Digital Society

SAMPLE CHAPTER

Eli Bomfim • Tammy Earle
Michael Fitzpatrick • Carol Hancox
Jonathon Levin • Barbara Stefanics
Series Editor: Barbara Stefanics

Boost

HODDER
EDUCATION

Contents

UNDERSTANDINGS

By the end of the section, you should understand:
- ▶ how to use the seven concepts as a lens to focus on important aspects of the use of digital technologies
- ▶ the range of issues with impacts and implications associated with each concept.

Chapter 1.2 introduced the foundations of a digital society. In this section, you will learn how to use the digital society concepts to probe and investigate our evolving digital society.

The study of the interaction of **concepts**, **content** and **contexts** will help you develop skills to transfer your learning and apply this to new situations through a series of investigations.

◆ **Concepts**: powerful, widespread ideas that open up different perspectives and provide insight during inquiries into the real-world use of digital technologies.

◆ **Content**: the study of the digital technologies used.

◆ **Contexts**: the study of digital technologies in a variety of real-world examples.

CONCEPTS
Change, expression, identity, power, space, systems, values and ethics

STAKEHOLDERS

Impacts and implications

CONTEXTS
Cultural, economic, environmental, health, human knowledge, political, social

CONTENT
Data, algorithms, computers, networks and the internet, media, artificial intelligence, robots and autonomous technologies

■ Digital society: Concepts

The seven digital society concepts

The seven concepts provide different windows and perspectives that can be used to explore the digital society we are in, and the society we are evolving into. The concepts focus on elements that are applicable across our developing digital society.

It does not matter which of the concepts an inquiry may start with, as the exploration becomes deeper and broader, additional concepts may be relevant.

The starting concept is the one that is most applicable to the context and content of the inquiry. Also, when starting an inquiry with a content focus, such as databases or artificial intelligence, or a context focus, such as care for the elderly or education, the concepts will provide different ways to explore impacts and implications, and where to go next with future developments and interventions.

- **Change** is a fundamental concept as digital society is always evolving and there are many consequences that can be explored from a number of perspectives.
- **Expression** in a digital society examines how technological change has enabled different and expanded ways of thinking, communicating, collaborating and creating.
- **Identity** in a digital society considers how our personal and community identities are changing and becoming multifaceted.
- **Power** examines how digital technologies are extending and changing the way in which we influence others, control and are controlled by others, at personal, institutional and governmental levels.
- **Space** considers how our interactions with each other are changing, as well as our interactions with our physical environment.
- **Systems** thinking provides a way for understanding connections between human, natural and built environments, and the role of people and communities within them.
- **Values and ethics** looks at the consequences of change and explores their impacts and implications in the context of right and wrong, fair and unfair, just and unjust, legal and illegal, proper and improper.

ACTIVITY

Using the concepts: dashcams

Dashcams are being installed in many cars by their drivers for a variety of reasons. Some drivers record their trips to protect themselves with evidence if an accident or incident happens, some share the footage online to 'shame' offending drivers, while others post the footage on special police websites to help the police catch offenders.

Each of the concepts can be used to investigate the use of dashcams.

- **Change** – identify the type of change that has been happening, not just with technology but in other areas due to the use of the dashcam footage. Identify what is new and evolving about the use of dashcams.
- **Expression** – the footage is being published in a variety of ways and in different places that can have both positive and negative impacts and implications for people and communities.
- **Identity** – publishing the footage has affected the identities of many people, impacting their privacy and anonymity.
- **Power** – the footage has provided power to individuals and institutions in society through shaming and law enforcement, and the creation of a surveillance culture.
- **Space** – with the use of dashcams, spaces now have an additional surveillance component, beyond that of the police and road authority cameras. This should be considered when we use the roads.
- **Systems** – recording, using and publishing or posting the footage involves a set of connected systems: technology-based, legal systems, and others.
- **Values and ethics** – there are calls for the control of the use of the footage due to the mixture of benefits and issues that arise from its use.

