

METALINGUISTIC ABILITIES

Is there a difference between
bilinguals and monolinguals?

Bialystok, E. Majumder, S. & Martin, M. (2003)

QUESTION: Do bilingual children have an advantage over monolingual children in phonological awareness skills? Does bilingualism generally, or bilingualism in certain languages, correlate with stronger phonological awareness skills? Are there some phonological skills (above others) that are affected by bilingualism?

IMPLICATIONS: If they do, maybe bilingual children can learn to read with more ease/rapidity.

OVERALL METHOD: 3 studies of children between Kindergarten and Second Grade completed various tasks of phonological awareness with/without cues meant to accommodate for working memory needs/limitations

Study 1

SAMPLE:	72 children ½ English-French bilinguals ½ English monolinguals Equal number of children in each language group were in K, 1 st and 2 nd grade
TASKS:	Digit Span from the WISC-R Phoneme Substitution Task (3 conditions)
RESULTS of WISC:	Difference between bilinguals and monolinguals NO effect of grade
RESULTS of PST:	Condition effect (no-cue more difficult) Grade effect (1 and 2 better than K) Advantage for monolinguals in sound condition Bilingual advantage in the no-cue condition Digit span not correlated for monolinguals, yes for bilin

Conclusion Study 1

- No overall difference in the two groups in solving the Phoneme Substitution Task
- Bilinguals and monolinguals might approach the task differently, with monolinguals using the memory cues
- **PROBLEM:** Bilingual children were being tested in English, which was NOT their language of literacy instruction

Study 2

SAMPLE: 75 children
12 English-French bilinguals (per grade)
13 English monolinguals (per grade)
K, 1st and 2nd grade

TASKS: Digit Span from the WISC-R
Phoneme Substitution Task (3 conditions) **TESTED IN LANGUAGE OF LITERACY INSTRUCTION*
Picture Recall Task

RESULTS of WISC: *No difference between bilinguals and monolinguals*
Grade effect (between K and 2)

RESULTS of PST: *No Condition effect*
Grade effect (1 and 2 better than K)
Advantage for monolinguals in sound condition
Digit span not correlated for monolinguals, yes for bilin

RESULTS OF Pic Rec:
Significant correlations found between working memory scores and all conditions

Conclusion Study 2

- No effect of bilingualism in PST
- When children's phonological skills are tested in the language in which they receive literacy instruction, bilingual and monolingual children demonstrate comparable phonological awareness skills.

Study 3

SAMPLE: 89 children
Grades 1 and 2
33 English monolinguals
31 Chinese-English bilinguals
35 Spanish-English bilinguals

TASKS: PPVT
Sound Meaning Task
Phoneme Segmentation Task
Phoneme Substitution Task
Word Identification Task
Word attack (Woodcock Reading Mastery Tests, Woodcock 1987)

RESULTS: Grade effect only for Sound-Meaning Task
On Segmentation Task, three groups differed (English-Spanish bilinguals performed best, followed by monolinguals, followed by English-Chinese)
Grade effect for Phoneme Substitution Task
Phoneme Position effect
NO group effect for Word Identification or Word Attack
Grade effect and task effect both Word Tasks
Only correlation between reading tasks and phonological awareness task was the phoneme substitution

Conclusion Study 3

- Some language pairs might interact with each other better to support phonological awareness skills
- Spanish might provide an advantage with phonological awareness

DISCUSSION

Bialystok, E. Majumder, S. & Martin, M.

QUESTIONS:

1. Do bilingual children have an advantage over monolingual children in phonological awareness skills?
2. Does bilingualism generally, or bilingualism in certain languages, correlate with stronger phonological awareness skills?
3. Are there some phonological skills (above others) that are affected by bilingualism?

ANSWERS:

1. No, bilingual children do not have an advantage
2. Bilingualism in general does not correlate with children having stronger phonological awareness skills
3. Some phonological awareness skills, such as phoneme segmentation, might be stronger in children who speak certain languages (e.g. Spanish).

"These results point to an area of metalinguistic awareness where bilingualism in itself may not be an advantage, although being bilingual in specific languages may be."
(pg. 42)

Cromdal, J. (1999)

QUESTION: Does bilingualism enhance the development of linguistic awareness? Does it create an advantage in symbolic flexibility and concept formation? Using Bialystok's model of dual processing in metalinguistic performance as a reference, do bilinguals have better 1) analysis of knowledge and/or 2) control of cognitive processing?

