

# **A Proposed Interpretation of the ISO 10015 and Implications for HRD Theory and Research**

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*While recent discussions of ISO 10015- Guidelines for Training have done much to promote the need for the standard, no interpretation of the standard has been presented that would guide its actual implementation. This paper proposes an interpretation of the ISO 10015 based on the specifications of the guideline and two other standards related to the design of training: the IBSTPI Instructional Design Competencies and the ASTD Competencies for Designing Learning Activities. Then, potential HRD theory and research implications are presented.*

Keywords: ISO 10015, Quality of Training

## **Problem Statement**

ISO 10015 is one of the numerous standards developed by the non-governmental organization -International Organization for Standardization (ISO). ISO has developed a portfolio of over 16,000 standards (ISO, 2006). Among the standards, ISO 9000 (standards of quality management) and ISO 14000 (standards of environment management) are the most influential standards (WTO, 2005). These are “generic management system standards”, and the focus is “how” they produce the products or services instead of “what” the products or services are. Simply put, the principle of the standards is to “document what you claim and do what you documented.” ISO 9000 family of quality standards provides different perspectives for assuring the quality, and section “6.2.2 Competence, Awareness and Training” is the requirement to ensure that the people performing the work are competent to achieve the quality of the product or service. However, this section has been a problem area for many organizations, especially among small and medium sized organizations. Due to the greater felt need for an appropriate tool for assuring the quality of training, ISO 10015, was developed, negotiated, and refined by a panel of experts from 22 countries and issued by the ISO secretariat in December 1999. As a member of the ISO 9000 quality management family, ISO 10015 serves as a guideline to education and training within organizations, and it ensures that employees within the organization are well-trained and competent to “meet the organization’s commitment to supply products of required quality.” (ISO 10015:1999) ISO 10015 requires compliance with a standard process, one of its benefits is that HRD professionals can perform all aspects of the training design process without being asked by management to exclude any steps. In this way, the standard ensures that managers remain committed to best practices in training. Saner and Yiu (2003) suggest two other advantages of ISO 10015. First, the process oriented concept can be easily understood by companies used to ISO quality management standard. Second, the pedagogical-oriented standard offers guidance on the appropriate use of training technology and fostering organizational learning

Since ISO 10015 emerged as an international standard for ensuring the quality of employee training programs in organizations, discussions of ISO 10015 have done much to promote the need for the standard. However, no interpretation of the standard has been presented that would guide its actual implementation. As a result, using ISO 10015 has remained a somewhat illusive goal. Thus, the research questions are – 1) How does ISO 10015 relate to existing competency models? 2) What are the tasks needed to complete in each stage of the ISO 10015 cycle?

## **ISO 10015 Training cycle**

ISO 10015 training cycle can be viewed as a revised version of ADDIE model. As shown in figure 1, ISO 10015 requires the use of a systematic process consisting of four stages: (1) Define training needs; (2) Design and plan training; (3) Provide for training; and (4) Evaluate training outcomes. ISO 10015 also requires a monitoring mechanism that documents each step of the process to ensure step-by-step compliance with standardized procedures and performance criteria. The monitoring mechanism examines the outcomes of the training programs to determine the effectiveness of the training program. This is an ongoing process and can be viewed as a cycle that encourages continuous improvement.

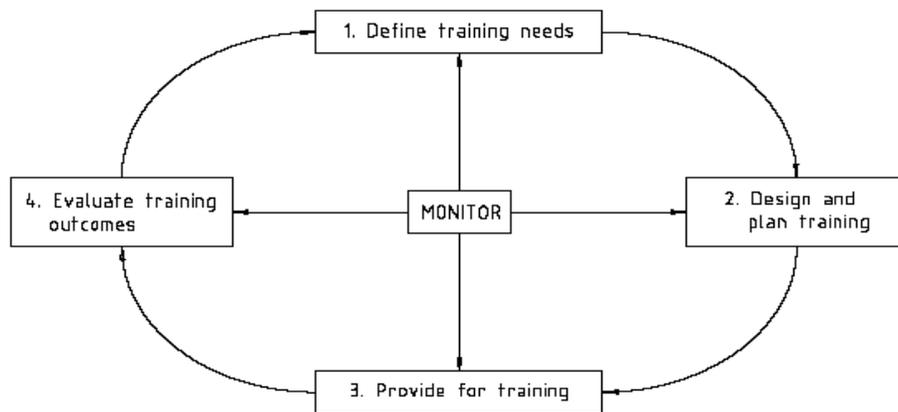


Figure 1. Training Cycle (Source: ISO 10015:1999)

### The Interpretation of the ISO 10015

This interpretation is based on a content analysis of the specifications of the guideline and two other standards related to the design of training: the International Board of Standards for Training, Performance and Instruction (IBSTPI) Instructional Design Competencies and the ASTD (American Society of Training and Development) Competencies for Designing Learning Activities. The analysis was done by three researchers.