How to use this section

The activities at the end of each concept do not require a comprehensive response. They are there to start you on the path of using concepts to explore, analyse and evaluate the issues, impacts and implications of the use of digital technologies in a society. As you progress through the other sections of this book, you will need to refer back to these concepts frequently.

Some examples of how to use the concepts are given, but you are expected to find more, especially from your own experiences.

The activities at the end of each concept can be attempted in two ways: directed (teacher-led) or guided (mixture of directed and open inquiry – your teacher and you together) depending on the time and resources available. You are also encouraged to engage in further self-initiated open inquiry as well.

Learning how to apply each concept is best explored through real-world examples involving content and context also.

◼ What are the different types of change in a digital society?

These are not exclusive, and often overlap, but provide a way of analysing change in a digital society. Digital technology innovation is the creation of something new that did not exist before, but it is often used interchangeably with change.

- **Change of form** – a change in the format, function or shape. For example, phones have morphed into different forms, from a single-purpose device into a multifunctional smartphone.

- **Change of state** – a change from one state to another, but still basically the same. For example, much of the old analogue information is now stored and used digitally. We have moved from analogue to digital watches; games have moved from the real world to the virtual world.

- **Change of values** – a change in what has been thought to be important. Privacy concerns, for example, have become more important to us and our families. Anonymity is now highly prized.

- **Incremental change:**
  - ○ **Evolutionary** – something existing can evolve into something different but still basically be the same, for example, digital technology is always evolving to become faster and have more features.
  - ○ **Adaptive** – something can basically be the same, but be adapted to new circumstances, for example businesses need to adapt to selling online as well as in physical shops.

- **Radical change:**
  - ○ **Transformational** – something can change from one form to another, which can be disruptive, for example, office work can be transformed into working from home.
  - ○ **Extends/combines** – change is enabled when digital technology and their uses are extended and/or combined to create something new, for example, people can now use all-pervasive networks and powerful devices to work anywhere and at any time, extending their office to the virtual world and combining it with other activities and places.

Online shopping

The growth of online shopping illustrates the different types of change. The impact and implications of the changes due to online shopping can be seen everywhere, for example in

- the growth of huge online businesses such as Amazon and Netflix
- the creation of new businesses that did not exist in a bricks-and-mortar world
- the disappearance of businesses due to the impact of online shopping
- businesses changing how they operate and what they sell, often combining bricks-and-mortar operations
- businesses changing locations, such as selling from home
- the scramble of many businesses to have an online presence.

When investigating change, we should be asking questions such as:

- Why does change take place? Is it due to needs or desires? Is it forced or optional? Is it due to something being new? Do people shop online just because it is possible? What are the reasons why people shop online? How many of these reasons are optional or compulsory?
- When change happens, is progress made? Change always brings a mixture of positive and negative impacts and implications. To what extent can online shopping be seen as progress, or does it have negative impacts as well?
- To what extent is change disruptive? To what extent has online shopping changed the way people shop? To what extent has online shopping changed the physical shopping environment? What is the impact of online shopping on businesses as a percentage of their, and our own, activities?
- Can change be predicted? Can we predict the outcomes of change? Can we force change? To what extent do announcements about the 'next big thing' in online shopping come true? How often do online businesses succeed? Online supermarket shopping has grown but it is not a large percentage of the way we shop, so how much has changed?
- To what extent can change be beneficial? It can be transformative for people who find going to a supermarket difficult, such as people who are time-poor or have mobility problems or are sick.

Research

Research businesses in your local area and others that you know of that have been impacted by the growth of online shopping.
- Find examples of the different types of changes.
- Investigate the positives and negatives of food delivery services from restaurants.
- Explore the positives and negatives from the perspectives of the restaurants, the consumers of the food, the delivery companies, and the delivery riders/drivers.
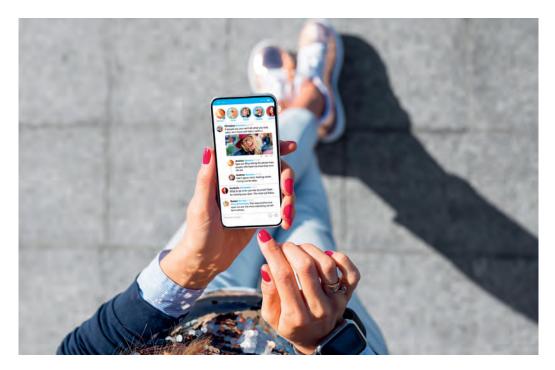

The next three concepts focus on the use of digital technologies by people and communities and how they are being impacted by them. People and communities include the users, developers, stakeholders and others that are involved with the design, production and management of the digital systems explored in this course.

