With our population someone with the latest techniques and research would be great. Teachers need on the job training. Workshops only do so much.
- 18. No. One teacher would not help. One per grade level would be helpful if that teacher was ELL and a Spanish speaker.
- 20. Yes. Our campus has many ESL students who are struggling learners. They should receive special assistance.
- 21. No. We have bilingual teachers
- 22. No. We have bilingual teachers
- 27. Yes. Our ELL is a wonderful support and resource for our students. She reinforces what is taught in the classroom.
- 28. Yes. A bilingual ELL teacher.
- 33. No. I think it would help, but my school has other needs where the money could be put to "better" use.
- 38. No. Since the bilingual teacher works with ELL students. The majority of teachers in my campus are certified bilingual.
- 39. Yes. Our matematics support staff teacher does not have any ELL training
- 40. No. Most of us possess bilingual certification

47. Yes. We could also use a Spanish or bilingual teacher.
49. Yes. Definitely
50. I do not understand the question. We have 1 bilingual teacher per grade level. Is ELL different?
52. Yes for reading fluency
54. Yes. Our campus is 70% Hispanic. Many do not speak English.
55. Yes. Yes, if there is not a bilingual teacher/ESL to help these students achieve.
60. Yes. Yes, as a bilingual teacher I am responsible for teaching the curriculum and an employed ELL teacher could certainly assist us in finding new and appropriate supplemental materials.
61. Yes. An ELL teacher can make the transition for Spanish to English a lot easier for ELL students.
62. Yes. ELL teacher facilitate the English language and concepts in order for students to understand.
63. No. We have teachers with bilingual certifications.
64. Yes. Every grade level should have one or all recent (3-S) immigrants should be in the same class.
67. No. Not sure. I have suggested to my principal about having 3rd-5th recent immigrants together to start them off with English oral language development.
68. Yes. Our school is the “cluster” school for all of the students that qualify for bilingual education.
70. No. From my perspective it is nice, but not necessary.
73. Yes. It would certainly help
74. Yes. A different view or more resources are always beneficial.
77. Yes. We have many ELL learners that require much /on/teaching.
82. Yes. At least one teacher
84. Yes. Of course, especially for parents of ELL students. We must communicate to them in their native language.
86. Yes. Yes, because it would make are students stronger in mathematics.
88. No. Every teacher that serves English language learners is bilingual or ESL certified in our school
94. No. We have several ESL certified teachers on campus
95. Yes. We have a huge population of ELL students.
98. No. We need more teacher aides who speak students’ native languages to aide during instruction
100. Yes. If our students are ELL students, we certainly need ELL teachers who know how to teach the ELL strategies.

5. Have you received any training or professional development in working with ELL students?

1. Yes. Yes, I have, our school district is aware of the importance of bringing approaches to help ELL kids to be successful. Some of these trainings are STOP, Kagan, Four Blocks, and actually I am in the Graduate Bilingual Program at A&M to get my Master Degree in this area.
2. Yes, but not enough.
3. Yes, but I wouldn’t mind attending any trainings.
7. Yes. I have attended numerous workshops that would benefit me in helping ELL.
13. Yes. During my Master’s Degree and certification program.

14. Yes. LPAC training, TOPS assessment training.
15. Yes. Through Region VI.
16. Yes. I went through 12 hours to assist in passing the Texas exam. There are other workshops available but have not had time to take them.
20. No. Our district provides very little ESL training to ESL teachers.
21. Yes. I've been given some training for reading. Our math specialist who re ESL certified have given training but not targeting ELL students.
22. No. Well, maybe. Does ESL count?
27. Yes. My training has been through various workshops throughout my teaching career.
28. Yes. HISD
30. Yes. Bilingual certification.
33. No. Just ESL training, with a small part on ELL students.
36. Yes. Our school district has several workshops on this. It never hurts to get more.
37. Yes. Only in reading instruction.
40. Yes. RAND Project, SAILL Grant
46. Yes. The district offers various opportunities thru the year on different types of training.
47. Yes. Small amount
49. Yes. More than 100 hours. 10 – 20 hrs per year.
52. Yes. Professional development – modifications – pictures – words – relations
54. No. Not specifically ELL – but I do speak some Spanish and am finishing a masters in curriculum and instruction which certainly applies to all learners.
55. Yes. Most of my prof. Devel. has been to help bilingual students achieve in all areas, but I'd like more specific ESL training.
58. Yes. Portion of early childhood training was ELL.
60. Yes. I attend all bilingual workshops that my district offers as well any my the surrounding areas offer.
61. Yes. I was trained with the dual language program in Roma ISD.
62. Yes. In May of 2004 I had two trainings on professional development in working with ELL students.
64. Yes. Use of many manipulatives, pictures and hands on material.
65. Yes. Many of the trainings are for bilingual students.
67. Yes. Several inservices throughout the years.
71. Yes. Some training mostly for ESL or ELL.
72. Yes. ESL certified
73. Yes. Minimal, mainly in language arts.
75. Yes. I've attended the Bilingual Conference at UTPB for 2 years and frequently chose workshops that pertain to reaching the needs of the ELL students.
77. Yes. 2 days of training.
79. Yes. July 2005 Conference with training workshops in San Antonio on ELL and mathematics.
86. Yes. I have received a variety of professional development class, for example Math Academy from Region IV. It was a great hands on class.
88. Yes. Only from our district – Sharon Wells – inservices.
91. Yes. ESL inservice
94. Yes. In order to receive an ESL certification, we must receive several hours of training.
95. No. I am not certified yet – Some of the trainings they say will help in the teaching of ELL but are not specifically ELL classes.

