# Lecture 2

## ICT Policies and Issues in Education

## A. Introduction

Information and Communication Technology (ICT) has completely transformed the education sector, providing a wide range of advantages for educators and students. Using ICT resources such as laptops, tablets, interactive whiteboards, and instructional software makes the teaching and learning process more dynamic, captivating, and efficient. A significant benefit is the improved accessibility to extensive information and resources worldwide, which allows learners to investigate other viewpoints and expand their comprehension of many subjects. In addition, ICT enables customized learning experiences, enabling educators to adapt education to each student's specific requirements and preferences. Interactive multimedia information and virtual simulations enhance the learning experience by promoting interactivity and enjoyment.

Additionally, they stimulate critical thinking, problem-solving, and creativity in students. In addition, ICT facilitates cooperative learning, dismantling geographic obstacles and promoting communication and cooperation among students and instructors, independent of their respective locations. Using online platforms and tools, students can engage in collaborative projects, exchange ideas, and obtain immediate feedback. This fosters the development of collaboration and communication skills that are crucial for achieving success in the modern digital era. Incorporating ICT in education improves the overall efficacy, efficiency, and inclusivity of the teaching and learning process, equipping students with the necessary skills to succeed in a technology-driven society.

Amid all these advantages, schools must be cognizant of possible risks posed by using ICT in teaching and learning. This lecture, therefore, will tackle the policies and issues in ICT and their implications for education toward maximizing its use while keeping everyone safe and secure.

*Image 1:* The Importance of Technology in Philippine Education (Source: ChildHope Philippines, 2021: Online)

***Lecture 1 Conclusion***

Technology opens up new ways to be creative, get students involved, and give them power. What makes it important is that it can customize learning, encourage teamwork, and teach critical digital skills needed to succeed in the 21st century.

## B. Session Objectives

After this session, you are expected to:

1. Discuss some ICT policies and explain their implications for teaching and learning;
2. Explain some issues that relate to ICT policies; and,
3. Identify safety concerns on the Internet, including digital safety rules.

## C. Session Content

### 1. ICT Policies in Education: ICT for Education (ICT4E)

An ICT for education policy is a regulatory framework created by governments or educational institutions to oversee the incorporation and utilization of Information and Communication Technology (ICT) in academic settings. In the Philippines, related policies are governed by the Department of Information and Communication Technology (DICT) in collaboration with the Department of Education (DepEd). The content comprises a set of regulations, goals, and strategies.

This policy outlines the vision, goals, and measures for effectively leveraging ICT technology and resources to enhance teaching, learning, and administrative processes in the education sector (Bilbao et al., 2019). The policies herein are adapted from the DICT Roadmap that Philippine schools use as the basis for their strategic and tactical plans to enhance the curriculum and instruction.

**a. ICT Integration in the Curriculum:** This policy requires using ICT in all topics and grade levels. It ensures that students are regularly exposed to learning experiences that utilize technology and align with national educational standards.

**b. ICT Infrastructure Development:** This policy centers on the advancement and upkeep of ICT infrastructure in educational institutions, encompassing the provision of computer access, internet connectivity, software applications, and technical assistance to promote the seamless integration of ICT in teaching and learning.

**c. Teacher Training and Professional Development:** This policy prioritizes providing training and professional development opportunities for teachers to improve their ICT skills, pedagogical knowledge, and capacity to use technology in their teaching practices successfully.

**d. Digital Learning Resources:** This policy promotes the utilization and advancement of digital learning resources, including e-books, multimedia content, online courses, and educational software, to enhance conventional teaching materials and provide students with captivating and interactive learning opportunities.

**e. Cybersecurity and Online Safety:** This policy addresses schools' cybersecurity and online safety concerns. It involves developing methods to safeguard student data, combating cyberbullying, promoting responsible internet usage, and educating students about digital citizenship.

**f. ICT Governance and Management:** This policy indicates the duties and obligations of school administrators, instructors, students, and others overseeing ICT resources. Its purpose is to ensure effective management, responsible conduct, and optimal utilization of technology in educational institutions.

**g. Monitoring and Evaluation:** This policy specifies procedures for monitoring the implementation of ICT projects, evaluating their influence on teaching and learning outcomes, and performing periodic assessments to identify areas for enhancement and successful strategies to duplicate.

## 2. Issues Relating to the ICT Policies

ICT is utilized in classrooms and may transform how we teach and learn. Technology is exciting, but ICT policy in education is problematic. Examples are technology access, digital skills gaps, data privacy, hacking, and how ICT in learning influences those sectors. Infrastructure, digital learning tools, and instructors' ICT skills are also critical.

