O. Oleinyk, D. Kostiuk, Students K. Tuliakova, Lecturer, research advisor National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"

THE INFLUENCE OF READING ON HUMAN BRAIN

In the modern world the problem of reading is one of the most widespreaded. Every day almost everyone reads without thinking about how does it influence on our brain. That's why this problem is very relevant for modern science.

Since the childhood, we are learnt that reading books is very important. And it's true, because literature helps us to develop and improve ourselves. We all remember the touch of the first book in childhood, our first favorite story, heroes and villains, love and friendship. And then our first encyclopedia, the power of knowledge, even a little. It all will be forever in our memories but is the importance of reading artistic or science literature real?

In school, teachers tell pupils that reading books will help them in future and it helps to develop their brains. But why? What does reading do to our intellect?

Reading books, not only are we advancing our memory and empathy, but science has proved that it makes us feel better and more delighted too. Researches has shown that reading has some incredible health benefits, including the help with depression, reducing stress, and decreasing the chances of developing Alzheimer's later in adulthood. [1]

No doubt, that reading has direct connection with our brain. According to the research of the Emory University, reading boosts activity of the brain in the region answerable for primary sensory motor activity. When we are learning something new, neurons in this area of the brain stimulate to create an emotion of not just reading about the action of the book, but involving the sensations it is express.

Imagine that you are reading your favorite book, and the main character is running away from the villain. Your nervous system activates the part of the brain that is responsible for the running.

During many decades, different organizations studied this problem. Here are some examples of them.

Scientists from the Liverpool University researched the activity of human brain during the reading Shakespeare's poems. It is proved that reading keeps our brain ablazed, even when we stop reading. Zones that are connected to the autobiographical memory were especially activated. In addition, scientists retold the plot of poems, but it hasn't made the same influence on the neurons.

Experts from the Emory University in Atlanta have made a Magnetic resonance imaging (MRI) to 12 students. They had to read 30 pages of the historical thriller of Robert Harris "Pompeii". Scan has shown that reading caused the high activity of left temporal cortex that is connected to the speech. But the excitement was kept after reading too.

In the 2008 year the scientists from the Duke University found out that reading can be used during the treatment of obesity. They studied 30 girls at the age of 9 to 13 years old that have adiposity. Some of them were proposed to read the book "Saving

lake" – about a girl with a low self-esteem who tries lose weight. Another group have read a book, in which was no character like that. And the third one hasn`t read anything at all. As the result reducing the body mass index in the first group was higher than in another two groups. It is connected to the motivation of girls, which they got from the book. [3]

Researches from the Stanford University asked the group of candidates of sciences in literature to read the novel of Jane Austin inside the MRI machine. With different methods. At first they were reading without thinking, but then they were asked to concentrate on the analyzing of the text. It was found that for the analytical reading required the implementation of the special function, that usually isn`t activated. During the change of reading for pleasure to the analytical , is happening the sharp switch of neural activity of the brain. [2]

So we can see that reading has a big influence on our brain. But unfortunately nowadays we can see tendency of decreasing the interest of young people towards reading. It can become even bigger problem in future, because it reduces the level of intelligence of younger generation. This age is perfect for self-development, and people who ignore this fact, in future will not be able to become educated human beings. Beside all of the earlier written things, we can add the fact that reading enhances the world view. Also develops the imagination and mindset.

REFERENCES

1. Польза чтения книг в развитии человека [Електронний ресурс] – Режим доступу до ресурсу: <u>http://reshit.ru/polza-chteniya-knig-v-razvitii-cheloveka</u>.

2. Psychology & Neuroscience. // 2. – 2009. – №2. – C. 111 – 123.

3. Scientific studies of reading. // 8. – 2004. – №3. – C. 293–304.