Domain of Management

The domain of management is the controlling of instructional technology through planning, organizing, coordinating, and supervising (Seels & Richey, 1994). Detailed and precise management is integral and plays a key role in every instructional technology project. Proper management is required from the outset of any project an instructional technologist undertakes. Management will ensure that each task is accomplished on time, within budget, and within the set specifications (Pinto, 1998).

Instructional technologists who work in a managerial role are responsible for many different tasks. Instead of actually designing or developing the project, they act as a supervisor to the designers and developers. The manager is responsible for making certain that each step begins and completes and that the project as a whole stays on time and within budget. Examples of what the manager is responsible for include feasibility studies, scope, product specifications, constraints, resources, milestones, risks, human resources, risk, communication, and schedules.

The management domain includes four sub-domains: project management, resource management, delivery system management, and information management.

Project Management

Seels and Richey (1994) describe project management as involving the planning, monitoring, and controlling of instructional design and development projects. Project management should not be confused with traditional management in that, while traditional managers are in charge of a permanent staff, project managers head up teams of shorter-term members. Project managers differ from traditional managers by lacking long-term authority over their team members since the team is most likely temporary (Rothwell & Kazanas, 1992).

Project managers (PM) within the instructional technology field are responsible for the planning, scheduling, and controlling of instructional projects (Seels & Richey, 1994). They also must control progress through negotiation, budgeting, monitoring, communication, and evaluation.

Michael Greer's ID Project Management model is frequently used by instructional technology practitioners. The model consists of three phases (Greer, 1992): project planning, instructional development, and follow up. During the project planning phase, the project manager determines the project scope and organizes the product. In the second phase, instructional development, the project manager gathers information, develops the blueprint, creates draft materials, tests the draft materials, and produces the master materials. In the final phase, follow up, the project manager reproduces and distributes the materials and then evaluates the project.

Instructional designers often use guides such as Project Management Book of Knowledge (PMBoK) to assist them in attaining knowledge and skills of managing projects. PMBoK

lists the following as the nine knowledge areas of project management. An instructional designer working as a project manager is advised to adhere to these areas in order to plan, develop, and implement a successful project:

> Project Integration Management
> Project Scope Management
> Project Time Management
> Project Cost Management
> Project Quality Management
> Project Human Resource Management
> Project Communication Management
> Project Risk Management
> Project Procurement Management

Murdock (2006) expounds on the PMBoK knowledge areas of project management by noting that project integration management ensures that project activities are properly coordinated. He further suggests that this area of project management includes project plan development, project plan execution, and overall change control within the project.

Project scope management ensures that the project stays within the confines of how the project was initially defined. Inside project scope management, the project manager writes a scope statement to identify major deliverables, including project specifications. This is called scope planning. In scope definition, deliverables are divided into smaller sub-components, or work packages. Scope verification includes formal approval and sign-off by the client. Last, scope change control includes controlling changes as to the project's scope.

Project time management ensures the project is completed on time. In this area of project management, the project manager engages in activity definition (which activities must be completed to produce the deliverables), activity sequencing (identify the dependencies), activity duration (how much time each activity will be given), schedule development (scheduling of the project based on activity sequence and duration), and schedule control (keeping the schedule in synch with any changes).

Project cost management ensures that the project stays within the budget. Project cost management includes resource planning (what resources does each activity need?), cost estimating (what do the resources cost?), cost budgeting (what portion of the budget does each work package require?), and cost control (keeping the budget in synch with any changes).

Project quality management ensures that, in the end, the product is within the pre-determined specifications. Quality planning defines the quality standards which will be used. Quality assurance continually evaluates the product. Quality control keeps an eye on the results of the project to make sure it stays within quality standards, thus eliminating the chances of a poor performance.

Project human resource management ensures the most effective use of people. In organizational planning, the project manager assigns project roles, responsibilities, and reporting relationships. In staff acquisition, the human resources which are needed are acquired. In team development, individual and group skills which will enhance project performance are developed.

Project communications management ensures that project information is collected and disseminated efficiently. Communications planning involves who, what, when, where, and how the information will be distributed. Information distribution makes information available in a timely manner. Performance reporting collects and distributes performance information such as status, forecasting, progress, etc. Administrative closure formalizes the end of a phase or of the entire project.

Project risk management includes activities concerned with identifying, analyzing, and responding to risks. The project manager will engage in risk identification (what are the risks and how are they recognized?), risk quantification (what are the possible outcomes of the risks), risk response (how should we respond to the risks?), and risk response control (how do we respond to changes in risks over the course of the project?).

Project procurement management is the acquisition of goods and services from outside the project's organization. It includes procurement planning (what to purchase and when), solicitation planning (documentation requirements and identification of sources), solicitation (acceptance of bids, proposals, etc.), source selection (choosing the vendor), and contract administration and closeout (management of vendor relationships).

Resource Management

"Resource management involves planning, monitoring, and controlling resource support systems and services" (Seels & Richey, 1994, p. 51). The management of resources includes managing personnel, budget, supplies, time, facilities, and instructional resources. Many practitioners consider it easier to manage resources such as facilities or supplies than it is to manage human resources. Human resource management ensures the most effective use of people by organizational planning (assigning project roles, responsibilities, and reporting relationships), staff acquisition (compiling the human resources needed to complete project activities), and team development (developing individual and group skills to enhance project performance). Often, a major challenge for a manager is motivating his or her team to produce a quality product while staying on time and within budget. While there are many techniques managers employ, Deming's 14 Points (Deming, 1996), McGregor's Theory X and Theory Y (McGregor, 1960), and Maslow's Hierarchy of Needs (Maslow, 1943) are three examples.

Delivery System Management

A role an instructional technologist may have to fulfill is that of a delivery system manager. In this role, the instructional technologist will manage the distribution and delivery of instructional materials. Delivery system management has a focus on both

product issues (hardware and software requirements, as well as technical support) and process issues (designer and instructor guidelines) (Seels & Richey, 1994). The success of the project is dependent on the manager making decisions that match the technology with the instructional goals. Many times, delivery system management is dependent upon other systems such as resource management.

Information Management

"Information management involves planning, monitoring and controlling the storage, transfer or processing of information in order to provide resources for learning" (Seels & Richey, 1994, p. 51). The roots of the sub-domain of information management lie in the field of information science. Information management is specific to storing, transferring, and processing, all of which overlap and depend upon each other. In addition to access management, information management also includes the ever-important realm of security management. The need for security of information is at an all-time high. It not only is important to provide continuous, dependable access to the information, but also to ensure methods are being used to keep the information secure.

Content management is another area which is currently receiving widespread attention. Instructional technologists often find themselves acting as administrators of content management systems (CMS). CMS is utilized for interactive use by a large number of contributors. A good example of a CMS is a wiki which is used to create collaborative websites. Many companies use Web CMS to manage computer files, image media, audio files, e-documents, and web content, allowing employees to easily share files with one another.