Engaging Students in Learning: A Focus of Differentiation of Instruction for ELLs

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PaTTAN’s Mission

The mission of the Pennsylvania Training and Technical Assistance Network (PaTTAN) is to support the efforts and initiatives of the Bureau of Special Education, and to build the capacity of local educational agencies to serve students who receive special education services.
PDE’s Commitment to Least Restrictive Environment (LRE)

Our goal for each child is to ensure Individualized Education Program (IEP) teams begin with the general education setting with the use of Supplementary Aids and Services before considering a more restrictive environment.

Outcomes of today’s webinar

• Modify and scaffold lessons for ELLs with attention to individual language and learning needs of the student

• Implement a planning template for ELLs to facilitate differentiation of instruction
Rationale

• Academic lives of our students

• Danielson Framework for Teacher Effectiveness

• Annual Measurable Achievement Objectives (AMAOs)

Rationale, explained . . .

➢ **Danielson Framework for Teacher Effectiveness**

  As 50% of teacher effectiveness in our schools will be assessed using the Danielson Framework for Teacher Effectiveness, it is essential that differentiation is evident in all teachers’ planning and instruction.
Rationale, further explained . . .

- **Annual Measurable Achievement Objectives (AMAOs)**
  
  This tool is the AYP for English language learners (ELLs).

  **AYP: All students :: AMAO: ELLs**

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**Act 48 Credits**

- Participate in February 14, 2013 Webinar
- Modify your own lesson, or one provided, to engage ELLs, using the *Template*, as demonstrated in this webinar by February 21, 2013
- Respond to a blog posting and post 1 subsequent and relevant question by March 14, 2013
## ACCESS for ELLs RESULTS

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>Level 6</th>
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<tr>
<td>Year 1</td>
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<td>13,393</td>
<td>10,905</td>
<td>5,562</td>
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</tbody>
</table>

### Chart

- Level 1
- Level 2
- Level 3
- Level 4
- Level 5
- Level 6
Performance Definitions (WIDA)

DEVELOPING (Level 3) Speaking & Writing
- Short and some expanded sentences with emerging complexity
- Expanded expression of one idea or emerging expression of multiple related ideas
- Repetitive grammatical structures with occasional variation
- Sentence patterns across content areas
- Specific content language, including cognates and expressions
- Words or expressions with multiple meanings used across content areas

Performance Definitions (WIDA)

DEVELOPING (Level 3) Listening and Reading
- Connected discourse with a variety of sentences
- Expanded related ideas
- A variety of complex grammatical constructions
- Sentence patterns characteristic of particular content areas
- Specific content language, including expressions
- Words and expressions with common collocations and idioms across content areas
Performance Definitions (WIDA)

EXPANDING (Level 4) Speaking and Writing
- Short, expanded, and some complex sentences
- Organized expression of ideas with emerging cohesion
- A variety of grammatical structures
- Sentence patterns characteristic of particular content areas
- Specific and some technical content-area language
- Words and expressions with expressive meaning through use of collocations and idioms across content areas

Performance Definitions (WIDA)

EXPANDING (Level 4) Listening & Reading
- Connected discourse with a variety of sentences
- Expanded related ideas
- A variety of complex grammatical constructions
- Sentence patterns characteristic of particular content areas
- Specific and some technical content-area language
- Words or expressions with multiple meanings across content areas
The Pennsylvania English Language Proficiency Standards (ELPS)

Standard 1: English language learners communicate in English for SOCIAL and INSTRUCTIONAL purposes within the school setting.

Standard 2: English language learners communicate information, ideas, and concepts necessary for academic success in the content area of LANGUAGE ARTS.

Standard 3: English language learners communicate information, ideas, and concepts necessary for academic success in the content area of MATHEMATICS.

Standard 4: English language learners communicate information, ideas, and concepts necessary for academic success in the content area of SCIENCE.

Standard 5: English language learners communicate information, ideas, and concepts necessary for academic success in the content area of SOCIAL STUDIES.

