



EAE Learning objectives for this lesson

Familiarise yourself with the vocabulary of big data and discuss the subject. Learn how to process complicated information and practice doing it. Learn how to introduce a complex idea in English using linking words and practice. Comprehension activities.

Activity One - Read the text and **ask your teacher questions** about anything you don't understand.

Big data is a broad term for data sets so large or complex that traditional data processing applications are inadequate. Challenges include analysis, capture, data curation, search, sharing, storage, transfer, visualization, and information privacy.

The term "big data" is relatively new but the act of gathering and storing large amounts of information for analysis is old. The concept gained momentum in the early 2000s when industry analyst Doug Laney articulated the now-mainstream definition of big data as the three Vs:
Volume. Organizations collect data from a variety of sources, including business transactions, social media and information from sensor or machine-to-machine data.

Velocity. Data streams in at an unprecedented speed and must be dealt with quickly. RFID tags, sensors and smart metering are driving the need to deal with torrents of data in near-real time.
Variety. Data comes in all types of formats – from structured, numeric data in traditional databases to unstructured text documents, email, video, audio, stock ticker data and financial transactions. Source - www.sas.com

Activity Two - **Introducing a complex idea in English.**



When you need to explain something quite complicated it's a good idea to break down the information into several short, simple sentences so that the listener can follow what you are saying easily. You should also use linking words and introductory expressions to make yourself clear. Here are a list of some usefull words and expressions:

To introduce what you are saying: Basically, Essentially, In fact, To put it as simply as I can, this is a bit complicated to explain, but let me simplify.
To sequence ideas: First of all, secondly, furthermore, finally, in conclusion, there are three main points to consider, there are two parts to this…
To clarify: What I am saying is, what I mean is, on the whole, generally, in other words, to put it more simply, so to sum this up I would say that, so all in all, basically this means that, what this means to you is…
To turn to a new point: Now, regarding.., as far as.. is concerned, As for…, it follows that, turning to..
To reinforce: Also, moreover, in addition, what is more, above all, not only…but also, in the same way, besides, furthermore.
To summarize: in brief, to summarize, overall, therefore, in conclusion.

Activity Three - **Read the text and answer the questions using the expressions from activity two :**

One day, every aspect of our lives will be affected by big data and it is already making a real difference today. It is used to understand and target customers. Companies use data from social media, browser logs, sensor data and text analytics to get to know their customers better. Many companies use this detailed information to create predictive models. Predictions can be used to propose products and services, to improve staff planning, to respond better to customer trends.

Bernard Marr writes "Retailers are able to optimize their stock based on predictions generated from social media data, web search trends and weather forecasts. One particular business process that is seeing a lot of big data analytics is supply chain or delivery route optimization. Here, geographic positioning and radio frequency identification sensors are used to track goods or delivery vehicles and optimize routes by integrating live traffic data, etc. HR business processes are also being improved using big data analytics. This includes the optimization of talent acquisition – as well as the measurement of company culture and staff engagement using big data tools."

Of course Google and Facebook use algorithms to predict what we want to see in adverts or in our newsfeed.



Big data is also used to help machines become more autonomous. Machine learning is developing quickly. This is the technology which allows all types of machines (driverless cars, drones, robots, domestic connected objects, electronic personal assistants) to become more and more intelligent and able to perform certain tasks with increasing skill. For example robots are being developed to help surgeons perform operations. They can learn from observing the surgeon and they can become better and better at assisting the surgeon so that operations become safer.

Machine learning is artificial intelligence which evolves. Computers deduce patterns from the data received from the internet or from any connected object and online behaviour. They learn from this information. Experts say that by 2025 Apple Siri will be able to have actual conversations with us as if they were human. By that time robots will also be able to converse with us and they will be able to anticipate our behaviour and daily priorities.

Big data is here to stay, and it will change the way we buy, the way we sell and the way we live.

1. What is big data used for now?
2. What will it be used for in the future?
3. How can it be used in retail logistics?
4. How can it be used in HR?
5. What is machine learning?
6. How will it be used in the future?
7. Do you think there could be risks involved with artificial intelligence?
8. What do you think these risks are?
9. What else do you think machine learning could be used for?
10. Do you use big data in your job? What for?

Activity Four: **Processing detailed or complex information in English.**

When a client or a colleague gives you some complicated, very detailed information, or just talks for a long time, it's sometimes hard to keep track, especially if they use new words or if you are unfamiliar with the subject. Here are the three V's of listening comprehension, for long explanations:

Visual - Keep a visual record. Listen for the key words and ideas and make brief notes so that you can keep a visual note of what was said and review it afterwards.

Verify - When you have finished listening,(if it's a one on one conversation), verify that you have understood the meaning by re-formulating the main points.

Validate - Get the interlocutor to agree to your version of what they said, then you are sure that it's clear and you can move on to the next part of the conversation.

Now practice the comprehension three V's by reformulating the main points of the article in activity three.

Activity Five: Now use the three V technique to help you to understand the video. Prepare a record, re-formulate the main points and check that your teacher agrees. Answer the questions below.

Watch the first 6 and a half minutes of this video - 'Explaining Big Data' on You Tube.
https://www.youtube.com/watch?v=7D1CQ_LOizA



1. Why is the quantity of data growing?
2. Which sectors are capturing more data?
3. What is social media producing?
4. What can we extract from images and video?
5. What poses the greatest challenge?
6. What's the problem with big data velocity?
7. What different types of data are being analysed?
8. What is wasted by organisations?
9. What examples of unused data is given?
10. What is hadoop?
11. What does linked in use it for?
12. Why does it make sense to run everything in the cloud?

