

## Satnav users risk losing their natural navigational skills

### Level 3 • Advanced

#### 1 Warmer

Can you read a map?

Do you use GPS technology to find your way?

If so, why? If not, why not?

#### 2 Key words

Fill the gaps in the sentences using these key words from the text.

navigation  
deteriorate

fatality  
misplaced

scenario  
perilous

breakthrough  
sceptical

wary  
innate

- \_\_\_\_\_ is the skill of being able to find the correct way to a place.
- If an opinion, idea or action is \_\_\_\_\_, it is not suitable for a particular situation.
- An \_\_\_\_\_ ability is one that you have always had.
- If things \_\_\_\_\_, they become worse.
- If you are \_\_\_\_\_ of something, you are careful or nervous about it because it might cause a problem.
- A \_\_\_\_\_ situation is one that is very dangerous.
- A \_\_\_\_\_ is a death caused by an accident, war, violence or disease.
- A \_\_\_\_\_ is a situation that could possibly happen.
- If you are \_\_\_\_\_ about something other people think is true or right, you have doubts about it.
- A \_\_\_\_\_ is a discovery or achievement that comes after a lot of hard work.

#### 3 Find the information

Find the following information in the text as quickly as possible.

- What is *satnav* short for?
- What does *GPS* stand for?
- How did satnav cause the death of a driver in Spain in 2010?
- What percentage of adults in the UK owned a smartphone in 2012?
- What percentage of adults in the UK owned a smartphone in 2015?
- What is Ofcom?

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#### Satnav users risk losing their natural navigational skills, expert warns

*Relying on smart devices and GPS is eroding our map-reading and way-finding skills, cautions former president of the Royal Institute of Navigation*

**Nicola Davis**

**30 March, 2016**

- 1 Writing in the journal *Nature*, former president of the Royal Institute of Navigation Roger McKinlay argues that our reliance on GPS (global positioning system) technology is misplaced and could be eroding our innate way-finding abilities. "If we do not cherish them, our natural navigation abilities will deteriorate as we rely ever more on smart devices," he wrote.
- 2 McKinlay believes huge investment will be needed before navigation systems will be good enough to allow technologies such as autonomous vehicles to take off. In the meantime, he argues, we need better research into systems for navigation while children should be encouraged to learn how to find their way around by more traditional means. "Schools should teach navigation and map reading as life skills," he wrote.
- 3 According to Ofcom (the Office of Communications), around 66% of adults in the UK owned a smartphone in 2015, up from 39% in 2012, making GPS technology widely available. But McKinlay, a satellite communication and navigation consultant, believes that we should be wary of leaving our navigational needs to our devices. "Navigation is a use-it-or-lose-it skill," he wrote.
- 4 While few scientific studies have explored the issue, research from 2009 supports the notion. "What we did was to look at a set of current London taxi drivers and a set of London taxi drivers that had been retired for about four years," said neuroscientist Dr Hugo Spiers, head of the Spatial Cognition Group at University College London, who is an author of the study. The results showed that the retired taxi drivers performed worse on navigation tests than those still behind the wheel. "We were able to show that their abilities did drop away if they weren't using their knowledge on that particular test."
- 5 Spiers also believes there is a danger in relying on technologies like GPS but he is quick to point out that the biggest risk lies in users being unwittingly led into perilous situations. Among the fatalities blamed on satnavs (satellite navigation devices) was the death of a driver who, in 2010, plunged into a reservoir in Spain. "There is a genuine potential for risk in relying on a satnav," said Spiers. "But the actual health risk of not using your brain effectively is not known."
- 6 The way in which navigational technology is used could also affect its impact on our own abilities, says Spiers. While audio instructions to drivers remove the need to think about navigation, he says, the use of smartphone apps as digital maps is very different. "In the old days, you had to print out or take an A to Z map in your pocket – what we are doing now is just using computer-aided information and you are having to think really quite hard about where you are going and interact with this device," he said. "The modern technology isn't just dumbing us down completely."
- 7 McKinlay remains convinced that navigation technologies have a long way to go before futuristic scenarios involving driverless cars and smart cities become a reality. "For really critical applications – safety applications like landing aircraft or navigating aircraft – GPS is still not good enough," he said.
- 8 Though Spiers believes the development of artificial intelligence based on machine learning could lead to a new wave of navigational aids, McKinlay remains sceptical. "We will see ever-smarter machines which are very, very task specific, but the big breakthrough will be when they are able to tune in to what you might be thinking and what you might be wanting to achieve," he said.
- 9 Ultimately, McKinlay believes, it's essential that humans remain able to take control of their navigation. "Do you really want to encourage people to get to a point where, when it disappears or when the battery goes flat, they are in total shock and can do nothing?" he said. "Technology isn't magic – it is just a tool."