- 98. Yes. I have had much training but none involving only math instruction.
- 99. Yes. Classes through Region IV – very helpful!

6. If yes, how helpful was the training?

- 1. Extremely helpful. Definitely, these sort of trainings have impacted my professional develop and even increased my interest for ELL kids. Also, I've gained more knowledge not only to bring more strategies to my math classroom, but also to understand all learning styles for ELLs.
- 2. Not very helpful. Presenter was not an effective communicator.
- 14. Somewhat helpful. The training sessions are to keep us up to date with state and district assessments of students, not necessarily teaching strategies or activities.
- 49. Somewhat helpful. About 50% of the overall training was useful. Some seminars were repetitious.
- 52. Very helpful. Sometimes difficult to explain w/ pictures.
- 55. Extremely helpful. Every training to help ELL students overcome the language barrier is greatly needed.
- 60. Somewhat helpful. They mainly focus on reading language arts.
- 61. Extremely helpful. The dual language program instilled in me the importance of maintaining ELL students native language and the importance of acquiring English as a second language.
- 62. Extremely helpful. The trainings were very helpful and new ideas were presented.
- 64. Somewhat helpful. Many of the students that we receive have not been to school. Consequently we now have to start at a very basic (preK) level.
- 65. Somewhat helpful. Training is useful but lack of Spanish resources and computer software makes it less so.
- 70. Not very helpful. In my experience there is little difference between ELL and English speaking learners. The all require individual attention.
- 75. Very helpful. Informative and helpful with perspective but little take home help.
- 77. Somewhat helpful. Centered toward passing the test
- 85. Not very helpful. It was training to help with ESL certification and taking the test. I really do not know what questions I missed or didn't on the test, so I can't say it was that helpful.
- 86. Extremely helpful. I have used a lot of the activities in my class.
- 93. Very helpful. I personally feel that any and all training will benefit my students. I'm better trained and therefore I can use this training for my students.

9. In comparison to the general student population of your school, how well do your ELL students perform in mathematics?

- 1. Not quite as well. Although ELL kids receive the same support cognitively and emotionally at school, is not always present for several reasons in ELL kids. Language barriers is one of the obvious reasons, but acculturation is a factor that causes a hidden impact into ELL's parents.
- 13. Similar, I believe
- 14. Not as well. Many struggle with word problems and problem solving strategies because lack of language or exposure to math terminology. They do well in computation but not a problem solving situation.

16. Similar. Many of my students are ESL – 2nd year monitor(?) about ½ my students' parents do not speak English.
21. Not as well. Lack of resources
26. Similar. 3rd grade students perform similar to the other students
52. Similar. Some are doing extremely well and other that are fluent still have problems w/math.
53. Similar, if story problems are read to them.
54. Similar. This is our area of strength.
61. Very well. The ELL students are doing much better in math than students who are not ELL.
64. Similar. 99% Hispanic population – 40 – non Lep, 50% LEP classified stud. Limited English proficiency stud.
65. Similar. Because I exchange students with teacher who presents Sharon Wells in Spanish, the students do well.
67. Similar. It depends on their LEP status and when they transition.
70. Very well. The generally perform better at math than LA, probably because they achieve a comfort level quicker.
72. Similar. Our school is a low social/economic school, therefore our overall performance is lower.
82. Similar. I'm new at this school but at other schools my experience has been that ELL's perform similar or lower.
95. Similar. They really only have more difficulty with word problems or words in directions.
99. Similar. The ELL students perform better than general native speakers on computations and mastering math concepts. However, the ELL students fall behind on story problems because of language proficiency.
100. Similar. The first grade, my students perform pretty similar to the other students

10. Are you aware of the kinds of instructional and assessment modifications that should be used in order to make your lesson content comprehensible to your ELL students?

1. Yes, I am. Multiple representations must be allowed in all ELL classrooms as assessments. As well as, have to provide a feedback to the instruction in order to adjust and improve every math TEKS for the ELL class.
7. Yes and no. I conference with our bilingual teacher.
12. Yes. Follow Silver Burdet(?) curriculum instruction in native language always. Oral modification
13. Yes. I use their first language and picture clues.
14. Yes, but I am sure it differs per campus, classroom, and district.
18. Yes, I am somewhat aware, but I need more training. I received one day of training.
33. Yes, some of them, but we could use more.
36. Yes, I am sure that there are some I could use more training in.
40. Yes. Until this week (2/13/06) I was conducting math entirely in Spanish.
42. Yes. I am somewhat aware of instructional strategies that enhance learning for ELL students. Those same strategies enhance learning for ELL students.
43. Yes. Real life applications preferably in home language.
47. Yes, somewhat
49. Yes, some

- 52. No, not enough
- 54. Yes, I know of some, however I don't know if it is what you refer to.
- 58. No. I have come across a few broad techniques/ideas but they have mostly come from language arts training.
- 61. Yes. ELL students need a lot of visuals, manipulatives and hands-on activities to have a better grasp of concepts that are taught.
- 65. No, with the exception of small group, I am not aware.
- 67. Yes, somewhat. It's quite difficult with our scope and sequence pace.
- 72. Yes. Each teacher receives a folder with a check list of the student modifications to be used.
- 74. Yes. I'm aware of a few, but it would be good to get a refresher course once a year.
- 75. Yes, somewhat
- 88. Yes, somewhat
- 95. Yes. My math curriculum really has a lot of activities for ESL students and I know to explain everything that has words, use manipulatives and visuals a lot.
- 98. Yes and no. Using visuals and TK materials. The only assessment modifications: I usually read story problems to them if needed
- 99. Yes. We use mostly manipulatives, acting and many other strategies. EG. Total response
- 100. Yes. I have worked with ELL students my whole teaching career.

