

# Long Live C-Learning

By James N. Farrell

**Sure, there's more Web-based delivery, but classroom training isn't going away. Think blended learning.**

**H**appy New Year: *Innovate or Die!* I read those words as I clicked through *RedHerring.com*, an online magazine specializing in cutting-edge technology. As I set my iced mocha down, I began to ponder what that chilling warning meant for training and development professionals.

As visions of an online training paradise danced through my head, I began to wonder whether the days of instructor-led training were coming to an end. After all, the 1999 ASTD State of the Industry Report showed that instructor-led training is on the decline in leading-edge firms, while use of digital instructional technology continues to rise. Should that have stand-up trainers worried? Perhaps not.

The State of the Industry Report also shows that classroom training remains the dominant form of instructional delivery among the leading-edge firms (58 percent) and among benchmark companies (77 percent), despite the continued rise of instructional technologies such as CBT and

Web-based training. In fact, instructor-led training is likely to remain the dominant form of instruction for most types of training, due in part to the unique qualities a trainer brings to the instructional relationship. A brief look into the past will explain why instructor-led training is here to stay.

## Back to the future

The movement in training toward increased use of technology parallels a similar movement that occurred in distributed communication systems.

During the 1990s, companies implemented a variety of new communication media such as electronic messaging and teleconferencing, in order to increase the efficiency of management decision making through distributed communication. However, the projected cost savings, such as reduced travel expenses, were never achieved. Managers still preferred to communicate face-to-face, even if it involved travel expense.

The research of

Richard Daft provided a straightforward explanation for why distributed communication didn't achieve its projected cost savings: Technology used for distributed communication didn't allow managers to exchange the right type or quantity of information needed to reach a decision. More specifically, in situations in which managers had to choose between competing solutions—such as when there was no established policy to deal with a problem—distributed communication was inadequate. Simply put, in difficult decision-making situations, managers couldn't reach consensus through e-mail or teleconferencing. They needed to communicate face-to-face.

Daft concluded that in difficult decision-making situations, in which information processing demands were high, managers selected face-to-face communication because it provided the exchange of a wider variety of information such as voice inflection and body language. The managers preferred face-to-face communication over email and teleconferencing due to its capacity to impart information richness.

Training and development professionals should take heed of the findings of communication systems research for a variety of reasons. One, training is a specialized form of communication and

## Main Points

- Classroom training remains the dominant form of instructional delivery, despite the rise of instructional technologies.
- With online instruction, many nonverbal cues are lost and there's a lack of information richness.
- When selecting delivery means, consider information processing requirements and the communication system's ability to provide meaningful information to the instructional relationship.

## Information Richness

Information Characteristic	Description
Feedback	How immediate the feedback is for participants and the instructor; enables participants to communicate lack of understanding; allows instructor to assess learner progress
Multiple cues	Body language, voice inflection, pictures, and various nonverbal cues that lead to more accurate communication
Language variety	Range of meaning that can be conveyed with symbols. Some symbols can convey precise meaning better; others are better suited to convey broad concepts such as natural language.
Personal focus	How much emotion and personal meaning can be brought into the situation. The instructor can express emotion, talk about personal experiences, and use the personal experiences of participants.

in the same room as the participants are and may be hundreds or thousands of miles away. Although such situations typically provide two-way communication via cameras and microphones, some provide only one-way communication; others provide no live instruction at all. As with communication systems of the 1990s, the movement toward increasing distance between participants and the instructor is believed to result in more employees being trained while cutting travel cost.

The move to distributed learning does present interesting possibilities for enhancing the instructional relationship and achieving cost savings, but will it enable trainers to reach their instructional objectives in all training situations? Consider this albeit extreme example: You're in a hospital emergency room, and a nurse says you need immediate brain surgery. Two physicians are available, and you must choose. One has undergone traditional one-on-one training with an experienced surgeon. The other has been trained through the hospital's revolutionary new distance learning program for brain surgeons, which included the completion of a 12-step CD-ROM course. Which surgeon do you want to operate on you?

Although medical training is a far-fetched example, it does illustrate a critical point about applying distance learning technology to training. There *are* situations in which distance learning has a negative impact on the instructional relationship, by making the achievement of instructional objectives more difficult or even impossible. Another look at communication systems of the 1990s might provide some answers why that's the case.