IMPLICATIONS: If a study could show benefits in one or both of the two areas in separate measures, it would validate the model of the two-component system.

Cromdal, J. (1999)

SAMPLE

6-7 year old English-Swedish bilinguals (40 total) from 2 preschools as well as their monolingual counterparts (16 total)

METHOD

Responsive PPVT administration (in conjunction with teacher feedback) to determine bilingualism!

3 tasks: picture vocab, symbol substitution, sentence judgement and correction

RESULTS Cromdal, J. (1999)

Symbol substitutions

- Bilingual children correct substitutions > monolingual
- The more bilingual, the more correct substitutions

Grammar judgments

- Bilinguals showed higher numbers of correct judgements of grammar in both grammatical anomalous and ungrammatical anomalous in Swedish
- Bilingual children scored better but not sig. in English
- All children performed well with the grammatically meaningful sentences while the bilinguals scored highest number of correct judgments on ungrammatical meaningful sentences

Corrections

- Fewer were made than judgments
- Highly bilingual children attained largest proportions of successful corrections for ungrammatical meaningful sentences.

RESULTS Cromdal, J. (1999)

- High correlations between control tasks
- Substitution scores generally did not correlate with other analysis tasks
- Bilingual children were better carrying out tasks in Swedish
- Bilinguals made more successful judgments in Swedish versions of sentences (all but the ungrammatical anomalous ones) (Language and group effect)

Conclusion

QUESTIONS:

1. Does bilingualism enhance the development of linguistic awareness?
2. Does it create an advantage in symbolic flexibility and concept formation?
3. Using Bialystok's model of dual processing in metalinguistic performance as a reference, do bilinguals have better 1) analysis of knowledge and/or 2) control of cognitive processing?

ANSWERS:

Bilinguality has positive influence on the control of linguistic processing as witnessed by better scores in the substitution task

"...this could be taken as evidence for the bilingual subjects' superior concept formation skills." (Cromdal, 1999)

There is support for the dual component model (Bialystok & Ryan, 1985) due to the strong findings in the control tasks

Children utilize their metalinguistic skills in their second language

Rosenblum, T. & Pinker, S.

QUESTIONS: Is it true that monolingual children cannot give more than one name to one item? Do they really believe that a name is intrinsic to an item? Is labeling an item by two different words an ability only bilingual children have (not monolingual)?

SAMPLE

- 12 bilingual children, 12 monolingual (Hebrew/English, English)
- Preschoolers from age 4 years to 5 years 10 months
- Controlled for SES, nonverbal intelligence, adequate English skills

Method

- Counterfactual test
- Test of volubility
- Name-manipulation test

Results

- All children handled counterfactual questions with ease (signaling they are cognitively OK with that task, therefore, can be linguistically)
- They were all talkers! They used the same number of content words on the volubility screen
- NO group was more inclined to be influenced by “word magic” (agreed to call a table a “shig”)
- Children in both groups performed similarly in name-learning tasks
- All children choose correct object properties
- When asked “why” they could call an item by another name, the monolinguals overwhelmingly responded by citing an attribute to justify their affirmative while the bilinguals cited the setting as the reason

Conclusion

- Preschoolers do not necessarily think that objects and their names are inseparable; that the name of an item is intrinsic to it
- Both monolingual and bilingual children are able to fathom giving more than one name to an item
 - Monolinguals think that objects can have more than one name if the properties reflected by the name are represented in the object
 - Bilinguals can assent to double names for objects if there are two different social contexts in which the object is labeled.

THE BIG QUESTIONS

- What is it about phonological awareness skills that make them a metalinguistic ability less affected by bilingualism? Is it because phonological systems are less universal across languages than syntactical systems?
- Would phonological awareness skills fall into the dual component model of Bialystok (1985) under one or the other: control/analysis? Or would certain skills fall under either component?
- Was Cromdal’s task truly a symbol substitution task? Was it purportedly measuring the same skill that Roseblum & Pinker measured: the ability of children to regard the name of an object as arbitrary? He says that, “to some extent, this could be taken as evidence for the bilingual subjects; superior concept formation skills.” HOW?
- Does meta-linguistic consciousness result from lack of automaticity? Does it result from exposure to incorrect models and the need to correct to find meaning?