

THE PROS AND CONS OF BILINGUAL UPBRINGING AND THE ALZHEIMER'S CONNECTION

K. Kulhánková

Department of languages, Medical Faculty, Charles University, Pilsen

I would like to start my paper with a question: What exactly is bilingualism? Most people believe that being bilingual means to speak two languages perfectly. But are we even perfect in one native language? And is language really so much about perfection? In my opinion and in that of many others, the most important thing about language is communication, making ourselves understood. So if we now return to my initial question about what bilingualism really is, let me quote Prof. Emeritus Francois Grosjean from Switzerland, who said, “Bilingualism is the use of two (or more) languages in one’s everyday life and not knowing two or more languages equally well and optimally (as most lay persons think)” (6). That means bilingualism is more about using two languages on a daily basis, and not so much about using them perfectly.

Another aspect we should consider when talking about bilingualism is the fact that, although for us it might seem a relatively new and unusual idea, it is quite normal for most of the world’s population to speak more than one language. Just think about the USA, India, Africa etc. But we do not have to go so far. Even in Europe we can find countries where most people speak at least two languages fluently. A well-known example is Switzerland. So while we are still discussing about the benefits and possible disadvantages of bilingual education, in many other countries in the world people have already accepted bilingual or even multilingual education as a normal part of their daily lives, and we can say that the majority of all children in this world already grow up bilingually (4, 6).

But since bilingual education is still not so common in our lives, in the main part of my paper I want to speak about the many, sometimes surprising advantages bilingualism can bring, but also about some of the difficulties that may arise in the education of bilingual children. And last but not least, to give you a practical example, I will introduce my two children in a short case study.

Advantages and disadvantages of bilingual upbringing

The pros

The most obvious advantage of bilingual upbringing is that your child acquires a second language nearly effortlessly. Learning a language is never more natural and easy than when

you are a toddler (4). And the good thing about bilingual upbringing in the family is: It is for free! Or let us say almost for free because of course it costs the parents a lot of effort. But the effort pays off when later on in school your child will show superior reading and writing skills in two languages while other children might be having a hard time trying to learn the basics of their first foreign language. Bilingual children also seem to learn additional languages more easily (10). Maybe this is due to the fact that they already know that there can be more than one word to one concept and that language learning does make sense because each new language will give them the opportunity to communicate with people from even more foreign countries.

However, bilingual education is not only about learning language skills. A positive side effect of learning a second language is that children are automatically exposed to another culture, which will most likely make them more open-minded, accepting and most of all more tolerant of other cultures (10). Some bilingual children might even come to see themselves as language or culture bridges between family members of different cultural backgrounds or between peers from foreign countries. In a global world where multicultural societies have become a common phenomenon, this is certainly an asset.

Also, of course, there is the professional aspect and the potential economic advantage to consider (5). Our working environment has become an extremely competitive and unstable one. The more skills you can list in your curriculum vitae, the better your chances of getting the job. Since there is increasing unemployment in many countries as a result of the ongoing economic crisis, the job market has become more international and many people are forced to relocate, not only within their country, but even to a foreign country in order to find a job. I am convinced that this trend is here to stay, and what can be better in such a situation than speaking another language fluently and knowing another culture so well that you will find it easy to make the country where this language is spoken your new home. Being bilingual definitely boosts your professional prospects in a world that has never before been so small and global and will help you to cope much better when the going gets tough.

Another, maybe rather unexpected advantage of bilingualism is the positive effect it may have on people's health. As a language teacher at the Medical Faculty of Charles University I was interested in whether bilingualism could somehow influence people's health. The results of my findings by far exceeded my expectations: Speaking two languages may not only protect the brain against Alzheimer's disease and dementia, but it also seems to make the brain smarter (13).

As early as 1962, Elizabeth Peal and Wallace Lambert revealed the positive effect of bilingualism on the intellectual development of ten-year-old children in a study carried out in six Montreal schools (9). Newer studies confirm that bilingualism has a direct influence on the structure of the brain it actually structurally changes the brain. Brain imaging showed that bilinguals had denser gray matter, especially on the brain's left side, which is known to be the seat of language and communication skills. Gray matter density was highest in the earliest second language learners (7). Also, when given a certain type of nonverbal tests bilingual people were faster than monolinguals. Neuroimaging showed that

bilinguals seemed to be using a different kind of network that included language centers to solve a completely nonverbal task (3).