In a digital society technological change has enabled different and expanded means of thinking, communicating, collaborating and creating.

■ What is an expression?

An expression is the act, process or instance of representing ideas, emotions and/or experiences using different modes and media.

■ What is the purpose of expression?

Expression serves many functions, including storytelling, world-building, artistic innovation and political activism.

■ What are the benefits of expression?

Expression brings people and communities together but also introduces significant dilemmas, as expressions can have negative impacts.

■ How does expression change?

Forms of expression that are now possible using digital technologies have changed compared to past modes of expressing our thoughts and ideas.

● **Evolutionary** – something that exists can evolve into something different but still basically be the same, for example, email instead of 'snail' mail.

● **Adaptive** – something can basically be the same but be adapted to new circumstances, for example, the development of dating apps, which have allowed people to meet others in an online world, instead of through letters and phone calls.

- **Transformational** – something can change from one form to another, for example, keeping up with friends and family using social media and video calls instead of letters and phone calls.
- **Radical** – the creation of new forms, states or values, for example, TikTok has enabled new forms of expression as communication through videos was not so easy before.

■ Questions to consider

Issues arise from and about these changes of expression.

- In what ways do digital systems influence how people express themselves, for example emojis? Are these an improvement or a step backwards in effective communication?
- What different kinds of stories are possible through digital media, such as the use of Instagram and TikTok? Should some of these be censored and controlled?
- Are there forms of digital expression that should be limited, such as certain types of negative posts on Facebook?
- This raises the question of *who* decides how digital expressions are controlled, such as the creation of new laws or the use of content monitoring or **censorship**.

◆ **Censorship**: The suppression or banning of certain content, speech or other information.

ATL ACTIVITY

Social

In class, discuss your favourite forms of expression in the digital world.
- Which apps are your favourite ways of communicating with others?
- Why do you choose to use these various forms?
- Describe how you use them for thinking, communicating, collaboration and creation.
- Explore how they are different from previous pre-digital forms of communication and expression, such as letters, books, passive TV, radio and movies.
- What are some of the negative and positive impacts and implications, for you and others?
- Do you operate in a 'media **echo chamber**'? How diverse are your news and information sources? What are the impacts and implications of being in a media echo chamber?

● Links

The control of digital expression through content monitoring or censorship links to 2.4 Power and 2.7 Values and ethics.

◆ **Echo chamber**: An environment in which people only hear beliefs and opinions that echo their own.

Identity

When we express ourselves in the digital world, we are exposing facets of our identity. This has impacts and implications for our various personal, group, social and community identities.

■ What is identity?

Identity helps to define ourselves, as well as groups, social entities and communities we belong to or identify with. Identity is defined internally by our own thoughts and feelings, but is also externally defined by our relationships with others who interact with us and form opinions about us and the groups, social entities and communities we are associated with.

■ What are the features of identity?

Identities are multifaceted and include aspects related to age, nationality, religion, culture, gender, sexuality, race and ethnicity, as well as social and economic class.

■ Is identity static?

Identity is not static – it changes over time and according to our own contexts and the perspectives of others. Identities are linked to our behaviour, both in the real world where they are continually developing and changing, and in the online world where they can be permanently stored.

■ Questions to consider

The following questions arise about identities from the intersection of our digital world with our other worlds:

- How do digital systems and technologies influence or construct identity?
- How different are our identities in the real world from the virtual world? Why is there a difference?
- How do our online identities change over time? Since online identities remain in the online world for a long time and long after we have changed our real-world identities, how does this impact our identity?
- How can we hide or distort our identities online?

