

In defense of ISD

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What is Instructional Systems Design (ISD)? Is it important for designing e-learning? Or is ISD dead?

I recently had the experience of teaching a course about e-learning consulting for the MA program in distance learning (MADL) at Royal Roads University. Most of our students were experienced e-learning practitioners and as a result we had many stimulating online discussions. In one course unit about ways to design and develop e-learning design we broached topics that I thought you would be interested in hearing about. The issue of using ISD models came up. The dilemma we face in e-learning, as explained, by one student is that instructional designers and developers are using new technology to deliver training. The Web and CD-ROM speeds up the delivery of training. The question is can we develop new business processes speed up instructional design.

ISD, or instructional systems design refers to a process for designing and developing instruction. For many people ISD is summarized in the ADDIE model of analysis, design, development, implementation and evaluation. Others have developed much more complex models of ISD. For some, the more complex, the better. But I prefer a simple model.

Models

You may have heard the term rapid prototyping. It is used to mean many things but essentially it is applying trial and error to instructional design. It means to build a course, test it, revise and continue with this building and testing cycle. The idea and the terminology of rapid prototyping come from world of software development. Rapid prototyping with its promise of getting on with instructional design and development can be the antithesis of the deliberate, systematic, careful approach that we have come to call instructional systems design, or ISD. Over the last two years e-learning gurus and writers like Diane Gayeski and Ron Zemke have been asking whether ISD is dead. Many high-powered thinkers insisting that rigor mortise has set in. There are also several who say they have been misquoted in the articles. Whatever the whole story is, the question for us, and for everyone associated with instructional design is what is the value of ISD?

Analysis

The first phase and often a very time-consuming step in the ADDIE-ISD model is

analysis. It's very important because it gives you the details you need to develop e-learning. I agree that ISD sometimes leads to excessive analysis -- to naval gazing. On the other hand, what do we have if we drop analysis? Intuition? Spontaneity is fine but we need facts to design targeted e-learning. Folks involved in designing e-learning, whether they be students, Newbies or clients, need a framework -- the big picture. ISD models provide this. Analysis, design, develop, test, deliver, evaluate explain what training is. These steps and concepts like training needs analysis, performance models, cost-benefit analysis, learning objectives, media selection, interactive learning, alpha and beta testing -- all components of a comprehensive ISD model - give us a common vocabulary. They help stakeholders communicate effectively. Analysis generates much needed systematic thinking. In my mind a thorough training needs analysis embraces seven types of analysis: context analysis, suitability of training analysis, content analysis, users analysis, work analysis, technology analysis and cost-benefit analysis. In my view, rigorous, analytical thinking finds expression in a systematic or ISD approach to crafting courses.

ISD - a way of thinking

We need to recognize the flaws in ISD. Linear, discreet, terminal, sequential, one SME-driven. Yes, an ISD-driven intervention could show these characteristics -- but this need not happen. This should not happen. That is my point. ISD is dynamic, flexible, multifaceted. Experienced designers ensure that the steps are not linear, discreet, terminal, sequential -- one SME-driven. Experienced ISD practitioners modify ISD techniques the way that artist build on the subjects and techniques of past masters, and continue to grow, adapt and learn throughout their lives. In some projects instructional designers conduct focus groups. (We do not limit ourselves to one SME.) We view the process as a whole with overlapping between segments. (Not as linear, discrete steps.) We use the Net to conduct ISD-driven processes.

ISD is simply a tool. Like all tools it can be misused. But when it is used effectively ISD is an effective tool.

ISD is not a flowchart. But that is the way that most systems picture it. It is a way of thinking: a commitment to systematically, broadly, reflectively - and sometimes slowly, or should I say deliberately - designing e-learning - or not designing training if it is not the right approach. It takes time to develop excellent training programs. However, if management wants a quickly designed e-learning program, an experienced ISD-rooted designer can do that, too.

Not what it seems to be?

