



# INSTRUCTIONAL DESIGN PRIMER

AN E-LEARNING  
GUIDE FOR  
INSTRUCTIONAL  
DESIGNERS

zipBoard

# Instructional Design Primer

An E-Learning Guide for Instructional Designers



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# Part 1

## Understanding Instructional Design

For a layman, a simple characterization about instructional design would be:

*It is a process for designing, developing, and implementing learning material and courses.*

But that would be an oversimplification of the process of instructional design and the work that goes into designing and developing learning experiences.

If learning was indeed that simple then we all could possibly be self learners, or autodidacts, from reading Wikipedia articles.

The science and art that goes into building conducive learning environments and experiences so that information is not only distributed appropriately but also retained in memory has more methods to it.

This article explores the underlying theories of instructional design, how these were formed, and touches in part upon 'what is the role of an instructional designer'.

## The elements of instructional design

Certain concepts and steps that are essential to instructional design are:

1. Understanding the present situation of the learner
2. Understanding the needs of the learner
3. Defining a goal for learning exercise, i.e. set of learning objectives
4. Designing and developing learning activities that will help learners achieve the objectives

Almost all learning theories today incorporate these elements into their process for developing instructional design, whether that is the ADDIE model, Successive Approximation Model (SAM), ASSURE model or rapid prototyping.

## Underlying theories for instructional design

Since instructional design ultimately aims to modify learner behavior in some way, there are certain theories that guide how this can be achieved.

## Behaviorism

This theory operates on the principle that external stimuli trigger certain behavior and that becomes automatic if repeated sufficient times. It is one of the most important principles kept in mind when designing instruction.

This is the reason that many vocational courses will have repetitive actions as part of their curriculum so that behavioral patterns can be refined with each repetition.

B.F. Skinner's book, *Science and Human Behavior*, advocated application of this theory via use of positive and negative reinforcement to modify behavior for educational and training purposes. One application of behaviorism is classical conditioning, made popular by the work of [Ivan Pavlov](#).

Pavlov worked with dogs, experimenting with light and food—the aim being that after sufficient repetitions, dogs would salivate simply by seeing the light. Essentially, the dogs were trained to see the light as stimuli rather than food. However, there was also the downside that as repetitions increased and food remained absent, salivation also started decreasing.

## Cognitivism

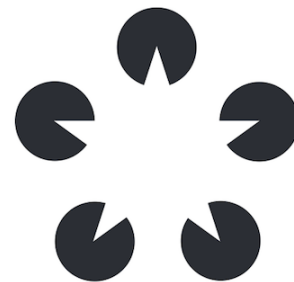
Cognitivism focuses on the inner workings of the brain to modify behavior. By examining cognitive aspects like memory, thinking, how we learn and imbibe knowledge, and how we approach problem-solving, instruction can be created that changes behavior appropriately.

This model is more individualistic in nature, and does not generalize like behaviorism. It looks at knowledge as a schema, that is organized within the brain.

This organization owes to relationships inside the brain, based on various cognitive aspects. For example, our brain is able to pick up on relationships and hierarchies in typography based on proximity and spatial arrangements of elements, which is [Gestalt's theory](#).

P r o x i m i t y

Proximity



Picture credit: HowDesign

This is because the knowledge to perceive shapes and spaces in a certain way has been stored in our brain as a schema.

Our brain's information processing is based on a number of cognitive functions such as sensory memory, working memory, and long-term memory. Schemas come under long-term memory. Continuously repeating a task commits the knowledge to our working memory. It is important to remember that information is constantly being processed in our brain across all these memory functions.

## Constructivism

The belief in constructionist theory is that knowledge is constructed or built upon past experiences and ideas. This takes into account the personal motivations and learning that an individual has had, acknowledging their uniqueness.

This means that every person has a different process for constructing schemas in their brain and a different interpretation about it.

The role of an instructor in such a case is more of a facilitator, rather than a direct supplier of knowledge. This places the [learner at the center](#) of the learning model. The idea that knowledge is not directly absorbed differs the objective notion of simply transferring learning.

In such an environment, how the trainer facilitates knowledge becomes very important, as does the nature of knowledge being imparted. There need to be open-ended questions and the opportunity for learners to reflect on concepts imbibed. Typically, smaller group activities are favored in such an approach.

What learning theory should your instructional design approach adopt?

So which of these learning theories should influence your approach to instructional design.

The answer is, it depends.

Dale H. Schunk, in his book [Learning Theories](#), talked about some of the questions that instructional designers and decision makers need to look at when making such a decision:

1. How does learning occur?
2. What are the factors that influence learning?
3. What role does memory play in the learning activities?
4. How is knowledge transferred during learning activities?
5. What types of learning are best explained by the theory?

Michael Hanley, discusses this very subject in [one of his articles](#) on aligning learning theory with instructional design, where he has reference table for what theory can work in which scenario:

| Learning Theory       | Instructional Design Approach                                                                                                                                                                                           |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Foundational Learning | A behaviorist/cognitivist approach works best.<br>Instruction is predetermined, sequential and criterion-referenced.                                                                                                    |
| Advanced Learning     | A cognitivist/constructivist approach works best.<br>Tasks require an increased level of processing (schematic organization, analogical reasoning etc).                                                                 |
| Expertise Development | A constructivist approach works best.<br>Tasks associated with subject matter expertise demand high levels of analysis and problem-solving (i.e. situated learning, cognitive apprenticeships, and social negotiation). |

