The Domain of Management

Project management● Resource management ● Delivery System management ● Information management

Within the research and practice of the field, instructional technologists are more and more involved with efforts in management of instructional technology. The domain of management controls instructional technology through planning, organizing, coordinating, and supervising (Seels & Richey, 1994). For implementation of one or more instructional technology projects, one key ingredient essential to success is management. Management is intended to produce an operational value system.

According to Seels & Richey (1994), there are four subcategories of the management domain: project management, resource management, delivery system management, and information management. Of the four categories, project management is overlapped with other three categories. The management of an instructional development project incorporates resource management, delivery system management, and information management. Within each subcategory there is a common set of tasks: planning for short-term and long-term goals, assuring organization, hiring and supervising personnel, planning and accounting for funds, and developing and maintaining facilities.

Project Management

Seels and Richey (1994) defines project management as "involves planning, monitoring, and controlling instructional design and development projects" (p.50). In other words, project management is the means by which all the analysis, design, development, implementation, and evaluation actions involved in instructional system development process are coordinated and controlled. An instructional technology manager is responsible for ensuring that all actions are started and accomplished within the scope of the project identified at the beginning. In practice there are some models an instructional technology manager can chose from to guide the management of the project. The models that are widely used are the Seels and Glasgow's (1998) ISD Model II, and the Michael Greer's ID Project Management Model (1992).

The Seels and Glasgow's model divides the project management process into three distinct phases, with diffusion as ongoing process in the model. The first phase is to formulate a management plan by identifying outputs in the problem analysis including needs assessment, performance analysis, and context analysis. The management plan encompasses goals, instructional requirements, and constraints, resources, and learner characteristics. The second phase includes all the steps related to design, development, and formative evaluation. Feedback and interaction is throughout all the steps and contribute to each other. The third phase of project management, implementation and evaluation management, involves transferring the program or product to a real lift setting for continued use.

Greer's model (1992) is a typical Instructional Design Project Management Model, which comprises three major phases: (1) project planning, (2) instructional development, and (3) follow up. In the 'project planning' stage an instructional technologist determines the scope of the project (including the customer requirements and deliverables), define staffing and resource requirements (including estimated cost), and develop a mater schedule.

The scope of a project is imperative to the management, depending on the scope of the assigned tasking. It affects subsequent development efforts. For example, if the scope of the assigned task is limited to defining the instructional alternatives before the customer commits to the development effort, the scope of the project might be limited to the Analysis phase. If the customer has selected the solution and expanding the task to include the actual development and implementation of the instructional project, the scope of the project is then updated to reflect the entire instructional system development efforts. The purpose of the phase is to obtain management buy-in. In the 'instructional development' stage the instructional technologist plans, organizes and monitors the entire instructional system development process of the project. The phase includes gathering information, developing a blueprint, creating a draft of materials, testing and producing master materials. The 'follow up' stage involves reproductions and adjustments that are involved in delivery and evaluation of the developed instructional technology project.

Resource Management

Resource management involves "planning, monitoring, and controlling resource support systems and services" (Seels & Richey, 1994, p. 51).   Resources include personnel, budget, supplies, time, facilities, and instructional resources. Resource management is very important to maintain the cost-effectiveness of a project. The constant challenge of resource management is to allocate and optimize personnel resources both functional and cross-functional. Personnel resource management includes such issues as how to scale staffing to the scope of the project, how to accommodate the individual strengths and weaknesses of team members, how to maximize the utilization of available personnel resources, and how to motivate personnel to fulfill their responsibilities. Of them, motivating personnel to fulfill their responsibility is critical. One general tool is to map out a staffing requirements chart and an in-process chart. A staffing requirements chart shows when, how, and where the various staffing resources are required to support the established schedule. An in-process chart presents where the various staffing resources are and how far they are going. Thus, peer monitoring and evaluation can motivate personnel internally to move their process forward. Making other non-personnel resources for personnel's timely access also is a tool to motivate personnel. But when allocating or procuring these non-personnel resources, the instructional technologist must consider and address the client's return on investment carefully.

Delivery System Management

Delivery system management is to ensure an instructional technology program is delivered to the learner successfully as designed and developed. It involves test of hardware and software, timely introduction of technical support to users and operators, availability of materials and guidelines related, and delivery process monitoring from professionals. For example, if the selected optimal delivery system is Blackboard, then to deliver the program effectively one must plan what facilities, hardware and software, equipments, and support technicians needed, monitor and solve process issues happened to instructors and learners during the delivery. Delivery system management is closely related to resource management.

Information Management

Information management is intended to provide access and user friendliness with learning. It involves such activities as the storage, transfer, and processing of information. With today's networked environment human beings expose to a mass of information and easy to be lost or distracted in the sea of information. Without information management skills human being's work efficiency is decreasing dramatically, even worse than in the age before network. The technologies that described in the development domain are tools or methods of storage, transfer, and processing of information. The importance of information management is in that it has the potential for revolutionizing learning and instructional design applications. In the fact, the area is more than for practitioners of the field, all human being in the information society today.

This moment an instructional technology program, from design, through development and utilization, to management, seems complete. But the question "how is the instructional technology program going in the real situation?" has not been answered. I think, this is what an instructional technologist concerns most because through the question he can see how well he performs as a professional. **Evaluation** arises naturally like this.