#### *IBSTPI Instructional Design Competency.*

IBSTPI stands for International Board of Standards for Training, Performance and Instruction and is a non-profit organization founded in 1984, and the members come from academia, industry, and government, both nationally and internationally. The mission of IBSTPI is to “develop, validate and promote implementation of international standards to advance training, instruction, learning and performance improvement for individuals and organizations.” One of the organization’s work is to develop the competencies of training professionals, including instructors (Hutchison, Shepherd, & Stein, 1988; IBSTPI, 1993; Klein, Spector, Grabowski, & de la Teja, I., 2004), instructional designers (Foshay, Silber, & Westgaard, 1986; IBSTPI, 1986, 1994, 2000; Richey, Fields, Foxon, et al., 2001), and training managers (Foshay, Silber, & Westgaard, 1990; Foxon, Richey, Roberts, & Spannaus, 2003). The instructional design competencies were identified as being most relevant as source of information for the development of the interpretation.

The IBSTPI instructional design competencies consist of four sections: 1) Professional Foundations; 2) Planning and Analysis; 3) Design and Development; and 4) Implementation and Management. (IBSTPI, 2000) The IBSTPI competencies are meant to be used for developing curriculum, establishing professional standards, and for guiding research on the profession. The list of IBSTPI Instructional Design Competency is shown as Table 1.

Table 1. IBSTPI Instructional Design Competency (1988)

1	Determine projects that are appropriate for instructional design.
2	Conduct a need assessment.
3	Assess the relevant characteristics of learn/ trainees.
4	Analyze the characteristics of a setting.
5	Perform job, task and/or content analysis.
6	Write statements of performance objectives.
7	Develop the performance measurements.
8	Sequence the performance objectives.
9	Specify the instructional strategies.
10	Design the instructional materials.
11	Evaluate the instruction/training.
12	Design the instructional management system.
13	Plan and monitor instructional design projects.
14	Communicate effectively in visual, oral, and written form.
15	Interact effectively with other people.

*ASTD Competency Study.*

ASTD is the largest association of HRD practice, and it has sponsored several competency studies of the profession (Pinto & Walker, 1978; McLagan & McCullough, 1983; McLagan, 1989; Rothwell, 1996, 2000; Piskurich & Sanders, 1998; Rothwell, Sanders, & Soper, 1999). The most recent study resulted in a competency model of workplace learning and performance professionals based on panel of experts and survey data from 2,000 practitioners and academics (Bernthal et al., 2004). The model consists of a list of roles, areas of expertise (AOEs) and competencies. As shown in Table 2, the Areas of Expertise were viewed as being the most relevant for informing a comprehensive interpretation of ISO 10015.

Table 2. *ASTD Competency Study: Key Actions of Designing Learning*

1	Applies cognition and adult learning theory
2	Collaborates with others
3	Conducts a needs assessment
4	Designs a curriculum or program
5	Creates designs or specifications for instructional material
6	Analyzes and selects technologies
7	Integrates technology options
8	Develops instructional materials
9	Evaluates learning design
10	Manages others
11	Manages and implements projects

*ISO 10015 Interpretation.*

As shown in Table 3, a comprehensive interpretation was developed, based on the standards of ISO 10015, the IBSTPI Instructional Design Competency, and the ASTD Areas of Expertise, Developing Learning Activities. The proposed interpretation extends the ISO 10015 in at least three ways.

First, the proposed interpretation conceptualizes the training cycle as having six phases, instead of having four phases. Second, the proposed interpretation formalizes performance analysis as part of the training cycle, which in the past had been assumed to exist beforehand. In addition, the proposed interpretation includes the need to institutionalize the training within the organization, as presented in Phase Six.

Finally, the proposed interpretation has been reconciled with best practices taken as represented in the other studies. In this sense, the proposed interpretation extends the original guidelines from minimum requirements to a comprehensive and representative set of standards.

**The Implications for HRD Theory and Research**

The proposed interpretation of ISO 10015 has implications for HRD theory and research. The following will discuss key implications. First, it should be assumed that using a systems approach will lead to more effective training programs. That axiom has been well established in the HRD literature (Jacobs, 2003). Of particular interest for the use of ISO 10015 is the impact that the standard might have on organizational functioning. That is, if organizations adopt the standard, then this decision might have consequences on the allocation of resources for training. In addition, adoption of the standard might have implications on management perspectives of training as strategic tool. Thus, the emerging HRD theory and research potential of adopting the standard focuses seems to focus more on the context of training in organizations. In many respects, this subject area has attracted the least amount of research attention, but often represents the most critical issues for HRD effectiveness in organizations.