Another difference between the brain of a bilingual person and that of a monolingual one is that bilinguals exercise the brain's executive control system, which is the basis of our ability to think in a complex way, much more than people who speak only one language. They have to do so to prevent their two languages to interfere with one another. Ellen Bialystok, a cognitive neuroscientist and psychologist at York University in Toronto, who has spent forty years on studying the bilingual brain, compares the executive control system to a general manager whose job it is to keep the brain focused on what is relevant and to ignore what is not. It is this more efficient executive control system that enables bilinguals to switch between languages quickly and easily (3, 11, 12).

The fact that bilinguals constantly have to switch between languages also seems to make them better at multitasking and prioritising in general. Ellen Bialystok and colleagues used a driving simulator to find out whether it was easier for bilinguals than for monolinguals to drive and to simultaneously do some extra tasks like talking on cell phones. The result of this experiment was probably of no great surprise for the scientists. Of course everybody's driving got worse, but the bilinguals were still better (3).

Research confirms: Bilingualism is intense and varying brain exercise and boosts the performance of the brain (12). So what is more natural than to make the Alzheimer's connection? A number of recent studies show that bilinguals have been diagnosed with Alzheimer's between four and five years later than monolinguals, and that the bilingual brain functions better and for longer even after having developed the disease. Bilingual patients with more advanced brain deterioration acted like monolingual patients whose disease was less advanced. Bilingualism might not prevent Alzheimer's disease, but it can delay the onset by up to five years and it also enables the patients to cope better with the disease once it develops (1, 2, 8, 14). The bilingual brain, even when showing deterioration from Alzheimer's pathology, is still able to fight typical symptoms like memory loss, confusion and difficulties with problem solving and planning much better than the monolingual one with the same impairment. It seems that learning and speaking a second language has a huge protective effect on the brain and thus offers protection against some of the most common symptoms of Alzheimer's and dementia (1, 2, 8).

The cons

After so many positive points, let me now turn to some of the disadvantages and difficulties of bilingual upbringing. To begin with, we should be aware of the fact that language learning is a long-term commitment which requires constant language exposure. In a family environment this can sometimes be rather demanding, especially since it takes courage and persistence to speak a foreign language when no one else in the outside environment understands you and when the child does not see the need to use the foreign language in daily life. Also, learning two languages simultaneously might seem to be difficult or confusing, presenting an additional academic load more than an opportunity. And of course you might come across peers who tease your child and see him or her as different because of speaking in a foreign language (10).

When we look at the language learning process as such, we can find that bilingual children tend to speak three to six months later than their peers and that they might temporarily mix their languages (5). That means they might use different words from different languages in one sentence. There is usually no need to worry though, as the problem seems to solve itself later on in the child's life. According to Ellen Bialystok, bilinguals also take a couple of milliseconds longer to find the right word in the right language, and bilingual children have a smaller vocabulary in each language than their monolingual peers even though altogether their vocabulary is larger (12).

Bilingual parenting in practice

Preparing for bilingual parenting

In this part of my paper I would like to introduce our two children, Kristýna, also called Kiki and Maximilian, called Max. Kiki was born in Pilsen in the Czech Republic in October 2000. Her father is a Czech national, her mother, that is me, was born and grew up in Duesseldorf in Germany. When Kristýna was born I had already been living in the Czech Republic for quite a long time and my Czech was fluent. But right from the beginning it was clear to both my partner and myself that we wanted to bring up our children with more or less equal access to both languages. We were sure to be doing the best for our kids and their future in giving them a second native language.

For our bilingual upbringing we chose a person oriented method called OPOL (10), which stands for one parent, one language. This means that one parent, in our case the father, speaks to the child in the local or majority language while the other parent, in our case me, uses only the minority language. You might guess that it is not always easy to stick to your own language rules at any time and in any place, especially if one of the partners does not speak the minority language. In that case, communication with the partner has to be in the majority or dominant language, while communication with the children should be exclusively in the minority language. I must admit, that at the beginning I sometimes felt a little embarrassed speaking to my baby in the minority language in public. However, the feedback from Czech citizens was usually very positive so that I settled into the routine relatively easily.

