

Liverpool John Moores University

Title: SOFT SYSTEMS MODELLING
Status: Definitive
Code: **6010COMP** (102980)
Version Start Date: 01-08-2011

Owning School/Faculty: Computing and Mathematical Sciences
Teaching School/Faculty: Computing and Mathematical Sciences

Team	Leader
Hulya Francis	Y

Academic Level: FHEQ6
Credit Value: 12.00
Total Delivered Hours: 36.00
Total Learning Hours: 120
Private Study: 84

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Workshop	36.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	AS1	Portfolio to be completed in weekly workshops throughout the module.	100.0	

Aims

To develop and apply knowledge and abilities in systems thinking.

Learning Outcomes

After completing the module the student should be able to:

- 1 Develop concepts associated with Systems theory and systems thinking.
- 2 Apply soft systems modelling techniques to human activity systems.

- 3 Demonstrate a critical understanding of the philosophical issues associated with soft systems modelling in comparison to hard systems modelling.
- 4 Appraise the contentions associated with methodological application per se and the resulting ramifications for the practice of systems analysis and design.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Portfolio 1 2 3 4

Outline Syllabus

Review concepts associated with Systems Theory. Outline the structure of Checkland's Soft Systems Methodology. Trace the impact of SSM within the discipline of Information Systems and the practice of Systems Analysis and Design. Apply SSM to the modelling of Human Activity Systems. Investigate the implications of using soft modelling techniques. Discover the ramifications for the discipline of contentions associated with methodological applications (the soft versus hard; or the soft embedded with hard dilemma). Develop expertise in applying methodology to a complete problem scenario.

Learning Activities

There are no formal lectures for this module. Each session will operate on a workshop type basis and students will be expected to participate in class discussions.

References

Course Material	Book
Author	Checkland P.B., Holwell S.
Publishing Year	2002
Title	Information Systems and Information Systems
Subtitle	
Edition	
Publisher	Wiley
ISBN	

Course Material	Book
Author	Checkland, P.B.
Publishing Year	1981
Title	Systems Thinking, Systems Practice
Subtitle	

Edition	
Publisher	Wiley
ISBN	

Course Material	Book
Author	Checkland,P.B. Scholes, J.
Publishing Year	1990
Title	Soft Systems Methodology in Action
Subtitle	
Edition	
Publisher	Wiley
ISBN	

Course Material	Book
Author	Stoweel,F.A.(ed)
Publishing Year	1995
Title	Information Systems Provision: The Contribution of Soft Systems Methodology
Subtitle	
Edition	
Publisher	Mc Graw Hill
ISBN	

Course Material	Book
Author	Jayaratna, N.
Publishing Year	1994
Title	Understanding and Evaluating Methodologies
Subtitle	NIMSAD, A Systematic Framework
Edition	
Publisher	Mc Graw Hill
ISBN	

Notes

This module provides an in depth theoretical and practical study of soft systems modelling techniques. The focus is primarily on effective problem definition and the satisfactory elucidation of system requirements. The implications of methodological applications and of the analyst's actions are made explicit. The module seeks to encourage students to 'look beyond' traditional modelling techniques.

Information systems consist of people, processes, machines and information technology. The great advancement in information systems is due to development in information technology and introduction of computers. Information System. An information system can be defined as set of coordinated network of components, which act together towards producing, distributing and or processing information. Therefore, information systems in business can be divided into operations support system and management support system. Information Technology. Everyday knowingly or unknowingly, everyone is utilizing information technology. It has grown rapidly and covers many areas of our day to day life like movies, mobile phones, the internet, etc. Both information systems (IS) and information technology (IT) are burgeoning industries that offer job opportunities that have long-term professional growth potential. The fields are related in more ways than that, however. In fact, the terms information technology and information systems are sometimes used interchangeably, but that is a misnomer. Information Systems Information systems is an umbrella term for the systems, people and processes designed to create, store, manipulate, distribute and disseminate information. The field of information systems bridges business and computer science. One of the reasons people may not distinguish between IS and IT is that they assume all information systems are computer-based systems. An information system is any organized system for the collection, organization, storage and communication of information.[3]. Information systems aim to support operations, management, and decision making through inter-relation between data systems and activity systems.[4]. Information systems are a combination of hardware, software, data, procedures, people, and feedback.[5]. Expert systems are computer systems that emulate the decision-making ability of a human expert.[6]. An expert system is divided into two sub-systems: the knowledge base and the inference engine. Information Systems is where business and technology meet. This ever-growing field attracts graduates who thrive in a team environment and want to utilize their expertise to develop even newer technologies to maximize business productivity. In addition, for those information-technology professionals who aspire to middle- and senior-management levels in the field, their future may be gilded with six-figure salaries.

