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# BBC LEARNING ENGLISH

## 6 Minute English

### How reading shapes your brain



This is not a word-for-word transcript.

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#### **Becca**

Hello. Welcome to 6 Minute English from BBC Learning English. I'm Becca.

#### **Georgie**

And I'm Georgie. Remember, you can find all this episode's vocabulary along with a transcript and worksheet on our website, [bbclearningenglish.com](http://bbclearningenglish.com). Now, Becca, do you read a lot?

#### **Becca**

Hmm, I don't read often. I just feel like I don't have the time, Georgie. How about yourself?

#### **Georgie**

I would love to read more, but I don't read very much at the moment. I read mostly before bed because I feel like it helps me relax and go to sleep. And today we're talking all about reading. We'll be hearing from some experts about how reading can change our brains, and as usual we'll be learning some useful new words and phrases.

#### **Becca**

Let's start with a quiz question. The longest novel in the world is widely thought to be by French author Marcel Proust, a book which, when translated into English, means Remembrance of Things Past. But how many words does the book contain? Is it:

- a) 130,000,
- b) 1.3 million, or
- c) 13 million?

#### **Georgie**

OK. The longest novel in the world. I still think 13 million words sounds too many, so I'm going to go with b) 1.3 million.

### **Becca**

Alright. We'll find out at the end of the programme. Now, we might think of reading as like speaking. We're born with the potential to do it and then we learn. It's **natural**. If something is **natural**, it's something you were born with or that comes from nature.

### **Georgie**

But Maryanne Wolf, author of the book *Reader Come Home*, says that this isn't true.

### **Maryanne Wolf**

We think of language as **natural**, and reading is written language so it must be **natural**. But it isn't. It isn't **natural** at all.

### **Becca**

Scientific studies suggest that when we're born, our brains already have the networks that allow our eyes to see and our vocal cords to produce sounds, but not with the pathways we need to read.

### **Georgie**

Let's hear more from psychologist and neuroscientist Rebecca Gotlieb, speaking to the BBC World Service.

### **Rebecca Gotlieb**

From an evolutionary timescale, our brain hasn't had enough time to develop a **dedicated** reading brain. And so, to build a reading brain network, we **co-opt** parts of the brain involved in vision and auditory processing, and language, and attention and affect. Reading is really a whole brain process. It involves activation in all four lobes of the cortex. The process of developing a reading brain alters everything, from brain activity to brain structure and brain connectivity. The power of deep reading is really fundamental to our humanity. When we read deeply, we change our brains and we change who we are.

### **Becca**

Rebecca says that our brains haven't evolved to include a **dedicated** reading brain. **Dedicated** here means designed and used for one particular purpose.

### **Georgie**

So, because we don't have a part of the brain designed specifically for reading, when we learn to read, we **co-opt** other parts of the brain. **Co-opt** here means to include someone or something, often against their will.

**Becca**

Right. Learning to read means using lots of different parts of the brain that are designed for other things, and this changes our brain structure compared to someone who hasn't learned to read.

**Georgie**

And the language we read also shapes our brain. Chinese characters, for example, use symbols instead of letters of the alphabet to represent words and ideas.

**Becca**

Research suggests that learning to read these symbols activates different areas of the brain to reading an alphabet-based system.

**Georgie**

Scientists studied a bilingual man who could read and speak Chinese and English. The man suffered a stroke, which affected parts of his brain, including his ability to read Chinese. But amazingly, he was still able to read English.

**Becca**

Maryanne Wolf explains more to the BBC World Service.

**Maryanne Wolf**

It's a beautiful example of how the brain's **circuit** reflects the requirements of Chinese, which **inevitably** means more visual memory and visual processing of those beautifully **intricate** symbols or characters.

**Georgie**

Maryanne says that the brain's **circuit** is shaped by learning to read Chinese. A **circuit** is a system of connections.

**Becca**

The visual qualities of Chinese symbols **inevitably** mean more visual areas of the brain are developed. **Inevitably** means in a way that cannot be stopped or avoided.

**Georgie**

Maryanne describes the symbolic Chinese characters as beautifully **intricate**. If something is **intricate**, it has lots of detail.

**Becca**

And something which also has lots of detail, or certainly lots of words – I asked you, Georgie, how many words are in Marcel Proust's Remembrance of Things Past.

**Georgie**

I said 1.3 million.

**Becca**

And you were correct!

**Georgie**

Yay!

**Becca**

The book also contains lots of very long sentences, including one with over 900 words.

**Georgie**

One sentence with 900 words? That is a lot. OK. It's time to recap the language we learned during this programme, starting with **natural**, which describes something you were born with or that comes from nature.

**Becca**

**Dedicated** can describe something that is designed and used for one particular purpose.

**Georgie**

If you **co-opt** someone or something, you involve them, sometimes against their will.

**Becca**

A **circuit** is a system of connections – for example, in the brain.

**Georgie**

**Inevitably** means in a way that cannot be stopped or avoided.

**Becca**

And **intricate** describes something which has lots of detail.

**Georgie**

That's it for this episode of 6 Minute English. Test what you've learnt with the worksheet on our website, [bbclearningenglish.com](http://bbclearningenglish.com).

**Becca**

Thanks for joining us. Goodbye!

**Georgie**

Bye.

\* In more recent publications of Marcel Proust's novel, the title has been translated as *In Search of Lost Time*.

## VOCABULARY

### **natural**

coming from nature; developed without special training

### **dedicated**

designed and used for one particular purpose

### **co-opt**

involve someone or something, sometimes against their will

### **circuit**

a system of connections

### **inevitably**

in a way that cannot be stopped or avoided

### **intricate**

having lots of detail