Information richness. Experience and research in communication systems have

shown that nonverbal cues such as posture and facial expression can be as important as words or numbers. As any trainer who has looked out over a class and experienced blank stares can tell you, there's a lot more to communicating with trainees than the strict content of the course. Furthermore, it's often a good idea to personalize instruction by having learners share personal experiences related to the topic.

When instruction is provided through distance learning, many

uses many of the same technologies found in communications systems. A second, more compelling reason is that when such concepts as information richness and information processing demands are considered within the instructional relationship, useful predictions can be made about how effective training delivery systems will be under various learning situations.

### The instructional relationship

Vygotsky noted that the instructional relationship is a highly specialized form of

communication, in which the student and teacher assume specific roles. The role of the teacher was considered to be complex, involving the assessment of student potential, administration of instruction, monitoring of feedback, and adjustment of instruction to meet the student needs. Participants performed an essential role by providing the instructor with feedback on how they were progressing.

With the advent of such new instructional technologies as distance learning, the instructional relationship has evolved to the point at which some training isn't

### The Instructional Relationship



- Assumes responsibility for learning
- Provides instructor with feedback
- Provides personal experience

- Transfers content
- Transfers feedback
- Varies in information richness

- Assesses participant potential
- Provides instruction
- Monitors progress
- Adjusts instruction

### Three Modes of Learning

Learning Mode	Description
Accretion	Adding new information to an existing skill set. Example: A nurse learning how to administer a new type of drug.
Tuning	Significantly modifying a set of learned procedures and skills. Example: A nurse learning a new procedure for registering patients in an IS system.
Restructuring	Learning a complete set of new skills. Example: A nurse learning how to conduct training.

### Delivery Systems for Information Richness

Delivery System	Capacity for Information Richness
Face-to-face instruction	
Distance learning	
Stand-alone PC	
Video	
Print	

nonverbal clues are lost. When there's only one-way communication, the instructor can't view participants' expressions or receive questions. In those situations, it's difficult—if not impossible—for the instructor to assess each participant's potential and provide developmental feedback. For participants, the instruction can be impersonal, with no way to provide the instructor with information on their progress. In order for training goals to be reached, the instructional relationship must be dynamic and have access to a rich variety of information from the instructor and the participants.

Information processing demands. Distance learning isn't ideal for all learning situations, but it can meet instructional objectives while reducing travel time and expenses as well as other costs. Daft's work in communication showed that when the information processing demands on managers were high, they pre-

ferred face-to-face communication. The flip side of that coin is that when information processing demands were low, managers favored less rich communication media, such as email and teleconferencing. Information processing demands can lead to similar scenarios in training.

Cognitive learning research has shown that learning situations vary in the demands placed on learners. Some situations require the addition of information to existing knowledge and skills (accretion)—such as a slight modification to a command in an information system. Other situations, in contrast, require the complete learning of a new set of skills and procedures (restructuring)—such as the learning of a new information systems and business process.

If learning situations differ in the demands placed on learners—as decision-making situations differed in their demands on managers in Daft's study—

then it's reasonable to conclude that the type of communication system used by the trainers should vary depending on the unique information processing demands required to attain instructional objectives. In situations in which a great deal of new information and procedures has to be learned, it makes sense to have the instructor in the classroom with the trainees. In those situations, participants are likely to need more feedback and personalized attention in order to achieve mastery.

When learning involves a slight modification to old skills or there's only a small amount of information to learn, distance learning is probably appropriate. In such situations, participants should be able to learn the information on their own. A hot-line or online coach can be included.

### What's next?

What does all this talk about e-learning mean for training and development professionals? You may find yourself between various delivery systems. Your choice, its impact on achieving instructional objectives, and its eventual impact on bottom-line business goals, will likely be the measure by which your performance is evaluated. Understanding the effect of instructional technologies on various learning situations will help you justify your cost estimates to senior-level managers.

Learning technologies are attractive in speed and ongoing low cost, but consider whether they are appropriate for the training situation. When selecting a delivery system, consider the unique information processing requirements along with a communication system's ability to provide meaningful information to the instructional relationship.

The most efficient instruction occurs when a training system's capacity for information richness is matched with the information processing demands placed on learners. Some situations will benefit from the use of distance learning, but many still will require the extra benefits that the presence of an instructor can provide.

Therefore, despite the rise in e-learning, it appears that classroom training is here to stay. □

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