



rijksuniversiteit
 groningen



| 1

Myths about multilingualism

Kees de Bot

University of Groningen

University of Pannonia





Myths?

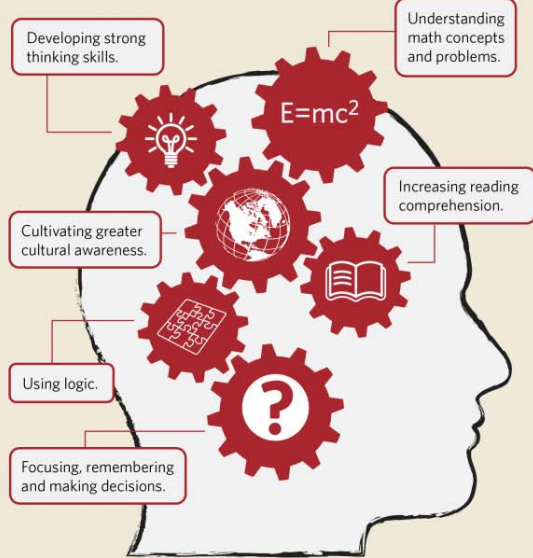
- › ‘an imaginary or fictitious thing or person.’
- › ‘an unproved or false collective belief that is used to justify a social institution.’



Benefits of a Bilingual Brain

Splash language immersion programs provide a unique and powerful opportunity to strengthen children's highest cognitive brain potentials through deliberate literacy development in two languages and authentic exposure to rich language experiences.

Research shows that **bilingual people** have an easier time with these key brain functions:



Mental Health

A multilingual brain is quicker, nimbler and more resistant to Alzheimer's and other forms of dementia.

Academic Performance

Students in dual language programs consistently outperform monolingual peers on state-mandated tests, regardless of demographic.

Preparation for the Future

Bilingual adults have several advantages over monolingual adults, including higher average salaries and greater career opportunities.

Language in the Brain

Research also shows that the brains of bilingual people are more developed in areas that organize and process speech.



For more info on Splash language immersion programs, visit us online at learn.vifprogram.com/languageimmersion



Sources: Zelasko and Antunez, 2000; Kessler and Quinn, 1980; Bialystok and Majumder, as cited in Ayanoka and Kasprzak, 2011; Castro, et al., 2011
For more info, visit www.vifprogram.com





10 myths on multilingualism

- › Myth 1. Is a new language learned at the expense of previously acquired languages?
- › Myth 2. An early start leads to speech disorders and retardation
- › Myth 3: Better moral decisions in a second language?
- › Myth 4: Learning and using a language leads to better thinking skills?
- › Myth 5: Multilingualism delays the onset of dementia?



- › Myth 6; Learning more languages leads to expanded brains?
- › Myth 7: Bilingual education leads to lower skills in the mother tongue?
- › Myth 8: is it possible to learn to speak a language like a native speaker after puberty?
- › Myth 9: Children are better language learners than adults?
- › Myth 10: Once a language is forgotten it has to be relearned from scratch?



Defining Multilingualism

- › Two extremes:
- › Minimal Variant: Knowing a few words and phrases makes you a bilingual
- › Maximal Variant: complete mastery of two or more languages



Do you know the meaning of the following German words? (I mean you, not your mobile phone!)

› Flab:



Do you know the meaning of the following German words? (I mean you, not your mobile phone!)

› Flab:

› Kebse:



Do you know the meaning of the following German words? (I mean you, not your mobile phone!)

› Flab:

› Kebse:

› Bankert:



Do you know the meaning of the following German words? (I mean you, not your mobile phone!)

- › Flab:
- › Kebse:
- › Bankert:
- › schobern:



Do you know the meaning of the following German words? (I mean you, not your mobile phone!)

- › Flab:
- › Kebse:
- › Bankert:
- › schobern:
- › Kolani:



Do you know the meaning of the following German words? (I mean you, not your mobile phone!)

- Flab:

›Kebse:

›Bankert:

›schobern:

›Kolani:

›Zabig:



Do you know the meaning of the following German words? (I mean you, not your mobile phone!)