11. Would you support extended day opportunities for ELL students so that they can receive help with their schoolwork and/or participate in extracurricular activities?

- 1. Yes. I do agree for implementing before and after school support programs at all Texas schools. For different reasons most of the ELL children do not master 100% of all of the math objectives.
- 2. Yes, but only if the student's time is not wasted.
- 4. No. Not for early childhood – their day is too long already.
- 5. Yes. At our school we had after school tutoring 4 X 2 hr.
- 13. Yes. They do not have parents with much schooling to help them at home.
- 14. Yes. Currently, I tutor three days a week after school for an hour. I would support any extra help for these students, especially providing opportunities for them to participate in extracurricular activities.
- 23. Yes, as long as I don't have to participate.
- 24. No, due only to their age. Later I feel that their attention span would be long enough.
- 29. Yes, only to help with school work.
- 30. Yes. I tutor after school and I am the UIL number sense director. I encourage my ELL students to try out for the team.
- 33. No. Right now we have extended day for all students who need help passing the TAKS.
- 42. No. Elementary students currently receive a full day of instruction and structured time.
- 47. Yes. We already have extensions.
- 48. Yes. This is what most of our ELLs need in order to be successful academically.
- 52. Yes. We do.
- 53. Yes. Our district has a language center that caters to more ELL students.
- 61. Yes. We are currently offering tutorials for our ELL students to build-up and review concepts already taught and help them with their school work.
- 64. Yes. Many of these students are eager to learn the English language and the math

vocabulary.

65. No. Many of the ELL children who are now 2nd grade but have been in school since Pre-K are children who seem very tired at the end of the day.

70. Yes. I already provide additional tutoring opportunities for ELL or any other students as needed.

71. No. Just don't give as much work to them.

72. Yes. I currently provide after school tutoring twice a week and all my students are welcome to come and get help several times throughout the day.

82. Yes. We do that now. (And every school should have a chess team!)

95. Yes. A lot of the parents are unable to help with homework because they can't read or understand English enough to help.

98. Yes. Only if these uses support in student's native language

100. Yes. I feel very strongly in making sure that my students succeed in school by offering extended day opportunities for ELL students.

12. Would you encourage training on designing alternative assessment tasks and a meaningful assessment plan that uses a diversity of assessment measures to assess ELL students?

1. Yes, I would. It is a value way to get access to authentic outcomes of the learning.

13. I do not have enough data to answer this question.

14. Yes. I encourage any training that involves enhancing learning for ELL students. All students differ so educators must have an enormous amount of resources to choose from.

20. No, because the state of Texas still expects them to pass the TAKS test, so they should be tested similarly to regular education students.

42. Yes. Alternative assessments would be helpful only with the stipulation that it will be utilized during a transitional period of English language development.

55. Yes. Definitely!

65. No. Sharon Wells assessments are pretty good.

70. No. I believe assessments should be neutral and not "aimed" at any group. Maintain the standard. Insist upon it. Teach them. Motivate them. They will exceed the standard!

72. No. These students already feel lost because many do not speak the language and more time they spend out of the class being tested the further behind they will be.

75. Yes. If it didn't require more work than meaningfulness. Portfolios not time efficient.

82. No. TAKS is the target. ELLs can do well on TAKS.

100. Yes. We have to specifically design alternative assessment tasks to insure that ELL students succeed.

13. Would you support providing rigorous professional development for teachers of ELL students with a goal of introducing best practices into mathematics classrooms?

1. Yes I would, because I believe that "rigorous" professional development will help to move teachers perception about ELL to higher stages such as application to evaluation.

5. Yes, I would support the professional development; but at this time I can not provide the training.

7. Yes. Please! Yes!

13. Yes. Teachers always welcome measures in order to assist better our students.

14. Yes. Of course – anything that would help.
29. Yes. We desperately need this type of training.
36. Yes. I believe that all teachers should be life-time learners.
38. Yes, definitely
40. Yes. The training I have received via RAND/SAILL has been very good, in my opinion, but minimal.
46. Yes. This is a must!
47. Yes, possibly
52. Yes. Sounds great
54. Yes. The more quality professional development the better.
55. Yes. Definitely
65. No, not if it is on Saturdays. This district is stealing too many Saturdays already.
70. Yes. Depends on what you mean by rigorous professional development. Likely more of the same old – same old. In that case “No, I wouldn’t.” If you mean hold them accountable and make them get off their lazy butts and teach each and every kid and encourage them and mentor them and give them every opportunity and develop their abilities, then Yes.
72. No. I think training for best practices should be given to all teachers regardless of the types of students they teach, be it regular, ELL, or Special Ed.
77. Yes, we need it, so please help us.
82. Yes, for teachers with low performance.
85. Yes. Maybe at a reasonable cost. Many of these students’ parents do not put tax dollars into our government which would fund these programs. Our government is going broke already trying to pay for too many programs. If it costs our government too much, I’m against it. We also are spending money on many of their medical bills.
95. Yes. I know everyone wants to be trained and educate the best they can. We want our kids to be as successful as possible.
97. Yes. Math needs lots of concrete objects and tool, not expensive catalog toys. Everyday use materials connected with math.
99. Yes, definitely. Teachers can also use these practices for all students.

