

An Examination on the Question "What effect will bilingualism have on my child's intelligence?"

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I Baker's View

"What effect will bilingualism have on my child's intelligence?" As one of the most frequently asked questions in second language acquisition by parents, bilingualism has been hotly debated in the academic world, from the harmful to the useless to the effective. Baker proposed his own opinion: under the condition of relatively good language development, bilingual or multilingual children have advantages in thinking (Baker, 2014).

What is good language development? That is, bilinguals have two fairly developed languages or multilinguals have several fairly developed languages (in the following discussion, the author will focus on bilingualism rather than multilingualism). At this time, bilinguals may have some temporary or even permanent mental advantages, including sensitivity to communication, cognitive development, selective attention, analytical skills, etc. Baker graphically compares monolingual and bilingual learning to two ladders, and divides the level of language achievement of a speaker into three floors. The situation that we just mentioned is the third floor that Baker delineated. On the first floor of the language learning house, bilingual children who are not bilingual enough for their age may have a mental disadvantage; On the second floor of the language-learning house, bilingual children think indistinguishable from monolingual children when their abilities in both languages are roughly age-appropriate.

II Examination

1. Rational analysis of thinking advantages mentioned by Baker

For the mind advantage, Baker cites the concept of the divergers. As the name suggests, a divergent person is someone who tends to think in a divergent, fluid, flexible, imaginative way, and often does not want to be limited to a single way. Only multiple answers or solutions to a question can satisfy their curiosity. During the test, subjects were given all the answers they could think of to a question within a certain amount of time. For example, the question might be "Think of what you can do with a nail?" Especially when doing math problems, divergent people are not just looking for the right answer to a problem, but for multiple solutions. Although divergers are not limited to bilinguals, bilinguals tend to be ahead of monolinguals in such tests of creativity and divergent thinking. Carringer (1974), Cummins & Gulutsan (1974), Landry (1974), and Torrance et al. (1970) have all demonstrated this point in their own experiments..

2. The effects of bilingualism on other aspects of intelligence

Baker mainly considers the impact of bilingualism on children's thinking, and the author strongly agrees with Baker's opinion. But intelligence also includes the ability to understand, judge, solve problems, express ideas, and use language. Next, the author will discuss the influences of bilingualism on children's language analysis, conversational suggestion sensitivity, and cognitive ability.

In language analysis ability, some studies have shown that bilingualism makes people better at language analysis. Ianco-Worrall (1972) tested the ability of 30 African and English bilinguals aged 4 to 9 to distinguish between language sounds and meanings. The bilinguals matched the other two monolingual groups in intelligence, age, sex, grade and social class. The test used the question: "Which of the three words CAP, CAN or HAT is more like CAP? CAN or HAT?" Choosing CAN suggests that the child is making decisions through pronunciation. The selection of HAT suggests that the child is making decisions based on word meaning. Between

the ages of 7 and 9, there was not much difference between the monolinguals and the bilinguals. Both groups chose based on the meaning of the word HAT. Between the ages of 4 and 6, bilingual children tended to make decisions based on word meaning while monolingual children tended to make decisions based on sound. The experiment suggests that bilinguals tend to analyze language at a younger age. The similar conclusions were drawn by Cummins (1978), Davidson et al (1997), Feldman & Shen (1971), Vygotsky (1962) and Yelland & Pollard & Mercun (1993), etc.

What's more, in terms of sensitivity to conversational cues, bilingual children are more sensitive than their monolingual peers to the cues given by listeners in conversation. Genesee Tucker & Lambert (1975) conducted such an experiment with children from bilingual and monolingual classes. They asked the children to explain to two listeners how to play a game. One listener was blindfolded and the other was blindfolded. The bilingual child paid more attention to the blindfolded listener's response than his monolingual counterpart, providing him with more information. The experiment showed that bilingual children were more sensitive to audience cues than monolingual children. Similar conclusions have been reached by Bain (1975), Ben-Zeev (1977), Cummins & Mulcahy (1978) Genesee Boivin & Nicoladis (1996) Skutnabb-Kangas (1981) and others.

In addition, on the Piagetian cognitive tests Feldman & Shen (1971), Liedtke & Nelson (1968) found that bilinguals performed better than monolinguals in some aspects of Piagetian cognitive tests, such as concept formation, concept measurement and so on. Other experiments, such as Ben-Zeev's (1977) and Duncan's & De Avila's (1979), also support this finding.

3. The negation of the harmful theory and the neutral theory of bilingualism

The harmful theory of Bilingualism is the idea that children who learn two or more languages have a negative effect on their own intelligence. From the 19th century, this theory prevailed in Britain and the United States for nearly 150 years, and has always occupied the position of mainstream thought. The "neutral stage of bilingualism" and the "harmful stage of bilingualism" overlap in time, and the duration is very short, from the 1930s to the 1960s.

Baker argues that earlier studies of these two conclusions were poorly designed or poorly designed. It includes the following three aspects.(Baker, 2014)

(1) Definition and test of intelligence

Simply put, Is intelligence judged by the child's language ability? A thief who can break into a bank custody is not a man of low intelligence. By the same token, a man who has worked his way out of poverty must have some intelligence. But this intelligence can be independent of language. Accordingly, Intelligence includes many aspects, such as observation, memory, imagination, analysis and judgment ability, thinking ability, strain ability and so on. A child's intelligence cannot be easily captured by a pen, a piece of paper or an intelligence test.

(2) The language of intelligence tests

Generally speaking, the more effective language to test a bilingual's intelligence is the one he has a better command of. It is also fair to use both languages. In these intelligence tests, however, language choice is not considered by the test takers. Intelligence tests are conducted only in English (Valdés & Figueroa, 1994). However, English is often the weak language of those subjects, which seriously affects their ability to fully perform in intelligence tests. As a result, the test results do not accurately reflect the subject's true intelligence.