Picture credit: E-Learning Curve Blog

## Developing a system for instructional design

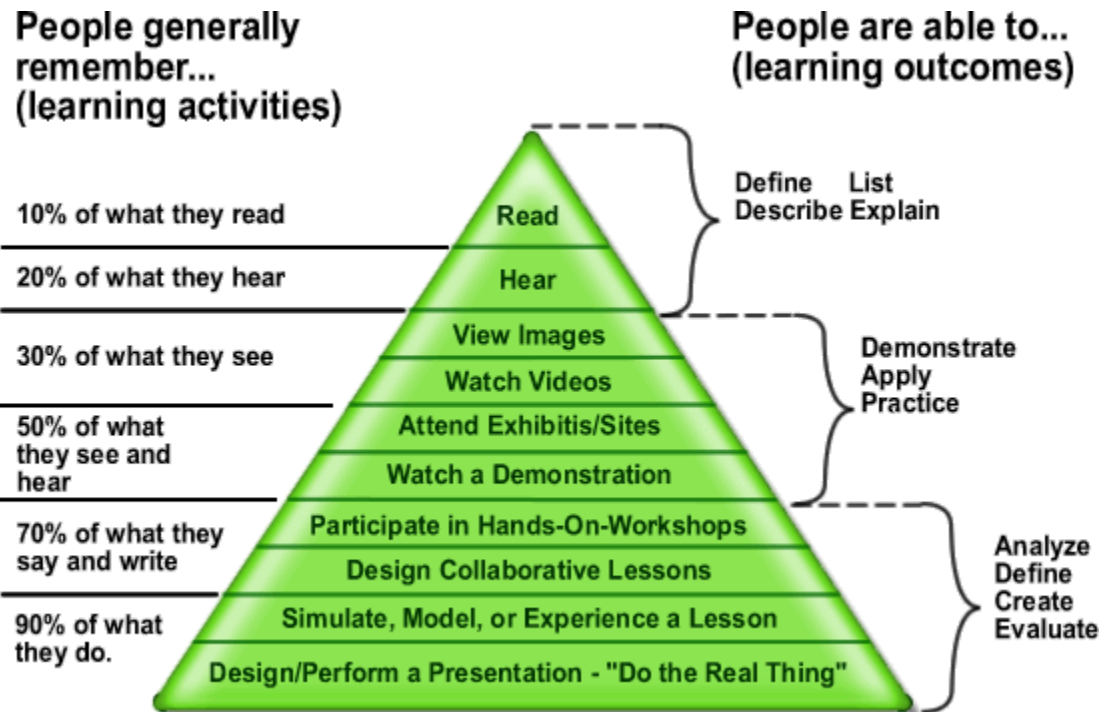
If we look at the seeds for instructional design, a structure starts to emerge in the research for military application of instruction during the Second World War. In an effort to develop training material for the large number of troops, considerable research and study into the principles of instruction and learning was carried out.

The research focus in these studies was on leveraging human behavior by influencing their experiences via technology and learning material.

This still holds true as the main aim for online learning or e-learning today.

### The cone of experience

Edgar Dale's cone of experience, which looks at the concreteness of instructional methods was one of the early results of study into this area.

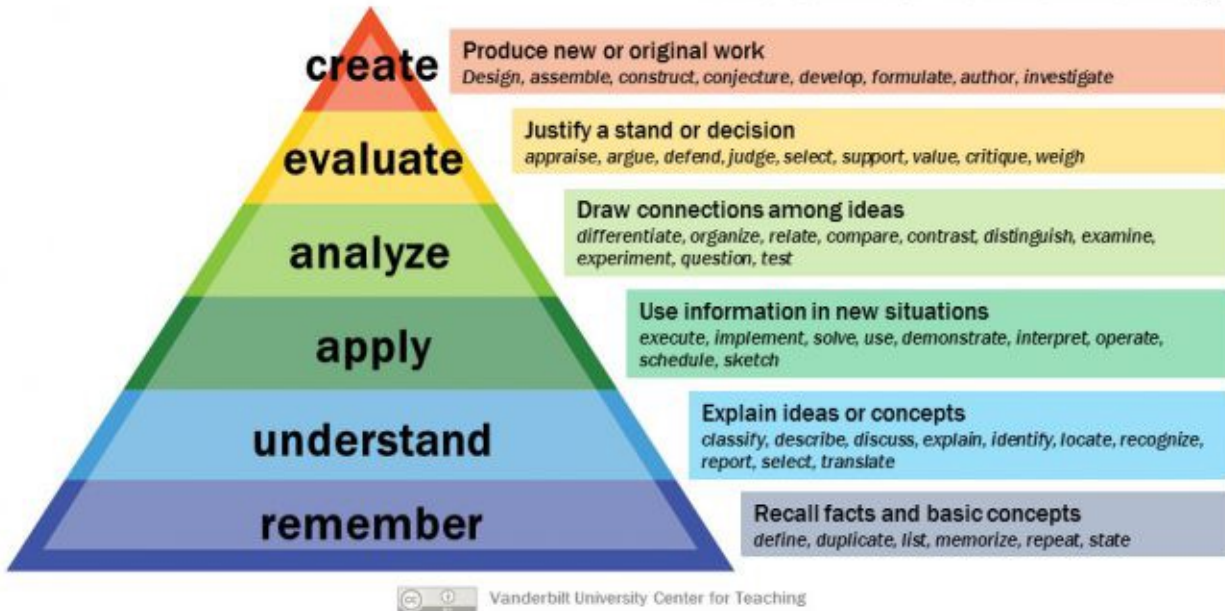


The levels of the cone are based on the how many senses are involved in learning. So as the number of senses involved go up, the retention of learning and knowledge also increases.

This framework also gives a glimpse into the influence that learning activities have on learning outcomes.

## Bloom's Taxonomy

# Bloom's Taxonomy



Picture credit: Vanderbilt University Center for Teaching

Benjamin Bloom and his team comprising of Max Englehart, Edward Furst, Walter Hill, and David Krathwohl published a framework for categorizing learning goals, which came to be known as Bloom's Taxonomy.

