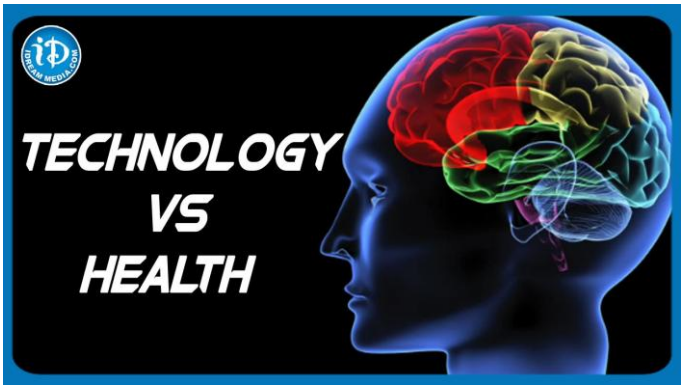
Module 5
Lesson 4

Positive and Negative Effects of Digital Technology



50. Answer the following questions.

1. Who uses computers today? Give examples of the impact they have on our lives? Are computers making us dumb?
2. Do technologies help you build positive, meaningful relationships, or do they hinder this process?
3. How often do you play computer and video games? Could games harm the young people who play them?
4. Are hackers good or bad? Do you think that computers can change your life for the better?

51. Read and tell the class about the pros and cons of the impacts of technological advances.

With the proliferation of technologies that are able to overcome the obstacles of time and space (e.g., airplanes, cars, the Internet), one would think that these tools would be used to gain an understanding of other cultures, meet people all over the world, maintain and strengthen familial relationships, communicate effectively with others, and help people to become more socially adept. However, some technological advances cause people to be distracted, overly stressed, and increasingly isolated. Many people are involved in an abundant number of relationships through technology, but sometimes the quantity of these associations leaves people feeling qualitatively empty. Obviously, technology has had a profound impact on what it means to be social.

52. Rob and Neil are talking about computers and discuss whether they are making us dumb. Listen to the conversation and summarize what they say about the following issues.

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1) The history of production of the first desktop computer.
2) Skills and talents of people relying on computers.
3) Human capacity for empathy, the ability to imagine and understand.
4) Using GPS to find our way around all the time.

53. In pairs, discuss ways of overcoming the problems mentioned in the conversation. How could we not rely so much on digital technology?

54. Discuss the adverse physical effects of e-reading. Read the text below and complete the table.

The Physical Effects of E-Reading

We are in the middle of an e-reading craze. Libraries are dashing around to add more digital titles to their catalogs. Libraries are lending out e-readers and even opening bookless branches. We know

that e-reading offers tons of great benefits for readers, but let's slow down a minute and consider possible adverse effects.

According to a recent Scientific American article, reading paper versus electronic material makes a difference when it comes to memory and learning. In digital format, readers tend to skim, looking for keywords. As a result, the full content of the material is often lost.

Screen reading takes more mental energy thereby leaving less for actual content retention. Students who read text via a computer screen did a little bit worse on a reading comprehension test than those students who used actual textbooks. During the test, they were able to look back at their textbooks for answers. The students who used actual textbooks retained not only more information but memory as to where that information was located.

Also, 'seeing' only a page or two at a time rather than the whole book is disorienting to the reader. Although most e-readers have a digital readout somewhere on the screen of the readers progress within the book, that's not enough. To physically hold the book and flip through individual pages makes the reader feel more grounded to the experience than a simple readout of one's progress on the screen. When readers are grounded to the experience, material is more likely to be remembered.

Headaches and neck pain are the biggest complaints of those who use e-readers. Eye strain and dry eyes are others. Nearly 70% of American adults show these side effects according to the ABC News report. And the concern is higher for children. E-readers are often the only device children read nowadays so the side effects mentioned above could harm children at an early age. If not caught, the harm could lead to more problems earlier in life.

There are ways to prevent these issues. Don't spend more than 20 minutes at a time staring at an e-reader or computer screen. Be sure to blink often to lubricate your eyes. Take many breaks. Be sure to do safe neck exercises to ward off a stiff neck (ригидность затылочных мышц, прострел) and tension in your shoulders. Or just read an actual book!

Benefits of reading papers	**Drawbacks of reading electronic materials**
1) readers can easily find a particular part of a paper book and pay more attention to its content 2) more... 3) better… 4) 'seeing'… 5) …	1) readers tend to skim, looking for keywords -> the full content of the material is often lost 2) … 3) … 4) … 5) the biggest complaints …

55. Work in small groups. Talk about the problem of plagiarism in education. Answer the following questions before reading the text.

