# Our Elearning Methodology, Instructional Design & Theories

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As you know, In today's economy, even with high-value returns on investment, the high cost of developing people always exceeds organizational budget - Both in the area of soft skill training and hard skills which are easily observed, measured and quantified such as financial procedures, computer skills, project management, etc. To counter this high cost of training, Most Companies uses a new generation tool in the training sector, which is referred as Computer-based training or e-learning. It offers a cost-effective platform which helps to reduce the training costs of companies by as much as 90%. With traditional training, the more people being trained, and the more geographically dispersed they are, needless to say the greater the training costs. Often, the money isn't even spent on the actual training; it goes toward airfare, lodging, meals and refreshments, and conference room rental. With e-Learning, the cost stays the same whether you're training 100 people or 1,000 people, and 100% of your training money goes toward training. Some of the other advantages of e learning are:

- ✓ Learning can happen at any time and at any place
- ✓ Large number can be trained with miniscule investment
- ✓ Learning can be according to the learning pace of the individual
- ✓ Learning can happen according to the learning style of the learner
- ✓ Training can be standardized

But the major hurdle for teaching through computer based training system is to make the content interesting & intriguing for the learners. Instructional designer plays the major role in creating these courses. The prime role of designer is not just to write for courses but to actually visualize the scenario. They think of different ways to make a subject interesting to the learner. Instruction design focuses on what the instruction should be like, including look, feel, organization and functionality.

Enhance follows instructional design theories to develop eLearning courses which are highly effective. We develop learner-centric courses and pay especial emphasis on analyzing the learner and his needs besides establishing the business need for the course.

**For designing and developing a course, we use the following:**

- ➢ **ID Model**
- ➢ **Processes**

## <mark>ID Model:  Our Instructional Design Model</mark>

**Step 1:** Identify challenges of the organization, learning culture, buy in of top management and risks.

**Step 2:** Audience and Stake Holders Needs

Also check the preferred medium of instruction from the following

- ✓ Linguistic, Musical, Logical, Kinetics, Spatial, Interpersonal, Intrapersonal
- ✓ Find out trends in Learning Style

**Step 3:** Motivation to be designed from Internal needs, External needs, Context of learning and linking to Maslows principle. The best motivator is challenge.

- ✓ Anxiety is also to be considered both personal and external
- ✓ Attention keeping strategy to be thought through
- ✓ Attitude change, if needed to be designed

**Step 4:** Task Analysis is done

**Step 5:** Rights and Wrongs in the tasks to be reflected on and learning brought into cognition through

- ✓ Thinking options
- ✓ Searching for info
- ✓ Selecting option
- ✓ Models, if needed to be developed

**Step 6:** Concepts to be developed or taught. Some best practices are

- ✓ Higher Rules to be made clear
- ✓ Higher aptitude, lower structure
- ✓ Easy to Difficult
- ✓ Chunks (7 +- 2)
- ✓ Image and text together help learning better
- ✓ Facts to be taught through Mnemonic's

- ✓ Practice through examples & cases
- ✓ One thought at a time
- ✓ Humor related to topic only
- ✓ Time Planner in course

**Step 7:** Evaluate with positive reinforcement

**Step 8:** Concrete Experience to be given

Some elements of a fruitful experience are

- ✓ Challenges
- ✓ Curiosity
- ✓ Competition
- ✓ Rewards
- ✓ Realistic Environment

**Step 9:** REWARD and FEEDBACK to be given for business and individual performance

**Step 10:** Active Experimentation with Social Learning on projects

**Step 11:** Adoption

Some best practices are

- ✓ Early adopters start using
- ✓ First few users take as role models
- ✓ Spread message
- ✓ Experience sharing among users
- ✓ Coaching users
- ✓ Link usage to performance rating
- ✓ Top management support