Language of the ELPS

English language learners communicate information, ideas, and concepts necessary for academic success in the content area of

LANGUAGE ARTS
MATHEMATICS
SCIENCE and
SOCIAL STUDIES
Communicating Information

Working with:
• Facts
• Terms
• Properties of objects
• Simple procedures or formulas

Communicating Information

• Recall elements and details of story structure, such as sequence of events, character, plot and setting.
• Conduct basic mathematical calculations.
• Label locations on a map.
• Represent in words or diagrams a scientific concept or relationship.
• Perform routine procedures like measuring length or using punctuation marks correctly.
• Describe the features of a place or people.
Communicating Ideas

• Compare/contrast
• Convert information from one form to another
• Classify or sort items into meaningful categories
• Describe or explain issues and problems
• Cause and effect
• Relationships
• Points of view

Communicating Ideas

• Identify and summarize the major events in a narrative.
• Use context cues to identify the meaning of unfamiliar words.
• Solve routine multiple-step problems.
• Describe the cause/effect of a particular event.
• Identify patterns in events or behavior.
• Formulate a routine problem given data and conditions.
• Organize, represent and interpret data.
Communicating Concepts

Includes the ability to:
• Analyze and evaluate
• State one’s own reasoning
• Explain and support with evidence
• Generalize
• Create

Communicating Concepts

• Support ideas with details and examples.
• Use voice appropriate to the purpose and audience.
• Identify research questions and design investigations for a scientific problem.
• Develop a scientific model for a complex situation.
• Determine the author’s purpose and describe how it affects the interpretation of a reading selection.
• Apply a concept in other contexts.
PA Standards Aligned System - Voluntary Model Curriculum (VMC)
ELL Template (Literacy and Mathematics)

Goal: To provide a systematic approach (template) to support differentiation of content instruction for English language learners

How to access:
www.pdesas.org/module/content/search/vmc.a spx - Click on template before lesson title; scroll down to “VIEW”; “Suggested Instructional Supports”

Utilization of VMC ELL Template
Suggested Systematic Supports

Based upon:

English Language Proficiency Level of the individual English language learner
Addressing VMC Mathematics Lessons

ELL Supports/Template

- **Preparation:**
  
  1. **Collaborate** with the ESL teacher to understand the students’ levels of English Language Proficiency (ELP) in each of the 4 domains (listening, speaking, reading and writing).
  
  2. **Clarify** the country of origin and source of other mathematics education. *If the student has received all education in the US, what follows may not be relevant to the ELL. However, it may impact the way family members support math assignments at home.*

- **Note the differences found in specific cultures regarding mathematics:** linguistic, conceptual, procedural. It is essential that you take into account the ELLs’ unique experiences, prior learning, and individual strengths to develop appropriate instructional strategies.
Mathematical concepts that may differ or be difficult for newcomers or ELLs educated in their home countries. . .

Adapted from McGraw-Hill Teaching Today

• **Measurement**

  Measurement may be especially challenging for ELL students, as their prior instruction most likely covered the metric system.

• **Fractions**

  Fractions may be unfamiliar to ELLs. Some ELL students may have come from an educational environment where decimals received more emphasis than fractions.

• **Geometry**

  The discipline of geometry in particular has many terms that may cause difficulties in understanding.

• **Algorithms**

  In some cases, algorithms may have been learned differently. Some ELLs may be used to algorithms that are different from traditional algorithms taught in your curriculum. Allow students the opportunity to share their algorithms. Use this as a learning opportunity by comparing algorithms and analyzing similarities and differences.
• **Standard(s) to be addressed:**
  3. Add English Language Proficiency (ELP) Standard(s) to be addressed in the lesson.

• **Vocabulary**
  4. Identify key phrases or new vocabulary to pre-teach.
  5. Be alert to terms that have multiple meanings (polysemous).
  6. Provide visual cues, (e.g., manipulatives, graphic representations, etc.)
  7. ELLs will need many opportunities to use these terms orally.
  8. Allow first language support.