This laid down a framework which emphasized not just remembering learning, but inculcating the abilities to analyze and evaluate concepts picked up in learning. Bloom and his team identified three domains that influenced learning:

- Cognitive—how learners think
- Psychomotor—what learners do
- Affective—what learners feel

Over time this framework has been revised by the original authors and other researchers, so that the following activities have been identified as comprising each domain:

### Cognitive

1. Remembering
2. Comprehending

3. Applying
4. Analyzing
5. Synthesizing
6. Evaluating

## Psychomotor

1. Perception
2. Set
3. Guided response
4. Mechanism
5. Complex overt response
6. Adaptation
7. Origination

## Affective

1. Receiving
2. Responding
3. Valuing
4. Organizing
5. Characterizing

## Significance of Bloom's Taxonomy

Bloom's Taxonomy continues to be a mainstay in the study and design of instruction even after all this time, mainly because it establishes some important relationships and concepts in the development of learning materials.

- Goals for instruction need to be established early on so that both instructors and learners are aware of the purpose of learning and training.
- A concrete framework for developing and designing instruction helps the process.

- Having a framework helps instructional designers plan and choose the right method for delivering instruction.
- It helps create a sound system for evaluating and assessing the outcome of learning activities and learner performance.
- Provides a platform to gauge whether learning activities have brought learners closer to the objectives set out to achieve. Provides a platform to gauge whether learning activities have brought learners closer to the objectives set out to achieve.

## Gagne's Nine Steps of Instruction

Robert Gagne's work in developing instructional design laid the basis for many instructional design processes and models that are used today. Gagne's principles of instructional design or nine steps of instruction is considered to be a checklist of things to cover when designing and developing learning material.

The nine steps of instruction are:

### 1. Gain attention

- Using a stimulus to gain the attention of learners so that they are engaged and committed to learning. An introduction which engages the learners right from the start is one way to achieve this.
- Explaining to the learners how relevant the online training or course is can another good way to gain their attention. Things that will matter to them include how efficiency is improved or time saved, especially in the case of corporate e-learning solutions. For e-learning training for students in the K-12 context, using custom learning design to frame thought-provoking issues can help.

### 2. Establish a learning objective

- Establishing a learning objective gives the learners a concrete goal to work towards. It will give them an idea of what they are trying to accomplish and organize their ideas around it, also providing motivation.
- [Research](#) has indicated that achievement can be raised by 34 percentile points if an objective is in place, and even more when learners have a sense of control over their learning outcomes.

### 3. Stimulate recall of prior learning

- Linking new knowledge that the students are about to acquire with previous things they have learned helps. This is also the basis of the constructivism theory mentioned earlier. Knowledge is easier to absorb when it is built on previously known concepts and past experiences.
- Visual mapping of new concepts to prior learning helps build a [mental schema](#) in the learner's mind. Note-taking has shown to be one of the more successful practices in this regard, and hence, is widely encouraged.

#### 4. Present the material

- When learning material is presented to learners, it has to be done in a way so that impact and retention is maximized. Bloom's taxonomy and Dale's cone of experience provide good reference models in this regard.
- Breaking down the material in smaller pieces and in an order that aligns with learning objectives is important. Using media and examples is also a good strategy.

#### 5. Provide learning guidance

- Giving learners an indication of the desired outcomes help them calibrate their approach appropriately. This can be done via examples, case studies, and modelling various learning strategies like concept mapping, visualizing, role playing.
- Modelling the right examples and non-examples helps learners acquire knowledge more effectively. It also gives them encouragement and facilitates thinking along the same lines.

#### 6. Elicit performance

- At this stage, learners get a chance to practice and demonstrate the knowledge they have acquired. Once they internalized the knowledge, it is important for them to be able to elicit it at the right time and in the right way. This also increases their confidence and validates the effort they have put in to learning activities.

- In order to help the learner to elicit performance, learning material should consist of recall strategies, deep-learning questions, help them attach context to content and delve into details of the content.

#### 7. Provide feedback

- Feedback needs to be specific in nature, as well as confirmatory and corrective. This way the learners know what they did right and wrong.
- Feedback is a constant loop and not something that should come right at the end of the e-learning course or training module. So, it is important for courses to have feedback inserted at the right places during instruction.

#### 8. Assess performance

- One of the main functions of instruction is to provide assessment tools so that learners and instructors can gauge how successful learning activities have been in helping learners reach the objectives that had been set at the beginning.
- Assessment modules not only need to test for prerequisites and endpoint knowledge, but have to be inserted at appropriate gaps. There will be some variance in form and timing depending on the needs of the course.

#### 9. Enhance retention and transfer to the job

- At the last stage of instruction, learners need to be able to summarize and internalize all the knowledge they have acquired. Tools to do this are helpful such as providing reference material that can help them go into detail or summary visual maps that puts everything into context.

This has been an overview of what instructional design aims for and how it can be approached. Even with evolving needs for both learners and the decision makers who commission learning material, an understanding of the underlying principles is important to design sound instructional content.

Newer instructional strategies such as [blended learning](#) and [microlearning](#) provide different and interesting challenges for instructional designers as compared to the conventional techniques that were used for Powerpoint presentations or slide based courses.

## Part 2

# The Basics of Instructional Design Processes and Models

Instructional designers and eLearning developers need to pick the right delivery method for their eLearning courses. Whether working on curriculum development for corporate learning solutions or for implementing eLearning in schools and K-12 education, there is a host of instructional design models to pick from.