- Flab:

›Kebse:

›Bankert:

›schobern:

›Kolani:

›Zabig:

›Quabbig



- > 7?
- > 6?
- > 5?
- >



- › Flab: Fliegerabwehr
- › Kebse:
- › Bankert:
- › schobern:
- › Kolani
- › Zabig
- › quabbig



- › Flab: Fliegerabwehr
- › Kebse: Concubine
- › Bankert:
- › schobern:
- › Kolani
- › Zabig
- › quabbig



- › Flab: Fliegerabwehr
- › Kebse: Konkubine
- › Bankert: uneheliges Kind
- › schobern:
- › Kolani
- › Zabig
- › quabbig



- › Flab: Fliegerabwehr
- › Kebse: Concubine
- › Bankert: uneheliges Kind
- › schobern: schnuppern
- › Kolani
- › Zabig
- › quabbig



- › Flab: Fliegerabwehr
- › Kebse: Konkubine
- › Bankert: uneheliges Kind
- › schobern: schnuppern
- › Kolani: (bei der Marine getragenes) hüftlanges Jackett aus dickem, dunkelblauem Wollstoff
- › Zabig
- › quabbig



- › Flab: Fliegerabwehr
- › Kebse: Konkubine
- › Bankert: uneheliges Kind
- › schobern: schnuppern
- › Kolani: (bei der Marine getragenes) hüftlanges Jackett aus dickem, dunkelblauem Wollstoff
- › Zabig: kleinere Zwischenmahlzeit am Nachmittag
- › quabbig



- › Flab: Fliegerabwehr
- › Kebse: Konkubine
- › Bankert: ungezogenes Kind
- › schobern: schnuppern
- › Kolani: (bei der Marine getragenes) hüftlanges Jackett aus dickem, dunkelblauem Wollstoff
- › Zabig: kleinere Zwischenmahlzeit am Nachmittag
- › quabbig: schwabbelig



- › Complete mastery?
- › Definition of multilingualism:
- › *The regular use of more than one language*



Myth 1: A new language is learned at the expense of previously learned languages

- › Is there enough brain capacity?
- › Are there enough attentional resources?
- › Languages can be selected, active or dormant (Green 1983)
- › Risk of interference with similar languages
- › Language savants: German polyglot Emil Krebs
- › Daniel Tammatt: Reciting Pi from memory to 22.514 digits in 5 hours and 9 minutes a, learning Icelandic in a week
- › He learned Icelandic in week



Myth 2: An early start with foreign languages leads to mental disturbances and speech disorders

- > ‘There can be no doubt that the child reared in a bilingual environment is handicapped in his language growth’
(Thompson 1952, 367)



- › If it were possible for a child or boy to live in two languages at once equally well, so much the worse. His intellectual and spiritual growth would not thereby be doubled, but halved. Unity of mind and character would have great difficulty in asserting itself in such a circumstance. (Laurie, 1890, pp. 15–16)



Sears et al. 1923/1926

- › Sear administered the Stanford-Binet Intelligence Test to 1400 children aged 7-14 from bilingual and monolingual backgrounds,
- › bilingual children from a rural background scored 10 points less on average than monolingual English-speaking children,
- › So: the bilinguals were mentally confused and disadvantaged.



- › Bilingualism leads to stuttering (Darcy 1963)
- › BUT:
- › There are children that stutter and have two languages
- › There are children that stutter and have two legs



- › Now, the picture is completely opposite.
- › Children are assumed to profit from early bilingualism
- › Suggesting that there may be disadvantage of bilingualism is ‘not done’/politically incorrect!
- › Still: among speech therapists multilingualism is often seen as the cause of language problems



Myth 3. Better moral decisions in a second language?

- › Read the text on the Asian disease.
- › What would be your choice?



- › Would you make the same decisions in a foreign language as you would in your native tongue? It may be intuitive that people would make the same choices regardless of the language they are using, or that the difficulty of using a foreign language would make decisions less systematic..



“Asian disease” problem (Kahneman & Tversky, 1979)

Recently, a dangerous new disease has been going around. Without medicine, 600,000 people will die from it. In order to save these people, two types of medicine are being made.

If you choose Medicine A, 200,000 people will be saved.

If you choose Medicine B, there is a 33.3% chance that 600,000 people will be saved and a 66.6% chance that no one will be saved.

Which medicine do you choose?



- › Whereas people were risk averse for gains and risk seeking for losses when choices were presented in their native tongue, they were not influenced by this framing manipulation in a foreign language
- › using a foreign language reduces loss aversion, increasing the acceptance of both hypothetical and real bets with positive expected value.



Why different judgements?

- › Effects arise because a foreign language provides greater cognitive and emotional distance than a native tongue does.



Myth 4: Learning and using a language leads to better thinking skills?

