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# Strategies To Enhance The Positive Effects Of Bilingualism

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Strategies to Enhance the Positive Effects of Bilingualism

by

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A capstone project submitted in partial fulfillment of the requirements for the degree of Masters

of Art in Teaching

Hamline University

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## Project Summary

The objective of my capstone process was to turn existing academic studies into something that teachers would be able to utilize in their everyday classrooms. I created a website containing targeted bilingual strategies to support our bilingual students with the intention for them to be utilized by educators in their classrooms. These strategies not only support our bilingual students but also our EL students, low academic performing students, and monolingual students and educators. Specifically, the website seeks to disseminate some of the answers to my research question: *What strategies are available to educators to enhance the positive effects of bilingualism?* This website starts out as a collection of four strategies that support bilingualism. I will add more strategies in the future: some that I find myself and some that other educators share with me. This supports the notion that educators should always continue to build upon the resources and tools they have and always do their best to support the growing bilingual and EL student body.

The first thing visitors to my website see is an introduction about myself and an overview of the strategies included within the site. To the right of the the 'home' button is a section labeled 'positive effects of bilingualism', where readers can read about who benefits from bilingualism, as well as read some of the current research on bilingualism.

In this section, I explain the outdated research on bilingualism where code-switching was once seen as language confusion and compare it to the current research which shows that code-switching happens when students are trying to connect their home language with their socializing language and is beneficial for learning in both languages (Mohr et al., 2018). The 'studies about

bilingualism' subsection of this dropdown menu includes four different research studies which together give visitors a brief overview of the positive effects of bilingualism. The first three studies explore the benefits of presenting academic questions and problems in students' native tongue (L1) as well as learned language (L2). The first featured study concluded that providing students with questions in other languages in addition to English leads students to a greater understanding of and ability to apply the problem to their own lives (Bautista, Mitchelmore, & Mulligan, 2009). The second study found that when problems were just presented in a students' second language, students experienced more failure in finding a solution (Bernardo & Calleja, 2005). The third study revealed that when word problems are presented in their L1, students are better able to fully explore and engage in the problems and demonstrated a deeper level of understanding of the subject matter and its application to other problems in the future (Bernardo, 1999). The final study explores the lasting effects of bilingualism, and found that if the boost given by childhood bilingualism is sufficiently strong, bilingualism may continue to influence certain control processes throughout the life-span such as fluid intelligence, cognitive flexibility, and attentional control. I decided to include this last study to show that encouraging bilingualism at an early age can have positive effects throughout students' lives. Each of these studies were included to represent a different aspect of a student's interaction in the classroom: a student's success in the classroom, their understanding, their engagement and exploration, and finally the rest of their lives when they are no longer students.

Next on the navigation menu are the four different strategies currently included in the website. The first strategy is the Routine, Integrated, Structured, and Academic (RISA) strategy. It was developed by Jill A. Watson Ph.D, and requires the educator to create a dialogue and