1) Have you ever used the Internet to help you with your student's work?
2) How does studying with the Web differ from studying with books?

Internet Cheats

These days lots of students **browse** the Internet for help with their homework and assignments, and there is no doubt that the Web has become a valuable academic tool. But now that **cutting and pasting** is so easy, there can often be a fine dividing line between using the Net for research and plagiarizing material directly from it. There are even some unscrupulous sites (often called **'paper mills'**) that offer students ready-made downloadable essays on a number of popular topics — usually for a payment. But most teachers are now aware of Internet **plagiarism**, and there is even a variety of software that schools can use to detect it. But teachers can often spot plagiarists simply by following their own suspicions. For example:

• a high-school student **turns** in an essay using language and ideas more suitable for a university student;
• a weak student suddenly turns in an **outstanding** essay;
• the same work occurs in a number of different students' assignments;
• the essay doesn't quite fit the question or title that the teacher has **set** the class;

• American students produce essays written in British English, or vice versa.
The price of plagiarism can be high, especially in the USA, where it is not uncommon for students to be expelled particularly at college level.

Notes to the text

to browse = to look through something on the Internet in a random way;
to cut and paste = to make a copy of information on a computer and insert it in a new position;
paper mill = a factory that produces paper from wood. This is a play on the word 'paper', which can also mean an essay;
plagiarism = copying something directly without admitting it;
to turn in = to give, submit;
outstanding = excellent;
to set = to assign.

56. Choose the correct answers to the questions below using the information from the text above.

1) What are 'paper mills'?
a. Software programs that detect plagiarism.
b. Websites that offer ready-made assays.
2) Do you always have to pay to download an essay?
a. Yes.
b. No, not always.
3) When would a teacher start to suspect plagiarism?
a. If the level of a student's work seemed too high.
b. If the level of a student's work seemed too low.
4) When would a British teacher become suspicious?
a. If one of its students turned in an essay with lots of spelling mistakes.
b. If one of its students turned in an essay with lots of American spellings.
5) What can happen to students who are found guilty of plagiarism?
a. They can be thrown out of their school.
b. They can be taken to the police.

57. Are there any subjects that you would be tempted to cheat in? Discuss different reasons why plagiarizing would be wrong. Talk about:

1) why it is wrong to tell lies;
2) unfairness to your teacher;
3) unfairness to other students;
4) learning how to think and work independently;
5) how you can learn by making mistakes.

58. This quiz will help you 'hack' terms you may encounter while surfing the Internet. Explain their meanings in English.

1	cursor, *n*	**A**: coarse speaker. **B**: indicator. **C**: moneychanger. **D**: technician.
2	network, *n*	**A:** TV channel. **B**: digital design. **C**: system of computers. **D**: filter.
3	virus, n	**A**: flaw. **B**: poison **C**: fatigue. **D**: infection.
4	browser, n	software that a1lows you to **A**: explore the Internet. **B**: eavesdrop. **C**: send a fax. **D**: save a file.
5	cracker, n	**A**: fanatic. **B**: intruder. **C**: burglar. **D**: expert.
6	emoticon, n	**A**: robot. **B**: radiation. **C**: trick. **D**: illustration.
7	server, n	**A**: central computer. **B**: speed control. **C**: power supply. **D**: trouble-shooter.

8	pixel, n	**A**: picture element. **B**: programming oddity. **C**: brief blur. **D**: long delay
9	scanner, n	machine, that **A:** reproduces images. **B**: translates files. **C**: searches a document. **D**: adds color.
10	log on, v	**A**: to pile. **B**: gain access. **C**: waste time. **D**: stretch.
11	shareware, n	**A**: hand-me-down clothing. **B** free hardware. **C**: relic. **D**: trial software.
12	gigabyte, n	**A**: sudden shutdown. **B**: unit of storage. **C:** wide gap. **D**: high pressure.

59. Work in small groups. Discuss the origin and rules of the Hacker's Ethic.

The First Hackers

The first 'hackers' were students at the Massachusetts Institute of Technology (MIT) who belonged to the TMRC (Tech Model Railroad Club). Some of the members really built model trains. But many were more interested in the wires and circuits underneath the track platform. Spending hours at TMRC creating better circuitry was called 'a mere hack'. Those members who were interested in creating innovative, stylistic, and technically clever circuits called themselves (with pride) hackers.