14. Are you interested in participating in a teacher focus group where the focal point will be to identify and discuss current teachers’ training needs for enhancing the effectiveness of mathematics instruction for ELL students?

1. Yes, I am, since my area of interest are ELL kids. I want to be involved in getting solutions to bring more resources over all teacher styles which are in touch with ELL students in math classrooms.
2. Yes, but only if you are not wasting my time.
7. Yes, depending on when it is scheduled.
12. No, not at this time.
14. Yes. I am always open to opportunities to learn or collaborate on projects assisting my students and others.
16. No. I am just a first year teacher and am so overwhelmed with everything else, I don’t think I can handle any more. Maybe next year.
23. No, absolutely not!!!
36. Yes. I would love to be part of a group that wants to help students in Texas.
45. No. Too many questions from me, instead of providing all the answers.

- 46. No. I am full of questions and at this time very few ideas.
- 48. Yes. I would like to participate if it fits my schedule with work and school.
- 52. Yes. During summer time, but in local area, region and service center.
- 54. Yes, possibly, but not this year.
- 70. No. It would take time away from my students and I don't see anything as worthwhile that does that.
- 72. Yes, any training to help my ELL students is more than greatly appreciated.
- 73. Yes, I am willing to do anything to make me a better teacher.
- 77. Yes, but not on a Saturday.
- 78. Yes. I'm always interested in participating in focus groups that will better the instructional practices for ELLs.
- 86. Yes, only if the groups meeting class to my school.
- 93. No. At this time I have several family issues that require my full attention. Perhaps at a later date.
- 94. No, not at this time.
- 96. No, not at this time. However, I would be interested in reading the results of such a group.
- 100. Yes, but not at the present time. I would love to participate in a teacher focus group but I wouldn't be able to commit at this time due to my father is ill; otherwise, I would.

16. If you could change one thing about your school's approach to educating ELL students, what would it be?

- 1. I would bring more technology connected with math TEKS. This program must be able to keep track on each level for each student throughout the school year. The scenarios need to be developed under the high order thinking umbrella and have formative assessments along with explicit directions for accommodations/modifications into inclusive and ELL classrooms.
- 2. I would increase the number of books available to ELL learners in their own language (library books).
- 3. I would change the fact that some students are not transitioned at the appropriate time.
- 4. For all teachers to appreciate these children's uniqueness and to tap in to their diverse culture and way of living to better serve them.
- 5. That trainings are offered to all (K-5) grade teachers.
- 7. I really like what our school does to educate ELL students. We have teachers for each grade level that work with beginning and intermediate students while advanced and advanced high students are mainstreamed into the main population. We have small class sizes for the beginning and intermediate students and even for advanced and advance high so that we can provide more one-on-one teaching.
- 9. Our district has worked hard to ensure that materials and curriculum are available to our teachers to serve our ELL population. One thing I would change is the special services teachers' training to better serve our students.
- 10. As the ESL 1st grade teacher, I have all ESL students in my class. I would change the number of total students in my class.
- 12. I believe our school is as school that supports bilingual education fully. I think we are currently, overall, doing a good job. Some teachers, however, could benefit from additional training. Especially in the Kindergarten level where native language instruction is crucial.
- 13. I am very glad with my school's approach. One thing we need is materials in their first language. A literacy specialist in Spanish would be very helpful since a lot of the problems they

have in math is in word problem solving. If they can't understand what they read, they can't understand the math problem.

14. I would make it possible for students to work in small groups or classroom settings. Currently, I have 24 bilingual students in a third grade class. Although they are willing to leave the groups as large, it is hard to spend quality time and individualized instruction with those that need it.

15. To give ELL students an opportunity to integrate their cultural customs into the setting of mathematical problem solving.

16. With all the other issues facing our school I believe all the ESL teachers do the best they can. There are a lot of techniques that should be and could be used w/all students not just ESL.

17. The implementation of each education program to be done the way it is meant to be. In other words really put the theory into practice in order to benefit all students.

18. I would try to include more opportunities for family support in addition to techniques taught at home.

19. More training. More academic and financial support.

20. I wish they could receive a true bilingual education so comprehension could be greater.

21. Eventually, I would like to see a dual language approach.

22. Not sure

23. Educate the regular ed teachers about ELL students – acquisition of a second language.

24. To allow all teachers to be certified in ESL or take at least a few workshops to know how to address the needs of these students.

25. I think it would be nice to have some training on how we can help our ELL students.

26. I'm open to suggestions, and would like to visit with other schools and educators. As far as our campus is concerned I feel we are doing a great job.

27. Some things to change at our school would be to have more Spanish resources. This includes text books, lesson plans, instructions, and computer programs. Smaller class sizes would also be beneficial to ELL.

