Effects of bilingualism in phonological awareness and reading decoding development in Greek-English speaking children.

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Introduction

• The writing system used by a language may affect children’s acquisition of word reading because each system is based on a different set of symbolic relations and requires different cognitive skills. Therefore, the process of learning to read in different writing systems may depend on the type of writing system used in each language (alphabetic, syllabaries and character languages) (Coulmas, 1989).

• Two reasons to explain why literacy may proceed differently for bilingual and monolingual children:
  - Bilingual children may develop prerequisite skills for literacy differently from monolingual ones.
  - Bilingual children may transfer the skills acquired for reading in one language to reading in the other (Bialystok, Luk & Kwan, 2005).

Outstanding question in the literature

It is unclear if learning to read in one language leads to an advantage on literacy development in another language across school years and whether this advantage differs across different domains of literacy.

Research Questions

• Are there any effects of bilingualism on phonological awareness and word reading of Greek primary school children in the UK with English as an additional language (EAL) compared to monolingual English children in Year 1 & 3.

• Do bilingual children have better literacy skills in English than monolingual children.

• Could these skills be transferred from one language to the other.

Method

Participants

• 40 Greek-English bilingual children (Year 1 = 20; Year 3 = 20)

• 40 English speaking children (Year 1 = 20; Year 3 = 20)

Tasks Used

Non-verbal IQ: Raven’s colour matrices (Raven & Court, 1990)

Language and literacy tasks

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References


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Results

Phonological Awareness

Blending Task

• Bilingual Year 1 (M=80.5, SD=10.24) > Monolingual Year 1 (M=55, SD=14.4);
• Bilingual Year 3 (M=92.3 SD=6.6) > Monolingual Year 3 (M=62.5 SD=14.2);
• Effect of School Year group: F(1,76)= 13.292, p < 0.001;
• Effect of Group (mono-/bilingual): F(1,76)= 109.5, p < 0.001;
• No interaction between Group and School Year in blending task

Elision Task

• Bilingual Year 1 (M=69.3 SD= 11.3) > Monolingual Year 1 (M=27.5 SD=13.5);
• Bilingual Year 3 (M=85.3 SD=8.2) > Monolingual Year 3 (M=57.3 SD=14.6);
• Effect of School Year group: F(1,76)= 70.9, p < 0.001;
• Effect of Group (mono-/bilingual): F(1,76)= 164.5, p < 0.001.
• Pairwise comparisons showed that the difference between Bil Y1 and MonoY3 was medium (d=16, Cl(95%) 1.6-22.4 (effect size d=0.6). There was no significant difference among the other comparisons.

Real-Word Reading Task

• Bilingual Year 1 (M=67.6 SD= 13.3) > Monolingual Year 1 (M=53.3 SD=17.6);
• Bilingual Year 3 (M=82.7 SD=7.96) > Monolingual Year 3 (M=77.4 SD=9.87);
• Effect of School Year group: F(1,76)= 7652, p < 0.001;
• Effect of Group (mono-/bilingual): F(1,76)= 11.93, p < 0.001.
• No interaction between Group and School Year in real-word reading task

Pseudo-word Reading Task

• Bilingual Year 1 (M=67.9 SD= 14.3) > Monolingual Year 1 (M=33.5 SD=7.7);
• Bilingual Year 3 (M=84.6 SD=7.02) > Monolingual Year 3 (M=70.1 SD=13.9);
• Effect of School Year group: F(1,76)= 112.3, p < 0.001;
• Effect of Group (mono-/bilingual): F(1,76)= 94.6, p < 0.001.
• Pairwise comparisons showed that the difference between Bil Y1 and Bil Y3 was large (Cl(95%) -16.7, p < 0.001), Cl (95%) 7.1 -26.3 (effect size d=0.9). There was no significant difference among the other comparisons.

Conclusion

• The bilingual group performed better than the monolingual group on phonological awareness and reading decoding tasks, suggesting cross-language transfer from reading instruction and/or learning to read in a language with transparent orthography (Greek) alongside a language with opaque orthography (English).

• A facilitation may exist in the development of these skills in bilingual children, specifically in the early school grades.