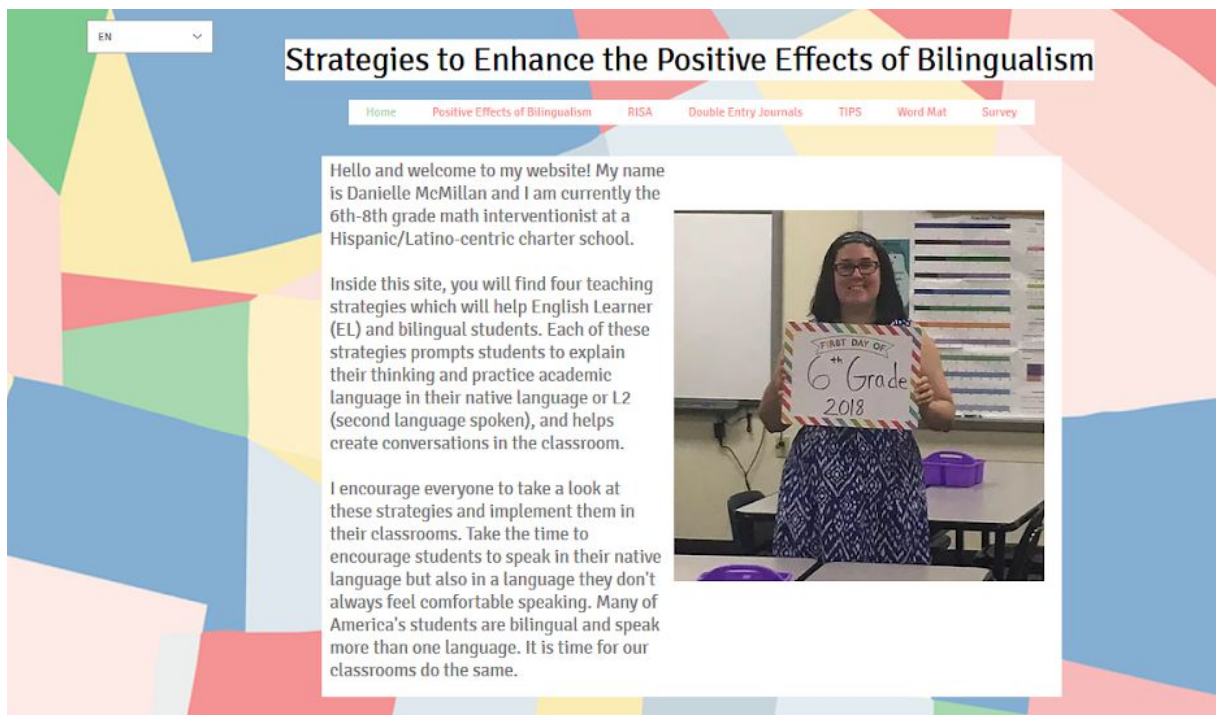
visually display it for the class, often on a poster. The educator must also decide on the partnership strategy for the activity; will it be a high/ low partnership where one partner has a higher language or content area than the other person, or will students be grouped according to EL level? The website includes different examples of RISA in math, reading, and science, and also presents an example in the three most prevalent non-English languages in Minneapolis Public Schools: Spanish, Somali, and Lao (Hmong). Each RISA strategy in English has a translated version in one of these three languages.

The second strategy on the website is the double entry journal section. Double entry journals allow students to write out their responses to questions posed to them in whatever language they prefer. The students draw a line vertically down their piece of paper or a notebook and write a response to a question posed to them. For example, if given a math problem on the left side of the column, students solve the problem with simple mathematical formulas and processes. On the right side of the paper, students write out the thinking and reasoning processes they used to solve the problem. Students are able to respond in any language they feel comfortable with, which helps bilingual students engage with the learning material. As with the RISA section, also included different ideas for a double entry journal in math, reading, science, and social studies and provided translations for them into the three previously listed languages.

The third strategy visitors see on the website is the Think, Ink, Pair, Share (TIPS) strategy, where educators give students a question and students have to first think about the question for a minute, then write about it for a minute, share with a partner for 1-2 minutes and then share out to the whole class in whatever language they choose. This strategy encourages students to activate the primary areas of language: reading, writing, and speaking. The website

includes a list of TIPS-ready questions for each of the primary education subjects. Each of these lists of questions is also translated into one of the three main languages I referenced throughout this section.

The final strategy I included in the website is the Word Mat strategy. This strategy helps students learn the vocabulary they need to understand for their lesson. Students first write the vocabulary word, then write the definition of it and draw a picture for that word. On the bottom half of the paper, students must rewrite the word in another language so they are practicing and expanding their vocabulary in more languages than English. To create examples for this strategy, I divided each word mat by content area and combined potential language pairings. For example, my math example is geared towards bilingual English- Spanish students. Overall, there were a lot of moving pieces to the website but I believe that these strategies and this website will resonate with educators.



The image shows a screenshot of a website with a colorful geometric background. At the top left, there is a language dropdown menu set to 'EN'. The main title is 'Strategies to Enhance the Positive Effects of Bilingualism'. Below the title is a navigation bar with links: Home, Positive Effects of Bilingualism, RISA, Double Entry Journals, TIPS, Word Mat, and Survey. The main content area features a white box with text and a photo. The text reads: 'Hello and welcome to my website! My name is Danielle McMillan and I am currently the 6th-8th grade math interventionist at a Hispanic/Latino-centric charter school. Inside this site, you will find four teaching strategies which will help English Learner (EL) and bilingual students. Each of these strategies prompts students to explain their thinking and practice academic language in their native language or L2 (second language spoken), and helps create conversations in the classroom. I encourage everyone to take a look at these strategies and implement them in their classrooms. Take the time to encourage students to speak in their native language but also in a language they don't always feel comfortable speaking. Many of America's students are bilingual and speak more than one language. It is time for our classrooms do the same.' To the right of the text is a photo of a woman, Danielle McMillan, holding a sign that says 'FIRST DAY OF 6th Grade 2018'.

