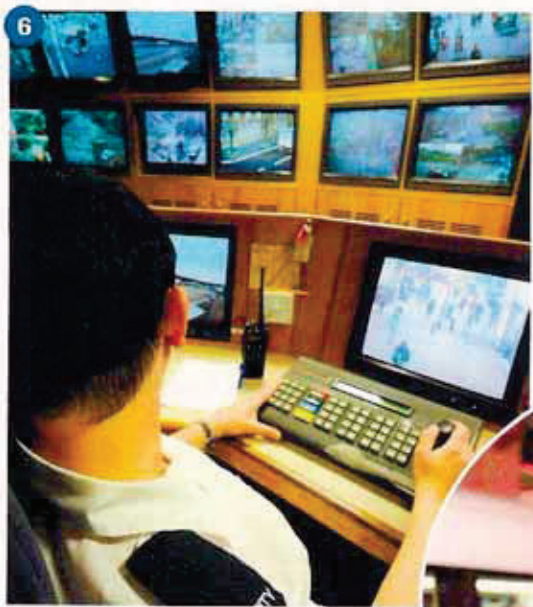# Unit 6   IT society

Starting off

1 Work in small groups. Match the photos (1–6) with these uses of information technology (IT) (a–f).

   a   monitoring passenger movement
   b   finding directions
   c   working/studying
   d   providing entertainment
   e   managing personal finance
   f   purchasing goods

2 How has IT changed the way people do the things in the photos?

3 Choose one of the types of IT in the photos and discuss how it will change in the future.

Reading Section 3

❶ Work in small groups. You are going to read a passage about an innovative approach to teaching maths. Before you read, discuss these questions.

1 Did you enjoy studying maths at school?
2 What do you find particularly easy or difficult about working with numbers?

❷ Work in pairs. Read the title and subheading of the article. What do you expect to read about in the article?

❸ Skim the passage quickly to find out what Khan Academy is, how it is changing education, and how people feel about it.

The new way to be a fifth-grader

by Clive Thompson

Khan Academy is changing the rules of education.

I peer over his shoulder at his laptop screen to see the math problem the fifth-grader is pondering. It's a trigonometry problem. Carpenter, a serious-faced ten-year-old, pauses for a second, fidgets, then clicks on "0 degrees." The computer tells him that he's correct. "It took a while for me to work it out," he admits sheepishly. The software then generates another problem, followed by another, until eventually he's done ten in a row.

Last November, his teacher, Kami Thordarson, began using Khan Academy in her class. It is an educational website on which students can watch some 2,400 videos. The videos are anything but sophisticated. At seven to 14 minutes long, they consist of a voiceover by the site's founder, Salman Khan, chattily describing a mathematical concept or explaining how to solve a problem, while his hand-scribbled formulas and diagrams appear on-screen. As a student, you can review a video as many times as you want, scrolling back several times over puzzling parts and fast-forwarding through the boring bits you already know. Once you've mastered a video, you can move on to the next one.

Initially, Thordarson thought Khan Academy would merely be a helpful supplement to her normal instruction. But it quickly became far more than that. She is now on her way to "flipping" the way her class works. This involves replacing some of her lectures with Khan's videos, which students can watch at home. Then in class, they focus on working on the problem areas together. The idea is to invert the normal rhythms of school, so that lectures are viewed in the children's own time and homework is done at school. It sounds weird, Thordarson admits, but this reversal makes sense when you think about it. It is when they are doing homework that students are really grappling with a subject and are most likely to want someone to talk to. And Khan Academy provides teachers with a dashboard application that lets them see the instant a student gets stuck. — line 40

For years, teachers like Thordarson have complained about the frustrations of teaching to the "middle" of the class. They stand at the whiteboard trying to get 25 or more students to learn at the same pace. Advanced students get bored and tune out, lagging ones get lost and tune out, and pretty soon half the class is not paying attention. Since the rise of personal computers in the 1980s, educators have hoped that technology could save the day by offering lessons tailored to each child. Schools have spent millions of dollars on sophisticated classroom technology, but the effort has been in vain. The one-to-one instruction it requires is, after all, prohibitively expensive. What country can afford such a luxury?