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#### 4 Comprehension check

Choose the best answer according to the text.

1. What might happen if we rely increasingly on GPS technology?
  - a. We might lose our innate ability to find our way.
  - b. We might not know what to do when our car has a flat battery.
  - c. We might get lost more easily.
2. Which group of taxi drivers performed better on the navigation tests?
  - a. the group that had been retired for about four years
  - b. the group that was still driving taxis
  - c. both groups performed the same
3. What, according to Roger McKinlay, should be taught in schools?
  - a. how to use GPS technology
  - b. how to navigate and read maps
  - c. how to avoid perilous situations when using satnav
4. What, according to McKinlay, would be the big breakthrough in navigational aids?
  - a. ever-smarter machines that are very task specific
  - b. machines that can tune in to what we are thinking and what we want to achieve
  - c. machines that allow humans to remain in control of their navigation

#### 5 Find the word

Find the following words and phrases in the text.

1. a verb meaning *gradually reduce the strength or importance of something* (para 1)
2. a verb meaning *think that something is very important and wish to keep it* (para 1)
3. a two-word phrasal verb meaning *become successful or popular very fast* (para 2)
4. a two-word phrasal verb meaning *become weaker or smaller in amount* (para 4)
5. an adverb meaning *in a way that is not conscious or deliberate* (para 5)
6. a verb meaning *fall quickly from a high position* (para 5)
7. a two-word phrasal verb meaning *make something simpler and easier to understand in a way that reduces its quality* (para 6)
8. a two-word phrasal verb meaning *understand something such as a situation or other people's feelings* (para 8)

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#### 6 Verb + noun collocations

Match the verbs in the left-hand column with the nouns or noun phrases in the right-hand column.

- |            |                                      |
|------------|--------------------------------------|
| 1. find    | a. a notion                          |
| 2. read    | b. your way around                   |
| 3. explore | c. your brain                        |
| 4. support | d. an issue                          |
| 5. use     | e. someone into a perilous situation |
| 6. lead    | f. a map                             |

#### 7 Word-building

Complete the sentences using the correct form of the word in brackets at the end of each sentence.

1. Roger McKinlay warns against a \_\_\_\_\_ on GPS technology. [RELY]
2. He believes \_\_\_\_\_ skills should be taught in schools. [NAVIGATION]
3. \_\_\_\_\_ scenarios involving driverless cars and smart cities have a long way to go before they become reality. [FUTURE]
4. GPS technology is now \_\_\_\_\_ available. [WIDE]
5. The health risk of not using your brain \_\_\_\_\_ is not known. [EFFECTIVE]
6. We are now using computer-\_\_\_\_\_ information instead of paper maps. [AID]

#### 8 Discussion

Discuss the statements.

- Driverless cars will be much safer than cars with drivers.
- GPS is much better than traditional maps.
- Schools should teach navigational skills.

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#### KEY

#### 2 Key words

1. navigation
2. misplaced
3. innate
4. deteriorate
5. wary
6. perilous
7. fatality
8. scenario
9. sceptical
10. breakthrough

#### 3 Find the information

1. satellite navigation (devices)
2. global positioning system
3. It caused his car to plunge into a reservoir.
4. 39%
5. around 66%
6. Office of Communications (the government-approved regulatory and competition authority for the broadcasting, telecommunications and postal industries of the UK)

#### 4 Comprehension check

1. a
2. b
3. b
4. b

#### 5 Find the word

1. erode
2. cherish
3. take off
4. drop away
5. unwittingly
6. plunge
7. dumb down
8. tune in

#### 6 Verb + noun collocations

1. b
2. f
3. d
4. a
5. c
6. e

#### 7 Word-building

1. reliance
2. navigation/navigational
3. futuristic
4. widely
5. effectively
6. aided