

WELCOME VELKOMMEN
BIENVENUE WELKOM
VITAJTE VÄLKOMMEN
DOBRO DOŠLI WITAJCIE
WILICOM WILKOMMEN
KALOS HPΘATE VELKOMEN

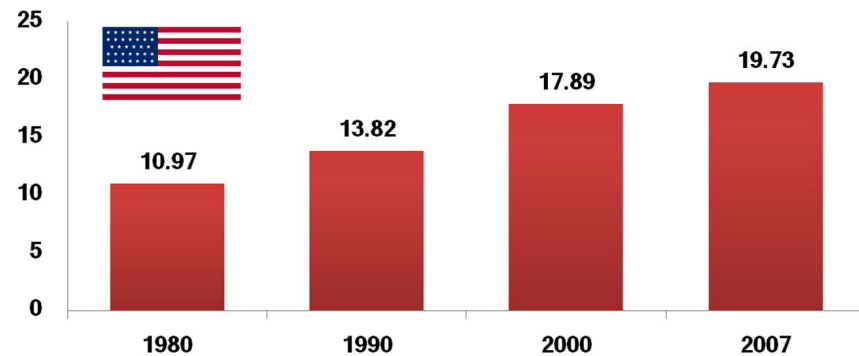
The background of the slide is a light beige, aged paper texture. On the left side, there are several black ink splatters of varying sizes, some with fine lines radiating from them, suggesting a fountain pen or brush. The splatters are most concentrated on the left edge and fade towards the center.

Bilingualism and Language Delay: Fact or Fiction

Zachary Sellers & Rachel Goldstein
DBP Block 5
6-November-2012

Common myths

Percentage of US Population who spoke a language other than English at home by year



Source: U.S. Census Bureau, 2007 American Community Survey

- Bilingualism causes language delay
- Bilingualism causes language confusion
- TV is great for teaching a second language!
- Bilingualism impairs cognitive ability

Bilingualism definitions/development

- Simultaneous bilinguals
e.g., One-parent, one-language
- Sequential bilinguals
e.g., L1 → L2 speakers, language immersion



Not what we mean...

"...and I'm proficient in two languages
— English and text messaging."

Bilingualism and language delay...

○ MYTH!

○ Dominance in one language ≠ disorder in another

○ Ideal testing for bilinguals?

Bilingualism and language confusion...



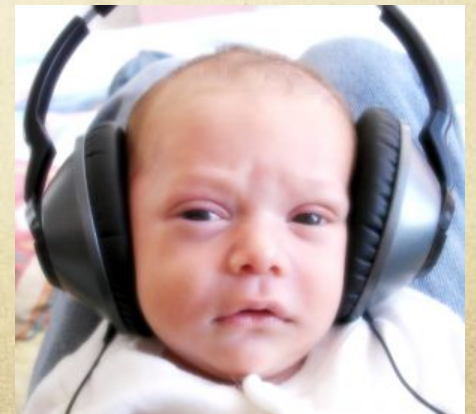
○ MYTH!

- Code-switching = MASTERY
- One-parent, one-language
 - Quantity and quality are key!

Language learning and technology...

- Save your money (and your eyesight)!
- In person language exposure is best

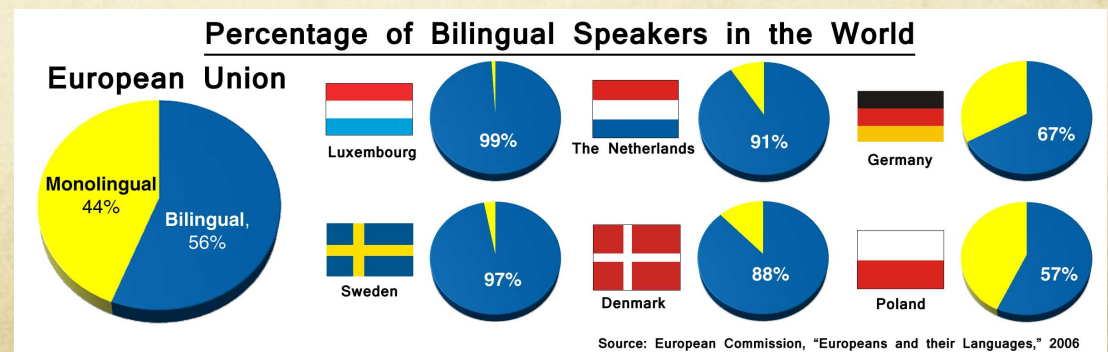
Good for your playlist, but
language development?



Bilingualism impairs cognitive ability...

○ MYTH!