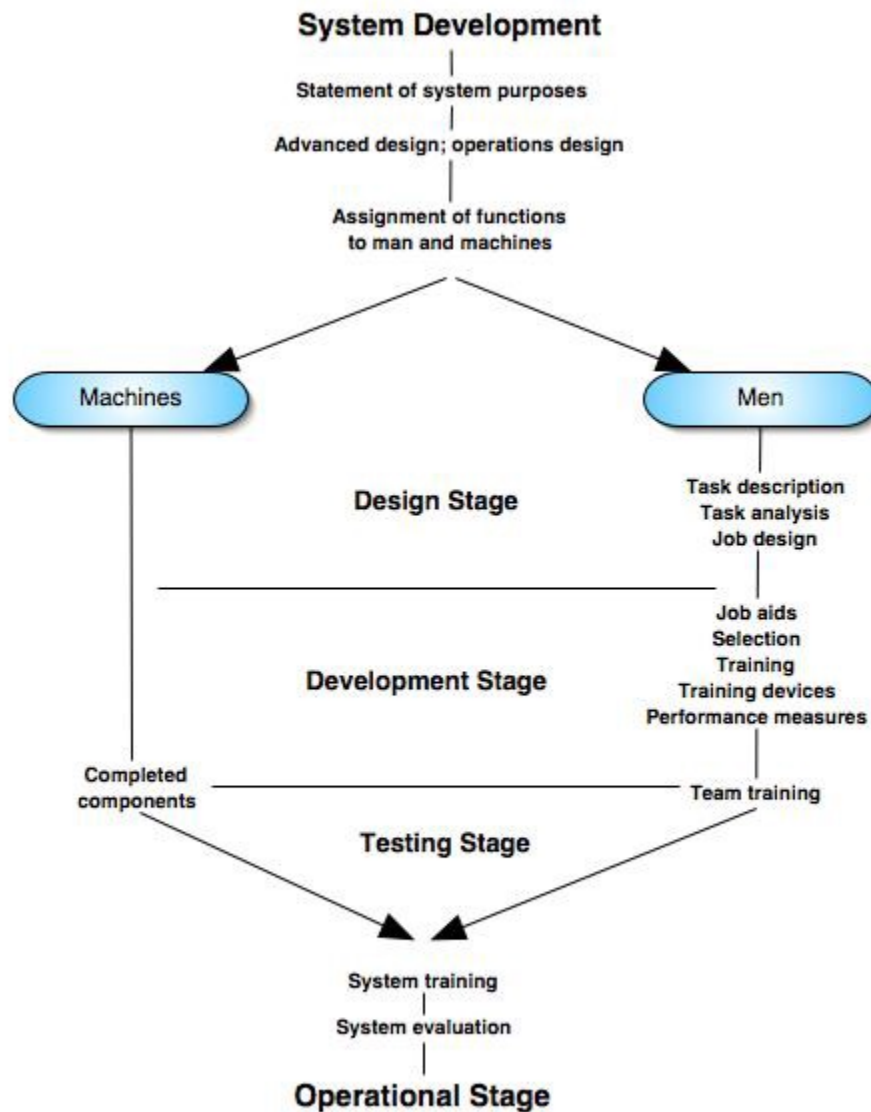
Each learning theory & instructional design strategy has pros and cons, and while this post is not necessarily an instructional design model comparison guide, it does lay out the basic elements of various ID models.

Before we delve into the numerous acronyms and training design jargon, here's a brief look into the beginning of instructional design theory and systems.

### A brief history of instructional design models

The roots for instructional design theory can be found in Robert Gagne's work in system development. After the Second World War, Robert Gagne looked at how instruction could be used to train Army Air pilots.

His work focused on formalizing a process that looked at people's interaction with technology so that both could function as part of a larger system.



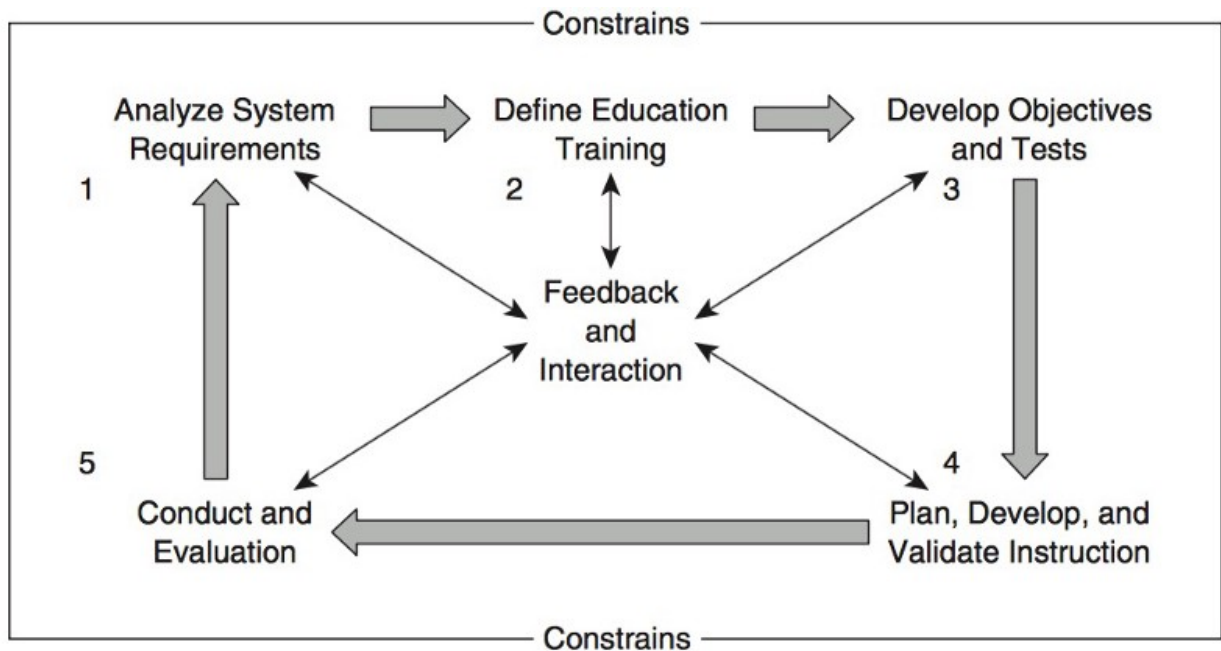
The procedure used in the development of human components of systems.  
Procedures used for equipment development are not shown in detail.

Picture credit: Don Clark

The resulting framework for imparting instruction and training design could be loosely broken up into a project stage for planning, design, development, testing, and finally operational level.

## Developing a training design process for the military

The military started building an instructional design methodology based on Gagne's principles for instructional design and soon, the Air Force developed a Five Step Approach that already had elements which were starting to resemble what would eventually become the ADDIE model for instructional design.



