

Instructional Strategies for the Development of E-learning



Introduction

To support the development of large scale, custom E-learning, Results Unlimited has developed appropriate instructional strategies and guidelines to ensure quality throughout the instructional design process. This paper discusses the use of instructional systems design (ISD) in Results Unlimited's content development process as well as instructional strategies supporting Blooms taxonomy and adult learning motivational factors.

For the purpose of this paper, an instructional strategy is the action taken in support of a specific teaching goal. Guidelines provide the parameters and specifications for how these instructional strategies are implemented within the instructional content.

Goals for E-learning

The world of E-learning is continuously evolving and presenting new challenges, so instructional tools must successfully meet current challenges. The following are goals Results Unlimited has identified to create successful E-learning offerings:

- Ensure that client needs are correctly identified and that final training is appropriate and effective.
- Ensure that content supports adult learner characteristics and motivation.
- Develop instructional strategies, based on instructionally sound models and methods that are appropriate for a virtual environment.
- Develops clear and effective guidelines for all instructional strategies that can be easily and consistently used among all instructional designers.
- Create granular, stand-alone pieces of content based on a learning object architecture.
- Create content that can be easily updated to support client needs. During the update process, the majority of the content should remain viable and the update process should be cost effective.

- Implement a course content structure that is easy to use and access. Content will need to be updated and clients might have in-house staff perform the updates.
- Ensure that course design is flexible. Instructional strategies must be easy to modify according to client need.
- Develop instructional strategies that work within bandwidth sensitive requirements and still result in highly interactive and engaging courseware.

After reviewing our goals we concluded that an ISD model was best for the overall design and development of instructionally sound E-learning. We additionally determined that by developing instructional strategies that supported Gagne's Nine Events of Instruction, Bloom's Taxonomy and a learning object architecture our resulting content development process could achieve our goals.

One of our goals was to identify the primary learning characteristics and motivational factors affecting adult learners. In reviewing current adult learning theory, several key characteristics were identified as being important to support by our instructional strategies.

Adult Learning Theory

A major challenge in designing instructional materials for adult learners is to not merely communicate effectively, but to also bridge the gap between adult learners of different educational backgrounds, attitudes, skill levels and learning styles. E-learning must provide enough guidance, reassurance, and reinforcement for all types of learners. Effective instructional design considers adult learners' common characteristics, while providing enough flexibility to also support their differences.

Perhaps the most influential researcher on adult learning was Malcolm Knowles, who coined the term “andragogy” for the approach he recommended. Knowles contended that adult learners differ from child learners in several ways:

- Adults are more self-directed.
- Adults have a larger base of knowledge that can be used in learning new concepts and skills.
- Adults have specific goals for learning.
- Adults want to apply what they learn right away.

When designing instruction, it is important to the success of the training that general adult learner characteristics are taken into account. MacKeracher describes most adult learners as believing themselves to be self-directed and capable of planning actions and making decisions for themselves. They expect to be provided with a sense of where they are going in the learning process, how they will get there and how they will know when they have succeeded. In addition to recognizing the importance of general learner characteristics, content relevance should be considered, since it has a significant impact on a learner’s perception of E-learning. It is generally believed that without relevance, instruction may not engage the learner, risking the effectiveness of the instruction.

When developing instruction, not only should the instruction be clear and sound, it should also be motivating. Several methods of establishing motivation in an E-learning environment can be incorporated into the instructional content.

Wlodkowski lists several key motivational factors. Instruction should enhance meaning by providing engaging and challenging learning experiences that include learner perspectives and values. Training should enable learners to be confident in their ability to perform competently. Learners should believe that they have effectively learned something they value, and they should perceive their new knowledge as being useful and relevant in their world. Identifying these factors is the first step to ensuring that the chosen instructional strategies ultimately support these factors in the content presentation.

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A primary goal of instruction is to allow students to acquire new skills and knowledge. Clear and accurate instruction is only part of achieving this goal. By designing training to encompass adult learner characteristics and provide motivation, the potential for learning to occur is greatly increased. Additionally, the use of sound instructional principles as a base for the development of E-learning is critical to the overall success of the educational materials.

Instructional Systems Design

In the last 20 years, researchers have tested and proven a set of principles for designing adult education materials. These principles constitute the field of instructional design. Whether for instructor-led training or E-learning, to be most effective course materials should follow principles of instructional design.

One effective model that supports basic instructional design principles is the instructional system design (ISD) model. The ISD model is a procedural system. One definition of a system, presented by Dick & Carey is,

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To insure that client needs are correctly identified, and that final training results in learning, we chose to utilize the ADDIE ISD model. The ADDIE model encompasses the major phases of ISD:

Analysis

The purpose of the analysis phase is to identify the performance goal, context analysis and audience analysis. An assessment of available materials, subject matter expertise and technology requirements is also conducted.

