The Digital Divide

- **Definition**: Technological inequalities among people within a country and between countries.
- **Key Critical Issues**:
  - **Existence**: Whether there is such a thing as a digital divide.
  - **Measurement**: Indicators that should be used to measure the divide if it exists.
  - **Solutions**: The best ways to close the digital divide.

Access

- **Importance**: Crucial component in the digital divide.
- **Obstacles**:
  - Geography
  - Income
  - Ethnicity
  - Age
  - Education

Geography

- **Divide**: Significant gap between rich industrialized countries and poor, less industrialized countries.
- **Deprivation**: Poor, developing countries are geographically more deprived of access to information.
- **Digital Inclusion**: Effort to ensure every individual and community has access to Information Communication Technology (ICT) and the skills to use it.

Income

- **Greatest Predictor**: Internet and other ICT technologies' use.
- **Key Findings (ICT)**:
  - Broadband at home
  - Internet use
  - Mobile phone ownership

Ethnicity

- **Influence**: One's ethnicity greatly influences ICT access.
- **Changes**: Rapid changes in modern communication technologies, especially Internet-able mobile communication technologies, have affected ethnicity and ICT access.

Age

- **Statistics (Philippines, 2023)**:
  - 85.16 million internet users (73.1% penetration).
  - 84.45 million social media users (72.5% of the population).
  - Highest average screen time on phones; high usage on computers, social media, and gaming.
  - Filipinos spend nearly a third of their day (32.53%) on phones.
  - Younger people are more likely to own a phone (41%) than older adults.

Education

- **Impact**: Educational digital divide affects students' development, safety, welfare, and potential for success.
- **Solutions**:
  - Universal Connectivity/Enhancing Connectivity
  - Adaptable Educational Platforms
  - Engaging with Families on an Individual Basis

Technology's Role in Society

- **Enhancements**:
    - Enhancing Business Efficiency
    - Enhanced Communication Speed
    - Advanced Lifestyle
    - Information Availability

Hardware

- **Trends**: Steady increase in computers, telephones, and other modern communication technologies globally.
- **Challenges**: Quantity, quality, and maintenance of technologies remain problematic, hindering the narrowing of the ICT digital divide.

Software

- **Advantage**: Countries benefiting from ICT often produce their own software or have the financial capacity to source it effectively.
- **Developing Countries**: Face challenges in sourcing software.

Humanware (Human Capacity)

- **Components**:
    - Creating awareness of ICT potential.
    - Developing and strengthening ICT usage capacity with local inputs.
    - Building capacity to produce and package information.
    - Ensuring ongoing technical capacity development and knowledge sharing.
    - Preventing local capacity drain to developed countries.

Infrastructure

- **Components**:
    - Fixed communication structures.
    - Availability of resources accelerates ICT development.

Enabling Environments

- **Definition**: Environments where ICT can thrive.
- **Components**:
    - Politics
    - Public policy and management styles

Politics

- **Requirements for ICT Thriving**:
    - Democratic rights and civil liberties conducive to ICT adaptation.
    - Respect for rule of law and property rights.
    - Investment in human capacity.
    - Low levels of government distortions.

Public Policy and Management Styles

- **Current Issues**: Existing ICT-related laws and policies may not be enforced.
- **Solutions**:
    - Update and enforce policies strictly and fairly.
    - Develop new competitive policies (e.g., liberalization of telecommunications and energy sectors).
    - Staff sectors with competent managers.
    - Ensure ICT regulatory policies are efficient, predictable, and understandable.
    - Efficient licensing bodies staffed with professionals.
    - Government support for taxing policies.
    - Transparency in government to create a moral bar for the country.

Obstacles to Overcoming the Digital Divide

- **Types of Access to Address**:
  - Physical access
  - Financial access
  - Political access
  - Cultural access

ICT in the Workplace

- **Automation**: Vigorously pursued since the industrial age.
- **Impact**: Contrary to fears, automation has proceeded alongside increases in employment numbers.

The Electronic Office

- **Definition**: A technology-augmented office with knowledgeable employees.
- **Technologies Included**:
  - Computers and computer-driven devices for communication.
  - Telecommunication devices with text-processing and storage capabilities.
  - Office support equipment to streamline decision-making tasks.
- **Factors Fueling Growth**:
  1. Increasing productivity to counter rising office operation costs.
  2. Acquiring technology to handle increasing complexity and modernization of office communication and decision-making.

Office on Wheels and Wings

- **Trend**: Workers leaving the office due to electronic gadgetry.
- **Virtual Workplace**: Employees work remotely, often telecommuting using personal or company-provided equipment.

The Quiet Revolution: The Growth of Telecommuting

- **Categories of Telecommuters**:
  1. Workers using homes as an adjunct to conventional office jobs.
  2. Workers using homes as the base for their businesses.
  3. Workers with full-time jobs preferring to work from home.