Despite your political views, no evidence that Europeans are dumb...



Are there any benefits?

- According to Zucker Parker Handbook¹:
 - Language: increased phonemic awareness. Improved ability to breakdown words into sounds - foundation for reading/writing
 - Academic: increased ability in math and understand what things mean
 - Cultural: enhanced cultural awareness
 - Increasing global community
 - Other: better abstract thinking, grasping rules, processing, creativity, cognitive flexibility



¹Augustyn et al. The Zuckerman Parker Handbook of Developmental and Behavioral Pediatrics for Primary Care. 3rd Ed, 2011

What Does the Research Say?

Research shows that people who speak a second language are deemed more attractive.

Maybe...but that is not what we are going to tell our families

What Does the Research Say?

- Majority of studies performed on preschoolers (ages 3-5)¹
 - However, advantages have been noted as early as 7 months²
- Most studies examine executive functioning
 - Since bilinguals learn two sets of rules, they learn more from a mixed input, which requires cognitive flexibility³
 - Ex: “Apples grow on noses.”⁴
 - Monolingual: “That’s silly” and they stall
 - Bilingual: “It’s silly, but it’s grammatically correct”
 - Bilinguals manifested a cognitive system with the ability to attend to important information and ignore the less important.



¹Psychological Science. 2009 10, 89-129

²PNAS USA. 2009 106, 6556-6560

³Dev Sci. 2012 Nov;15(6):812-6

⁴http://www.nytimes.com/2011/05/31/science/31conversation.html?_r=0

What Does the Research Say?

- Faster and more accurate anticipation¹
- Improved task-switching²
 - Dependent on how often one switches between languages on a daily basis
 - Spanish-English *vs.* Mandarin-English
- Improved executive functioning³
 - Bilinguals/trilinguals > second-language learners > monolinguals
- Improved working memory⁴
 - Especially when task contains executive function demands

¹Dev Sci. 2011 Mar;14(2):256-69.

²J Int Neuropsychol Soc. 2011 Jul;17(4):682-91

³J Exp Child Psychol. 2012 Dec;113(4):535-51

⁴J Exp Child Psychol. 2012 Oct 8. Epub ahead of print

Bilingualism keeps on giving

- Advantages with executive function, working memory, and multitasking continue into adulthood^{1,2}
- Ex: Monolinguals and bilinguals in a driving simulator
 - Through headphones, gave them extra tasks to do – as if they were driving and talking on cellphones. Then measured how much worse their driving got.
 - Everybody's driving got worse, but bilinguals' driving didn't drop as much
 - Do NOT recommend multitasking while driving, regardless of language abilities!!



¹Psychology and Aging, Vol 19(2), Jun 2004, 290-303

²http://www.nytimes.com/2011/05/31/science/31conversation.html?_r=0

Bilingualism keeps on giving

- Lifelong bilingualism maintains white matter integrity and functional connectivity with age¹
- Bilingualism may delay Alzheimer's Disease²
 - Diagnosed 4.3 years later
 - Symptoms 5.1 years later
 - No evidence that it prevents Alzheimer's Disease



¹J Neurosci. 2011 Nov 16;31(46):16808-13

²Neurology. 2010 Nov 9;75(19):1726-9

Potential Questions from Parents

- When to start teaching/speaking another language?
 - As early as possible - skills related to length of exposure
 - Earlier speech exposure does not accelerate speech acquisition¹
 - Womb is high-frequency filter
 - Preterm infants gain increased exposure, however, acquisition is correlated with brain maturation



Potential Questions from Parents

- If I didn't start as a baby, is it too late?
 - No - ability to transfer skills from one language to another
 - Native-like annunciation easier for younger children
 - Grammar, vocabulary, syntax, and literacy easier for older individuals due to transfer
- I don't speak another language, can my baby learn one?
 - Yes
- Does my child have to attend an international school?
 - No

Clinical Example

- 2 year-old Chinese Male
- Recent diagnosis of Autism
- Speech and language delay – only saying a couple of words
- Parents speak Mandarin and some English
 - How can parents help their child improve language?
 - Should parents speak Mandarin, English, or both at home? Outside of home?
 - Does he need speech therapist fluent in Mandarin, English, or both?

Not the answer...



References

- Center for Applied Linguistics. (2010). *Raising bilingual children: common parental concerns and current research*. Washington, DC: King, K. & Fogle, L.
- Callan, E. Critical review: does bilingualism slow language development in children? [dissertation] Univ. Western Ontario, 2008.
- Kohnert, K. Bilingual children with primary language impairment: issues, evidence and implications for clinical actions. *J Commun Disord*. 2010; 43(6): 456-473.