**A: Hey \_\_\_\_\_!**  
**B: Hey \_\_\_\_\_! What's up?**  
**A: Oh nothing, I just figured out how to solve one step equations.**  
**B: Great! Can you help me with this problem?**  
**A: Sure!**  
**B: The equation is \_\_\_\_\_ how can I solve this?**  
**A: You need to use the inverse. The inverse of \_\_\_\_\_ is \_\_\_\_\_. Do that on both sides of the equal sign.**  
**B: Oh! So the variable equals \_\_\_\_\_. Thanks for your help!**



**Student Objective:** I can solve one step equations using inverse operations such as multiplication/ division and adding/ subtracting.

**Academic Vocabulary:** equations, one step, inverse, variable

**Example of responses:**  
A: Hey Dani!  
B: Hey Kyle ! What's up?  
A: Oh nothing, I just figured out how to solve one step equations.  
B: Great! Can you help me with this problem?  
A: Sure!  
B: The equation is  $3x=12$  how can I solve this?  
A: You need to use the inverse. The inverse of multiplying is dividing. Do that on both sides of the equal sign.  
B: Oh! So the variable equals four? Thanks for your help!

## Diarios de doble entrada de matemáticas

Ejemplo de una respuesta de un estudiante

Problem/Solution	Thinking Response
?	
?	
$3x+3=12$ $-3 \quad -3$ $3x=9$ $/3 \quad /3$ $x=3$	<p>Primero, reescribo la ecuación en mi papel. Luego trato de obtener <math>x</math> por sí solo en un lado. Tomo el inverso de sumar 3 que es restar tres y hacer eso a ambos lados de la ecuación. Luego reescribo lo que tengo ahora. Todavía necesito <math>x</math> por sí solo, así que divido 3 en ambos lados de la ecuación. <math>x</math> es igual a 3</p>

## Social Studies TIPS

Below is a given list of questions that could be asked while implementing the TIPS strategy

- What are pros and cons of the Lewis and Clark expedition?
- What are current events that may impact your life?
- If you could create your own appreciation month what would it be for?
- What is a different continent you would like to live on?
- What is something that you need vs want?
- What is something that happened in U.S history that has shaped our society?
- What is one invention you are thankful for?

### Science and Somali Bilingual Word Mat

Biology Definition	Heredity Definition	Gene Definition	Trait Definition
Picture	Picture	Picture	Picture
Biology qeesidda	Dhaxalka qeesidda	Gene qeesidda	Sifo qeesidda

Presented above is an example of a science and Somali word mat. In this example the vocabulary words have to deal with life science. Students will learn the words biology, heredity, gene, and trait.

A link to the website can be found here: <https://www.focusbilingually.com/>

The user can select the language of Spanish, English, Lao, or Somali in the website.



## References

- Bautista, D., Mitchelmore, M., & Mulligan, J. (2009). Factors influencing Filipino children's solutions to addition and subtraction word problems. *Educational Psychology, 29*(6), 729-745. <https://doi.org/10.1080/01443410903254591>
- Bernardo, Allan. (1999). Overcoming Obstacles to Understanding and Solving Word Problems in Mathematics. *Educational Psychology - EDUC PSYCHOL-UK, 19*. 149-163. [10.1080/0144341990190203](https://doi.org/10.1080/0144341990190203).
- Bernardo, A., & Calleja, M. (2005). The Effects of Stating Problems in Bilingual Students' First and Second Languages on Solving Mathematical Word Problems. *The Journal of Genetic Psychology, 166*(1), 117-129.
- Bialystok, E., Craik, F. I. M., Klein, R., & Viswanathan, M. (2004). Bilingualism, Aging, and Cognitive Control: Evidence From the Simon Task. *Psychology and Aging, 19*(2), 290-303. <http://dx.doi.org/10.1037/0882-7974.19.2.290>
- De Houwer, A. (1990). *Cambridge studies in linguistics. The acquisition of two languages from birth: A case study*. New York, NY, US: Cambridge University Press.
- Lanza, E. (1997). *Language mixing in infant bilingualism : A sociolinguistic perspective / Elizabeth Lanza*. (Oxford studies in language contact). Oxford [England] : New York: Clarendon Press ; Oxford University Press.

Mohr, K., Juth, A., Kohlmeier, J., & Schreiber, S. (2018). The Developing Bilingual Brain: What Parents and Teachers Should Know and Do. *Early Childhood Education Journal*, 46(1), 11-20.