Company Role in Telecommuting

- **Drivers**:
  - Advances in technology.
  - Need for businesses to increase productivity with minimal expenditures.
  - Internet and globalization opening up new international competition.
- **Benefits**:
  - Increased productivity (10–15% in many studies).
  - Savings on expenses through fewer employees on premises.

Effects and Benefits of Telecommuting

- **Individual Effects**:
  1. Gender
  2. Nature of Work
  3. Labor Supply
  4. Age
- **Benefits for Employees and Employers**:
  - Eliminates commuting time, trouble, and expense.
  - More discretionary time, less stress, and health improvements.
  - Greater autonomy and flexibility.

o More quality time with family.
o Employers gain increased productivity and reduced premises expenses.

Employee Social and Ethical Issues

- **Concerns**:
  o Office automation may lead to perceived loss of control, helplessness, joblessness, and stagnation.
  o **Diskilling**: Stripping employees of job skills due to changes in job content or procedures.
    ▪ **Intraoccupational**: Skill content of the job decreases over time.
    ▪ **Entraoccupational**: Few gain necessary skills, leading to low-paying jobs or layoffs.
- **Preventing Diskilling**:
  o Employee willingness to retrain and use new technology.
  o Historical patterns show more hiring to cope with new technology.
  o Technology often leads to expanded operations and growth.

Employee Monitoring

- **Management Theories**:
  o **Theory X**: Top-down autocratic management.
  o **Theory Y**: Empowerment and semi-independent employee units.
  o **Scientific Management**: Attempts to control work processes.
  o **Fear Management**: Voluntary compliance through fear.
- **Workplace Privacy and Surveillance**:

o **Channels of Information Collection**:
    1. Voluntary channel
    2. Surveillance
o **Electronic Monitoring**:
    ▪ Measures work quality, quantity, and worker effectiveness.
    ▪ Assesses worker habits on and off premises.
o **Issues**:
    0. Misaligned goals between monitoring programs and employee perceptions.
    1. Severe psychological effects on employees.

Consequences of Electronic Monitoring

- Fear of job loss
- Reduced task variety
- Lack of individual initiative
- Reduced or no peer social support
- Lack of self-esteem and interest in the job
- Lack of trust among workers and management
- Alienation

Workplace, Employee, Health, and Productivity

- **Control and Choice**: Choice between traditional office and working from home leads to commitment and higher productivity.
- **Dangers**: Computer technology introduces new workplace dangers.

Ergonomics

- **Definition**: Designing human–machine interactions for a safe, comfortable, and healthy work environment.
- **Repetitive Strain Injury (RSI)**:

- **Causes**: Repetitive motion, forced gripping, performance stress, alienation, static loading, fixed posture, deviated wrists, boredom.
- **Forms**: Occupational overuse syndrome (OOS), cumulative trauma disorder (CTD), carpal tunnel syndrome (CTS), upper limb disorder (ULD).
- **Suggested Changes**:
  1. Use ergonomically correct work equipment.
  2. Use a light touch on the keyboard and keep wrists straight.
  3. Take frequent breaks and perform stretching exercises.
  4. Educate about RSI.
  5. Reduce time spent at the computer if necessary.

Stress

- **Origins**: Environmental inputs leading to fear, anxiety, and anger.
- **Impact**: Increased stress levels endanger individual health.

LECTURE 2: ETHICS AND THE PROFESSION

Profession

- **Definition**:
  - A trade, business, or occupation requiring extensive knowledge, experience, and formal education.
  - Autonomy and responsibility to make independent decisions.
  - A calling with specialized knowledge and often long academic preparation.
  - Principal calling, vocation, or employment.
  - The body of persons engaged in a calling (Webster's Dictionary).

Four Themes

1. Evolution of professions
2. The making of an ethical professional
3. The professional decision-making process
4. Professionalism and ethical responsibilities

Evolution of Professions

Origins of Professions

- **Commitment**: Formal commitment to become a member of a religious order or a learned pursuit (divinity, law, medicine, military).
- **Characteristics**: Authority on a body of knowledge, skilled, fractioned, not amateur.

Two Categories of Profession

1. **Learned Professions**: Require deep knowledge acquired through years of formal education.
2. **Common Professions**: Historically required individuals to be noblemen who did not need to work for a living (e.g., military career).

Requirements of a Professional

1. Highly developed skills and deep domain knowledge.
2. Autonomy.
3. Observance of a code of conduct:
   - Professional code
   - Personal code
   - Institutional code
   - Community code

Codes Governing Human Actions

1. Commitment
2. Integrity
3. Responsibility
4. Accountability

Pillars of Professionalism

Characteristics of Commitment

1. Voluntary commitment without pressure.
2. Responsibility to meet the commitment, seeking help if needed.
3. Clear agreement on what is to be done, by whom, and when.
4. Open and public statement of commitment.
5. Commitment is not made lightly.
6. Advance notice and renegotiation if the commitment cannot be met.