1.ORGANIZATIONAL DIMENSION : Information system are part of organization. Information system will have the standard operating procedure and culture of an organization embedded within them. This involves: a)Functional specialties b)Business processes c)Culture d)Political interest groups.

2.MANAGEMENT DIMENSION : Managers perceive business challenges in the environment. Information systems supply tools and information needed by the managers to allocate,coordinate and monitor their work, make decision,create new products and services and make long range strategic decision.

3.TECHNOLOGY DIMENSION

Information systems consist of people, processes, machines and information technology. The great advancement in information systems is due to development in information technology and introduction of computers. Information System. An information system can be defined as set of coordinated network of components, which act together towards producing, distributing and or processing information. An important characteristic of computer-based information systems information is precision, which may not apply to other types. In any given organization information system can be classified based on the u An information system is any organized system for the collection, organization, storage and communication of information.[3]. Information systems aim to support operations, management, and decision making through inter-relation between data systems and activity systems.[4]. Information systems are a combination of hardware, software, data, procedures, people, and feedback.[5]. Expert systems are computer systems that emulate the decision-making ability of a human expert.[6]. An expert system is divided into two sub-systems: the knowledge base and the inference engine. Information systems are of different types catering to different user classes. Information systems that cater to the needs of management are the focus in this chapter. These systems are broadly called management information systems if they conform to some specifications. These management information systems can be created from scratch or can be acquired off the shelf and then customized to fit the needs of the organization. Contribution to MIS literature (Anthony 1965) by developing a framework for management information systems in organizations, that remains largely valid. The framework under 1.ORGANIZATIONAL DIMENSION : Information system are part of organization. Information system will have the standard operating procedure and culture of an organization embedded within them. This involves: a)Functional specialties b)Business processes c)Culture d)Political interest groups. 2.MANAGEMENT DIMENSION : Managers perceive business challenges in the environment. Information systems supply tools and information needed by the managers to allocate,coordinate and monitor their work, make decision,create new products and services and make long range strategic decision. 3. TECHNOLOGY DIMENSION

The information requirements for users at each level differ. Towards that end, there are number of information systems that support each level in an organization. This tutorial will explore the different types of information systems, the organizational level that uses them and the characteristics of the particular information system. In this tutorial, you will learn the different Classification of Information. Pyramid Diagram of Organizational levels and information requirements. Transaction Processing System (TPS). Management Information System (MIS). Decision Support System (DSS). Artificial An information system is a computer system that provides management and other personnel within an organization with up-to-date information regarding the organization's performance; for example, current inventory and sales. It usually is linked to a computer network, which is created by joining different computers together in order to share data and resources. It is designed to capture, transmit, store, retrieve, manipulate, and or display information used in one or more business processes. These systems output information in a form that is useable at all levels of the organization: strate An Information system (IS) is a formal, sociotechnical, organizational system designed to collect, process, store, and distribute information. In a sociotechnical perspective, information systems are composed by four components: task, people, structure (or roles), and technology. Information systems can be defined as an integration of components for collection, storage and processing of data of which the data is used to provide information, contribute to knowledge as well as digital products. 1.ORGANIZATIONAL DIMENSION : Information system are part of organization. Information system will have the standard operating procedure and culture of an organization embedded within them. This involves: a)Functional specialties b)Business processes c)Culture d)Political interest groups. 2.MANAGEMENT DIMENSION : Managers perceive business challenges in the environment. Information systems supply tools and information needed by the managers to allocate,coordinate and monitor their work, make decision,create new products and services and make long range strategic decision. 3.TECHNOLOGY DIMENSION