Design

During the design phase, objective maps identifying all course objectives and instructional strategies are created in preparation for content development. Design specifications include “look and feel” issues, corporate image considerations, technical specifications and a project schedule is determined.

Development

In the development phase, content development experts create content that supports all performance objectives. Content authoring, media development and technology development are completed after a thorough editorial process. Content is carefully reviewed and tested to ensure completeness and accuracy.

Implementation

During the implementation phase, courses are integrated with the client’s learning management system or with Results Unlimited’s learning management system. Part of implementation is publicizing the availability of the training to the target audience, helping ensure utilization of training, another key factor in successful implementation.

Evaluation

For the evaluation phase, Results Unlimited begins by performing data analytics to create benchmarking levels. This data will be used later to perform ROI analysis. In phase 2 we incorporate Kirkpatrick’s four levels of evaluation. These levels measure the students’ reaction, learning, behavior and results that occur upon completion of the training. We then perform final data analytics to evaluate program successes and additional learning opportunities.

The learner truly benefits from the systematic design of instruction. Through careful analysis and design, all performances required by the learner are identified and content is focused on the skills to be learned and presented under the best conditions for learning. The learner is evaluated with assessments that measure the performances described in the objectives. Following this process ensures that the primary focus is on the individual learner and results in the creation the best possible instruction.

Bloom's Taxonomy

Bloom's taxonomy has been instrumental in helping us to develop guidelines for the creation of appropriate objectives and their supporting instructional strategies. Not all objectives are the same. Different objectives focus on different performances and outcomes. Different types of objectives require different types of strategies. Instructional design is made easier by assigning learning objectives to different categories. Each category leads to a different class of human performance and also requires a different set of instructional conditions for effective learning. By correctly identifying the learning level of an objective, strategies can then be developed to ensure that the content is presented clearly and appropriately for E-learning, and that the instruction will be effective.

Results Unlimited as identified the following learning levels as those most often covered in E-learning content:

Knowledge

Demonstrating knowledge typically involves the recall of a wide range of material, from specific facts to complete theories. Objectives at the knowledge level represent the lowest level of learning outcomes in the cognitive domain. Examples of objectives at this level are: recognize or identify common terms, specific facts, methods and procedures, basic concepts and principles.

Comprehension

Comprehension is defined as the ability to grasp the meaning of material. This might be shown by translating material from one form to another, by explaining or summarizing material and by predicting consequences of effects. These learning outcomes go one step beyond simply remembering material. Examples of objectives at this level are: understand facts and principles, interpret verbal material, charts and graphs, translate verbal material to mathematical formulae, estimate the future consequences implied in data and justify methods and procedures.

Application

Application refers to the ability to use learned material in new and concrete situations. This may include the application of such things as rules, methods, concepts, principles, laws and theories. Examples of objectives at this level are: apply concepts and principles to new situations, apply laws and theories to practical situations, solve mathematical problems, construct graphs and charts and demonstrate the correct usage of a method or procedure.

Conclusion

In developing large-scale, custom E-learning solutions, Results Unlimited has implemented a content development process based on proven instructional design strategies, to ensure the success of the instructional content. By supporting Blooms taxonomy, adult learning characteristics and motivation in our instructional strategies, we have developed a highly effective process for custom courseware development.

A primary goal in our content development process is to ensure that content developers create consistent, cohesive courses in terms of look and feel, as well as instructional quality. Our content development guidelines also help support flexible course design, allowing for modification based on client needs and requirements while continuing to ensure instructionally sound content. By adhering to these standards for consistency and flexibility in our instructional content, Results Unlimited is able to effectively address the changing needs of our clients for E-learning on the whole.

Through the development of strategies and guidelines based on proven instructional design principles, along with an ongoing commitment to stay abreast of the continuously evolving E-learning environment, course developers can successfully create and implement effective and engaging E-learning solutions.

Results Unlimited, LLC is an internationally recognized leader in the design, development and delivery of training. We specialize in: Sales Training, Customer Care Training and Sales Management Development. Committed to driving results, differentiation and a return on your training investment we partner with you to: Enhance your profits, gain market share and create sustainable competitive advantage.

Within the training and development industry are a spectrum of choices and approaches. Many companies offer the “standard” solution approach. It’s the “one-size-fits- all” mentality. Unwilling to invest in understanding your culture and unable to customize their curriculum, they mass market a generic application.

Unlike most custom training organizations, we don’t take months and millions to design your application. We are the leader in customizable, turnkey training, or CTT. Results Unlimited, LLC provides proven turnkey processes; curriculum and delivery customized to your specific needs, industry and culture. We do this in a cost effective, timely manner.

Results Unlimited
61 Spotted Dear Lane Suite 200
Franktown, CO 80116
888.288.1113
www.rulearning.com

