

LIFE, WORK, AND SMARTPHONES

Introduction

Focus

Smartphones have become a popular wireless communications device. Although smartphones look like cell phones, they can do much more than send and receive phone calls. This *News in Review* story examines how the capabilities of smartphones are rapidly transforming—for better or worse—our personal and professional lives.

Smartphones really are smart. You can check e-mails, get directions, update your Facebook page, listen to music, watch a YouTube clip, play a video game, tweet about a great restaurant, text a friend to meet your there, and then take a photo of your gathering—all with a pocket-sized device. Over one-third of Canadians presently own a smartphone, and interest in the phones seems to be growing.

Even though smartphones may look like cell phones, the functionality of a smartphone more closely resembles that of a computer. Smartphones have an operating system and access to the Internet. This enables the user to work, entertain, communicate, and even navigate all in one small mobile device almost anywhere, anytime.

It is not surprising that these capabilities make smartphones the new standard in communication devices. In the United States, smartphones are expected to surpass cell phones in sales by the end of 2011 (*The Globe and Mail*, March 31, 2010, B2). According to a recent Ipsos Reid survey of Canadian Internet users, there was a 50 per cent increase in smartphone purchases in

just one year (CBC News, June 2, 2011, www.cbc.ca/news/business/story/2011/06/02/technology-comscore-smartphone.html).

So how does this rapid surge in smartphone use impact our personal and professional lives? For starters, smartphones are modernizing the “dating game” through mobile access to social media sites and location-based apps that use the GPS function to identify and possibly meet an interested partner. Schools are debating how smartphones can be appropriately used in classrooms as instructional tools. Businesses are reviewing policies to ensure that corporate information remains secure and that employees do not feel they are on call 24/7. Families are also trying to balance the convenience of smartphones with the need to have uninterrupted family time together. Increased smartphone use also raises questions about whether or not the waves emitted by the phones have an impact on human health.

As smartphones become more entrenched in our daily routines, it becomes hard to envision a life without them.

To Consider

1. Do you think smartphones are really very different from cell phones? Explain your answer with specific reasons.
2. Do you believe smartphones are here to stay or just a fad?
3. In what ways has your life been affected by smartphones?

WORK, LIFE, AND SMARTPHONES

Video Review

Did you know . . .

RIM (Research in Motion), based in Waterloo, Ontario, launched its first smartphone—the BlackBerry—in 1999. Today, BlackBerry smartphones are a top seller in Canada and abroad.

Pre-viewing Questions

With a partner or in a small group discuss and respond to the following questions.

1. What is a smartphone?

2. Why do you think smartphones have become so popular so quickly?

3. How might smartphones change the way we communicate with each other?

Viewing Questions

As you watch the video respond to the questions in the spaces provided.

1. List some of the functions of a smartphone.

2. What new hazards can smartphones bring?

3. What do scientists think is happening to the teenaged brain from too much multi-tasking with digital devices?

4. What do teenagers find more manageable (circle the answer):

(a) multi-tasking when using digital devices or

(b) focusing on a single task?

5. What does brain research say about the ability of the teenaged brain to focus?

6. Explain how smartphones are transforming the workplace. Include both advantages and disadvantages.

7. In the video, when the family members gave up their mobile devices for one week, what were the concerns of:

a) the parents

b) the children

8. During the experiment, did any of the children's responses surprise you? Explain.

9. Following this experiment, what did the family say they'd like to improve?

Post-viewing Questions

1. According to the video, 70 per cent of Canadians use a mobile device, but this number increases to 89 per cent for Canadians under the age of 30. Do you feel pressure to either own a smartphone and/or to use your smartphone constantly in order to stay in the loop with your friends? Provide an example to illustrate your answer.

2. You also learned that last year Canadians sent 150 million text messages daily with an annual total of 56.4 billion. Do you think that texting will replace talking on the phone or talking face-to-face with someone? Why?

3. Do you agree or disagree with the statement: "We should give up our smartphones to improve the quality of our lives." Explain your stance in terms of: work-life balance, how we learn, how we socialize.

WORK, LIFE, AND SMARTPHONES

Smartphones – A Snapshot

Did you know . . .

To curb the use of smartphones and other hand-held devices while driving, the provinces of Alberta, British Columbia, New Brunswick, and Ontario have passed “distracted driving” legislation.