Khan never intended to overhaul the school curricula and he doesn't have a consistent, comprehensive plan for doing so. Nevertheless, some of his fans believe that he has stumbled onto the solution to education's middle-of-the-class mediocrity. Most notable among them is Bill Gates, whose foundation has invested $1.5 million in Khan's

site. Students have pointed out that Khan is particularly good at explaining all the hidden, small steps in math problems—steps that teachers often gloss over. He has an uncanny ability to inhabit the mind of someone who doesn't already understand something.

However, not all educators are enamoured with Khan and his site. Gary Stager, a long-time educational consultant and advocate of laptops in classrooms, thinks Khan Academy is not innovative at all. The videos and software modules, he contends, are just a high-tech version of the outdated teaching techniques—lecturing and drilling. Schools have become "joyless test-prep factories," he says, and Khan Academy caters to this dismal trend.

As Sylvia Martinez, president of an organization focusing on technology in the classroom, puts it, "The things they're doing are really just rote." *Flipping* the classroom isn't an entirely new idea, Martinez says, and she doubts that it would work for the majority of pupils: "I'm sorry, but if they can't understand the lecture in a classroom, they're not going to grasp it better when it's done through a video at home."

Another limitation of Khan's site is that the drilling software can only handle questions where the answers are unambiguously right or wrong, like math or chemistry; Khan has relatively few videos on messier, grey-area subjects like history. Khan and Gates admit there is no easy way to automate the teaching of writing—even though it is just as critical as math.

Even if Khan is truly liberating students to advance at their own pace, it is not clear that schools will be able to cope. The very concept of grade levels implies groups of students moving along together at an even pace. So what happens when, using Khan Academy, you wind up with a ten-year-old who has already mastered high-school physics? Khan's programmer, Ben Kamens, has heard from teachers who have seen Khan Academy presentations and loved the idea but wondered whether they could modify it "to stop students from becoming this advanced."

Khan's success has injected him into the heated wars over school reform. Reformers today, by and large, believe student success should be carefully tested, with teachers and principals receiving better pay if their students advance more quickly. In essence, Khan doesn't want to change the way institutions teach; he wants to change how people learn, whether they're in a private school or a public school—or for that matter, whether they're a student or an adult trying to self-educate in Ohio, Brazil, Russia, or India. One member of Khan's staff is spearheading a drive to translate the videos into ten major languages. It's classic start-up logic: do something novel, do it with speed, and the people who love it will find you.

adapted from *Wired Magazine*

4 Writers often use reference words/phrases (e.g. *it, such*) to avoid repetition and to link different parts of the text. Find these words and phrases in the passage and decide what the words in *italics* refer to.

1 work *it* out   *a trigonometry problem*
2 on *which* students
3 the next *one*
4 more than *that*
5 *such a luxury*
6 plan for *doing so*
7 among *them*
8 *this dismal trend*
9 grasp *it* better

5 **Underline** the key ideas in Questions 1–5 (not the options). Then scan the passage to find the relevant parts and read each part carefully to choose the correct options.

Questions 1–5

Choose the correct letter, A, B, C or D.

1 What do you <u>learn</u> about the <u>student</u> in the <u>first paragraph</u>?

   A He has not used the maths software before.

   B He did not expect his answer to the problem to be correct.

   C He was not initially doing the right maths problem.

   D He did not immediately know how to solve the maths problem.

2 What does the writer say about the content of the Khan Academy videos?

   A They have been produced in a professional manner.

   B They include a mix of verbal and visual features.

   C Some of the maths problems are too easy.

   D Some of the explanations are too brief.

3 What does *this reversal* refer to in line 40?

   A going back to spending fewer hours in school

   B students being asked to explain answers to teachers

   C swapping the activities done in the class and at home

   D the sudden improvement in students' maths performance

4 What does the writer say about teaching to the 'middle' of the class?

   A Teachers become too concerned about weaker students.

