

# The Cognitive Benefits of Language Learning:

A Critical Synthesis for Policy, Practice and Research

Findings and Implications



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This project is distinctive in its focus on the evidence for the cognitive benefits of language learning, as opposed to the better known benefits of biand multilingualism.

The project provides a systematic review of the academic evidence base, supported by fresh research on public attitudes towards language learning. The study highlights where research findings apply especially to different age, gender and socio-economic groupings and to different types of learning experiences, and includes sign languages as well as spoken languages.





#### The project comprised:

- A systematic review of peer-reviewed UK and international academic publications on cognition and cognitive functioning of bilingual and multilingual language learners and users across the lifespan, including informal as well as formal language learning environments (home, nursery, school, supplementary school, on-line, and other settings)
- Meta-analysis and synthesis on two themes: the relationship between language learning and academic achievement across the curriculum, and with creativity
- Surveys of attitudes towards language learning of 740 adults and 40 young people
- Focus groups with educators and a stakeholder interview with a policy maker

The project was funded by the British Academy, and led by Professor Bencie Woll FBA, UCL and Professor Li Wei, UCL Institute of Education.

The final report of the project can be found at: thebritishacademy.ac.uk/projects/ cognitive-benefits-language-learning

# What are cognitive benefits?



In the context of this study, cognitive benefits extend beyond executive function (paying attention, organising, regulating emotions and understanding others), literacy and health to include creativity, social and affective cognition (how we process information about other people such as emotions and social situations).

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# Our Findings

#### **Cognitive benefits**

- Being bilingual (or multilingual) is generally agreed to improve an individual's cognitive flexibility, mental switching and ability to multitask, though recent studies have begun to question the causality of this link
- The relationship between executive function skills and language learning success is complex and inconsistent but learning a new language through an immersive process appears to improve attention and mental alertness
- Empathy appears to be a useful trait for language acquisition, but there is limited evidence that it is an outcome of learning a language; similarly, there is little evidence that language learning develops a more global mindset, as opposed to being a motivation for undertaking that learning

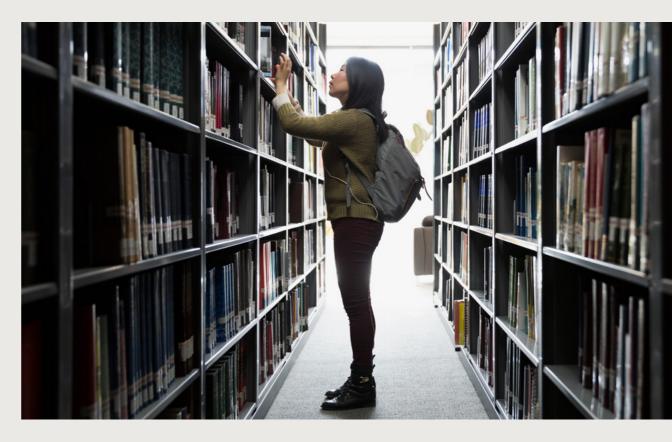
- Sign language learners develop enhanced spatial processing abilities and face-processing skills; learning sign language in pre-school settings gives younger children a greater appreciation of cultural diversity and diverse ways of communicating
- Language learning programmes aimed at older people may be an optimal solution for building cognitive reserve because language learning engages an extensive brain network that is known to overlap with the regions negatively affected by the aging process, but recent meta-analysis has challenged the strength of this argument

#### **Academic Achievement**

- 90% of studies on the crosscurricular effect of language learning report a positive impact, across English language learning, literacy, maths and science, while the remaining 10% show no impact; these studies include learners from a variety of countries, different language combinations, and varied socio-economic backgrounds
- Length of participation in a dual language programme has an impact on the measured outcomes: dual language learners in an immersion programme often presented an initial lag in academic performance within the first three years compared with monolingual peers, but they caught up and even surpassed their peers after several years' immersion
- Dual language learners with proficiency in both languages tend to benefit most across the curriculum from the experience of

language learning; students from a minority-language background tend to have better academic performances in English reading and mathematics if they maintain a high level of proficiency in their native language

- Dual language learning tends to benefit learners with both high and low socio economic backgrounds compared with their monolingual peers, but students with higher socio-economic backgrounds tend to achieve higher academic standards; the benefits for learners with lower socio economic backgrounds may take a longer time to manifest and be lower overall. However, most of the studies are American with Spanish and English as the language combination, so these findings may not transfer directly to the UK situation



#### Creativity

- There is a strong positive correlation between creative flexibility, fluency, originality and foreign language learning
- This may be due to the cognitive practices involved in learning a new language, such as the willingness and adaptability to change required for language switching, or the rigorous practice and study involved in language learning

Many families face challenges in their everyday lives and they find it hard to accept that learning a foreign language can help to improve their situation. 99

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66



Survey evidence shows that public perceptions of the benefits of language learning are strong.

#### Of 740 adults surveyed:

#### 0%

agreed learning a new language helps to develop thinking/analytical skills

#### 81%

agreed learning a new language helps to improve school/ academic achievements

#### 86%

agreed learning a new language gives better employment opportunities

#### 77%

63%

agreed learning a

people's emotions

new language helps in understanding other

agreed learning a new language helps in making friends

### 84%

agreed learning a new language helps to improve memory

Of 40 young people surveyed:

#### 81%

agreed learning a new language will help them get a good job

75%

agreed learning a new language is fun

#### 78%

agreed learning a new language helps with school work

67%

agreed learning a new language makes them more creative

8%

agreed that learning a new language made them anxious

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Interviews with both educators and a civil service representative indicated the importance of demonstrating the concrete benefits of language learning. For educators, cross-curricular benefits are seen as the key to influencing families to have a positive view towards language learning; for policymakers, broad cognitive benefits such as enhanced resourcefulness and creative thinking are key.

The survey evidence of public perceptions suggests that there is a strong basis from which to build in changing attitudes if the evidence can be marshalled to make the case.



### **Implications** for research

The findings suggest a number of areas where further research is needed:

The relationship between bilingualism/language learning and social cognitive capacity such as empathy and creativity

The mechanisms behind the correlation between language learning/bilingualism and creativity

The cross-curricular benefits of language learning in a UK context, among speakers of English learning other languages

The relationship between language learning later in life and the development of cognitive reserve

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# Further information

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Published May 2019

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