28. If I could change one thing about my school's approach to educating ELL students it would be make sure that my ELL students are getting the small group and one on one time that they desperately need. I want to make sure that there is someone who can work with them on a set schedule.

29. What we can do so the student recalls information already learned.

30. The bilingual population at my school easily reaches 45%, yet, they are seen as "second class" citizens. The perspective needs to change.

31. I would like to see the day split where they learn English ½ day and work on their basic language skills the other ½ day.

32. Nothing. Our ELL teacher does a great job.

33. That the teacher be given more training on useful classroom techniques in order to help these students. Things that are proven to work, not just research.

34. Smaller classes for more individualized instruction.

35. Nothing

36. I believe that our district and school are trying to help ELL students, but we have not been faced with this problem in the magnitude that we are seeing today. We have a long way to go to be where we need to be to bring these students' math abilities up.

37. Have truly bilingual classes, with only ELL students in the classroom.

38. Group students according to language levels (proficiency levels) during content areas. We don't have teacher assistants; as a result it's difficult to allot appropriate language leveled

activities (not to mention academic disabilities (ADHD, ADD, dyslexia)).

39. I would change the personnel hired to support the classroom teachers of ELL students.

Support personnel NEEDS TO BE individuals that can address the LEP and non-LEP students.

40. Teachers' attitudes!!! I find a general sense of rushing students into English. Although I am new to the teaching field this approach is not yielding the results they yearn.

41. I believe ELL students need to be grouped homogeneously and need the same teacher for all subject areas or if school is departmentalized ELL teachers need to be team teaching and come up with a curriculum.

42. ELL students should be allowed use of home language texts in the classroom. Once students acquire a basic understanding of concepts, instruction in English becomes more meaningful.

43. I feel we would benefit more from a dual language program.

44. To be aware, informed and trained in any helpful resources.

45. Need to have more bilingual teachers per grade level; smaller classroom sizes. Started last year with 27 students; the aide for stated amount of time and expanded time. More Spanish materials and already translated.

46. Needs more bilingual teachers at each grade level. Smaller class room size (27 at beginning of school year.) Extended time of educational assistants in classroom. Translated materials ready for use.

47. Provide a bilingual instruction time for ESL students.

48. No change.

49. More time in the school day.

50. To have a better program. We are immersing them into English (basically) and not promoting their 1st language, as we should. We have a hard time getting qualified bilingual ELL teachers.

51. I would encourage teachers to differentiate instruction for ELL using ESL strategies such as pictures, labels, videos, repetition, hands-on, manipulatives, etc. to ensure student success. Some teachers do not like to deal with students who do not speak English fluently.

52. To change English speaking parents mind about Spanish students slowing down the learning process. Change parents' mind. Change childs' mind, then the ELL would feel accepted. I would like to see the ELL student open up more.

53. Our school has been very successful in training ELL students. Those who are very new to English go to the language center.

54. Less worksheets, more hands-on. Make math relevant and fun.

55. More training for ELL teachers to increase their English acquisition.

56. A more inclusive and well thought out for ELL students development over the course of their educational careers.

57. the language barrier may be a problem at times. I would like to see the parents learn the English language as well as the student. Communication would be better and the attitude from home would be more encouraging for the students.

58. Creating alternative assessment tools so that we can correctly assess our students' abilities rather than the current assessments which seem to test their language deficiencies in comparison to English speaking students.

59. We need to connect ourselves with things that are happening close to our community. We are too isolated. Need to travel more.

60. My school's approach to educating ELL students is comparable to the other students.

61. ELL students need a lot of vocabulary development during their ESL block in the lower

grades. ELL students need to be exposed not only to the oral English but the written as well.

62. If I could change one thing about my school's approach to educating ELL students, it would be that the lower grades need more instruction training on how to translate the students from oral to reading.

64. Teach the fundamentals in their native language but extend their English vocabulary intensely; double their math time, one for operations, the other for story problems, vocabulary.

65. I would stop mixing classes of ELL and non-LEP kids together. They should each have a teacher who can focus only on their needs, instead of having mixed classes where no one's needs are completely met.

66. I would like the students to be in different classes instead of grouping them together in the same class all day.

67. Vocabulary development of math terms. Students at 5th grade are sometimes unaware of concepts they have learned from previous years due to the correct terminology used. Once they see it, they remember learning it but not the words (terminology).

68. I'm pleased with our school's approach. The faculty and staff that work with this sub-population do well. I wish I could change our district's approach though. I would like for each school to teach "their own" students so they would not have to be bussed such long distances every day. (10 to 25 miles each way, away from their communities).

69. Allow us teachers to do more on "as per student needs" than to "follow curriculum".

70. Hold every teacher accountable to maintaining the highest standards for themselves and their students. Make the teachers teach and stop mollycoddling students. The kids want to achieve; some just don't know it yet.

71. Don't have many ELL students. We have more ESL students. Many of their parents are ELL or Spanish speaking.

72. Nothing. Our school educates the ELL population in a positive and caring way.

73. I think our school does an awesome job educating ELL students. The only change I can think of is having a teacher hired to assist in math area, especially for those students who arrive totally non-English speaking.

74. We are a dual language campus. I see the benefits of it compared to a transitional campus. Since it is my first year working with this kind of program I'm not sure I have enough experience to answer your question.