   B Technology has not until now provided a solution to the problem.

   C Educators have been unwilling to deal with the issues.

   D Students in this category quickly become bored.

5 Students praise Khan's videos because they

   A show the extent of his mathematical knowledge.

   B deal with a huge range of maths problems.

   C provide teaching at different ability levels.

   D cover details that are often omitted in class.

Exam advice   *Multiple choice*

• For referencing questions, read around the word(s) carefully to find what the reference refers to. The answer may come before or after the reference.

• For vocabulary questions, read before and after the word to understand the context.

6 **Underline** words in Questions 6–10 which will help you scan to find the relevant parts of the passage. Then read those parts of the passage and answer the questions.

Questions 6–10

Do the following statements agree with the claims of the writer in the reading passage?

Write

YES   *if the statement agrees with the claims of the writer*

NO   *if the statement contradicts the claims of the writer*

NOT GIVEN *if it is impossible to say what the writer thinks about this*

6 Thordarson's first impressions of how she would use Khan Academy turned out to be wrong.

7 Khan wished to completely change the way courses are taught in schools.

8 School grade levels are based on the idea of students progressing at different rates.

9 Some principals have invited Khan into their schools to address students.

10 Khan has given advice to other people involved in start-up projects.

7 For Questions 11–14, <u>underline</u> key ideas in each of the options and use the names in the questions to find the relevant parts of the passage. Then read carefully to answer the questions.

Questions 11–14

Complete each sentence with the correct ending, A–G, below.

11 Bill Gates thinks Khan Academy

12 According to Gary Stager, Khan Academy

13 Sylvia Martinez regrets that Khan Academy

14 Ben Kamens has been told that Khan Academy

A is only suited to subjects where questions have exact answers.

B can teach both the strongest and the weakest pupils in a class.

C means the teaching of other school subjects will have to be changed.

D only prepares students to pass exams.

E could cause student achievement to improve too quickly.

F requires all students to own the necessary technology.

G is unlikely to have a successful outcome for most students.

8 Work in small groups.

1 What IT or websites do you use to supplement your classwork or lectures?

2 What effect do you think IT will have on classrooms in the future?

Listening Section 4

1 Work in pairs. You are going to hear a media-studies lecturer talking about animation technology in the film industry. Before you listen, discuss these questions.

1 How did film makers make animated films before the invention of computers?

2 Why do you think both adults and children enjoy animated films?

2 Work in pairs. Look at Questions 1–10 on page 67.

1 What main areas will the lecturer cover in her talk?

2 How does the organisation of the notes guide your listening?

3 What type of word (noun, verb, adjective, etc.) and what type of information do you think you need to complete each gap?

Questions 1–10

Complete the notes below.

*Write **NO MORE THAN TWO WORDS AND/OR A NUMBER** for each answer.*

Animation Technology

History

Thomas Edison:	first camera – 1889
J. Stuart Blackton:	first animated film technique – used many 1 .... of faces
Émile Cohl:	first animated scene – used cut-outs made of 2 ....
Walt Disney:	• first talking colour film – 1928 – used 3 .... slides • first full-length colour film – *Snow White and the Seven Dwarfs* – 1937

Pixar Animation Studios

Origins:	graphics group
Earnings:	Over 4 $............... worldwide
Famous films:	1995 – *Toy Story* – first computer-animated film
	2001 – *Monsters, Inc.* – included 5 .... as a new animation feature
	Finding Nemo – new techniques in 6 ....
	The Incredibles – believable simulations of people and 7 ....

Future developments:

a Digital humans: focusing particularly on skin and 8 ....

b Speed: companies producing 9 .... will help

c Colour: aim to preserve vibrancy

d Styles of animation: a move from 10 .... to new concepts

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3 🎧 **Listen and answer Questions 1–10.**

> **Exam advice**   Note completion
> - Check how many words you have written for each answer.
> - Take care to spell your answers correctly.
> - Use your ideas on the type of word you need to guess any missing answers at the end.