Picture credit: Educational Technology

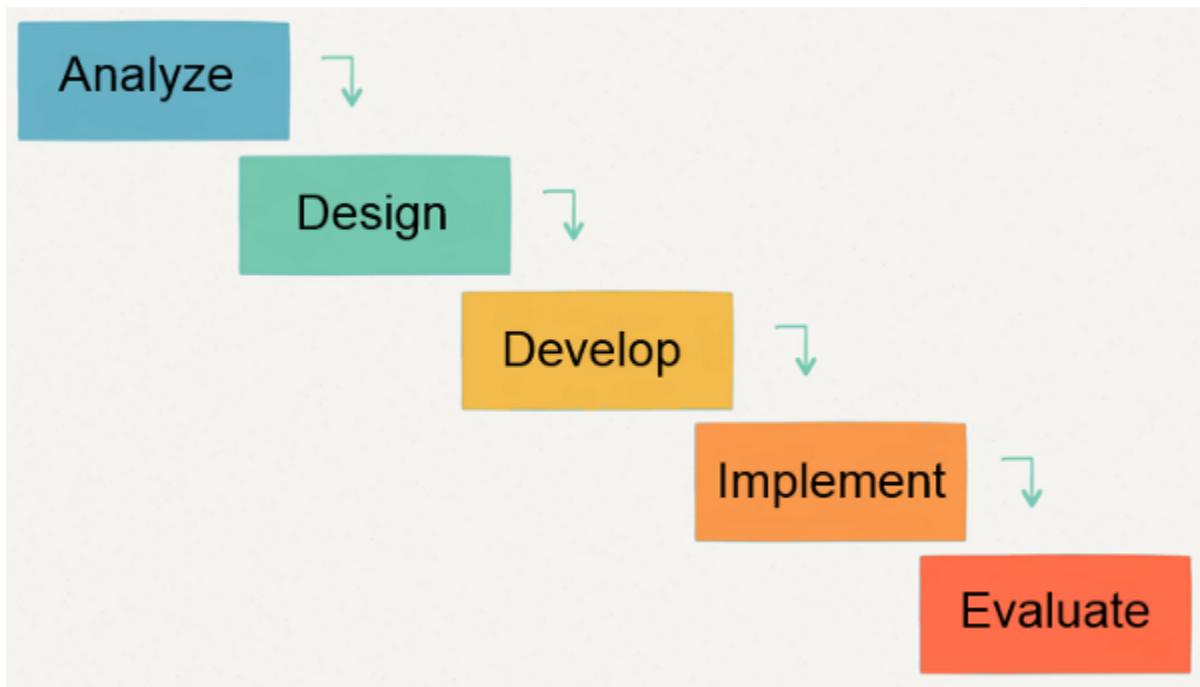
The five step approach of the Air Force can be considered to be one of the first framework that aimed to create a system for designing effective instruction for learners. From the task analysis stage of the five step approach, learning designers can get an overview of the requirements for the training, learner behavior that has to be modified and conditions for the training design module. They then progress to developing learning objectives and goals for the training program design. Once this has been translated into concrete designs for the learning project, instructional designers can validate and get evaluations on the effectiveness on the program.

The ADDIE instructional model came shortly after the Five Step Approach of the military, and soon became a mainstay in instructional design models for early professional training and corporate learning solutions. With the evolution of requirements and processes, new ID models came about that built on these basics or incorporated more agile practices into these.

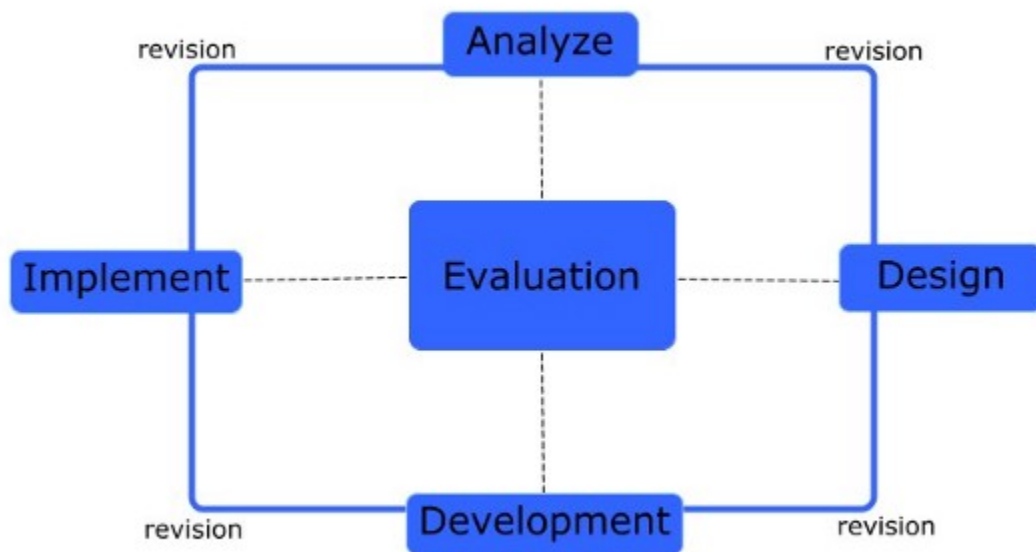
## Types of Instructional Design Models

### ADDIE Model

The ADDIE(Analysis, Design, Development, Implement, Evaluate) model was developed in 1975 at the Florida State University.

