4. What about text message abbreviations, emoticons, and chat slang terms. Which have been formally recognized by University Oxford Press as a part of the English language? Is it good or bad that these are becoming a part of our formal language? Justify your answer.

CLOSING CASE STUDY TWO

Smartphones and the Great Digital Divide

Smartphones are rapidly becoming the technology of choice for a variety of functions beyond just making and receiving phone calls. Most notably, because of their relative inexpensiveness compared to desktop computers, laptops, and even tablets, many people are opting for a smartphone as their primary vehicle for accessing the Internet. In many cases, some people simply can't afford any kind of Internet-accessing device other than a smartphone. In Africa, for example, over 316 million people have become new mobile phone subscribers since 2000.

In the United States, smartphones offer a way for economically disadvantaged people to get connected to the Internet. In many respects, this may very well close the digital divide between the "haves" and "have-nots" with respect to technology. The following are some statistics from the Pew Research Center for you to consider.

- 83 percent of U.S. adults own a mobilephone. Of those, 42 percent own a smartphone. So, 35 percent of all adults in the United States own a smartphone.
- 59 percent of adults in households with earning income greater than $75,000 own a smartphone.
- 44 percent of African Americans and Latinos own a smartphone.
- 87 percent of smartphone owners access the Internet via their smartphones, while 68 percent do so on a daily basis.
- 25 percent of smartphone owners say they mostly go online using a smartphone instead of a computer.
- By Gender (for smartphone ownership):
  ○ Men—39 percent
  ○ Women—31 percent
- By Age (for smartphone ownership):
  ○ 18–24—49 percent
  ○ 25–34—58 percent
  ○ 35–44—44 percent
  ○ 45–54—28 percent
  ○ 55–64—22 percent
  ○ 65 + —11 percent
- By Race/Ethnicity (for smartphone ownership):
  ○ White, non-Hispanic—30 percent
  ○ African American, non-Hispanic—44 percent
  ○ Hispanic—44 percent
- By Household Income (for smartphone ownership):
  ○ <$10,000—21 percent
  ○ $10,000-$20,000—20 percent
  ○ $20,000-$30,000—26 percent
  ○ $30,000-$40,000—36 percent
  ○ $40,000-$50,000—44 percent
  ○ $50,000-$75,000—38 percent
  ○ $75,000-$100,000—53 percent
  ○ $100,000-$150,000—57 percent
  ○ $150,000 + —73 percent
- By Education Level (for smartphone ownership):
  ○ No high school diploma—18 percent
  ○ High school graduate—27 percent
  ○ Some college—38 percent
  ○ College + —48 percent
- By Geographic Location (for smartphone ownership):
  ○ Urban—38 percent
  ○ Suburban—38 percent
  ○ Rural—21 percent
- Percentage of Smartphone Owners Who Also Own These Devices:
  ○ Laptop computer—79 percent
  ○ MP3 player—70 percent
  ○ Desktop computer—68 percent
  ○ E-book reader—20 percent
  ○ Tablet PC—18 percent

- By Race/Ethnicity (percentage of owners who use their smartphone as the dominant means to access the Internet):
  - White, non-Hispanic—17 percent
  - African American/Latino—38 percent[13,14,15]

Questions

1. Even though 44 percent of African Americans and Latinos own a smartphone while only 30 percent of white, non-Hispanics do, many people contend that this isn't really closing the great digital divide because African Americans and Latinos use their smartphones more for entertainment than empowerment. Build an argument to support the previous statement.
2. When accessing the Internet, what can you do on a desktop or laptop computer that you can't do on a smartphone? If smartphones have fewer Internet capabilities (than desktop and laptop computers), can you necessarily link an increase in smartphone ownership within a U.S.-based economically disadvantaged group of people to closing the great digital divide? Why or why not?
3. How does an increase in smartphone ownership in a third-world geographic region like Africa close the digital divide for countries in that region? If you owned a U.S. business and wanted to start doing business in Africa, what would be an essential part of your marketing strategy?
4. If you look at smartphone ownership by household income, you'll notice a fairly sizable dip for the category of $50,000–$75,000. To what do you attribute this? Justify your answer?
5. Finally, will greater access to the Internet cause a closing of the great digital divide? You can answer Yes, No, or Some. Whatever the case, build an argument for your answer.

■ KEY TERMS AND CONCEPTS

Augmented reality, 263
Automatic speech recognition (ASR), 264
Biochip, 269
Biometrics, 267
Bluetooth, 270
Cave automatic virtual environment (CAVE), 265
Crowdsourcing, 281
Disintermediation, 261
Facial recognition software, 270
Factory-to-business-to-Consumer (F2b2C), 261

Feature analysis, 264
Glove, 265
Haptic interface, 266
Headset (head-mounted display), 265
Holographic device, 265
Holographic storage device, 275
Implant chip, 270
Language processing, 264
Multi-state CPU, 275
Nanotechnology, 274
Near Field Communication (NFC), 270

Pattern classification, 264
Personal software-as-a-service (Saas), 259
Push technology, 260
Radio frequency identification (RFID), 271
Virtual reality, 265
Voice over Internet Protocol (VoIP), 262
Walker, 265
Web 2.0, 262
Web 3.0, 262
WiFi (wireless fidelity), 270

■ SHORT-ANSWER QUESTIONS

1. How does push technology differ from spam?
2. What is disintermediation? How does the F2b2C e-commerce model support disintermediation?
3. What exciting applications are associated with the Web 3.0?
4. How does automatic speech recognition work?
5. What are the devices commonly associated with virtual reality?
6. What role do haptic interfaces play?
7. What is the best form of personal identification?
8. How can you expect smartphones to change in the future?
9. What is RFID?
10. How does nanotechnology differ from traditional manufacturing?