Since I had read a lot about bilingual education and also about its disadvantages, I was a little worried that my children would be late speakers and could be confused about learning two mother tongues simultaneously. Now, a couple of years later, I tend to think that language skills are very individual and do not really have so much to do with bilingual upbringing.

Kristýna

Kristýna was a contented, happy child. She seemed to find it normal that her mother spoke to her in one language and her father in another. She also enjoyed sitting on my lap when I was teaching English at home. Kiki started speaking at the same time as most of her peers. She had no problems understanding her Czech and German grandparents. We regularly visited Germany in order to expose Kiki as much as possible to the minority

language and to give her possibility to bond with her German relatives. Her German was almost as good as her Czech, her pronunciation in both languages excellent. She was able to form relatively complicated sentences and to use future and past tense forms as well as conditional clauses at an age normal for native speakers. She did mix the languages though, and still does so now, having developed something like a Czech-German slang.

When Kiki grew older, she was exposed much more to the dominant language, first in kindergarten and later in school. That was when she stopped talking to me in German. She evidently did not want to be different. Now I say something to her in German and Kiki answers in Czech. She visits her German grandparents regularly in the summer holidays though, and is able and willing to communicate fluently in German once she changes her environment. At the age of 10 Kiki started to read German books when she was on holiday in Germany.

Since Kiki seemed to have a talent for languages, we enrolled her in a private school with six classes of English per week, starting with the pre-school year. She has been learning English almost effortlessly and her pronunciation is very good. But what is even more important, she enjoys speaking in English whenever she gets the chance to do so. And I do not need to explain the necessity of learning vocabulary to her. She knows that she will need the words to be able to communicate.

Her first school years passed without major problems. She was in fourth class when we noticed that there were some words in Czech that she did not know. It was usually words that are not used so frequently, as for example the word “skvostný”, which means “magnificent” or “splendid”. Kristýna also started to panic more easily during exams, sometimes forgetting what she had learned. I believe that this kind of confusion could be due to her bilingual upbringing. We have been trying to improve the situation by making her read more in Czech to enlarge her vocabulary. So far this method seems to be working well. This school year Kristýna has started grammar school in Pilsen.

Maximilian

Our son Max was born in March 2003. He was a typical boy, who started talking a little later than his female peers and whose pronunciation was not perfect in either language. He was generally lazier than his sister, who actually supported his laziness by looking after him and fulfilling almost all of his wishes. Nevertheless, we tried to expose him to the minority language in the same way as Kristýna. Actually, we added more exposure to German TV because Kiki was already old enough to find TV serials for children rather interesting.

As I have already mentioned, Max is not a natural talent when it comes to languages. We had to visit a speech therapist in order to improve his Czech pronunciation and sometimes it was a little harder to understand his German. But he too has been visiting his German grandparents each summer, and after one such visit, when he was about six years old, he started to speak quite fluently in German, coming up with some more complicated words and using past tense and future tense forms as well as conditionals. He is also more willing to communicate in German with me, and after some initial embarrassment he finds it normal to answer me in German even in public. So I can say that lately his German has

greatly improved and he too understands German perfectly well. Unfortunately, he is not so much interested in reading and reads neither Czech nor German books.

Even though Maxi is not a language talent, we decided to enroll him in the same basic school as Kristýna, and I have to say that he too has been learning English effortlessly and is one of the best pupils in English in his class. His communication skills may not be as good as Kristýna's, but he seems to have the bigger vocabulary. He is more interested in natural and technical processes and has a more analytical mind than our daughter. So far he is doing well in school and does not seem to be negatively affected by his bilingual upbringing in any way.

Both Max and Kiki still do mix languages, but I think that now they are doing it just for fun. For them it seems to be more like a game, something like inventing a secret language that belongs only to our family. Neither Kiki nor Max ever use this slang outside the family environment though.

All in all, I can say that at the present time both children have no major problems in their dominant language, and that even though they are sometimes fishing for the right word in their subordinate language, they also master that language more than well. And what is more, both children are doing really well in their third language, too.