During the spring of 1959, a new course was offered at MIT, a freshman programming class. Soon the hackers of the railroad club were spending days, hours, and nights hacking away at their computer, an IBM 704. Instead of creating a better circuit, their hack became creating faster, more efficient program - with the least number of lines of code. Eventually they formed a group and created the first set of hacker's rules, called the Hacker's Ethic. Steven Levy, in his book "Hackers", presented the rules:

Rule 1: *Access to computers - and anything, which might teach you, something about the way the world works - should be unlimited and total.*
Rule 2: *All information should be free.*
Rule 3: *Mistrust authority - promote decentralization.*
Rule 4: *Hackers should be judged by their hacking, not bogus criteria such as degrees, race, or position.*
Rule 5: *You can create art and beauty on a computer.*
Rule 6: *Computers can change your life for the better.*

These rules made programming at MIT's Artificial Intelligence Laboratory a challenging, all encompassing endeavor. Just for the exhilaration of programming, students in the AI Lab would write a new program to perform even the smallest tasks. The program would be made available to others who would try to perform the same task with fewer instructions. The act of making the computer work more elegantly was, to a **bonafide** (добросовестный) hacker, **awe-inspiring** (внушающий благоговение).

Hackers were given **free reign** (полная свобода действий) on the computer by two AI Lab professors, 'Uncle' John McCarthy and Marvin Minsky, who realized that hacking created new insights. Over the years, the AI Lab created many innovations: LIFE, a game about survival; LISP, a new kind of programming language; the first computer chess game; The CAVE, the first computer adventure; and SPACEWAR, the first video game.

60. State whether the following are true or false.

1) The first hackers were interested in railroad circuitry.
2) The first hackers studied at MIT.
3) The purpose of hacker's work was to create a faster and smaller code.
4) Hackers had their own Ethic Code.
5) TMRC stands for Toy Machinery Railroad Car.
6) An elegant computer was, to a real hacker, awe-inspiring.
7) At AI Lab hackers wrote a computer program for every other task.
8) Hackers were quite prolific in innovations.

61. Brainstorm the effects of playing computer and video games. Computer and video games are very popular these days. Some people believe these games are a harmless form of escapism but others think they make young people too aggressive and they can become dangerously addictive. Give your views on this topic and say whether you agree or disagree with the points made.

Useful expressions:
Pros: *playing video games can be funny and social, allows young people to let off steam, never causes violent behavior and cannot turn normal children into killers similarly to fairy tales; young people enjoy virtual fights with virtual guns and swords, can express feelings to be controlled in real life, become better friends.*
Cons: *games are extremely violent, have addictive nature, more harmful than violent films or television programs; young people identify themselves with the aggressive characters on screen, try to solve their own problems in a violent way, suffer psychologically, become hyperactive and isolated from their friends and families, cannot distinguish what is reality from fantasy, are desensitized to suffering, think that violence is acceptable.*

62. Put the linking words and expressions 1 - 10 into groups a - c.

1	although	**6**	which is why
2	as a consequence / result	**7**	however
3	so that	**8**	what is more
4	therefore	**9**	in spite of /despite
5	while	**10**	furthermore

a) similar or extra information
b) contrasting information
c) expressing a result

63. Use appropriate linking words to connect the information in sentences a - g. There may be more than one possible answer. If you are making one sentence, you may need to change the order of the information.

a)	Computer games are good fun.	They can be very social.
b)	One concern is that young people may have trouble distinguishing what is real from what is fantasy.	They may act out what they do in the games in real life.
c)	There is a great deal of violence in fairy tales.	It never led our parents or grandparents to behave violently in real life.
d)	A lot of violent computer games are interactive.	They may be more harmful than violent films or television.
e)	Children might identify with the aggressive characters on screen.	They might try to solve their problems in a violent way too.
f)	The games sometimes take over children's lives.	Children often suffer psychologically.
g)	Ultra-violent video games are unhealthy.	There is no proof they turn normal children into killers.

64. Do you know any of the films that were made using digital technology? Work in pairs. Discuss the main characters and plot of one of the movies you like. For example, you may talk about the 'Avatar', a sensation amongst movie lovers with its breathtaking three dimension technology.

James Cameron, the director of 'Avatar', successfully incorporated 3D technology as well as real human footages into the movie. Computer-generated imagery was used extensively in the movie. He used a technique called the 'image-based facial performance capture', which required actors and actresses

to put on special headgears (шлем) called skull caps (тюбетейка) that were equipped with cameras. As the recording went on, facial expressions and movies were transmitted from the camera to the virtual characters. The movements caught on tape would be six times bigger, which created authenticity (достоверность) in the characters. By using such technology, the facial expressions of the characters can be made to change according to how the dialog was told.

