
INFORMATION PROCESSING

B. STRAND RATIONALE AND PHILOSOPHY

Information Processing, a strand in Career and Technology Studies, represents the study of electronic technologies as they apply to personal use and the business environment.

As we move more rapidly into the information age, it is crucial that students are able to use electronic technologies to access and manipulate information in an efficient manner. Accurate, timely information is the basis for sound decision making and effective communication.

As students build confidence in their understanding of the various information processing tools and procedures, they will be able to transfer their knowledge and skill to a wide range of contexts. They will also be better able to adapt to the continual changes caused by the evolving technologies.

To understand the shift from the *industrial society* toward the *information age*, it is important that a student understands the significance of the current technological development, of how technology affects an individual's daily life and of the impact that technology has on the world of work. Within this perspective, Information Processing provides for the development of:

- a meaningful study of technological trends

- an understanding of the systems that relate in whole or in part to the management of information
- an understanding of the ethical and societal issues concerning technological development and its impact on society
- technological skills and knowledge designed for personal use
- technological skills and knowledge that transfer to other curriculum areas
- technological skills and knowledge required for the world of work.

Students will learn to input, process and output information in the following areas:

- system operations
- text/data input
- productivity software
- applied processing
- dynamic environment
- programming (procedure-oriented and object-oriented)
- computer science.

STRAND ORGANIZATION

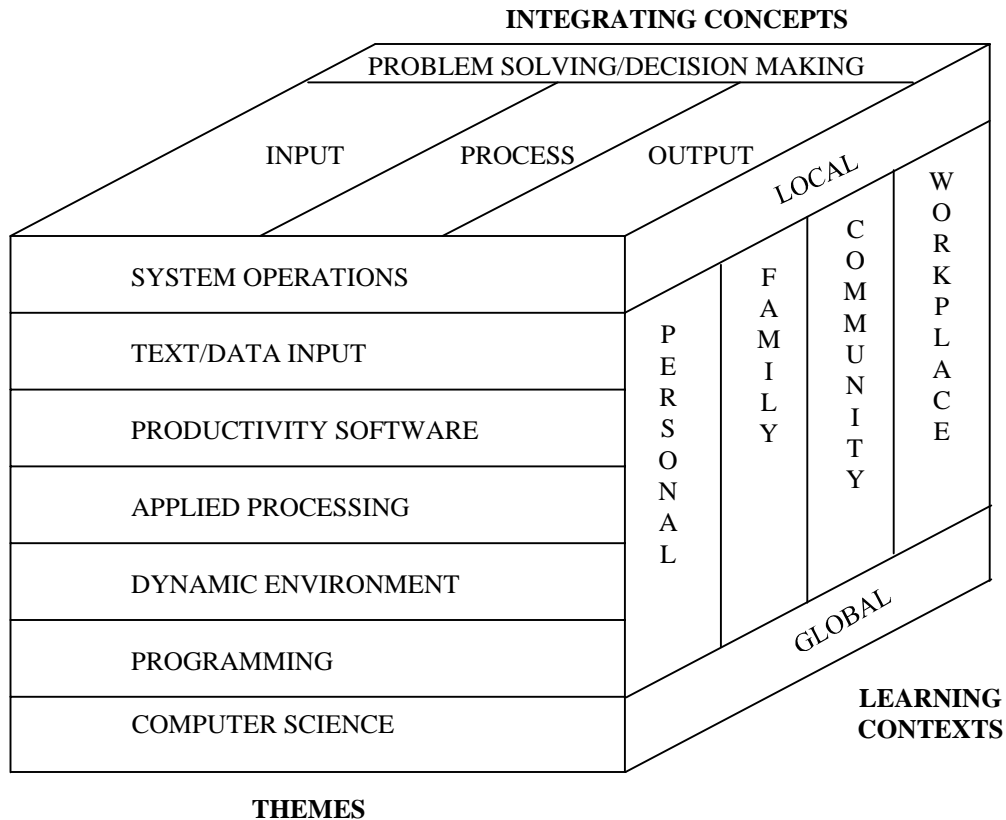
The developmental model indicates the relationship of what the students learn (as described in the themes), how these learnings are emphasized within the courses (as described in the integrating concepts) and how students will apply these learnings (as described in the learning contexts).

In the intermediate level courses, students are expected to work more independently and expand and refine basic skills in a wide range of applications.

At the advanced level, students use initiative to efficiently integrate applications and processes to produce high quality work to workplace standards.

LEVELS

Students working on courses at the introductory level develop basic techniques and skills which, while primarily for personal use, also form the foundation for the development of more professional applications.



THEMES

The themes provide learning experiences that link knowledge, skills and attitudes with real-life situations. Courses are organized into seven themes:

- system operations
- text/data input
- productivity software
- applied processing
- dynamic environment
- programming
- computer science.

The courses in the System Operations theme help students efficiently use and assess computer hardware and related software and peripherals, and understand and apply various communication protocols.

In the Text/Data Input themes, students develop efficient keyboarding competencies for both personal use and professional skill levels.

In Productivity Software courses, students learn the commands and processes of the key productivity software packages used in personal and professional applications, including word processing, spreadsheet, database, graphics and electronic/desktop publishing. Students expand their ability to use these software applications in other CTS strands such as Communication Technology, or in other courses such as English language arts, mathematics.

The Applied Processing theme is designed to increase students' level of productivity as they produce a variety of documents that integrate text, data and graphics applications.

In the Dynamic Environment theme, students work with software that links various media and processes in new and unique ways to manage and communicate information.

The Programming theme provides an opportunity for students to develop high-level, structured programming skills, using either procedure-oriented or object-oriented processes.

The Computer Science theme provides opportunities for students to develop skills in a high growth career area of the emerging economy. Courses within this theme address a need identified by business/industry and post-secondary institutes for:

- more senior high school students to have access to training in computer science
- more consistent standards for literacy in computer science
- smoother transitions from secondary to post-secondary education.

INTEGRATING CONCEPTS

Integrated within each of the Information Processing courses is the expectation that students will identify and resolve problems efficiently by using effective decision-making skills. Students apply these problem-solving/decision-making skills as they determine the most effective and efficient processes to use to input, process and output information.

LEARNING CONTEXTS

Learning contexts help students relate their learning to real-life experiences and challenges. In courses at the introductory level, these challenges are most frequently in a context typical in daily living—within the home, school or community. As the student progresses through the intermediate and advanced levels, the challenges and related expectations for performance involve contexts that relate to the workplace.

With the ever-increasing power of information technologies, all of these applications can be applied both at the local and global level. The competencies students develop in Information Processing will also support students as they continue their education in post-secondary or other further education opportunities.