4 Take a minute to prepare a short talk on a film you have seen that includes some computer-animated features. Then work in pairs and take turns to give your talks. You can use these questions to help you.

1 What was the film about and what happened during the film?

2 What computer effects did you see in the film?

3 What did you particularly like or dislike about the film?

5 Change partners and give your talk.

Vocabulary
Adjective + noun collocations

1 Look at these sentences. For each one, cross out the adjective that CANNOT be used with the noun in bold to form a collocation.

1 It was possible to build up a small scene, though a *large / big / considerable* **number** of cut-outs were required to do this.

2 Now it has become a Hollywood icon, with earnings of over 6.3 billion dollars and *numerous / plentiful / countless* **film awards**.

3 Many **features** of the film were seen as *outstanding / irreplaceable / excellent*.

4 It is still considered to be one of the most *extensive / significant / noteworthy* **achievements** in the history of film animation.

5 This helped to enhance the appeal of one of the film's *central / primary / main* **characters**.

6 Many scenes took place underwater and relied on a *certain / particular / sure* level of brilliance and clarity throughout.

7 Yet cinema audiences have increasingly *high / tall / great* **expectations**.

2 Complete these sentences using collocations from Exercise 1 in the correct form.

1 If friends praise a film too much, your .... can be too .... when you go to see it.
2 Film directors know that audiences need to be able to identify with the .... in a film.
3 In my view, Leonardo DiCaprio's performance was the most .... of the film.
4 Producers now have a .... of animation techniques at their disposal.
5 Making a short animated film was a .... for me.

Speaking Parts 2 and 3

1 Look at this Speaking Part 2 task and think about what you could say. Make some notes.

> Describe a website that you like using.
>
> You should say:
>
> what this website is
>
> how people use it
>
> who uses it
>
> and explain why you like using this website.

2 🎧(2) Listen to Rosy doing the task.

1 Tick (✓) the things that she does.

1	introduces her topic	✓
2	introduces each point clearly	☐
3	paraphrases when she can't remember a word or phrase	☐
4	repeats some points	☐
5	rephrases to avoid hesitation	☐
6	uses a strategy to include something she forgot	☐
7	pauses unnecessarily	☐
8	ends her talk naturally within two minutes	☐

2 Look at the recording script on page 157 and check your answers, underlining the phrases Rosy uses for each function.

3 Work in pairs. In her talk, Rosy doesn't remember these words

1 amateur   2 music genre

Look at the recording script on page 157. Which of these strategies (a–d) does she use to explain what she means?

a saying what it is not
b explaining how it works
c giving a definition
d describing what it looks like

4 Work in pairs. If you had forgotten or did not know the words in bold in these sentences, how would you explain the idea?

1 What people do is they make a CD in a **recording studio** somewhere.
2 … some people set up the **recording equipment** in their own home, …
3 … though there's no **age limit** …
4 … they're usually talented musicians and **composers**.
5 … and they hope a **talent scout** will **spot** them on the website!
6 I love this website because you get to hear **original music** …

5 Work in pairs. Take turns to do the Speaking task in Exercise 1.

> *Exam advice*   *Speaking Part 2*
> • Use a range of strategies to express ideas when you can't think of the right word(s). Showing you can do this will improve your score.

6 🎧(3)–(5) Listen to three candidates answering the questions below. Which question does each candidate answer?

A Katalina

B Obi

C Elicia

> **Children's use of the Internet**
>
> 1 Some people say it isn't good for children to use the Internet a lot in their free time – what do you think?
>
> 2 Is it true that the Internet is sometimes an *unhelpful* tool when it comes to children's education?
>
> 3 Would you agree that the Internet has a positive effect on children's social lives?

❼ Underline the phrases in the recording script on page 157 that each candidate uses to talk about advantages and disadvantages.

Example: a *significant advantage for anyone is ...*

❽ IELTS candidates often make mistakes with prepositions when they describe advantages and disadvantages. Choose the correct preposition in these sentences. Then check your answers in the language reference.