Pre-reading Activity

Working in a small group or as an entire class conduct an informal survey (perhaps by show of hands) based on the following questions:

1. How many people know what a smartphone is?
2. How many people own a smartphone?
3. How many people plan to buy a smartphone within the next year?
4. How many people send more text than verbal messages on their smartphone or other mobile device?
5. How many times per day (0-5, 5-10, 10-15, 15+) do you check e-mails or access social media sites using a smartphone or other mobile device?

How They Work

Before smartphones, cell phones were largely used to make phone calls and had some messaging capabilities such as texting. Once cell phones added organizational features similar to those found in personal digital assistants (PDAs) and connected to the Internet, smartphones emerged. Smartphones more closely resemble computers than cell phones.

A smartphone has an operating system that allows it to run various programs (from word processing to photo editing to GPS navigation); it has various forms of messaging including calling, texting and e-mail; it connects to the Web; it has a keyboard similar in format to a computer; and it can download a wide array of apps, or applications, ranging from entertainment to personal finance.

It is not surprising that the multi-tasking capabilities of smartphones have led to a rapid rise in consumer demand.

According to Canalys—a United Kingdom-based technology market research firm—the global smartphone market grew to 101.2 million units by the start of 2011. This was an increase of 89 per cent from the previous year (CBC News online, February 1, 2011, www.cbc.ca/news/technology/

story/2011/02/01/technology-android-smartphone.html). The global expansion of smartphones is projected to continue as companies like RIM promote their products to emerging markets such as China and Indonesia (*The Globe and Mail*, March 31, 2010, B2).

By the Numbers

What do the following data tell you about smartphone use in Canada?

- Nearly one-half of mobile phone users aged 18-34 years own a smartphone, with usage of approximately 20 hours per week.
- The majority of smartphone use is for activities other than talking.
- Seventy per cent of smartphones users take photos and check e-mails on their phones.
- Fifty per cent of smartphones users check social networking sites on their phones. This is up 20 percentage points from 2010.

Source: May 26, 2011 Ipsos survey (www.ipsos-na.com/news-polls/pressrelease.aspx?id=5246)

- One-quarter of 1 000 surveyed Canadians report using their smartphones as a “mobile wallet” to make credit card purchases (*Vancouver Sun*, June 24, 2011).

- Forty-five per cent of cellular connections made to Rogers' network at the beginning of 2011 were from smartphones (*Postmedia News*, May 26, 2011).
- Canadians send approximately 199 million text messages per day.
- Texting is expected to overtake verbal communication as the primary mode of communication over wireless networks.

Source: Canadian Wireless Telecommunication Association (www.cwta.ca/CWTASite/english/industryfacts.html)

The Dating Game

Smartphones are modernizing the age-old practice of dating. Long gone are the days of writing down someone's telephone number on your hand to contact her/him at a later time. For the largely 20-something crowd, smartphones are becoming a crucial device on the dating scene.

Mobile apps downloaded onto a smartphone allow the user to access online dating sites anywhere, anytime. Some apps, like SmartDate, play matchmaker and even link to flower delivery services. The newly released Tingle is a location-based dating app. Tingle works with the GPS unit in the smartphone so users can check in to bars, nightclubs, and restaurants around the cities of Vancouver and Toronto to see if other available singles have also checked in. The user can then decide if s/he wishes to make contact by sending a text or phone message.

The extensive use of social media networks also provides a forum for a

wide range of dating communications—from flirting to break-ups. As social and mobile technologies become the new norm in the dating game, concerns around privacy, personal safety, and the loss of romance are being raised.

Health Concerns

As our use of smartphones increases, the impact on human health is being questioned. Even though medical researchers have not yet come to a definitive conclusion, the World Health Organization did find in 2010 that people who used cell phones for 30 minutes a day for more than 10 years are at approximately twice the risk of developing a rare and often fatal brain tumour known as glioma (*The Globe and Mail*, September 25, 2010, F4). Other studies also found that the cancer risk quadrupled for extensive users under the age of 20 (*Toronto Star*, October 5, 2010, E9).

The culprit is the microwaves sent and received by the antenna on cell and smartphones. Although these microwaves are a form of non-ionizing radiation, and thus not as powerful as X-rays, research on lab rats has found that limited exposure to cell phone microwaves resulted in broken strands of DNA—often a precursor to cancer. The rats also suffered other brain damage such as cell alterations and memory lapses (*The Globe and Mail*, September 25, 2010, F4). To limit the potential damage, precautions for smartphone use include using a wired headset or speaker phone, texting instead of talking with the phone against the ear, and discouraging use by children.