Conclusion

At the end of my paper let me sum up the main points. Of course we have to face some difficulties and potential disadvantages when we decide for bilingual parenting. Our children might be late speakers, they might mix up their words when they are small, and they might have a smaller vocabulary in each language. And, yes it is demanding for the parents. They need to be very consistent and persistent. They need to support their children's knowledge by providing books, videos, CDs etc. and by using especially the minority language in everyday conversation, when telling bedtime stories, giving instructions, asking questions and so on.

But what about the overwhelming list of advantages? Just think about the positive effect bilingualism may have on the future career prospects of your child, about the cultural enrichment it brings and about the booster effect it has on the human brain. And last but not least, think about the positive influence of bilingualism on Alzheimer's disease. By bringing up our children with two native languages we can actually do something for their health. Considering the great costs in the health care sector that mostly Western countries and health insurance companies are facing, it would be interesting to find out just how much money could be saved on the care for bilingual Alzheimer's patients if the onset of the disease is about 5 years delayed compared to monolingual patients. Even if we take into consideration some potential costs for bilingual education, I do believe there could be a lot of money saved in the long run. So we could even end up saving our country and the tax payers some money in bringing up our children bilingually. Don't all these advantages by far outweigh the disadvantages?

In my opinion they do. As a mother and teacher I can say that at least for our family bilingualism works perfectly well and has enriched our family life tremendously. So if I go

back to the question asked at the beginning of my paper: What exactly is bilingualism? My answer to that question would now be: Bilingualism is a gift for life and will most probably become a necessity in the very near future!

SUMMARY

As we all know, we are living in a *global world*, where political and social relations, economy and many other aspects of everyday life have become more and more international. That is why being multilingual can always be considered an asset. It helps in *international communication*, business activities and relationships, and provides better job opportunities. But it can also have a major effect on the quality of our lives, especially when we get older. In this paper I want to discuss *the advantages and difficulties of bilingual education and the booster effect bilingual upbringing might have on the human brain*. As a practical example I will give a short case study of my two children, aged 10 and 12. Being bilingual does not only mean being able to communicate fluently in two languages and therefore to be a more successful candidate on the job market. A child that is being brought up with two languages will develop a better sense of *appreciating different cultures* and will be capable of *understanding societies in a more complex way*. Moreover this child might profit from its bilingual education at a much later time in his or her life, at a time when many of us will be facing the threats of *dementia and Alzheimer's disease*. Many critics of bilingual education in schools argue, that this kind of education is too hard on the taxpayers pocket. However, bilingual upbringing in the family does not cost the taxpayer a penny, and brings a lot of positive aspects for family life and society at large.

Výhody a nevýhody bilingvní výchovy a její propojení s Alzheimerovou chorobou

SOUHRN

Jak všichni víme, žijeme v globálním světě, kde politické a sociální vztahy, ekonomika a další aspekty každodenního života získávají mezinárodní rozměr. Ovládat více jazyků může být proto velkým přínosem právě v mezinárodní komunikaci, v obchodních vztazích a při výběru zaměstnání. Může to mít velký vliv na kvalitu našeho života, zvláště v pozdějším věku. V tomto článku se zabývám výhodami bilingvní výchovy ale i obtížemi s ní spojené. Zabývám se též jejím možným vlivem na lidský mozek. Jako praktický příklad jsem použila krátkou studii svých dětí ve věku 10 a 12 let. Být bilingvní neznamená jen schopnost komunikovat plynule dvěma jazyky a mít tudíž lepší postavení na trhu práce. U dítěte, vychovávaném v dvojjazyčném prostředí, se vyvine lepší cit pro různé kultury, a bude tak schopné porozumět společnosti komplexněji. A navíc takové dítě může profitovat ze své bilingvní výchovy i v pozdějším věku, v době, kdy mnozí

z nás budou čelit hrozbě demence a Alzheimerovy choroby. Mnozí kritici bilingvního vzdělávání ve školách argumentují vysokými finančními náklady na takovéto vzdělávání. Ale bilingvní výchova v rodinách nestojí daňové poplatníky ani korunu, a přitom přináší mnoho pozitivních aspektů pro rodinný život i společnost jako celek.

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Author's address: K. K., Alej Svobody 31, 323 18 Plzeň