(3) The symmetry of the control group

This is particularly important. To test the IQ of a group of monolingual children and a group of bilingual children, or to compare their performance in other aspects of cognitive ability, the two groups are first required to match each other in various aspects, such as the socioeconomic class of the family, the age and gender of the subjects, the language environment, the type and nature of the school they attend, urban or rural areas, and so on. The only difference was that one group spoke only one language and the other two. If not, the results may be due to other factors than the number of languages. The backgrounds of the bilinguals compared were often inconsistent, for example, monolinguals from urban or middle class backgrounds and bilinguals from rural or working class backgrounds. One group of monolinguals, for example, fared much better socioeconomically than the bilingual group that served as a control group. If the results show that monolingualism is superior to bilingualism, then we can assume that all the differences are not due to monolingualism but to other factors, such as differences in social class.

In the author's opinion, the two conclusions of "the harmful theory of bilingualism" and "the neutral theory of bilingualism" are unreasonable. It also includes the following four points: analysis method, division standard, sampling, language environment.

(1) Analysis method

Early intelligence tests often used simple comparisons, comparing the average scores of monolingual and bilingual subjects by ranking them side by side. However, this statistical method does not reveal whether the differences in performance are due to genuine intelligence gaps or occasional factors, so that subsequent reprocessing of

the data will produce different results. For example, in 1966 Jones reanalyzed Saer's 1923 data and found no significant differences between the two groups after adjusting for some individual factors.

(2) The standard for dividing bilinguals and monolinguals

Is a person bilingual as long as he or she speaks a language plus his or her native language? Listening, speaking, reading and writing, like the IELTS or TOEFL categories, are skills that languages are often tested for. Should all four skills be included when testing bilinguals' intelligence, or should only some be focused on? At that time, there were no clear and consistent answers and standards to these questions.

(3) Sampling standard and generality

Whether the conclusions of a study are generalizable depends on the sampling method. If the sample is selected for temporary needs and convenience rather than random sampling, then theoretically the final conclusion is only applicable to that one particular case, without generality. In other words, this conclusion may not be entirely applicable to other situations. Much of the research on bilingualism and intelligence is based on the latter sampling method. As a result, the conclusions of the 11-year-old sample are not generalizable to other age groups. The studies done in the United States and the United Kingdom are not generalizable to the rest of the world. In addition, the samples of early studies are generally small, making the conclusions unreliable.

(4) Language environment

For a study, the subject's language environment should also be taken into account. It takes into account whether the subject is in an environment conducive to bilingualism or one conducive to the development of the second language while the decline of the first language. Most of the evidence that bilingualism is bad for intelligence comes from language minorities living in the latter environment. So if

you take a sample from a previous environment, you might get very different results.

III Advice for Parents

Linguistics, psychology and other studies believe that language plays both communicative and cognitive functions in human survival and development. Therefore, based on a large number of empirical studies and Vygotsky and Bruner's theory of the relationship between language development and thinking, Cummings and Hamers, the internationally renowned experts in bilingual education, agree that in order to avoid the adverse effects of bilingual learning on children's cognitive development, it is necessary to pay attention to the development of cognitive functions of bilingual children in at least one language. Moreover, children can use this language effectively to carry out normal cognitive activities, so that bilingualism will not have adverse effects on children's cognitive development. According to the survey, the poor development of children in preschool stage generally do not develop good cognitive function of language. Based on the above investigation and analysis, the following suggestions are put forward for parents:

First, we need to develop competitive languages. In the implementation of bilingual education, we should ensure that our children can develop their language cognitive function as soon as possible in primary school. To this end, in the lower grades of primary school, should let the children first concentrate on learning a language, that is, to develop a good advantage of the language, using a gradual transition model to learn another language is better.

Second, grasp the critical period of language development to avoid missing the golden age of children's brain development. Parents should let their children develop a good cognitive function of a language in kindergarten. After entering primary school, children in bilingual teaching mode spend their limited time on learning two languages more evenly, which is not a problem for children with better cognitive function development of one language. But the task of mastering two languages is too much for children with less developed cognitive function. As a result, not only did

they fail to master the cognitive functions of both languages, they failed to master the cognitive functions of even one language. Therefore, the implementation of bilingual education should ensure that children receive preschool education.

Third, give full play to children's psychological and physiological advantages, pay attention to the cultivation of intonation, pronunciation. In second language learning, pronunciation matters. If the pronunciation is not correct, it is bound to affect children's listening and speaking, which is not conducive to the cultivation of comprehensive language ability. Parents can consider choosing bilingual kindergartens. Bilingual education in kindergarten has unique advantages. Firstly, it provides a good learning environment for children's bilingual learning. Secondly, it creates a lot of opportunities for children's oral communication. In addition, foreign teachers should be hired when necessary, to create the most local, the most standard bilingual classroom, the introduction of advanced teaching facilities, to carry out innovative cultural knowledge concepts, to help children correct pronunciation, to create a good bilingual learning environment. This learning environment can be situational or non-specific, everyday communication. Any situation that encourages bilingual conversation can be called a learning environment.

To sum up, children's young age, high plasticity of thinking, coupled with full language learning potential, can be regarded as the best stage of bilingual education. As a heavy responsibility, parents should take "interest" as the first guiding medium, cultivate children's bilingual awareness with the help of interest, identify bilingual teaching and research content or bilingual education schools, strengthen children's ability to convert their mother tongue and second language, and promote the comprehensive development of children's language knowledge. Children's education needs the joint efforts of parents, teachers and the society, so that children can learn in a more independent and happy environment.

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