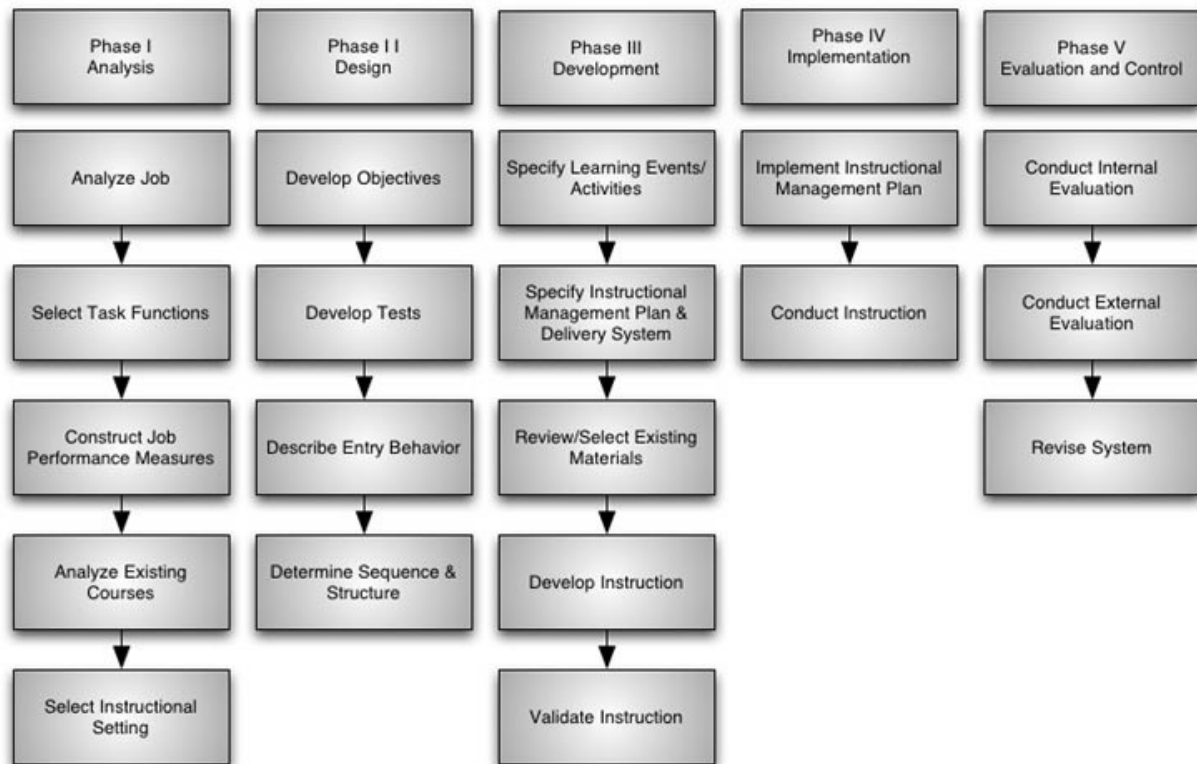


Traditional representation of ADDIE model as a step-by-step process. Picture credit: Saltbox



A more agile and iterative adaptation of the ADDIE model. Picture credit: wikimedia commons

In one of its earlier incarnations, it had about 19 steps that comprised the five project phases of the instructional design process.



Florida State University Five Phases of ISD (1975)

Picture credit: Don Clark

Here's what each phase of the ADDIE model for instructional design conventionally deals with:

### Analysis.

- Who are the learners?
- What is their knowledge level and what knowledge gap will the course fill in?
- What tasks are the learners already doing and what would the learners have to do to bridge the knowledge gap?
- What is the learning environment like and what are the constraints in this environment?
- What is the scope, timeline and cost of the project?

### Design.

- The minimum threshold for the learner to be a part of the training course.

- Learning objectives for each task to be covered in the course.
- Determine the flow and structure of the learning modules.
- Design an evaluation system to assess impact and engagement.
- Map each phase of the learning module to the timeline decided.

## Development.

- Select a delivery method for the learning modules.
- Translate designs into actual learning materials.
- Make sure that learning material covers all goals and objectives of the training design process.
- Create documentation like guides for trainers, list of auxiliary resources needed for learners etc.

## Implementation.

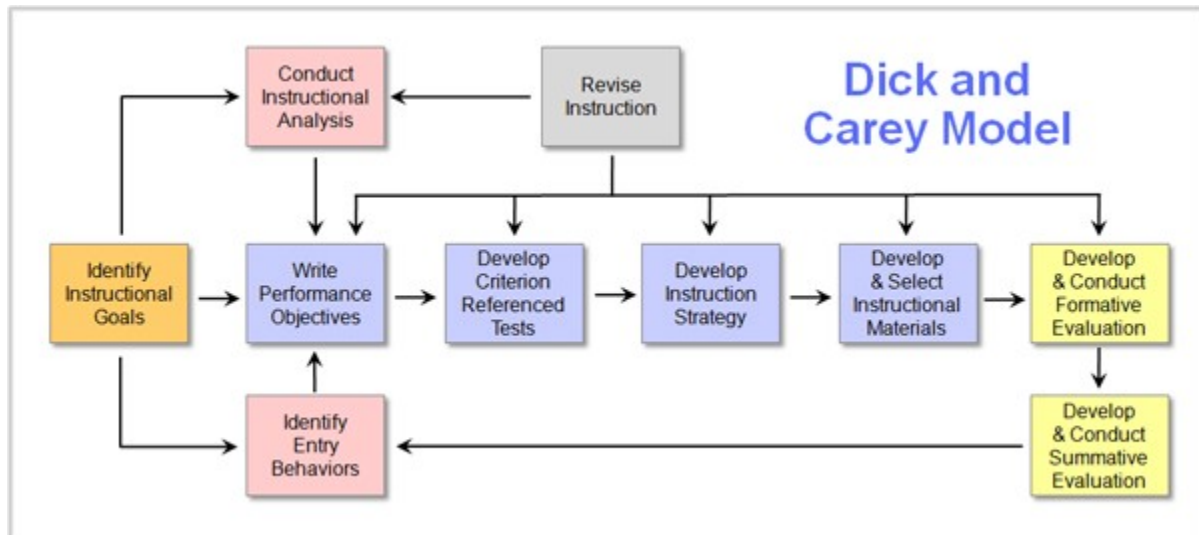
Disburse the learning modules to the learners.