- › Huge debate: ‘The Bilingual advantage’
- › In 1930/40s: evidence for bilingual disadvantage (Sears
- › 1972: Peal & Lambert in Canada: controlled for SES and looked at other aspects (attention, executive control, memory -> positive effects
- › Ellen Bialystok et al.: Bilinguals from birth have better executive functions



Ellen Bialystok's contribution

- › Executive functions:
- › Task switching: cooking and making a telephone call
- › Information updating: remembering telephone numbers
- › Inhibition: Not getting angry in heavy traffic
- › -> also relevant for language use



- › *Task switching*: change style of speaking due to changes in conversational setting
- › *Updating*: remember what you said before
- › *Inhibiting*: not using a vulgar word in a formal conversation



- › Language use as exercise depends on executive functions
- › Has positive effects on these functions
- › Bilinguals have more to do than monolinguals: code switching/inhibition of other languages
- › Therefore more training of general executive functions
- › That leads to general cognitive advantages



Maybe not?

- › After series of articles with positive effects, now problems with replication, and many that do not find these effects
- › There may be a bilingual advantage, but we cannot see it because there are so many other possible factors (physical exercise, meditation, diet, gaming, music...)
- › There may not be a specific bilingual advantage because it is part of other factors
(Valian 2015)



A publication bias for bilingual advantage?

- › Positive findings more likely to be published!
- › Hard to explain null results
- › De Bruin et al. (2014): positive findings led to publications in 64% of cases, against 34% for null or negative results
- › SO: the evidence may be less overwhelming than it is claimed by some!



Myth 5: Multilingualism delays the onset of dementia

- › Related to Bilingual advantage.
- › Bialystok et al 2004: early bilinguals show a delay in onset of Dementia symptoms of about 4 years
- › ‘Cognitive Reserve’: if we know more we can lose more without getting into trouble
- › Some evidence, but contested: few studies, small effects, no consistent findings, migration as factor



•Myth 6: Learning more languages leads to expanded brains?

- London cab drivers, jugglers and violists
- Use leads to growth
- More languages, more brains?
- Dutch: ‘Talen knobbel’ (Sprachtalent). From Phrenology to neuroscience



Myth 7: Bilingual education leads to lower skills in the mother tongue?

- › Is there a price to be paid for an early start with learning a foreign language?
- › Slower reaction times in lexical decisions and word/picture naming
- › Research on early foreign language learning in the Netherlands;: FLIPP project: role of teacher proficiency, number of hours and starting age: positive effect on English, no negative effect on Dutch, also for migrant children. (Unsworth et al. 2014)



- Stevenson, Weijers, Saarloos & de Bot (2015):
 - 350 children age 8/9 in early foreign language classes with 150 controls in monolingual schools
 - Testing of Executive functions (Efs), English and Dutch
 - Significant gain in English, age appropriate levels of Dutch. No effect of bilingualism on EFs



Myth 8: Is it possible to learn to speak a language like a native speaker after puberty?

- › Yes, but it is hard
- › The critical period hypothesis
- › Theo Bongaerts experiment
- › 5-15%?
- › Why do you have to sound like a native: suggesting complete L2 knowledge, also cultural



Myth 9: Are young children better language learners?

- › No, given same time they are worse
- › Apart from pronunciation
- › Bilingual education is not like growing up bilingually
- › Not an argument for bilingual education or for the earlier the better!
- › But children learn easier by playing and not being afraid of making errors



Myth 10: Once a language is forgotten it has to be relearned from scratch

- › Research on attrition: hardly any decline even after 8 years of non-use
- › Feeling of attrition vs. test results
- › Young children lose a language quickly, but also relearn quickly
- › ‘Savings’: residue of earlier learning
- › Relearning with minimal exposure to words, but only the relearned words, not other ones (part/whole learning)



And a few more....

- › Are bilinguals better drivers?
- › Are languages stored separately in the brain : neuro-imaging/brainstimulation/aphasia?
- › Are girls better language learners?
- › Code switching is detrimental in education and should be avoided at all costs?
- › Children who grew up bilingually make good translators and interpreters?



So, is multilingualism a good thing or a bad thing?

- › Overall, it is an asset
- › But we should not close our eyes for negative aspects, such as lower processing speed and delays in development
- › Normal developing children benefit from learning additional languages
- › For elderly adults being bilingual gives some protection against age related decline and delay of onset of dementia



Thank you for your attention

c.l.j.de.bot@rug.nl