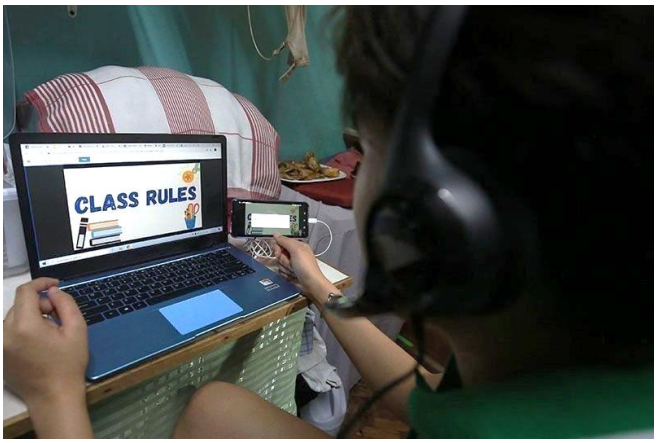


*Image 2:* UNESCO: Philippines still lacking in computers for students' learning (Source: Servallos, 2023: Online)

To deal with these problems, we need comprehensive policy frameworks that support ICT access, digital inclusion, student privacy, and teacher support (Bilbao et al., 2019). By carefully looking at these issues, policymakers may be able to use ICT to completely change education while lowering its risks and making sure that all students have equal chances.

**Issue No. 1: Freedom of Expression and Censorship.** The challenge is reconciling the inherent right to freedom of speech with the necessity to govern objectionable material on the Internet, such as hate speech and false information. Although censorship is intended to reduce these hazards, it frequently gives rise to apprehensions about suppressing freedom of expression and hindering the sharing of varied perspectives. To successfully navigate this conflict, it is necessary to employ sophisticated strategies that respect democratic norms while effectively tackling the issues presented by toxic internet content.

**Issue No. 2: Privacy and Security.** ICT utilization in education elicits apprehensions regarding privacy and security, given that student data and online activities are susceptible to breaches and exploitation. It is essential to consider the advantages of individualized learning while protecting sensitive information. Without strong safeguards, such as encryption, secure platforms, and explicit data protection regulations, there is a potential for privacy breaches and illegal entry into student data, which can erode confidence and impede the successful use of technology in education.

**Issue No. 3: Surveillance and Data Retention.** Surveillance and data retention in ICT-enabled education are problematic. Monitoring student behaviors can help assess progress and ensure safety, but excessive surveillance violates privacy and fosters distrust. Security, consent, and misuse considerations arise when maintaining student data. Clear regulations, informed consent, and robust data protection procedures are needed to balance proper oversight and student privacy. These acts are necessary for ethical behavior and a safe learning environment.

**Issue No. 4: E-pollutants from E-wastes.** The problem of e-pollutants resulting from the disposal and recycling of outdated electronic equipment in ICT-based education is a significant concern. Improper electronic waste management releases toxic compounds into the environment, which presents health hazards and causes environmental deterioration. To tackle this problem, it is necessary to implement responsible methods for managing electronic trash, such as recycling programs and rules that aim to reduce pollution and encourage the sustainable use of ICT resources for education.

## Implications of the ICT Policies and Issues to Teaching and Learning

The implications of policies and challenges associated with ICT-based education involve intricate obstacles, including privacy apprehensions, digital disparity, and environmental consequences. To tackle these problems, it is necessary to establish thorough policy frameworks, take ethical factors into account, and work together to guarantee fair access, protect privacy, support sustainability, and utilize the transformative power of technology to improve educational outcomes in a rapidly changing digital environment.

### For the Teacher and the Teaching Process

a. Provide guidance to educators on the content and methodology for teaching ICT. Given the quick pace of ICT development, instructors may feel overwhelmed by its swift progression. Exercising moderation in its utilization is a prudence that warrants attention.

b. Human instructors should not be substituted with technology due to their ability to provide empathy, emotional support, personalized guidance, and

nuanced comprehension, which are crucial for successful education, student development, and tasks that electronic devices and software cannot do.

**For the Learner and the Learning Process**

a. ICT policies directly impact learners' ability to use technology and digital resources, affecting their capacity to interact with educational content effectively. Factors like digital inequality might worsen the disparities in academic achievements among children from varying socioeconomic origins.

b. ICT policies influence the incorporation of technology into teaching methods, impacting learning. By prioritizing digital literacy and implementing creative teaching methods, we may improve student engagement, foster critical thinking, and strengthen collaborative abilities.

c. Protecting learners' privacy and data security is of utmost importance. Data protection and cybersecurity policies directly impact the safety and confidentiality of student information. These policies also influence trust in digital learning environments and promote responsible use of technology.

## 3. Safety Issues in ICT and e-Safety Rules

E-safety in teaching and learning pertains to implementing measures to ensure a secure and protected online setting for students and instructors. It includes strategies to safeguard persons from online hazards such as cyberbullying, improper material, identity theft, and online predators. E-safety programs encompass pupils' education on responsible online conduct, providing guidance on privacy settings and security measures, and implementing policies to combat cyber dangers and protect digital welfare.