## Step 1: Business Development:

**TIME:**

**Carried out at the pre-proposal stage to evaluate the critical parameters of the project**

**ACTIVITY:**
- ✓ Gap Analysis / Organizational Analysis
- ✓ Business Managers Need
- ✓ Task Analysis
- ✓ Performance Objectives and Goals
- ✓ Skills, Knowledge, Attitude
- ✓ Casual Factors
- ✓ Causes
- ✓ Solutions
- ✓ Desired and Current levels
- ✓ How to improve
- ✓ Training Goals
- ✓ Audience Analysis
- ✓ Focus Group / Sample User
- ✓ Learners' Profile

**OUTCOME:**
- ✓ Organization Need
- ✓ Learner's Personal Needs

**TEAM MEMBERS:**
- ✓ Business Development
- ✓ Customer

    **TIME:**

    **Carried out at the kick-off stage of the project**


    **ACTIVITY:**

- ✓ Mission
- ✓ Performance Needs
- ✓ Audience and Expectations
- ✓ Personal Needs / Motivational Factors
- ✓ Context Analysis
- ✓ Task Analysis
- ✓ Environment/Organization Learning Culture
- ✓ Collaboration
- ✓ Copyright, IPR
- ✓ Security Issues
- ✓ Content Analysis
- ✓ Reusability Analysis
- ✓ In-use Methodologies and Products
- ✓ Resources with Manpower Profiles
- ✓ Delivery Platform
- ✓ Authoring Environment with Justification and Licenses
- ✓ Time Limit of Program
- ✓ Planning Project Milestones
- ✓ Planning -Qualitative and Quantitative
- ✓ Evaluation Model
- ✓ Adoption Strategy / Major Account Plan / Management Support Plan
- ✓ Administration Needs
- ✓ Up gradation of knowledge contents and experiences
- ✓ Cost Benefit Analysis

**OUTCOME:**

- ✓ Needs Assessment Reports
- ✓ Learner's Profile
- ✓ Content Outline
- ✓ Learning Hierarchy
- ✓ Instructional Objectives
- ✓ Authoring System Specs
- ✓ PERT Chart
- ✓ Project Timetable
- ✓ Evaluation Plan
- ✓ Adoption Plan
- ✓ Upgrade Plan
- ✓ Metaphor Plan

**TEAM MEMBERS:**

- ✓ Project Manager
- ✓ Subject Matter Expert
- ✓ Instructional Designer
- ✓ Project Evaluator
- ✓ Programmer
- ✓ Business Development

## Step 3: PROPOSAL

**OUTCOME:**

- ✓ Approval from Customer

## Step 4: PROTOTYPE:

**ACTIVITY:**

- ✓ Prototype Design
- ✓ Development
- ✓ Test

**OUTCOME:**

- ✓ Prototype

**TEAM MEMBERS:**

- ✓ Project Manager
- ✓ Project Evaluator
- ✓ Programmer
- ✓ Graphic Artist
- ✓ Video Producer

## Step 5: DESIGN:

**ACTIVITY:**

- ✓ Interface Specs, Icons, Templates
- ✓ Story Board
- ✓ Content Scripts

**OUTCOME:**

- ✓ Interface Templates
- ✓ Storyboard
- ✓ Scripts

**TEAM MEMBERS:**

- ✓ Project Manager
- ✓ Subject Matter Expert
- ✓ Instructional Designer
- ✓ Project Evaluator
- ✓ Programmer
- ✓ Graphic Artist
- ✓ Video Producer

## Step 6: DEVELOPMENT:

### ACTIVITY:
- ✓ Authoring Interactions
- ✓ Creating Graphics/ Video/ Animation/ Audio
- ✓ Preparing Adjunct Materials
- ✓ Integrating Media and Code
- ✓ Creating Setups

### OUTCOME:
- ✓ Interactive Code
- ✓ Graphics/ Video/ Animation/ Audio
- ✓ Adjunct Materials
- ✓ Program Documentation

### TEAM MEMBERS:
- ✓ Project Manager
- ✓ Project Evaluator
- ✓ Programmer
- ✓ Media Artists
- ✓ Video Producer

## Step 7: TESTING:

### ACTIVITY:
- ✓ Objective Check
  - ❖ Content Expert
  - ❖ Business Manager
- ✓ Student Opinion
  - ❖ Rating of Course
  - ❖ Preparedness for job
  - ❖ Chewable chunks
  - ❖ Ease of use
  - ❖ Compare with other MM courses