Adapted from Colorín Colorado *Math Instruction for ELLs*
• **Lesson Objectives**

  9. With assistance of ESL teacher, following the district ESL planned instruction, select a language function for oral development during lesson

  10. Using WIDA Can Do Descriptors, plan performance indicator(s) for students at ELP level(s) listed above

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**The WIDA Can Do Descriptors**

Are statements of what ELLs “can do” at each proficiency level

• Can Do Descriptors provide indicators of effective teaching of ELLs in content classrooms
• Share them with content teachers
• Include them in walk-through protocols
• Download this document from the WIDA website: www.wida.us
Model Performance Indicators (MPI):

Language function + content stem + support

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Sample MPI

Language function

Content stem

Support

→ Explain the steps in the process of solving a long division problem with a partner

English Language Proficiency Standard 3: Mathematics.

Grade Level Cluster: 3-5  Domain: SPEAKING  Proficiency Level 4
Materials

- Select materials and examples that connect to the culture and experiences of all student groups.

- Where ELP level is low, choose shorter reading passages (ELP levels 1 and 2).

Procedures

- Make connections between these activities and students’ real lives.
- Focus on meaning
- Be flexible with students’ use of native language.
  - You may want to have your ELLs record answers or solution steps in their native language (ELP levels 1 and 2).
  - You may have their work translated, if desired. This will help ELL students focus on the concepts and reasoning involved, without being slowed or hindered by their developing language skills (ELP levels 1 and 2).
Formative Assessment

The same accommodations and scaffolding provided for instruction need to be implemented in assessment tools used with ELLs.

Sample VMC Mathematics Lesson with ELL Supports

Correlation (M-8-3-3)
• Preparation
• Standards
• Lesson Objectives
• Materials & Resources
• Procedures
• Instruction
• Formative Assessment
Preparation – Who are your ELLs?

- Luis
- Fernando
- Maria
- Miguel

Case Study 1 - Developing

Luis enrolled in US schools in grade 2 when he scored 2.5 composite on W-APT. Luis returned to Mexico for one year and re-entered school in the U.S. in grade 4 with a 2.5 composite score on W-APT. Now in grade 8, he scored 3.7 composite on ACCESS for ELLs in 2012. For Listening and Speaking he has scored 4.6. His literacy composite score was 2.4.
**Case Study 2 - Expanding**

**Miguel** was born in PA and has been in school since Kindergarten. His family speaks Spanish at home and Miguel qualified for ESL when he entered school. Now at grade 8, Miguel’s scores on ACCESS for ELLs indicate that he is at level 4.5 for listening; 5.0 for speaking; 3.9 for reading and 3.6 for writing. His composite score is 4.3.

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**Mathematics Curriculum Lesson - Correlation (M-8-3-3)**

**Standards**

*Grade Level: 8th Grade*

- **2.6.7.E** - Interpret trends and make predictions based on data displayed in a graph.

- **2.6.8.A** - Understand and apply sampling techniques to gather data including simple random sampling and convenience sampling.

- **2.6.8.C** - Calculate quartiles for one-variable data and describe the correlation coefficient for two-variable data displayed in a scatter plot.
Include

PA English Language Proficiency Standard

**Standard 3:** English language learners communicate information, ideas, and concepts necessary for academic success in the content area of **MATHEMATICS.**

Vocabulary

- Identify key phrases or new vocabulary to pre-teach: *correlation, graph, scatter plot*
- Identify words with multiple meanings (polysemous): *bar, line, weak, strong, positive, negative*
  
  *Allow multiple opportunities for oral language use of new words.*
Lesson Objectives

• Create and explore scatter plots.
• Analyze strength of the relationship via line of best fit and correlation coefficient.
• Plot and analyze a real-world sequence and make further analyses/connections.
• Develop a study involving two variables.

Lesson Objectives:

Math Objective: Create and explore scatter plots.

Language function objective: Discuss, compare, and analyze scatter plots.
Materials: Include multiple visuals.

- Scatter plot
- Bar graph
- Graphic organizers, i.e., *Frayer Model, Concept Maps*
- Manipulatives
- Diagrams
- Ruler (Paper rule)
- Graphing calculators
- White boards
- GeoGebra (free geometric software)

Differentiate your instruction.

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**Discuss** the steps used to solve a problem (describing a correlation) using a scatter plot within a small group.

**Compare** predictions based on different survey results or graphs, i.e., bar, line, circle, scatter plot, using technical language with a partner.