75. An immersion program for 1st year students. Exemption from TAKS in English for 5 years instead of 3.

76. Not exiting students from ELL in grades 3, 4, 5 to help strengthen their skills.

77. Not sure. Don't have enough exposure at this time.

78. Because I am currently split between 2 campuses I would love to devote my teaching expertise to one grade level. It would be nice to have the ELL students full time rather than 30 minutes a day as in our current pull-out program.

80. Cultural attitude

81. The accountability of the students from teacher to teacher.

82. I would like to see master math teachers at every grade level. I feel we need more specialization. We are a motivated bunch, given more opportunity we can do more. We need to be goal oriented in math, too! (We have TPRI for reading.)

84. Incorporating technology in the classroom. Using the basal is not enough. A pyramid connection has to be made (ie visual, cognitive and hands independent practice.) I currently have incorporated technology and I can see immediate results and engagement.

85. Our school is doing a quite adequate job with the education of the ELL students. We have

an ESL who pulls the students for instruction. We have tutorials or extended day to supplement classroom instruction for these students. In due time, if the students work hard, they improve w/their math skills, some quicker than others. We have Anglo children that struggle in math also. Our Asian students seem to be more gifted at math than the Hispanics and Anglos on the whole.

86. None, because we are currently working on helping ELL students.

87. I wish we had more small group instruction time that actually helped our students become successful. As is, no progress has been noted with my ELL students nor has there been an increase of test scores for ELL students over the past 3 years.

89. To integrate ASL into content area all day and not just during science and enrichment time. To allow more time for content areas to be taught using ASL and not having a specified period of time for each content area.

90. To make our faculty aware of the huge canyon that represents what ESLs face. They may look like they understand, but they only get pieces some times. A student who appears to be insolent may be just frustrated and confused. A gap in learning may mean that something that is a normal progression of skills for one student may be nonexistent for others.

91. I think every school should have a ELL teacher help each ELL student.

92. If I could change one thing about my school's approach to educating ELL students will be the amount of programs available for the students. Monolingual students have all these programs and bilingual or ELL students don't have any. Usually the teachers have to integrate or translate the program to teach it to the students and sometimes the objective is not taught. The training given to teachers is for monolingual students, not ELL, so it doesn't help the teachers teaching the ELL students.

93. I don't know that I would change anything. I would continue to use any and all training I received to teach my students. We have plenty of materials but of course having an extra person in the room to help monitor students during a math lesson would help. Anytime you have one on one assistance, student needs can be addressed immediately.

94. I would want a more focus on the necessary individualized attention ESL students need versus the needs of the group. I would also have all teachers become ESL certified, especially 3-5 grades. (Since we block, usually only one of the teachers are certified.

95. Employ more ELL teachers and give more opportunities for development classes specifically based on ELL students.

96. This year we're trying inclusion. It seems to work most of the time. At this point, this is the change we decided to try.

97. Use the 9 intelligence approach from Coxvey(?). Students need to feel intelligent. The ELL student can practice the languages through art, math and other forms of learning.

98. Our school provides much support for ELL students and their families. We have a bilingual counselor, a Spanish speaking lead teacher, bilingual librarian, all Spanish speaking. I would like to have a Vietnamese speaking aide or teacher to work with students and families.

99. A pull out program an hour a day to focus on language mastery.

100. As far as our students are concerned, I would like for our students to be developmentally mature or developmentally ready to be in first grade which would help them learn all that is needed to learned.

101. Employ an all level ELL teacher on the elementary side as well as the Jr. High and High school side.

Additional comments are appreciated and welcomed:

1. I am very glad for participating in this survey, offering real possibility for improving math teaching and learning, specially for students with diverse learning needs, increase the opportunities to be successful in a new Texas culture. For me, who grew up in Latino country and got my Bachelor in Engineering, the perception of math now here in the United States changed systematically for me. Now, I understand how difficult is the math acculturation for some ELL students as well as their parents. In addition, teachers play as well a crucial part in ELLs' education and for this reason, they must be soaked with this same acculturation.
14. I am surprised, yet excited about this survey. These are the real good questions that aren't often asked, yet you have obviously found a need to question instruction for ELL students. We are usually given a bilingual fund to purchase materials but the need is not necessarily with more resources or manipulatives, but training in current research and findings of assisting ELL students in mathematics.
20. I am uncomfortable putting my name on a survey that criticizes my employer. Please white out my name if my information is shared.
22. I think ELL training would be something else for me to do. I am already overworked having to find materials, translating, LPACing, etc... and I don't even get a stipend here in this district. I can use my time doing something I enjoy.
28. I am very happy to work in WISD, and especially in my school, C. C. Hardy, because they have a very good bilingual program. Furthermore I am excited to help with the surveys because it will benefit teachers, tutors, students, and the community.
33. I would like useful training (as stated in Question 16). I have sat thru many workshops where they never give us techniques that work. They just tell us what the student needs. I know what most of my students need. I need a way to address these needs and "get it" across to my students.
37. My students are considered ELL but they are not students who are considered "newcomers." They have been here for a period of time and do not need any special modifications or adjustments. Only adjustment made is translating information being taught in class.
38. "No Child Left Behind" has not provided additional funds/time allotment/people power to help facilitate instructional activities for such diverse levels of language training for our population. As an example, I currently have 2 recent immigrants with no previous schooling, 19 others with levels ranging from beginners/interim/advanced/advanced high. So much emphasis is being stressed on achieving benchmark levels in reading/math/English language.
41. Research has shown that ELL students do not perform well on standardized tests. We have tried different things at our campus but there is very little improvement. ELL students need specialized instruction on their language rather than to be immersed into the English language. As a bilingual teacher I strongly agree and believe that ELL students are not behind – they just need specialized instruction and teachers need a curriculum that addresses their needs as well as the TAKS test.
45. I feel the district has made a great effort to meet the needs of the ELL student. Parents feel welcome t schools that have Spanish speaking staff in the office and at the administrative level. I would like for the bilingual team to start attending the national conventions/State of Organizations such as TABE or NABE or more bilingual/ESL workshops.
46. Each grade level should have title help.
49. Good survey!