## Evaluation.

- Was the instruction clear to the learners?
- Did it motivate the learners?
- How did it impact the learner and did it bridge the intended knowledge gap?
- What did not work in the course?
- What can be improved?

There is considerable debate in the eLearning industry about the advantages and disadvantages of ADDIE model but it continues to be used in various forms, or in many cases provide a base for the instructional design methodology adopted.

## Dick and Carey Model



Picture credit: Educational Technology

Influenced by Robert Gagne's principles of instructional design, Walter Dick was joined by Lou & James Carey, to develop the Dick and Carey model of instructional design.

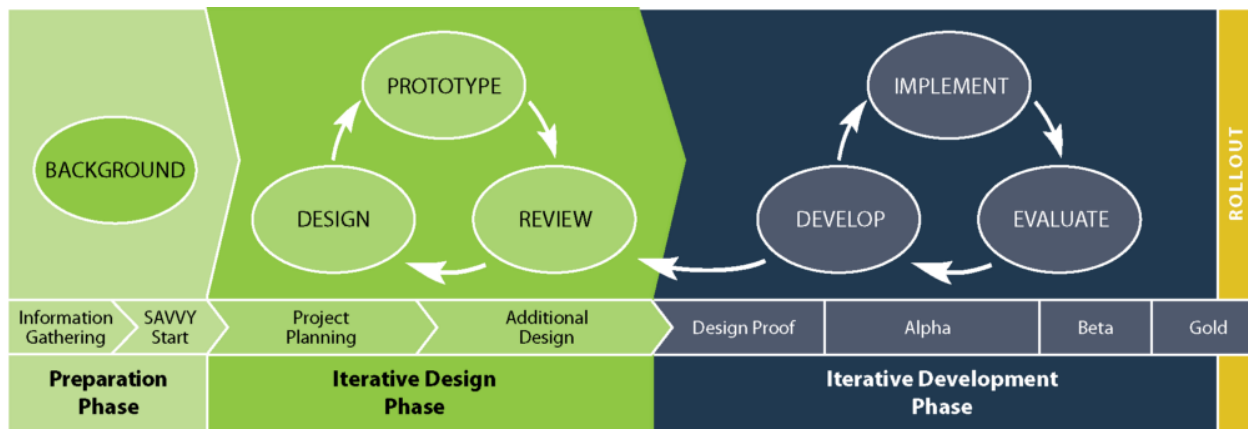
This instructional design methodology recommends 10 steps to follow for designing effective instructional content:

1. **Assessing instructional goals.** Defining in general terms what the learner needs to gain from the e-learning project and course; is the program aimed at helping K-12 students do better at mathematics, or is it filling in gaps in knowledge for a corporate environment?
2. **Doing instructional analysis.** For this, elearning developers need to put together what are the prerequisites for the learners. Do learners need to have specific skills and knowledge to complete the course?
3. **Defining entry behaviors.** At this stage, you need to do some learner research to understand their present context. What are learner expectations, goals or objectives? Is there personalization needed to adapt to special needs of the intended learners? This can help make the course a well-rounded & comprehensive experience for the audience.
4. **Performance objectives.** These are the direct intended results that learners should experience after completing the course. These need to be observable and measurable results. Performance objectives also give a marker about the criteria that will be used for learner evaluation.

5. **Create assessments based on a criteria.** Tests and assessments provide a benchmark for learners and external stakeholders to evaluate progress and completion of performance objectives.
6. **Create an instructional design strategy.** It is time to draw up an outline of the learning material, what tasks each of them will have and what the flow will be like. All the knowledge gaps that have been identified in the learner's context, the instructional strategy needs to address those.
7. **Develop and select instructional materials.** The blueprint goes into implementation here. Create the online learning exercises and tasks that the learners will directly interact with. Select the right tools to transfer learning.
8. **Formative evaluation.** Formative evaluation gives the internal stakeholders a chance to assess what is working, what is not, and why. This can be done in alpha and beta releases, and by using validation techniques like prototyping. Before the course is finally delivered, issues of content, functionality, UI, responsiveness etc. can be ironed out in the training design.
9. **Summative evaluation.** This is external evaluation from stakeholders like learners and clients. It is a major indicator of the project's success. Getting eLearning feedback via questionnaires, surveys and interviews is one option. zipBoard is a review and collaboration tool that can help streamline the entire course development process and ensure that summative evaluation can be integrated with formative evaluation, and as a result the entire process of designing courses.
10. **Revising instruction.** Using the feedback and reviews collected from formative and summative evaluation, courses can be revised in the Dick and Carey model.

## Successive Approximation Model (SAM)

As the need to plan eLearning projects in a more agile way increased, the need for a dynamic instructional design model with faster instructional design iterations that focused on collaboration, became greater.



The Successive Approximation model, developed by Dr. Michael Allen of Allen Interactions, became more popular as it filled this need. The book, '[Leaving ADDIE for SAM](#)' has influenced a great number of teams in giving SAM a try and many now prefer it as one of the better options.

SAM focuses on “repeated small steps, rather than perfectly executed giant steps”. Rather than having a linear model of moving the course development process like in ADDIE, in Successive Approximation Model the idea is to keep learner experiences and engagement at the center of things rather than how the course is presented and content organized. Hence, have a more dynamic instructional design process.

## Preparation phase

When starting off eLearning projects, the first priority is to gather as much information and data as possible. All information gathered is used to create a narrative about what the learners need from the project. This is done extremely rapidly.

This is followed by the 'Savvy Start', which is a kick-off meeting for stakeholders to discuss initial ideas and lay the groundwork for future project direction. The challenges many times is to help clients or project sponsors understand their exact requirements.

Savvy start can be customized according to the need of the clients, or the project, or due to constraints. However, the general model involves brainstorming, creating a narrative, turning these into prototypes, planning and revising. Some of the main things to establish in a savvy start are:

- rules for the kick-off meeting and project goals
- evaluating past learning experiences of the learners
- explaining successive iterations
- creating a strategy to bring about behavioral change in learners.