Table 3. *ISO 10015 – Quality of Training: An Interpretation Based on Global Best Practices*

	ISO 10015 Standard	IBSTPI ID Competency	ASTD Compete ncy Study
<b>1. Analyze performance problems</b>		1	
a. Document the organization's strategic issues and priorities	4.2.2	1	
b. Analyze the current performance of a potential problem situation, strategic orientation, or change in operational context		1	
c. Identify the desired performance of a potential problem situation, strategic orientation, or change in operational context		1	
d. Identify the causes of the performance gaps		1	
e. Identify the most likely solutions to address the performance gaps	4.2.6	1	
f. Prepare a performance analysis report that describes the strategic issues and priorities, the performance gap, the causes of the gap, and the types of solutions required to close the gap		1	
<b>2. Define training needs</b>	4.2	2	
a. Select the individuals who have subject-matter expertise in the work	4.2.3	2	
b. Conduct an analysis of the work required to close the identified performance gap	4.2.3	2	3
c. Identify the desired level of employee competence to perform the work	4.2.3	2	3
d. Analyze the current level of employee competence to perform the work	4.2.3	2	3
e. Identify the gap between the current and desired level of employee competence	4.2.4	2, 5	3
f. Monitor anticipated employee competence needs based on strategic plans and quality goals	4.2.2	2, 5	
g. Prepare a training needs report that describes the work analysis, the current gap in employee competence, and the anticipated gap in employee competence	4.2.2	2, 5	
<b>3. Design and plan the training</b>			
<i>Design</i>			
a. Identify the training objectives	4.3.4	6	3, 5
b. Identify the characteristics of the trainees that might affect training effectiveness	4.3.3	3	3
c. Identify the organizational constraints that might affect training effectiveness	4.3.2	4	3
d. Identify principles on how best to present the training content		9	1
e. Select the training strategy, training methods, and training media	4.3.3	9	6, 7
f. Develop the training program: trainer materials, trainee materials, performance guides, performance tests, and all other materials for the training program	4.3.3	10	4, 5, 8
g. Conduct field test of training program if necessary			
<i>Plan</i>			
h. Identify the training provider(s), roles, and expectations	4.3.2/4.3.4	12	
i. Ensure trainers are qualified to deliver the training	4.3.2/4.3.5	12	
j. Prepare the training plan: stakeholder approvals, schedule, sequence, milestones, training location, and required resources	4.3.3	12	
<b>4. Provide for the training</b>			
a. Complete pre-training support activities: training schedule, training logistics, and training resources	4.4.2.1	12	
b. Monitor the implementation of the training	4.4.2.2	12	

Table 3. Continued

c.	Complete end-of-training support activities: collect feedback from trainees and trainers, record trainee participation, and inform stakeholders about the training		12	
d.	Provide support for the transfer of the training content to the work setting	4.4.2.3		
e.	Document completion of the pre-training support activities, training implementation, end-of-training support activities, and training transfer	4.4.2		
<b>5. Evaluate training outcomes</b>				
a.	Evaluate the immediate impacts of the training: learning gains and trainee satisfaction	4.5.1	11	9
b.	Evaluate the organizational impacts of the training: improvements in performance, financial benefits, and use of the learning on the job	4.5.1	11	9
c.	Evaluate additional impacts of the training: stakeholder satisfaction, employee motivation, organizational climate and culture, and quality of work life	4.5.1	11	9
d.	Evaluate the match between the actual and planned implementation of the training	4.5.1	11	9
e.	Prepare an evaluation report that summarizes the impacts and the implementation of the training	4.5.2	11	
<b>6. Monitor and improve the training</b>				
a.	Maintain records related to the training cycle	5.1	13	
b.	Maintain records about assumptions and decisions made at key decision points of the training cycle	5.2	13	
c.	Maintain records related to trainees' outcomes	5.2		
d.	Maintain records related to organizational outcomes	5.2		
e.	Institutionalize improvements to the training cycle and training program	5.2		
f.	Institutionalize ways to improve links between the organization's strategic issues and priorities and the training cycle	5.2		
g.	Institutionalize ways to improve coordination between training and business functions	5.2		
h.	Document improvements to the training program, training cycle, and linkages with the organization	5.2		
i.	Document overall performance of the training management system	5.2		

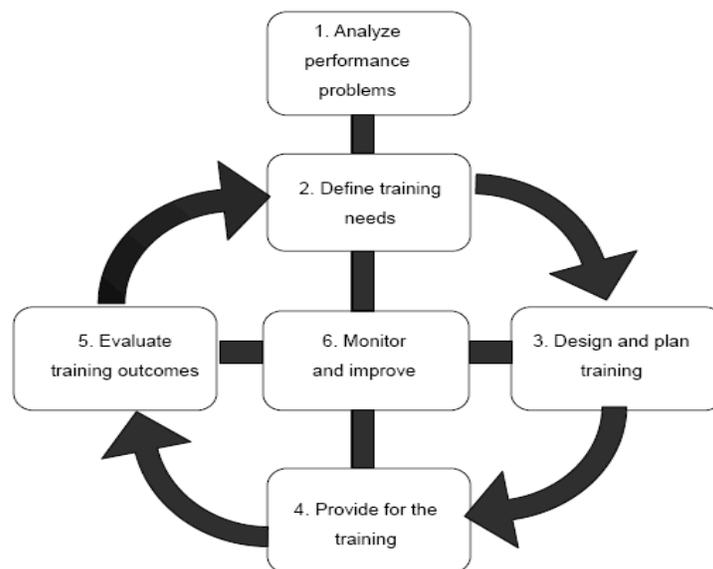


Figure 2. Proposed Six Phase Interpretation. (Center on Education and Training for Employment, 2005)

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