50. I do not feel that Texas universities are doing a good job in preparing ELL teachers for our public schools.
51. Training to work with ELLs should be mandatory for every single teacher in Texas. Texas has a very large population of ELLs who need better prepared teachers who care about their success and who will make sure ELLs receive equity and quality education.
52. Laws to be changed; ELL students testing, schedule. If they are not fluent, it is frustrating to them and to the teacher.
54. ELL students generally like math, but see little relevance of “school” in general. That is where the change needs to be – perhaps thru mathematics.
55. This would be interesting (the survey) for teaching reading w/ELL or bilingual students.
57. Our ESL teacher is a very caring teacher that works well with our students and families.
58. I believe a combination of ELL specific training in mathematics and appropriate assessment tools would greatly increase our students’ success. Our math test seems to be an English test, translated to Spanish, and is all written. It’s not very helpful in assessing ELL students’ abilities or areas of true need.
61. The administration should take a closer look at how lower grade teachers implement English instruction during their ESL block. ELL students are not given the opportunity to connect the oral with the written. Therefore, making more difficult for the 3rd, 4th and 5th grade teacher to prepare them for TAKS testing.
64. The students do not do well due to a limited vocabulary and many immigrants are coming to our school without any schooling from Mexico or United States. This makes it very difficult for teachers to group students.
69. I have seen many changes in my 27 Years of teaching. I believe that we just need the time to prepare necessary as per child needs materials. Sometimes, I personally need time to “make a game” for a particular skill and when we robotically follow the curriculum, well, we left Panchito behind with Maria. Children come as personal individuals, not as curriculum followers, and the same with their backgrounds. Every child has their own personal story that sometimes just needs to be heard at least once to be known. Knowing this background, we know what we are dealing with in the “curriculum.”
70. Teaching is an art – not a science. Give me teachers with a passion for teaching, a heart for their students, and you will see student achievements soar. All the “professional” development in world can’t equal that!
72. I feel that ELL students that enter this country should be given more than 3 years to develop their language before being tested on the TAKS. I also feel that LAT testing for the math TAKS should be offered to ELL students even after they are no longer TAKS exempt. As both an ESL teacher and a fifth grade math teacher for my ELLs that failed the fourth grade math TAKS, vocabulary and hands on learning seem to work best for these students.
76. Students are (departmentalized) grouped with the total grade, therefore not receiving necessary help in subject matters. It’s sink or swim, therefore losing ground in academic areas. Doesn’t seem fair, does it?
82. Having a person to help us evaluate ourselves, guide lessons and math goals would be very useful. We need time to process.
85. We have discovered on our campus that when the student (ELL) is mainstreamed with the regular classroom as much as possible, the student picks up the language and ideas better. They do need someone to translate words to them and work one-on-one though also. One must remember that even those with acquired language skills many times struggle with math. Some of us are good in math, some aren’t. With hard work, things are obtainable.

86. Currently and for the past years, I help write lessons in mathematics for 1st grade. One plan for all students that the teachers use. Every teacher is on the same page when it comes to math in our school. It has worked very well in our school. We also have placements that are reviewed every year and then follow the TEKS.

92. I feel that teachers teaching ELL should receive more training to help the ELL reach their academic success.

94. Because we are a Title I school, I have found that the ESL strategies work very well with our entire population. They are good strategies and should be taught by all teachers.

96. Region centers need to have more trainings offered for ELL/ESL teachers. Things change so quickly, it's difficult to stay ahead of the game – maybe they could help.

97. I will appreciate if somewhere you have a triple beam balance to teach grams to my kids. I used to help 11th graders that did not know how to use the TBB (70%). If anybody from that university wants to donate it, it will be appreciated, or any material connected to math. Thanks.

98. ELL teachers have progressively been encumbered with more and more paperwork to assess the reading and written skills of ELL students (ex. TOPS). Less emphasis placed on evaluating math because most ELL students tend to do better in math than reading until they reach TAKS age and most read independently the math problems. Teachers need training on how to teach ELL students to understand the language of math so they can comprehend the story problems.

100. If an ELL student is provided with a strong foundation of applying math best practices to everyday life, that child will truly succeed in life. When math is real and has meaning to a child and he/she can grasp any concept in math, believe me, he/she will enjoy learning about math or any subject for that matter.