Grammar

65. Translate the sentences into Russian paying attention to pronouns and adverbs.

someone **somebody** **something** **somewhere**	1. I have got some time. 2. Some research laboratory will be built here. 3. We shall study some new subjects. 4. He has something to discuss with you. 5. Somebody must speak at this conference. 6. I saw this publication somewhere yesterday. 7. Someone gave an example. 8. Some 10 students attended the seminar.
any **anyone** **anybody** **anything** **anywhere**	1. Is there any time for it? 2. Have they any new ideas? 3. Do you study any foreign language? 4. Did anybody attend the lecture last week? 5. Will you go anywhere tomorrow? 6. Does anyone of you speak English? 7. Did he find anything as a result of this operation?
no one **nobody** **nothing** **nowhere**	1. They have nothing to tell you. 2. Nobody is going to do research in this field now. 3. No one is familiar with this system. 4. Nothing certain was known about his appointment. 5. She could find his abstract nowhere. 6. He has no research adviser. 7. No computer can think.
not any **not anyone** **not anybody** **not anything** **not anywhere**	1. I do not know anything about this method. 2. He does not study any problems of topology. 3. She did not have any publications. 4. There is not anybody here who knows this subject. 5. He did not write anybody about it. 6. She does not go anywhere this weekend.
everyone **everybody** **everything** **everywhere**	1. Everyone (everybody) attended his lecture. 2. Does he know everything? 3. You can find this book everywhere.

66. Complete the sentences with *some-* or *any-* + *-body*/*-thing*/*-where*.

1) I was too surprised to say ___*anything*____.
2) There's _____ at the door. Can you go and see who it is?
3) Does _____ mind if I open the window?
4) I wasn't feeling hungry, so I didn't eat _____ .
5) You must be hungry. Would you like _____ to eat?
6) Quick, let's go! There's _____ coming and I don't want _____ to see us.
7) Sally was upset about _____ and refused to talk to _____ .
8) This machine is very easy to use. _____ can learn to use it in a very short time.

9) There was hardly _____ on the beach. It was almost deserted.
10) 'Do you live _____ near Jim?' 'No, he lives in another part of town.'
11) We slept in a park because we didn't have to stay.
12) 'Where shall we go on holiday?' 'Let's go _____ warm and sunny.
13) 'They stay at home all the time. They never seem to go _____ .
14) I'm going out now. If _____ phones while I'm out, can you tell them I'll be back at 11.30?
15) Why are you looking under the bed? Have you lost _____ ?
16) _____ who saw the accident should contact the police.
17) Sue is very secretive. She never tells _____ _____ . (2 words)

67. Complete these sentences with *no-* or *any-* + *-body/-thing/-where*.

1) I don't want __*anything*__ to drink. I'm not thirsty.
2) The bus was completely empty. There was _____ on it.
3) Where did you go for your holidays?' '_____ . I stayed at home.'
4) I went to the shops but I didn't buy _____ .
5) 'That did you buy?' '_____ . I couldn't find _____ I wanted.'
6) The town was still the same when I returned years later. _____ had changed.
7) Have you seen my watch? I've looked all over the house but I can't find it _____ .
8) There was complete silence in the room. _____ said _____ .

68. Complete these sentences with *all*, *everything* or *everybody/everyone*.

1) It was a good party. ___*Everybody*___ enjoyed it.
2) _____ I've eaten today is a sandwich.
3) _____ has got their faults. Nobody is perfect.
4) Nothing has changed. _____ is the same as it was.
5) Lena told me _____ about her new job. It sounds quite interesting.
6) Can _____ write their names on a piece of paper, please?
7) Why are you always thinking about money? Money isn't _____ .
8) I didn't have much money with me. _____ I had was ten pounds.
9) When the fire alarm rang, _____ left the building immediately.
10) She didn't say where she was going. _____ she said was that she was going away.
11) We have completely different opinions. I disagree with _____ she says.
12) We all did well in the examination. _____ in our class passed.
13) We all did well in the examination. _____ of us passed.
14) Why are you so lazy? Why do you expect me to do _____ for you?

Home assignment after Lesson 4:

1. Review Lessons 1-4.
2. Be ready for a **three-minute presentation** on one of the suggested topics. Prepare **exactly three slides** to support it. Follow the advice in the video https://youtu.be/P4BPsCtlINg

1) The future of computer technology.
2) Cybersecurity and crime.
3) Hackers of today.
4) Virtual reality as the way of exploring the world.