● To what extent do different aspects of our identity appear on digital platforms?

● What are the potential harms and benefits that arise from identities created online?

ATL ACTIVITY

Thinking

Reflect on the various identities you display and use in the digital world.

■ What avatars, symbols and pictures do you use to identify yourself online?

■ How do they intersect with your other worlds?

■ Why do you create different identities online?

■ How have your identities online changed overtime through evolution, adaptation, transformation, and/or radical creation?

■ What are the benefits of having different identities online?

■ What are the drawbacks of having different identities online?

Deeper thinking

Challenges to our identity: privacy and surveillance

Privacy means that an individual or group can isolate themselves and/or information about themselves from access by others. This enables them to operate and express themselves, their ideas and opinions, without worrying about the reaction of others. When something is private to a person or group, it usually means that something is special or sensitive about it. Most people agree that there is a right to privacy that should be protected by law. However, this right does not have priority over the law.

Our identities are mainly private and we may choose to keep many aspects hidden for a range of reasons. However, many digital technologies have allowed the invasion of our privacy. This includes technologies such as **surveillance** spyware on our phones; Google tracking our movements and locations as we move around using Google Maps; the use of CCTV and facial recognition; and hidden tracking of our mobile phones as we move from one mobile transmission tower to another, and the same in larger buildings such as shopping centres when we move from one shop to another.

The impacts of our loss of privacy are many. Among these are psychological damage, financial damage, damage to your reputation, and the physical invasion of your personal space. Often there is a mixture of these impacts.

There can be positives from the use of our 'private' information if we allow it to be collected. Companies often keep records of which sites we visit, and why. This can be used to target advertising, which provides us with links to items that we are interested in. However, this data can be sold to others, which can lead to negative impacts as well.

ATL ACTIVITY

Research

Investigate how digital technologies can be used to impact our privacy.

■ Search news items and other sources for examples of how digital technologies can be used to invade our privacy.

■ Investigate both the negatives and positives of these technologies.

(You will study more about these technologies and their impacts in Section 3 and how and why they are used in Section 4).

2.4 Power

In the future, the digital society we live in and see evolving around us will produce a range of positive and negative impacts and implications. We will need the power to control and influence these to advance the positive and lessen the negative impacts on ourselves. Other people may also want the power to control others through the use of digital technology. As soon as we interact with others, power becomes a factor to be considered.

Power is a feature of all social relations and it involves a person's or group's capacity and ability to influence or control the actions of others.

■ What are the types of power?

The use of power can include more than one of these at a time:

- **Coercive** – when someone forces us to do something against our will, for example, the power of bullies on social media, the power of a person who has invaded our privacy using digital technology (sometimes resulting in blackmail and other demands for money, or influencing others for their benefit).

- **Reward** – this is the opposite of coercive power; it involves giving benefits to someone if they do something, for example, the power to get you to spend money in computer games as it helps you to win.

- **Legitimate** – the power that arises from a formal relationship between people, for example, school rules about the use of digital devices.

- **Expert** – the power that comes from someone having a higher level of skill and experience, for example, students need digital devices to study so they consult an expert to keep them working; or they pay experts to do something for them.

SAMPLE CHAPTER

Digital Society

Ensure full coverage of the digital society course with this accessible guide written by an experienced international team of IB educators and examiners, enabling students to build skills and understand the importance and impact of digital systems and technologies in the contemporary world.

- Explore digital society through the key concepts, content and contexts of the syllabus with clear, real-world, internationally minded examples for each topic.
- Delve into the higher-level extension challenges and interventions in digital society using contemporary, real-world issues that allow students to formulate their own recommendations, with reflections to consolidate learning throughout.
- Essential tools for inquiry are integrated throughout the course, with links to ATL, TOK, and extended essay.
- Specific chapters and activities are featured for conducting inquiries suitable for SL and HL students, with added extended inquiries for HL students.
- Prepare for the inquiry project with step-by-step guidance, advice, practice questions and top tips on how to maximise potential in the assessment.

HODDER EDUCATION
e: education@hachette.co.uk
w: hoddereducation.com