Science as a human endeavour

Verbal/Linguistic

Read the following article about the effect of mobile phone use in cars and then answer the questions that follow.

Mobiles distract more than passengers

‘Using a hands-free device on a mobile phone is more distracting than sitting next to a talkative passenger, say US researchers.

Their finding, published in the Journal of Experimental Psychology: Applied, adds to a growing body of evidence that mobile phones can make driving dangerous.

Professor Lee Strayer of the University of Utah and colleagues found in a series of experiments using driving simulators that hands-free mobile phones are just as distracting as handheld models.

They have previously demonstrated that chatting on a mobile phone can slow the reaction times of young adult drivers to levels seen among senior citizens, and shown that drivers using mobile telephones are as impaired as drivers who are legally drunk.

For their latest study the researchers used a simulator to test 96 adults aged 18 to 49 years.

Strayer’s team showed that drivers using a hands-free device drifted out of their lanes and missed exits more frequently than drivers talking to a passenger.

Second set of eyes

The researchers believe it may be due to passengers acting as a second set of eyes or sometimes helping when they see the driver needs to make a manoeuvre.

‘When you take a look at the data, it turns out that a driver conversing with a passenger is not as impaired as a driver talking on a mobile phone,’ says Strayer.

‘The passenger adds a second set of eyes, and helps the driver navigate and reminds them where to go.’

Passengers also simplify conversation when driving conditions change, the researchers write.

‘The difference between a mobile phone conversation and passenger conversation is due to the fact that the passenger is in the vehicle and knows what the traffic conditions are like, and they help the driver by reminding them of where to take an exit and pointing out hazards,’ says Strayer.

In 2005, an Australian study published in the British Medical Journal found drivers who used a mobile phone, with or without a hands-free device, were four times more likely to have an accident within 10 minutes of using it, than if they had not.

Source: ABC/Reuters, December 2008
1 Researchers have found that using a hands-free mobile device is more distracting than having a conversation with a passenger in the car.

(a) Describe how using a mobile phone affects a driver's reaction time.

(b) Recall the two comparisons made by the researchers to describe the effect of this altered reaction time.

2 Recall two driving behaviours that the researchers found were more likely to occur when a driver was speaking on a mobile phone.

3 Propose why speaking to a person in a car is not as distracting as having a conversation on a mobile while driving.

4 According to the 2005 Australian study mentioned in the article, state how many times more likely a driver is to be in an accident within 10 minutes of using a mobile phone.

5 List arguments for and against using a hands-free mobile device while driving.

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<th><strong>Advantages of using a hands-free mobile device while driving</strong></th>
<th><strong>Disadvantages of using a hands-free mobile device while driving</strong></th>
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6 (a) Recommend if and when you think drivers should be allowed to use a hands-free mobile device while in a car.

(b) Justify your choice.