- ❖ Personal need
- ❖ Recommendation
- ❖ Change in the course
- ✓ Usability Test
  - ❖ Content
  - ❖ StoryBoard
  - ❖ Colors
  - ❖ Unexpected Feedback
  - ❖ Exit / Entry is OK
  - ❖ Style Check
  - ❖ Test questions linked to objectives
  - ❖ Video & Audio OK
- ✓ Program Test
  - ❖ Fault No.
  - ❖ Fixed By
  - ❖ Hardware OK
- ✓ Backup Copy

**OUTCOME:**
- ✓ Alpha
- ✓ Beta

**TEAM MEMBERS:**
- ✓ Project Manager
- ✓ Project Evaluator
- ✓ Programmer
- ✓ Graphic Artist
- ✓ Video Producer

## Step 8: IMPLEMENTATION:

### ACTIVITY:
- ✓ Deployment
- ✓ Replication
- ✓ Documentation
- ✓ Version Control
- ✓ Post Sales Support

### OUTCOME:
- ✓ Ready to use application
- ✓ User Documentation

### TEAM MEMBERS:
- ✓ Project Manager
- ✓ Programmer
- ✓ Project Evaluator

## Step 9: FINAL PRODUCT

## Step 10: ADOPTION

### ACTIVITY:
- ✓ Map Perceptions of Learning, on-line Learning
- ✓ Important Meetings spread message
- ✓ Do company relevant projects
- ✓ Spread Message for Early Adopters
- ✓ Make Role Models of Early Adopters
- ✓ Give Context related messages and learning
- ✓ Hold Contests

**OUTCOME:**

- ✓ Usage Trends

**TEAM MEMBERS:**

- ✓ Project coordinator
- ✓ Project Manager

## » Process followed for developing eLearning courses

| Process Flow |
|---|
| **Business Development** |
| ↓ |
| **Needs Analysis** |
| ↓ |
| **Proposal** |
| ↓ |
| **Prototype** |
| ↓ |
| **Design** |
| ↓ |
| **Development** |
| ↓ |
| **Testing** |
| ↓ |
| **Implementation** |

**Customer Ratification**

**Final product**

"Click each stage in the process to know more about it".

**Diagram**

**INSTRUCTIONAL THEORIES USED**

| FLOW OF PROGRAM | THEORIES OF LEARNING |
| --- | --- |
| Attention Grabber | Social Learning Theory (Bandura) |
| Objectives | Adult Learning (P. Cross) |
| Roadmap | Adult Learning (P. Cross) |
| Contexts of Learning | Andragogy (M. Knowles) |
| | Double Loop Learning (C. Argyris) |
| | Experiential Learning (C. Rogers) |
| Gap Quiz | Double Loop Learning (C. Argyris) |
| | Gestalt Theory (Wertheimer) |
| Learning Style (Optional) | Learning Style (Kolb) |
| Prerequisites | Adult Learning (P. Cross) |
| Content | Adult Learning (P. Cross) |
| Quizzes / Creativity | Lateral Thinking (DeBono) |
| Cases | Andragogy (M. Knowles) |
| | Lateral Thinking (DeBono) |
| Counseling | |
| On the job guides | Andragogy (M. Knowles) |
| | Social Learning Theory (Bandura) |
| Practical Games and Projects | Action Learning ( Revans, 1980) |
| | Andragogy (M. Knowles) |
| Mentoring | |
| Collaboration | Action Learning ( Revans, 1980) |

❖ **THEORIES USED**

❖ **ATTENTION GRABBER:**

This would grab the attention of the user. Individuals are more likely to adopt a modeled behavior if the model is similar to the observer and has admired status and the behavior has functional value. Hence a role model would invite the user to the program. (Social Learning Theory (Bandura)) The symbols and music would be linked closely to the user's motivation levels.

❖ **OBJECTIVES**

As an adult one would like to know what's in it for me. It pertains to the self-directed, problem-centered nature of most adult learning. (Adult Learning (P. Cross)).

