





Developing Emergent Bilinguals' Language in Mathematics Class

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Welcome

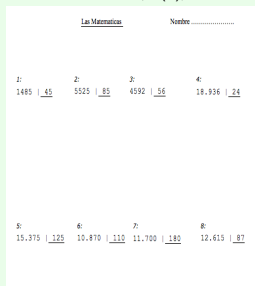
- What do you **appreciate** today? 
- What do you already **know** about developing language in math? 

Emergent Bilinguals

1. English Learners, ELLs: **deficit language**.
2. Our goal is for students to be **bilingual**, not English learners.
3. **Emergent bilinguals**: values both languages.

Taken From:

Ewing, J. (2017). Facilitating pre-service teachers to learn the Mathematical Practices and engage English language learners. *The Journal of Multicultural Affairs*, 2(1), 1-5.



Developing Language

1. How did you **feel**?
2. Did I teach you **Spanish**?
3. How could I have developed your **language**?

Developing Language

1. Yes, develop **language** in all classes, including math class.
2. When providing **access**, we also need to develop language.
3. We need to share the **discourse**.
Teachers speak too much.

Ewing, J. (2018). Considering ELLs when planning lessons. *Ohio Journal of School Mathematics*, 78 (1), 52-56.

All 4

1. Opportunities to **listen**.
2. Opportunities to **speak**.
3. Opportunities to **read**.
4. Opportunities to **write**.

Ewing, J., Gresham, G. & Dickey, B. (2019). Pre-service teachers learning to engage all students, including English language learners, in productive struggle. *Issues in the Undergraduate Mathematics Preparation of School Teachers: The Journal*, 2, 52-56.

Brain Breaks

1. **Tiring** to learn content in another language.
2. Being **bored** has a -.49 effect size.
3. Take **brain breaks**.

Almarode, J. et al. (2019). *Teaching Mathematics in the Visible Learning Classroom*. Corwin.

Bring in Books

1. Reading books to **hook** students before math can develop language.
2. But are the books **culturally responsive**?
3. **Considering ELLs** when Planning Lessons (Ewing, 2018).

Ewing, J. (2018). Considering ELLs when planning lessons. *Ohio Journal of School Mathematics*, 78 (1), 52-56.

Silent Phase

1. Students may go through a **silent** phase for 6 weeks.
2. **Respect** students and do not call on them, especially not in whole class discussions.
3. Emergent bilinguals need to be in **language rich** classrooms.

Pair Share



1. Intimidating to share in front of **whole class**.
2. Avoid saying "**Raise** your hand..."
3. **Pair share**.

Reciprocal Teaching

1. Effect size of **0.74**
2. Develops language because students are **listening** and **speaking**.
3. Originally was used in **reading**.

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Reciprocal Teaching

1. With a neighbor, **predict** what reciprocal teaching means.
2. Predict how we could use this reading strategy in **math**.
3. **Hint**: predict, clarify, solve, summarize.

Almarode, J. et al. (2019). *Teaching Mathematics in the Visible Learning Classroom*. Corwin.

Predictor

1. Predictor could **guess** which operation are necessary to solve the problem.
2. Predictor can guess a **sensible** answer.
3. How might **predicting** help EBs develop language?

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Clarifier

1. Clarifier can make sure everyone in the group knows the **vocabulary words**.
2. Clarifier discusses with group the **steps** needed to solve.
3. How might **clarifying** help EBs develop language?

Almarode, J. et al. (2019). *Teaching Mathematics in the Visible Learning Classroom*. Corwin.

Solver and Summarizer

1. **Solver** discusses each step of the problem as they solve together.
2. **Summarizer** reflect on the process and how they could refine the process in the future to do even better.
3. How might **solving and summarizing** help EBs develop language?

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Summarize

1. **Summarize** the steps of reciprocal teaching.
2. **Analyze** how reciprocal teaching could work in your class.
3. How might **reciprocal teaching** help EBs develop language?

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Reciprocal Teaching

1. **Predict, clarify, solve, summarize**
2. Students get a chance to **teach**.
3. Helps **develop language**.
4. High **effect size**.

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Review Often

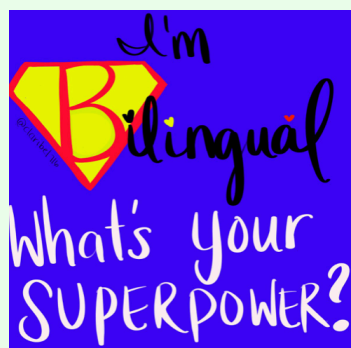
1. What **strategies** have I used today to develop language?
2. **Which** strategies might you use in your class?
3. Please write for **3** minutes.

Storytelling



Please leave your email address for updates.

Let's Appreciate EBs



High Expectations

Let's raise our
expectations for
EBs.
Self-efficacy = .92



**Thank you.
Enjoy the rest of your
conference.
With gratitude.
Jim**

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