Appendix C: MELL Focus Group Protocol

Personnel

- One or two facilitators who will nurture the process, but not participate. A facilitator will provide a 10-minute introduction, ensure that the group adheres to the schedule, focus lines of questions, ask for clarification of responses when necessary, and conclude the session with a summarization of the group's discussion.
- Five to ten elementary teachers with a significant population of ELL students

Supplies and Equipment (some optional)

Tablets, pencils, pens, bottled water, hard candies
Three flip charts, multiple colors of felt markers, adhesive tape
Nametags for participants and facilitators
Recording device and audio/video tape

Role of the Facilitator

- Collect useful information to meet the goals of the meeting (most important of all roles)
- Record the session and keep track of time. **If you use 60-minute recording tapes, please remember to change tapes after 60 minutes.**
- Carry out the agenda
- Carefully word each question
- Take notes on the flip chart (and in a personal notebook if necessary)
- Ensure all teachers are participating in discussions and that participation is evenly distributed. This is why nametags are so useful. If the same people seem to be dominating the conversation (or if some people are not participating in the conversation), then ask for opinions – perhaps by going around the table to ask each person to contribute a thought/opinion on a given topic.
- Close the session.

Procedures

Facilitator(s) Setup Duties (20 minutes prior to beginning focus group)

- Position the flip charts in convenient places throughout the room.
- List each question on the second page of a flip chart. It is important that the participants do not see the questions until the session actually begins.
 - Question #1 - What is good about professional development for teachers of English Language Learners in Texas?
 - Question #2 – What aspects of professional development for teachers of English Language Learners in Texas need improvement?

- Question #3 - What do you believe are the greatest professional development needs in Texas for enhancing mathematics instruction for secondary English Language Learner students?
- Meet and greet the participants
- Provide each participant with a notebook and pencil and/or pen
- Because we want all participants to be comfortable and relaxed, it also may be wise to have either bottled water for each participant or a pitcher of water with plastic cups. Hard candy is sometimes helpful if throats become dry while brainstorming.

Introduction (10-15 minutes)

- Start the recording device.
- Thank participants for participating and introduce yourself as the facilitator of the focus group.
- Explain the means of recording the session and assure the participants that the recording will not be viewed by anyone other than the researchers.
- If you have not already done so, ask each participant to complete a Lamar University Request to Pay Vendor (RPV) form and human consent form.
- If you choose, have each participant briefly introduce him/herself.
- Briefly review the structure of the focus group. (You can say ... We will meet for 1.5 to 2 hours today. My intentions are to introduce three questions for group discussion. It is important that everyone participates in the discussion through brainstorming, building on one another's comments, agreeing or disagreeing with one another, discussing personal experiences with students and teachers, etc... I have three ground rules: 1) Stay focused on the task that we are trying to accomplish; 2) Maintain momentum, and; 3) Achieve consensus on the best responses to the questions.)
- Briefly remind the audience of the purpose of the session. (You can say ... As we are all aware, the achievement gap in mathematics between the English Language Learner (ELL) student population and non-ELL student population demands action. The Texas State University System (TSUS) is part of a major funding effort to identify secondary mathematics teachers' training needs for enhancing the effectiveness of mathematics instruction for ELL students. The grant involves five TSUS universities and has a monetary value in excess of \$1,000,000. Our goal is to develop and provide a series of resources for secondary teachers of ELL students throughout the state of Texas, improving ELL student proficiency in the area of mathematics. We hope that the data that we gather from this focus group will significantly impact training needs for teachers.)
- Emphasize that your role is merely that of a facilitator because you want this to be more of a discussion among participants, not a lecture or revelation of your thoughts. Hence, all participants should keep the conversation going (as we know teachers can easily do).
- Ask if there are any questions before you begin.

Phase I (45-60 minutes)

- Introduce the three questions by removing or flipping the first page of each flip chart.

- Ask participants to brainstorm about the questions (5 minutes) with the intent of helping us identify training needs for teachers of ELL students.
- Begin with question 1 (although it is likely that responses will often address all three questions). Ask someone to begin the discussion on question 1.
- When you feel that an opportune segue to the next question presents itself, introduce the next question.
- Record comments on the flip chart under the respective question. As more comments are added, it will likely be necessary to tape a full page to the wall and continue writing comments on the next page. Please number pages. For instance, comments for Question 1 may be labeled Q1-P1, Q1-P2, etc...

Phase II (30-40 minutes)

- Ask participants to review the questions and the recorded information on the pages on the wall.
- Ask participants to rank the top five items for each question – go for consensus. Summarize all information gathered.
- As participants agree on the top five items, transfer the top ranked items to clean pages on the flip charts.

Phase III (10 minutes)

- Ask for any final thoughts, was this session helpful, etc...
- Thank participants again for coming and answer any final questions. They can call Dr. Richardson with any questions.
- They will receive their stipends via mail as soon as the paper work is processed at Lamar University.

Facilitator Post-Focus Group Task

Gather recorded tapes.

Gather notes made on flip chart. Put them in one pile.

Gather any of your written notes (clarify any scratching, ensure pages are numbered, etc...)

Write down any observations that you made during the session that you did not record.

Contact either Sandra Richardson sandra.richardson@lamar.edu or MaryE Wilkinson maryewilkinson@lamar.edu to finalize data pickup arrangements.

References

Morgan, D.L. (1988). *Focus groups as qualitative research*. London: Sage.

The TSUS MELL Project Web Site <http://www.tsusmell.org/pages/1/index.htm>