1 One of the many advantages *for / of* teleworking is being able to work in your own home.
2 The students said that they benefited enormously *from / with* attending the performance.
3 There are several drawbacks *of / to* this type of behaviour.
4 *For / To* a technician, it is a significant advantage to have good equipment.
5 The outstanding features of this software give it many advantages *over / from* other packages.

▶ page 116 *Prepositions with advantages and disadvantages*

▶ Pronunciation: *Intonation 2*

❾ Work in pairs. Take turns to ask and answer the questions in the task in Exercise 6 and the questions below.

Entertainment on the Internet

1 Would you say the Internet is a better form of entertainment than television? Why?

2 Would you agree that there are a lot of advantages to watching TV on the Internet? Why?

3 Some people say the Internet is a good place to be 'discovered' as an entertainer. What do you think? Why?

Exam advice *Speaking Part 3*

• Introduce positive and negative points clearly, using appropriate language.
• Use intonation to help signal agreement and disagreement.

Pronunciation
Intonation 2

Speakers use intonation to show that they are engaged in a discussion and to help the conversation flow. This is important when you introduce your arguments, particularly if you want to disagree with the examiner but maintain a friendly, interested tone.

❶ ⟨6⟩ Work in pairs. Listen to two students responding to a Part 3 question.

a *Not really. It's convenient sometimes, but I don't think it's as enjoyable.*
b *Yeah – a lot of young people do that these days.*

1 Which speaker sounds more interested? Why?
2 How does the other speaker sound? Why?

❷ ⟨7⟩ Listen to these questions and answers and mark where the students' voices rise and fall when responding. Then repeat the sentences.

1 A: Some people say it isn't good for children to use the Internet a lot in their free time – what do you think?
   B: That could be right – yeah, a lot of people would agree with that.
2 A: Would you agree that the Internet has a negative effect on children's social lives?
   B: Oh, well, actually, I think it has a positive one.

❸ Work in pairs. Look at this question and the candidates' responses below. Discuss how you think the candidates might say these sentences to show they are interested and engaged in the discussion.

> Some people say we've reached the point where technology is intruding on our private lives. Would you agree?

a Oh, completely. There are CCTV cameras everywhere.
b I don't think people notice really – they're just used to it.
c I would, yes. Everywhere you go, there are screens of one kind or another.
d Well, you can't stop it – new developments are happening all the time.
e I'm not sure. In some ways it's a nuisance, but in others it isn't.

❹ ⟨8⟩ Listen to the exchanges from Exercise 3. Then take turns to repeat the answers.

Writing Task 2

❶ Work in pairs. Look at this Writing task and make a list of benefits and drawbacks.

> Write about the following topic.
>
> *Information technology is changing many aspects of our lives and now dominates our home, leisure and work activities.*
>
> *To what extent do the benefits of information technology outweigh the disadvantages?*
>
> Give reasons for your answer and include any relevant examples from your own knowledge or experience.

❷ Work in pairs. Read the sample answer in the next column (ignoring the underlining and bold for the moment) and answer these questions.

1 What is the writer's view, with regard to the question in the task?
2 How does the structure of the writer's answer reflect this view?
3 Has the writer referred to the three areas specified in the task?
4 How does the writer link paragraphs 2 and 3?
5 How does the writer link paragraphs 3 and 4?
6 How does the writer link paragraphs 4 and 5?
7 In what three ways is the last paragraph an effective summary?

Information technology has become an integral part of human life, and we are becoming increasingly dependent on it. But while it enhances certain aspects of our lives, I also think it may be having a detrimental effect on others.

One of the biggest drawbacks of information technology is that it can be incredibly time-consuming. People who work in international business have to read hundreds of emails every day, and children can spend hours chatting online. Some people would argue that **this time** could be better spent.

A related criticism is that it leads to unhealthy lifestyles. Rather than going out and taking regular exercise, for example, some people spend a lot of time sitting at their computers or with their smart phones. In the long term, **this lack of activity** does not do our bodies any good.