Analysis

1. Compare information from the By the Numbers segment with the survey data collected in the Pre-reading Activity at the beginning of this section. How did results from the class survey mirror those from the national surveys? Are there any results from your class survey and/or the national surveys that you found surprising? Explain.
2. What additional information should surveys try to obtain from teenagers about their smartphone use? Create two or three new questions and then ask members of your class to respond. Feel free to share your findings.
3. Do you think that the location-based dating apps used in smartphones help to make the dating scene easier to navigate or run the risk of invading a person's privacy?
4. Should greater attention be paid to the health concerns being raised about mobile devices like smartphones? Are health concerns the responsibility of the user, the mobile company, or the government?
5. Some people view smartphones as both a blessing and a curse. Reflect on your personal use of a smartphone or information from this section to write your own response to this statement.

WORK, LIFE, AND SMARTPHONES

Transformation in Schools

Definition

A *tablet* is a mobile computer that looks like a large smartphone—with its slate design, touch screen, and built in keyboard—but has additional capabilities to operate like a laptop.

Pre-reading Activity

Before reading this section, create a list of all the mobile and electronic devices you use when completing schoolwork either in or out of the classroom. Do these devices: a) help you concentrate on the assigned task, b) assist you to find additional information, c) act as a source of distraction? Be honest with your answers!

The increasing role of technology in classrooms raises new questions: How will governments and schools close the digital divide between those who can and cannot afford the devices or do not have reliable access to Wi-Fi? Can smartphones be used as an effective educational tool or will they be too much of a distraction for students? How can schools and teachers ensure that students are using their mobile devices in an appropriate and academically honest manner?

Will backpacks weighed down by thick textbooks soon become a thing of the past? The unprecedented development and use of mobile technologies—such as smartphones and tablets—is undoubtedly altering school environments in terms of how and where students learn.

Brain Research

The recent CBC television series *Sex, Lies and Smartphones* examines the impact technological devices have on the teenaged brain and questions whether students can really concentrate on their homework while listening to music, texting their friends, and downloading videos. Initial research suggests that teenagers are capable of focusing on a given task and thinking deeply about a topic but that they need to continue to practise this skill. So far, brain scans of teenagers do not show any changes as a result of the speed and volume of digital information, but the situation is still new.

However, researchers at Temple

University in the United States are concerned that our “Twitterization culture”—the endless stream of facts and opinions through smartphone apps and social media sites—is overloading our brains and making it harder for us to make well-informed decisions. Access to more information can be beneficial, but our brains are being trained to focus on the most recent of information, not the best quality information (*Newsweek*, March 7, 2011 p. 28).

Technology in the Classroom

The Canadian School Board Association posted on its website information from a recent U.S. survey of students, parents, and educators from grades K-12 about the role of technology in the classroom. The survey respondents believed that:

- Mobile devices like smartphones and tablets would engage students in and beyond the classroom.
- School rules are the largest obstacle that students face in their use of smartphones.
- Almost one-half of students would take an online course or want to use social media sites for group projects.
- Enrolment in online courses has increased significantly in one year.
- Students are looking for blended learning opportunities that combine multiple teaching approaches with different Web technologies.
- Over one-third of high school students use electronic textbooks (e-texts) and other online resources.

- The majority of parents believe that the use of smartphones will extend learning beyond the classroom and said they would buy a mobile device for their child if schools allowed it.
- The majority of parents and educators, but a minority of students, said that schools were doing a good job using technology in the classroom.

Source: "Speak Up 2010 National Survey," <http://cdnsba.org/all/reports/speak-up-2010-national-findings-how-todays-students-are-leveraging-emerging-technologies-for-learning>

School Policies

The extensive use of mobile technologies, especially by teenagers, is placing new pressures on schools to review existing cell phone policies. In response, a number of school boards, including Canada's largest—the Toronto District School Board—have lifted bans

that prohibit students from using cell phones and other electronic devices in classrooms and hallways during school hours. This leaves it up to individual teachers to decide how and when mobile devices will be appropriately used.

The Ontario Secondary School Teachers' Federation (OSSTF) maintains its position that mobile devices should not be used during the school day. The OSSTF argues that mobile devices are too distracting for students and create inequality and potential discipline issues in the classroom. In contrast, the Premier of Ontario, Dalton McGuinty, has stated that schools should consider allowing students to use mobile devices in the classroom. "Telephones and BlackBerrys and the like are conduits for information today, and one of the things we want our students to do is to be well-informed" (*The Globe and Mail*, February 24, 2011).