Maxims of Integrity

- Vision
- Love
- Commitment

Types of Responsibility

- Personal
- Communal
- Parental
- Professional
- Provider Responsibilities
- Service Responsibilities
- Product Responsibilities
- Consequential Responsibilities

Elements of Accountability

1. Outcome measures to evaluate performance.
2. Performance standards defined by outcome measures.
3. Incentives for meeting standards and penalties for failing to meet them.

The Making of an Ethical Professional: Education and Licensing

Formal Education

1. Formal courses in professional ethics within professional programs.
2. Ethics information integrated throughout general education or major courses.
3. Capstone courses with ethics content.
4. Exit information ethics courses, possibly online.

Licensing Authorities

- **Licensing**: Grants formal or legal permission to practice a profession.

Professional Codes of Conduct

- **Purpose**: Promote public image by specifying and enforcing expected ethical behavior.
- **Components**:
  - Moral and legal standards
  - Professional–client relationship
  - Client advocacy
  - Professional–public relationships
  - Sanction mechanics
  - Confidentiality
  - Assessment
  - Compliance
  - Competence
  - Certified professional credentials

Enforcement

1. Develop and revise codes of ethics.
2. Conduct education campaigns.
3. Distribute codes to members.
4. Develop disciplinary procedures.
5. Handle complaints, conduct hearings, counsel, and sanction guilty members.

6. Promote the profession's image.

Professional Decision Making and Ethics

Professional Dilemma in Decision Making

- Advances in technology
- Incomplete or misleading information
- Guilt and making ethical decisions
- Reporting grievances

Reporting Procedures

1. **Typical Organizational Route**: Complaint reported to local chapters, then to national ethics committee.
2. **Short-Circuit Procedure**: Reporting can be done at any level directly to the top.

Hearing Procedures

- Conduct hearings to address complaints.

Sanctions and Appeals

- Implement sanctions for violations.
- Provide avenues for appeals.

Guilt and Making Ethical Decisions

- **Criteria**:
  - Utilitarian: Based on outcomes or consequences.
  - Rights: Based on societal liberties (e.g., Magna Carta).
  - Justice: Fair, impartial, equitable decisions.
- **Process**:
  - Examine ethically relevant issues, principles, standards, and practices.
  - Identify affected parties and their interests.
  - Decide on alternative actions if outcomes are unexpected.
  - Consider short and long-term consequences.
  - Consult with trusted colleagues if necessary.
  - Evaluate personal values, biases, and beliefs.
  - Assume responsibility for consequences, including corrections.

Whistle-blowing

- **Definition**: Act of seeking public attention to expose wrongdoing.
- **Methods**:
  - Computer-Aided Methods
  - Traditional Methods
- **Challenges**:
  - Fear of reprisals
  - Suspicion surrounding whistle-blowing
  - Organizational channel memberships

Harassment and Discrimination

1. **Awareness**
2. **Prevention**

- **Ethical and Moral Implications**:
  - Whistle-blowing aims to alert the public to illegal acts harmful to health, welfare, or public resources.
  - High moral standards individuals may be hindered by organizational privileges and freedoms.
  - Harassment and discrimination create discomfort and inferiority, perpetuated by individuals lacking moral standards.

Intellectual Property (IP)

- **Definition**: Rights and obligations related to creations of the mind, including inventions, literary and artistic works, symbols, names, and images used in commerce.
- **Human Rights Aspect**: Right to benefit from the protection of moral and material interests from authorship of scientific, literary, or artistic productions.

Why Promote and Protect IP?

1. **Progress and Well-being**: Drives creation and invention in technology and culture.
2. **Legal Protection**: Encourages investment in further innovation.
3. **Economic Growth**: Spurs job creation, new industries, and enhances quality of life.

IPOPHL Mandate and Function

- **Agency**: Intellectual Property Office of the Philippines (IPOPHL).
- **Mandate**: Administer and implement State policies on IP to strengthen IP rights protection.
- **Functions**:
  - Development-Oriented
  - Regulatory
  - Enforcement
  - Adjudicatory
  - Policy-Making
- **Vision**: A progressive Philippines using IP assets for inclusive economic and social development by 2030.
- **Mission**: Build an inclusive IP system serving the needs of Filipinos.
- **Values**:
  - Justness
  - Harmony and Teamwork
  - Accountability
  - Integrity
  - Excellence

