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Health to meet you

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Health dimension:

Screen use

Name of activity:

How new technologies influences our brain

Description of the topic:

Screen Use

The IQ of population is currently decreasing globally according to American scientists.

Nowadays we are completely surrounded by information. In the past, we gathered them much more complicatedly. The sources were mainly books or a radio and TV. Today in time of the Internet, we are overwhelmed by so much information that our human brain can't process them all. It starts defend itself. How long is it going to last?

Greek philosopher Socrates: "If people learn how to read and write, they will not use their memory".

What would he probably say today, when we replace our memory by technological miracles many times a day? Will really, our brain stop developing, if we use the Internet, PCs and cell phones? Will our IQ get lower? Does all the civilization get brainless? According to last researches (more than 10 years – prof. Garry W. Small) we could answer to all three questions that YES. While surfing the Internet our brain activates its centres for making a complex decisions and reasoning more than our memory. The memory also works in a way when it creates a block (page of the book) and "save it". On the Internet a webpage keeps continuing like a long document so you cannot see it all at once like a picture and the brain remembers about 1/3 less information than from the books. So we actually do not read on the Internet at all, we only browse it (skim it). Therefore, in our memory there will stay nothing, or almost nothing.

What about social networks? Those are even worse. You can compare them to drugs (the Americans are already using a term for this: "digital cocaine"). So what is actually wrong? Social networks are like casinos. Losing one euro on a slot machine it is the same like uploading a picture and sharing it with a few friends. However, the slot machine is set for you to win sometimes. Therefore, what does your brain tell about it? It will start with producing of a certain amount of dopamine that makes you

feel happy, so you bet repeatedly. On social networks, it is the same and this function is provided with the “Like”. You receive more and more likes. The result of dopamine’s production here is that you take your phone in your hand more often.

Where can it lead? In one of the last research, the scientists were comparing the reactions on messages from Facebook and the reactions on traffic signs. And what is the result? Reactions of the brain were much faster for messages from Facebook. For example: If you drive a car, you can simply pass the cross roads on the red light, because your brain will prefer the text from your phone more than driving. In addition, the brain is heavily overwhelmed by the amount of information. Only for the last 25 years, the amount of information got 5 times bigger.

Can you still use a map, atlas? Do you still remember any phone numbers? Do you know the address of your school?

What to do about that? Just stay offline sometimes. Take sometimes a book instead of a computer. Relax. Go to do some sports and lighten your brain for a moment. Moreover, if you want to be the best, do this regularly.

Addiction on social networks is getting bigger and bigger. On the contrary, the amount of information is getting smaller and smaller. Students and pupils do not memorize as many things as they learned earlier.

My sources:

Brain Research Institute – Garry W. Small - <http://www.bri.ucla.edu/people/gary-w-small-md>

Research: <https://www.ncbi.nlm.nih.gov/pubmed/19155745>

Initial assessment:

It would be very interesting to find out how new technologies can influence our everyday activity, our brain.

Objectives of the activity:

The main target is to compare results of the scientific research with the results of students, of their own survey.

Target group:

Pupils 15 – 19

Activity process structure, implementation:

1) Discussion

Students discuss about ICT technologies, media, and their influence on their everyday activities.

2) Recording during a day

Students or pupils record all activities connecting with information and communication technologies, digital devices or other new technologies. They should record everything into a table during three days: one workday, one workday with a school subject ICT and one weekend day.

All details are recorded into a table (day, time, activity, used technologies).

3) Google form questionnaire

All the data collected were rewritten into the questionnaire:

https://docs.google.com/forms/d/1OPe5mCuULptRe2wYpe_OXHTWpPNZNvL845EyYle-mAl/edit#responses

There is a link for possible filling in:

<https://docs.google.com/forms/d/e/1FAIpQLSdisoMgANbiX8betduV34Vv-YIBAo-yhio6sqgGaMfYfQmAmg/viewform?vc=0&c=0&w=1>

4) Familiarization with a research of Garry W. Small:

[Brain Research Institute – Garry W. Small - http://www.bri.ucla.edu/people/gary-w-small-md](http://www.bri.ucla.edu/people/gary-w-small-md)

5) Discussion and assessment of results

Students together with teachers compare results of their survey with scientific knowledge. They can discuss what is surprising for them. They can consider what type of ICT and digital devices they use for everyday life, how much time they spend with ICT and digital devices. The most important is that they should have a think if it is not time to use less ICT and digital devices or if it is necessary to connect their everyday life with all the technologies and devices. For example: is it needed to use your mobile phone as an alarm clock?

Equipment, aids, tools:

- PC with the Internet connection
- A piece of paper for recording of a day

Expected results, assessment:

- To collect data
- To compare results
- To gain awareness

References:

There are many articles, researches, surveys about ICT and digital devices using on the Internet. But just to read them it isn't s interesting for students as if they can record their own situation. They sometimes think that they do not use all the new technologies very often and then they are surprised. It is the first step to gain some awareness of overusing ICT in our everyday life and that it is sometimes very easy to stop using them.

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