

2 Ethical and Social Issues in ICT

Computer Ethics

Computer ethics refers to moral principles that guide the proper and responsible use of computers, ensuring no harm is done to others while using digital technology.

Some key commandments of computer ethics include:

- Avoid using computers to harm others.
- Refrain from publishing false or misleading information.
- Respect others' privacy by not accessing their files without permission.
- Do not delete or destroy someone else's data or records without authorization.

These rules promote responsible and ethical behavior in using computers and digital technology, ensuring respect for privacy, security, and integrity.

Digital citizenship

Digital citizenship means using technology, the Internet, and digital media responsibly and ethically. It promotes a safer and more inclusive online environment. Digital citizens should communicate respectfully, protect personal information, and critically evaluate online content.

Good practices of a digital citizenship include:

- respecting others' privacy,
- contributing helpful information, and
- Offering constructive feedback in discussions or online communities.

By following these behaviors, individuals can positively engage with society in the digital world.

Digital footprint

A digital footprint is the data trail left by users when they interact with digital platforms, including social media posts, search history, and shared content. It can have positive effects, like building a good online reputation and credibility, or negative ones, such as damaging one's image and leading to cyberbullying. To manage it well, users should protect their privacy by using strong passwords, sharing less personal information, and being cautious about posted content.

Types of digital footprints

- a) Active digital footprint
- b) Passive digital footprint

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An **active digital footprint** is created when users intentionally share information online. Examples include posting on social media platforms like Facebook, Instagram, Snapchat, and Twitter.

A **passive digital footprint** is generated when data is collected without the user's awareness. For example, websites may install cookies on a device without clearly informing the user.

Managing both types of footprints involves understanding how data is shared and taking steps to control online privacy.

Cyberbullying It refers to harassment or bullying using digital technology.

Here are some common examples:

- **Sending rude messages:** Harassing someone through mean emails, texts, or instant messages.
- **Posting harmful content:** Sharing offensive or hurtful posts about someone on social media platforms.
- **Sharing without consent:** Distributing embarrassing photos or videos without the person's permission.
- **Impersonation:** Creating a fake online profile to pretend to be someone else and harm their reputation.

Cyber law

The law which governs the legal issues in the cyber space regarding the Internet or WWW for digital data processing and transaction is called cyber law.

The importance of cyber law is that it controls cyber-crime and punish the offender.

Aims of formulating cyber law in Nepal

- To legalize the transaction through electronic media to control various types of electronic frauds
- To punish a person who does criminal activities through electronic means especially on computers.

Cybercrime [SEE 2074] [SLC 2071]

Cybercrime refers to criminal activities that are carried out using computers, networks, and the Internet. These crimes can take many different forms, including theft, fraud, harassment, identity theft, hacking, and spreading malware and viruses.

Digital signature

A **digital signature** is an electronic method used to verify the authenticity and integrity of a document or message. It ensures the document is from the sender and hasn't been altered. Digital signatures use public and private key encryption, where the sender signs using their private key, and the recipient verifies it with the sender's public key.

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They are commonly used in industries like finance, healthcare, and law to ensure secure, trusted electronic communication.

ICT

ICT stands for Information and Communication Technology. It refers to the integration of technologies used for communication and information processing, including hardware, software, and networks.

Challenges of ICT:

- **Cybercrime:** Cybercriminals exploit systems using fake identities, making detection and control difficult.
- **Hacking:** Unauthorized access to systems is increasing, posing significant security risks.
- **Oversharing Information:** Sharing unnecessary personal or group information can lead to privacy issues.
- **Digital Divide:** The gap between people with Internet access and those without creates inequality in accessing information and digital services.

IT Policy 2072

- Percentage of the population will have digital skills by the end of 2020? – 75%
- Percentage of the population will be able to access the broadband services by 2020? – 90%
- Percentage of the population of Nepal will have internet access by 2020? – 100%
- Percent of government services will be provided online by 2020? – 80%

Objectives of IT Policy 2000

- a) To establish knowledge based industry
- b) To increase employment
- c) To build knowledge based society

Vision of ICT Policy 2015

- To transform Nepal into information and knowledge based society and economy.

Mission of ICT Policy 2015

- To create conditions for the intensified development and growth of ICT sector as a key driver for Nepal's sustainable development and poverty reduction strategies.

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Goals of ICT Policy of Nepal:

- **Digital Literacy:** Ensure at least 75% of the population has digital literacy skills by the end of 2020.
- **Online Government Services:** Provide 80% of citizen-facing government services online by 2020.
- **G2G Implementation:** Promote full automation of land administration, revenue management, vital registration, passport, and citizenship services.
- **Broadband Expansion:** Achieve 30% broadband penetration with a minimum speed of 512 kbps nationwide and at least 10 Mbps in urban areas by 2018.

Electronic Transaction:

Electronic transactions involve the exchange of digital records using various electronic means. These transactions rely on electronic records and valid digital platforms to ensure secure and reliable data transfer in electronic form, such as e-commerce or online banking.

ETA (Electronic Transaction Act) of Nepal:

- The ETA addresses cybercrime issues and helps create laws to regulate it.
- Punishments include **6 months to 3 years imprisonment** and a fine between **Rs. 50,000 to Rs. 3,00,000**.
- Crimes like hacking, piracy, and fraud are clearly defined with strict penalties.
- It legalizes electronic transactions and digital signatures, ensuring secure online activities.
- Techniques like using strong passwords and updating security software help maintain privacy and protect against cyber threats.

When was Electronic transaction act 2063 authenticated and published in Nepal?

— December 8 2006 (22 Mangshir 2063)

Objectives of the Electronic Transaction Act 2063

- To make legal provision for authentication and regulation of electronic data.
- To make a reliable date generation, communication, and transmission.
- To make a secured and authentic means of electronic communication.
- To regulate all the relating matters of electronic transactions.

Scopes of the Electronic Transaction Act 2063

- Creation and use of digital signature

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- b) Control cyber/computer-related crimes.
- c) Protection of intellectual property.
- d) Protection of confidentiality.

Social Media

Social media refers to online platforms and tools that enable users to create, share, and exchange content and information, and to participate in social networking.

Social media platforms allow users to interact with each other by creating profiles, sharing photos and videos, posting messages, and commenting on other users' content.

Some of the most popular social media platforms include Facebook, Twitter, Instagram, LinkedIn, YouTube, and TikTok etc.

Opportunities of using social media

- a) It creates awareness and innovate the way people live
- b) Social media let us share anything with others around the world.
- c) It keeps us informed about the world.
- d) It creates brand exposure for business to the largest audience.

Threats of using social media

- a) Personal data and privacy can be easily hacked and shared on the internet.
- b) More chances of creating fake accounts.
- c) Negative impact on the health.
- d) Decrease the working efficiency of people.
- e) Spreading false or unreliable information.

Full Forms:

ICT - Information and Communication Technology

SMS - Short Message Service

IT - Information Technology

G2G - Government to Government

ETA - Electronic Transaction Act

HoR - House of Representative MMS - Multimedia Messaging Service