Follow-up

1. In a small group discuss the questions in the first paragraph of this section.
2. Read the following statement from Annie Kidder, the executive director of the parent-led group People for Education: "There's lots of potential for the use of technology. And the most important thing we can be doing is teaching kids to use it wisely and using it with them, instead of trying to keep them from it" (*The Globe and Mail*, February 24, 2011).

Outline 3-5 strategies you could provide to your principal that would help the school improve the role of technology in the classroom.

WORK, LIFE, AND SMARTPHONES

The Work-Life Balance

Reading Prompt

As you read through this section, make a note of the benefits and challenges that smartphones have on workplaces and families.

Smartphones are quickly becoming a significant presence in workplaces and families. The convenience and multi-tasking features of smartphones are viewed by some as a blessing and by others a curse.

Workplaces

The recent CBC television series *Sex, Lies and Smartphones* questions whether the devices are compromising our work-life balance. One episode reported that a recent survey of over 100 000 Canadians found that many people are working upward of 70 hours per week, and the cost of lost productivity to North American businesses due to employee burnout and sick leave is \$50-billion per year. A University of Toronto study found that after-hours e-mails, texts, and calls from work are leading to higher levels of distress, especially among women when after-hours work requests conflicted with family and personal time (*Toronto Star*, March 9, 2011, A1). However, others feel that smartphones

improve their work-life balance by giving them greater flexibility to work at different times and locations while maintaining regular contact with family members.

Family Life

Smartphones are also transforming how family members communicate. Parents use smartphones to know where their children are and who they are with. Kids often find it less time-consuming to send a text message than to phone a parent.

However, household tensions can escalate when more communication occurs via mobile devices than face-to-face. For example, some children are upset when parents check e-mails or text messages instead of watching their soccer game or during family dinnertime. Children feel that their parents are not fully listening to them and think that what they have to say is unimportant. Similarly, parent frustration rises with teenagers' constant texting or communicating with their friends.

Follow-up

1. How do smartphones or other mobile devices affect the work-life balance in our lives? When do these devices create an imbalance between work and family time?
2. Jim Balsillie, chairman and co-chief executive officer of RIM says that when children complain about their parents' use of mobile devices during family time they should ask themselves: "Would you rather have your parents 20 per cent not there or 100 per cent not there?" (*The Globe and Mail*, December 9, 2006, B15).

Working with a partner or in a small group discuss what you think Balsillie means in the preceding statement. Do you agree with him? How does it make you feel when family time is interrupted by a work-related call or message? Are you satisfied if your parent or parents are home but using mobile devices?

WORK, LIFE, AND SMARTPHONES

Activity: *Could you live without a smartphone?*

One episode from the CBC television series *Sex, Lies and Smartphones* followed two separate families and how they coped with a seven-day challenge of living without their mobile devices. Family members (ranging in age from pre-teen to 50 years) placed their devices, including the parents' mobile phones for work, in a box that was securely stored. Not surprisingly, this was a difficult challenge.

At the beginning of the challenge, parents were more optimistic than their children about how they might cope during the challenge. Many of the children wanted their devices back after the first day. The teenaged family members often complained that they had "nothing to do" and were envious of their friends who continued to text messages and check their Facebook pages.

However, toward the end of the challenge some of the children admitted that they did not miss their smartphones and actually had fun without them. While the challenge allowed for more face-to-face conversations between family members, it was largely the parents who could not wait to get their mobile devices back. Parents felt uncomfortable not knowing what their children were doing, wanted to readily communicate with family members while away on business, and missed listening to music and texting their spouses. Others had colleagues at work complain that they were not as easy to contact during and after work hours.

Your task is to design and participate in your own "smartphone challenge." You can conduct your challenge either with a small group of friends or with members of your immediate family. Remember to place all your mobile devices, including cell phones, smartphones, MP3 players, and tablets in a secure location that is not easily accessible. Try not to cheat!

The challenge should run a total of four days, starting on a Monday. Be prepared to share your findings with the class the day after your challenge ends. Once the findings have been reported, write a half-page response to the question: "Could you live without a smartphone?" Your response should take into consideration the functions of smartphones as well as the impact they are having on schools, workplaces, and families.

You may wish to record information collected during the challenge in the following chart template.

Challenge Days/Questions	Day 1	Day 2	Day 3	Day 4
How do you feel being without your smartphone (or other mobile device)?				
What functions do you miss most about your smartphone (or other mobile device)?				
How are you communicating with friends and/or family members?				
What did you do with the time normally spent on your smartphone?				