❖ **ROADMAP**

1. Adult learning programs should capitalize on the experience of participants.
2. Adult learning programs should adapt to the aging limitations of the participants.
3. Adults should be challenged to move to increasingly advanced stages of personal development.
4. Adults should have as much choice as possible in the availability and organization of learning programs.
5. It pertains to the self-directed, problem-centered nature of most adult learning. (Adult Learning (P. Cross))

In keeping with this the program would be on the basis of level of the adults learning. The users through the road-map can choose the way he would like to access the program. The menu allows the user to access information on the basis of his context and need.

❖ **CONTEXTS OF LEARNING**

Adults are most interested in learning subjects that have immediate relevance to their job or personal life. (Andragogy (M. Knowles))

A starting problem is the beginning of training. As they use the theory in use and complement it with theory in action they learn (Double Loop Learning (C. Argyris))

Significant learning takes place when the subject matter is relevant to the personal interests of the student (Experiential Learning (C. Rogers)) Hence as we know the audience would need knowledge for the on the job induction the context for the job would be maintained. It should be relevant to

the job, be a starting point to learning with more secondary reading and be to the personal interest of the student.

### ❖ GAP QUIZ

According to this theory, individuals must learn to discriminate the difference between their perceptions or intentions and reality (espoused theory versus theory-in-use). Reducing the GAP by documentation and practice is the use. Adults being problem centric. This would be used basically in the behavioral courses. There would be a quiz to establish the theory in mind and give it as documentation to the theory in use.

### ❖ LEARNING STYLE ( Optional)

The experiential theory of Kolb (1984) suggests that the learning cycle consist of four primary stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation. There would be quiz to recognize this style and hence guide the individual through the course.

### ❖ PREREQUISITES

Adult learning programs should capitalize on the experience of participants. (Adult Learning (P. Cross)). The prerequisites would take one through the necessary fundamentals or be asked to take some courses.

### ❖ CONTENT

Adults should be challenged to move to increasingly advanced stages of personal development. (Adult Learning (P. Cross)) The content would be from basic to advance. There would be reflective sessions in between. The content would be on the basis of animation, photographs and video for technical courses and role play videos for behavioral courses. The chunking and media would be as per the required instructional theories. The technical courses would encourage modeling and the behavioral would get out behavioral changes.

### ❖ QUIZZES / CREATIVITY

After small chunks of information there would be quizzes with feedback and counseling.  The quizzes would encourage creativity. De Bono identifies four critical factors associated with lateral

thinking: (1) recognize dominant ideas that polarize perception of a problem, (2) searching for differ ways of looking at things, (3) relaxation of rigid control of thinking, and (4) use of chance to encourage other ideas.

### ❖ CASES and PROCESSES

Adults need to learn experientially (Andragogy (M. Knowles)) Real life cases with De Bono's creative quizzes would encourage real life experiences. It would be accompanied with metaphor based counseling.

### ❖ ON THE JOB GUIDES ( Optional)

The highest level of observational learning is achieved by first organizing and rehearsing the modeled behavior symbolically and then enacting it overtly. Coding modeled behavior into words, labels or images results in better retention than simply observing. (Social Learning Theory (Bandura)). Thus on-the-job guides would be made which would help the retention and practical experience.

### ❖ PRACTICAL GAMES AND PROJECTS (Optional)

The key elements of action learning are commitment to learning, social interaction, action plans, and assessing the results of actions. (Action Learning (Revans, 1980)). Thus a program of projects in which the action is drawn out is used. These would be relevant to their jobs. Mentoring by SMEs would follow it.

### ❖ COLLABORATION (Optional)

Chat, audio conferences, video conferences could be organized to enable mentoring and collaboration.

### ❖ OTHER FEATURES

Some other feature which would be included are hypertext, print, audio control, undo, help, manuals, reference notes, e-mail, FAQ, web sites, annotations (making notes), bookmarks, search, bulletin boards, calculator, navigation such as previous, next, exit, roadmap etc.