Types of Intellectual Property

Patent

- **Definition**: Exclusive right granted by the government for a period in exchange for full disclosure of the invention.
- **Requirements**:
  - New
  - Inventive
  - Industrially Applicable
- **Exclusive Rights**:
  - **Product**: Restrict unauthorized making, using, selling, or importing.
  - **Process**: Restrict unauthorized use of the process and products obtained from it.
- **Granting Authority**: IPOPHL under R.A. 8293 (Intellectual Property Code of the Philippines).
- **Eligibility**: Technical solution to a problem, new, inventive, and industrially applicable.
- **Statutory Classes**:
  - Product
  - Process
  - Improvement
- **Non-patented Subject Matter**:
  - Discoveries, scientific theories, mathematical methods
  - Schemes, rules, methods of performing mental acts and playing games
  - Methods for treatment of human or animal bodies
  - Abstract ideas or theories
  - Aesthetic creations
  - Plant varieties, animal breeds, biological processes
  - Computer programs

- o Anything contrary to public order, health, welfare, or morality
- **Benefit**: Exclusive rights to exclude others, permission to license or sell rights.
- **Term and Protection**:
  - o 20 years from filing date, no renewal.
  - o Territorial protection.

Utility Model

- **Definition**: Protects innovations not sufficiently inventive for standard patents.
- **Protection Offered**: Exclusive rights to prevent commercial exploitation for a limited period.
- **Statutory Classes**:
  - o Product
  - o Process
  - o Computer-related utility model
  - o Improvement
- **Benefits**:
  - o Prevent unauthorized commercial use.
  - o Inexpensive, faster to obtain, less stringent requirements.
- **Eligibility**: Technical solution, new, and industrially applicable.
- **Non-Patentable Inventions**:
  - o Similar to patents with additional exclusions for biological processes.
- **Term of Protection**:
  - o 7 years from filing date, no renewal.
  - o Territorial protection.
- **Registrability Report**:
  - o Validity of registration.
  - o Relevant prior art documents.
  - o Confirmation of novelty for enforcement.

Industrial Design

- **Definition**: Ornamental or aesthetic aspect of an article (3D features like shape or surface; 2D features like patterns or colors).
- **Conditions for Protection**:
  - o New or original
  - o Article of manufacture
  - o Not dictated by technical or functional considerations
  - o Not contrary to public order, health, or morals
- **Benefits**:
  - o Prevents unauthorized copying, selling, or importing of the design for commercial purposes.
- **Eligibility**:
  - o Must be a new or original creation.
  - o Excludes designs dictated by technical considerations, mere surface ornamentations, or contrary to public order, health, or morals.
- **Term of Protection**:
  - o 5 years from filing date.
  - o Renewable for two consecutive 5-year periods with renewal fees.

Trademark

- **Definition**: Word, group of words, sign, name, symbol, logo, or combination that identifies and differentiates the source of goods or services.
- **Functions**:
  - o Source identifier and differentiator
  - o Quality indicator and advertisement
- **Types of Marks**:
  - o **By Composition**:
    - ▪ Word
    - ▪ Symbol
    - ▪ Phrase
    - ▪ Combination
  - o **By Strength**:

- - - Generic
    - Descriptive
    - Suggestive
    - Arbitrary
    - Fanciful
- **Non-registrable Marks**:
  - Immoral, deceptive, scandalous
  - Flags, coats of arms, emblems
  - Names, portraits, signatures
  - Shapes necessitated by technical factors
  - Colors, unless defined by form
  - Misleading or generic
  - Customary to trade
- **Benefits**:
  - Protects brand identity.
  - Exclusive rights to prevent exploitation.
  - Can generate income through licensing or franchising.
- **Eligibility**:
  - Distinctiveness is key.
  - Must not fall under non-registrable categories.
- **Term of Protection**:
  - 10 years from registration date.
  - Renewable every 10 years indefinitely with proper maintenance.

Copyright

- **Definition**: Legal protection for the owner of rights in an original work in literary, scientific, and artistic domains.
- **Acquisition**: Automatically upon creation, irrespective of form or expression.
- **Unprotected Subject Matter**:
  - Ideas, procedures, systems, methods of operation, concepts, principles, discoveries, mere data, news, official texts, and certain government works.
- **Rights Provided**:
  - **Economic Rights**:
    - Reproduce, translate, adapt, exhibit/perform, distribute, broadcast, communicate to the public.
  - **Moral Rights**:
    - Recognition as the author.
    - Object to changes damaging honor or reputation.
- **Benefits**:
  - Exclusive rights to use or authorize use.
  - Control over reproduction, public performance, translation, adaptation, etc.
- **Eligibility**:
  - Literary, musical, artistic works, computer programs, databases, films, etc.
- **Term of Protection**:
  - Lifetime of the author plus 50 years.
  - Variations for joint authorship, anonymous works, photographic works, applied art, audio-visual works.