When you look at an ISD model you might get confused. Sure it looks linear, discreet, terminal, sequential in some (not all) flow-chart diagrams. (Obviously we need new ones!) My colleagues using ISD facilitate understanding within and among workplace teams. We build consensus. We generate buy-in. We help build learning organizations. We help define and modify business processes. We don't drive down the instructional design highway wearing blinkers - contemplating our ISD flowcharts/road maps. We

become engaged. We help improve performance. To do this we use ISD with a good dose of flexibility.

Flawed but essential

Notwithstanding the flaws of ISD flowcharts, I think that all instructional designers need to understand the essentials of ISD models. In the same vein I wanted my teenage daughter, and all other new drivers, to understand all the rules of the road before they start driving. I need to see my dance teacher complete a cha-cha step before I try it. I want to look at a road map before starting a journey. It is best to have the big picture and for many of us the small details, too, before we embark on important undertakings whether it be driving a car, learning to dance, starting a journey -- or designing e-learning. ISD does that. It gives us the questions to ask to get the information for designing solid e-learning . What is the origin of this project? Who supports it? Who does not? What is happening in the workplace? What work is performed? What does a competent performer do? Describe the potential participants in the intervention in terms of age, sex, education, preferred learning activities. Sometimes there is nothing more practical than a good theory. In this case ISD is a theory that gives us an orderly model of training - a vision. Sometimes we need to pull things apart, break them down into their components before we can grasp their true meaning and move forward. ISD dissects the training design process.

E-learning instructional designers should learn the phases of at least one ISD model, the questions to ask, the information to collect and a model of excellence in the same sense that I need my dance teacher to break down the 30+ steps of the back-to-back sequence in the cha-cha.

Learning the skill of design

Designing e-learning is a skill. If you apply the four phases of learning a skill: unconsciously incompetent, consciously incompetent, consciously competent, unconsciously competent - ISD approaches help designers graduate from the first level to the fourth - when they are able to design instruction without thinking consciously about each step. When we become unconsciously competent we do not need to mimic the model - we use it automatically. However, we still rely on its systematic thinking, the logic, and the language of ISD to communicate with our colleagues, with our clients, with each other.

Strange that I should be writing you in support of ISD approaches. I do not use the term. I dislike the words instructional systems design. My tongue trips over them. I have never designed an 'instructional system'. I write courses. I tend to refer to a 'systematic approach' where others might say ISD. Many ISD flowcharts fail to capture the essence of the way I work. They make e-learning design look linear, discreet, and sequential - which they are not.

A tool to develop designers

Why then do I spend this time at my keyboard defending ISD -- if it is the designer not the system that rules? Mainly because I think ISD contains the seeds to develop talented

instructional designers. In the absence of natural talent, or complementing knowledge and skills, ISD helps set standards of performance for crafting training. ISD, like driving lessons and dance lessons helps people through the process of becoming unconsciously incompetent, consciously incompetent, consciously competent, and eventually unconsciously competent. Is ISD perfect? No. Nor is anything else.

The students in our e-learning consulting course remarked in their postings that instructional designers needed to be aware that e-learning is still about good instructional design and ISD can help to achieve well-designed training. For them ISD is alive and well and essential for designing e-learning. I agree. We are expected to work smarter and faster these days so we need to guard against excessively elaborate ISD processes. We need to look for ways to manage ISD processes so they are not excessive but at the same time we need to develop training in a systematic fashion.

Relationships are primary

A final thought --- at least for now. In designing e-learning we forge a relationship between developers designers, management, employees and trainers. The outputs of that relationship are data, information, knowledge, insight, and creative solutions. If the relationship is solid, the outputs will be solid. The relationship is solid when it is built on the inputs of knowledge, integrity, trust, communication, critical thinking, listening -- to name a few attributes of expert instructional designers. What roles do ISD, Internet technology, design templates and electronic design tools play here? Worth pondering. I suspect if knowledge, integrity, trust, communication, critical thinking, listening are in place -- an experienced instructional designer could use just about any system, just about any tools and still generate good, maybe excellent results. It is not the system that makes the designer. It is the designer who makes the system. It's not the technology that makes the training work. It's the designer who makes the technology work.

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