The impact of internet safety and security on education is significant as it shapes the learning experience and directly influences student results. An online environment that ensures security instills trust in learners, allowing them to freely explore digital materials, collaborate with peers, and participate in online learning activities without any concerns about potential threats or harassment. In contrast, insufficient internet safety precautions might hinder educational advancement by

causing distractions, anxiety, and exposure to detrimental information that could adversely affect students' well-being and academic achievements.

Moreover, online security violations harm the trustworthiness of educational establishments, putting at risk the privacy of student data, intellectual assets, and secret information. To effectively address internet safety and security problems in education, adopting a comprehensive approach involving educators, parents, politicians, and technology suppliers is necessary. Schools may provide a secure online learning environment that fosters digital literacy, responsible online conduct, and the well-being of students and educators by giving priority to e-safety activities and adopting strong cybersecurity measures.

There are five critical issues in using ICT in the teaching-learning process.

**Cyberbullying.** E-safety issues encompass the proactive measures taken to avoid and mitigate instances of cyberbullying, which refers to the use of digital channels to engage in harassing, intimidating, or harmful behavior towards others. To tackle cyberbullying, it is necessary to take proactive steps such as teaching students about proper online conduct, implementing explicit anti-bullying regulations, and offering assistance to victims.

**Harmful Content.** Ensuring e-safety entails safeguarding pupils from accessing or encountering improper or detrimental internet information, such as violence, pornography, or extremist material. To address this problem, it is advisable to incorporate content screening systems, parental controls, and guidelines for age-appropriate content.

**Online Predation.** E-safety initiatives strive to safeguard pupils from online predators who may want to abuse or manipulate them for improper intentions. It is crucial to educate children about online privacy, safe social networking behaviors, and identifying warning indications of predatory activity to protect against this danger.

**Identity Theft and Fraud.** E-safety refers to implementing strategies to prevent the unauthorized use of personal information and financial fraud, such as phishing scams or malware attacks, that can put students' personal information and economic security at risk. The potential hazards can be reduced by educating kids on internet security measures, password management, and identifying online fraud.

**Digital Footprint and Privacy.** E-safety issues encompass the need to educate kids about the ramifications of their digital footprint, including the enduring effects of disclosing personal information online. Ensuring e-safety in teaching and learning requires promoting digital citizenship, responsible social media usage, and respecting privacy settings and permissions.

## Five Helpful Tips for Teachers to be E-safe

### 1. Online Safety Education

Incorporate Internet safety and digital citizenship courses into your curriculum to educate students on safety while using the Internet. Cyberbullying, the dangers of revealing personal information online, and how to spot and avoid fraud and dangerous websites are all important topics for children to learn.

### 2. Safeguard Privacy Settings

Encourage your kids to look at their social media and device privacy settings and make any necessary adjustments to manage who may see their content and information.

### 3. Secure Communication Channels

When interacting with children online, utilizing methods prioritizing privacy and encryption, such as school email systems or specialized messaging platforms, is best.

### 4. Monitor Learners' Online Activities

Keep an eye on what your kids are up to when they're online so you can catch any instances of cyberbullying, harassment, or other inappropriate behavior. When children have trouble navigating the Internet, it's important to encourage them to talk to and assist one another.

### 5. Foster Analytical Thinking and Media Literacy

Teachers integrate responsible netizenship by instructing students to recognize and reject false information and check the credibility of sources before relying on what they read online. This becomes part of training students to think analytically and critically and develop social responsibility.

**Five Helpful Tips for Students to be E-safe**

**1. Personal Privacy Matters Most**

Avoid giving out your full name, address, phone number, or password to complete strangers online; this is crucial personal information to keep private. Filling out online forms or creating new accounts should be approached with caution.

**2. Make Your Passwords Robust**

Don't use something as simple as your birthdate or pet name as your password; instead, use something unique and difficult to guess for each of your online accounts. To keep all of your passwords safe, you should think about using a trustworthy password manager.

**3. Think Before You Click**

It is important to exercise caution when dealing with links, attachments, and files from unknown sources. These files may contain malicious software or be an effort at phishing. Always check the legitimacy of an email or website before responding to it.

**4. Responsible Social Media Use**

Be wary of what you share online and take steps to limit access to your profile and posts by changing your privacy settings. Be cautious about posting personal or potentially embarrassing photographs or information online.

**5. Get Help**

Tell an adult you trust, a teacher, or the school administration immediately if you see anything fishy or dangerous happening on the Internet, such as cyberbullying, harassment, or improper material. Many websites also include ways for users to report problems like these.

## D. Conclusions

Optimizing teaching and learning requires understanding ICT policies and concerns. Access, privacy, security, and digital literacy must be balanced to maximize technology's transformational power. Collaboration and informed tactics may help educators develop inclusive, innovative, and safe learning environments that prepare students for digital success.

## E. References

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