**Analyze and present** a real-world sequence and make further analyses/connections, based on various survey results or graphs, i.e., bar, line, circle, scatter plot.
Procedures

• Explain the idea of sampling techniques, both random and convenience sampling. Provide examples of choosing a random sample.
• Examine various types of correlations using diagrams. Examine scatter plots that show two characteristics of the same population, as well as characteristics of different populations.

Scaffolded Procedures

• Enter a set of data, plot the data on a coordinate grid, and determine the equation for a line of best fit in a small group. For best practice, review the activity . . . Model the steps for the students.
• Encourage students to use various technological means to graph a scatter plot. Consider walking through several examples and using frequent formative assessment while explaining this concept.
Scaffolded Procedures . . .

• Discuss the *Golden Ratio* with respect to body measurements. Consider walking through several examples and using frequent formative assessment while explaining this concept. (Consider ratio of distance between finger and elbow and distance between wrist and elbow).

• Have students help you create a table, illustrating the measurement ratios and description of each body ratio.
  *Level 3 (Luis): Compare and/or contrast data using a graphic organizer.
  *Level 4 (Miguel): Create an appropriate table for a given set of data working with a partner.

Scaffolded Procedures . . .

• Using GeoGebra (a free geometric software), demonstrate how to create a scatter plot for the ratios. (Students must decide how many points to plot).
Scaffolded Procedures . . .

• Ask students to make generalizations regarding the plot. What is the shape of the plot? Does there appear to be a correlation among the points? If so, what kind of correlation is seen? Can you see a connection between the scatter plot and the golden ratio?

➤ Allow student discussion as these questions are being posed. Plan in advance what to do if students do not seem to understand, as well as develop assessing and advancing questions to help the students as they begin to make connections.

Scaffolded Procedures . . .

• Divide students into groups of four or five. Ask each group to make a brief presentation to the class on any topic related to correlation and scatter plots.

*Level 3 (Luis): Explain the steps used to compare and/or contrast data on scatter plots as depicted visually within a small group.

*Level 4 (Miguel): Analyze and evaluate the steps used to interpret data on scatter plots within a small group.
• Have students individually develop a study, whereby they determine a problem; design a plan; collect, analyze, and interpret data; and make predictions. Students will present their findings and visual representations to the class. *Consider allowing students to complete this task in small groups (4-5) or as partners where the groups or partners have been strategically selected by the teacher.*

### Formative Assessment

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</tr>
</thead>
<tbody>
<tr>
<td>Developing</td>
<td>Expanding</td>
<td>Bridging</td>
</tr>
<tr>
<td>Summarize data found on</td>
<td>Explain and support with evidence data found on various scatter plots</td>
<td>Collect, analyze, and interpret data found on various scatter plots.</td>
</tr>
<tr>
<td>scatter plots with a partner.</td>
<td>within a small group.</td>
<td></td>
</tr>
</tbody>
</table>

2/12/2013
PA Common Core Standards and ELLs

Instruction for ELLs needs to be rigorous, grade-level appropriate, and all teachers need to provide students with deliberate support and opportunities to:
- describe their reasoning,
- share explanations,
- make conjectures,
- justify conclusions,
- argue from evidence, and
- negotiate meaning from complex texts.

Participation in Blog: “Engaging Students in Learning: a focus on differentiating instruction for ELLs”

1. Please go to: http://moodle.pattan.net/login/index.php
2. Click on the "Create New Account" button
3. Type in the information requested (user name, password, etc.)
4. Click on “Create My New Account”
5. The system will then send an email to the email address you provided with additional instructions on how to complete the registration process.
6. When you receive the email, click on the URL in the email (or copy it from the email into your browser window).
7. Then click on the name of the course/ Blog you would like to enroll into. (Engaging Students in Learning: A Focus of Differentiation of Instruction for ELLs)

8. Enter the enrollment key ( ELL23896 ) and click on the "Enroll me in this course button"

9. Once you enter the course, please click on question 1 to answer.

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**Resources**


The English Language Proficiency Standards are at the following website: [www.pdesas.org](http://www.pdesas.org)

Can Do Descriptors [www.wida.us](http://www.wida.us)

Colorín Colorado [http://www.colorincolorado.org/educators/](http://www.colorincolorado.org/educators/)