Despite these drawbacks, we cannot deny that technology has made many aspects of life more pleasurable. We all have instant access to entertainment and social connections are just a click away. Like many people, I use a networking site, which apparently has more than 800 million active users. **This type of statistic** illustrates just how popular this website is.

There are also huge benefits to using technology for study and work. The Internet is an invaluable resource for students of all ages, provided that it is used sensibly. Also, some areas of work have moved forward in leaps and bounds due to the huge amount of data that computers can store.

Clearly, there are some negative aspects to technology. Having said that, it is the way we use it that causes these. If it is used sensibly and people take regular breaks from their computers, there are only benefits that remain.

❸ With this type of question, it is important to present a balanced view.

1 The writer uses discourse markers such as *despite these drawbacks* as signposts to show that he is moving from one side of the argument to the other (or the counter-argument). Which of the underlined discourse markers has a similar function in the sample answer?
2 Which of the underlined discourse markers indicates that there will be a 'for' and 'counter-' argument in the same sentence?
3 What other linkers can you use to introduce counter-arguments?

▶ Key grammar: *Referencing*

4 Work in pairs. Complete these useful collocations from the sample answer by writing one word in each gap.

1 an *integral* part
2 a .... effect
3 one of the .... drawbacks
4 taking .... exercise
5 instant ....
6 .... benefits
7 an .... resource

5 Complete these sentences using collocations from Exercise 4 in the correct form.

1 Some medical experts are critical of the .... that computers have had on our health.
2 Working from home has .... for parents.
3 The website proved to be an .... when I wrote my media-studies essay.
4 Data processing is an .... of most business systems.
5 One of the .... of living in this area is that I do not always have .... to the Internet.
6 Although I have a sedentary job, I still make sure I ....

6 Work in pairs. Read the Writing task below.

1 Note down some advantages and disadvantages.
2 Discuss how you can present a balanced view.
3 Write an essay plan.

> Write about the following topic.
>
> *Information technology enables many people to do their work outside their workplace (e.g. at home, when travelling, etc.).*
>
> *Do the benefits of this mobility outweigh the disadvantages?*
>
> Give reasons for your answer and include any relevant examples from your own knowledge or experience.

7 Write your answer to the task in at least 250 words.

Exam advice   Writing Task 2

- When you write an essay evaluating advantages and disadvantages, present a balanced viewpoint, but make your own opinions clear.
- Use reference devices and discourse markers to make your essay clear and coherent.
- Use collocations to make your English sound natural and more persuasive.

Key grammar
Referencing

1 Complete this paragraph from the sample answer on page 70 by writing one word in each gap.

Clearly, there are some negative aspects to technology. Having said 1 .... , it is the way we use it that causes 2 .... If 3 .... is used sensibly and people take regular breaks from 4 .... computers, there are only benefits that remain.

2 What do the phrases in bold in the sample answer refer to?

▶ page 117 *Referencing*

3 ⊙ IELTS candidates often make mistakes by using or omitting reference words. Correct the mistakes in these sentences either by adding a missing reference word or changing an incorrect one.

1 Children grow up here have the best facilities at schools. *who*
2 ~~These~~ kind of educational material is available in most schools. *This*
3 Some training should be given to anyone who asks for.
4 Using this two types of educational material means we can learn things more quickly.
5 Many factors are involved in such kind of production.
6 When it comes to films, most of us can say we enjoy it.
7 Other drawback of computers is that people become too solitary.

4 Complete this paragraph by writing a suitable reference word in each gap.

It is often said that computer games are bad for children, but 1 .... argument is not based on any evidence. In fact, some experts have shown that 2 .... can have a positive impact on the mental processing of children suffering from attention-related disorders. It seems that, in 3 .... cases, there are positive effects on areas such as concentration. Nowadays, computers are an integral part of life, and not having access to 4 .... is a huge disadvantage. Having said 5 .... , it is up to parents to monitor children's computer use and ensure that 6 .... does not become excessive.