A good, comprehensive savvy start can be done in two to three days, but can also be reduced depending on time constraints.

## Iterative Design Phase

Rapid prototyping based on the design guidelines and ideas is the norm for SAM. These prototypes can be used to get validation and quicker buy-in from stakeholders, both internal and external. Because all stakeholders have been consulted at the start of the project ('savvy start'), there is quicker turn around during design reviews and feedback can be processed faster.

Things to establish during the planning stage of this phase are:

- what are the expectations?
- what are the constraints?
- what is the cost of the project?
- what delivery platform should be used?

Based on this, plans can be documented well and in detail. The idea in this stage is to rotate through design, prototype, and review.

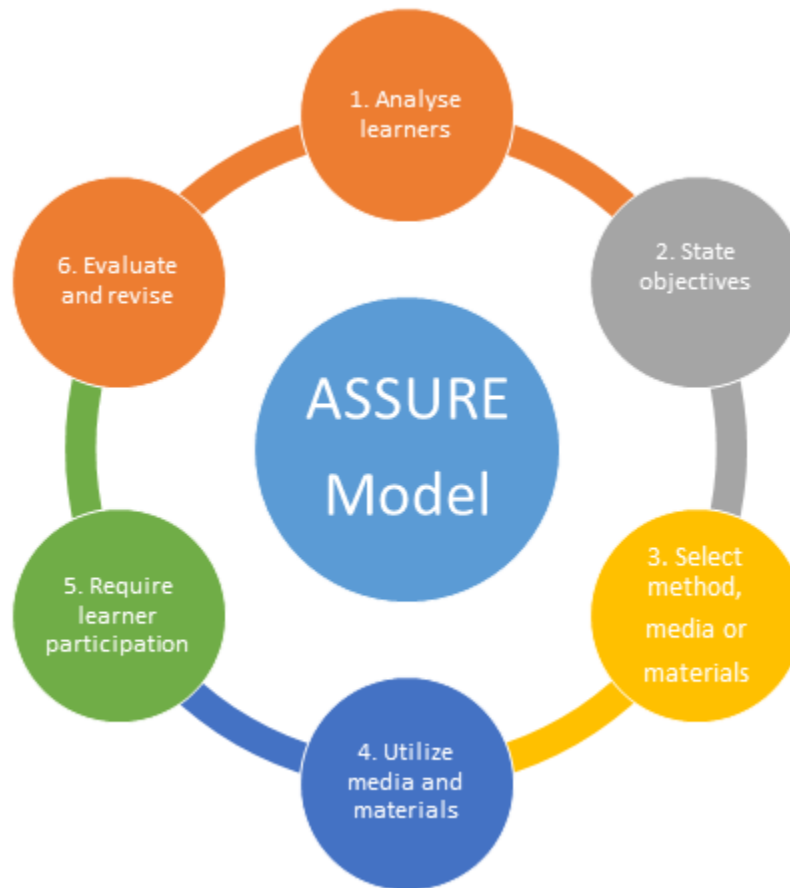
## Iterative Development Phase

Coming into the development phase, there is now a design proof that has been achieved thanks to exhaustively working on ideas and feedback in the previous design stage. This design proof is collaboratively approved and thus, presents a valid blueprint model that the development team can start implementing.

As the blueprints start turning into working materials, internal stakeholders can cycle through development, implementation and evaluation, getting valuable feedback from external stakeholders as well. The course material can be further refined in iterations over the alpha and beta phase, before going for a full-scale release.

## ASSURE Model

The ASSURE model was developed on the basis of Robert Gagne's work, specifically, on the [nine step model of instruction](#).



ASSURE gives instructional designers a model for integrating technology and media into learning and development coursework.

Here are the six stages it lays out:

### Analyze learners

Gather information about the learners. Who they are, demographics, learning style, prior knowledge etc. This information will be useful for making decisions later in the process about eLearning design and implementation.

### State standards and objectives

Instructors need to determine what is the goal of the instruction and what the learner will gain from the course. This also helps during assessment and measuring impact of the course on the learner.

## Select strategy, media and material

Decide on a delivery method for your eLearning project. Determine the degree of technology and media input. For example, if you're creating a blended learning course, you need to decide what will the contribution from online learning and what will the contribution from offline classroom teaching. Once a broad overview is ready, the details and material needed to implement the strategy can be decided.

## Utilize media and material

This is the implementation stage of the instructional design process. Prepare the material that has to be implemented. This is where the media designer or developer comes into create graphics needed, or when additional learning resources to support the coursework is created.

A good practice to execute this project stage is to follow the 5 P's.

- Preview the media and material. Carry out a demo run.
- Prepare the technology and media.
- Prepare the environment. Learning environment can include software or hardware in the classroom.
- Prepare the learner. Brief the students on course plan, context and assessment strategy.
- Provide the learning.

## Require learner participation

Create a strategy for engaging the students. This can be in the form of classroom discussions, QA sessions etc. Since ASSURE is a classroom oriented instructional design model, it places emphasis on offline strategies to complement online learning techniques.

## Evaluate and revise

Evaluating the performance of the learning design process and how successful it is for the stakeholders involved is an important step. Based on the evaluation results, instructional designers and project managers need to make the necessary revisions to the course.

## ARCS Model

The ARCS model was devised by [John Keller](#) as a theory for learning motivation. ARCS stands for—Attention, Relevance, Confidence, Satisfaction.

According to Keller, these are 4 elements of the learning design process that, when implemented, can improve motivation in learners for online training or e-learning. Specifically, these are:

- **Attention**—This can be gained by arousing curiosity and catching the learner’s attention with strategies such as active participation, humor, conflict, examples and inquiry.
- **Relevance**—Learners will not take to the course if it is not relevant to their concerns and needs. Some strategies that can help establish relevance are building on experience of current skills, demonstrating value in the present and future, incorporating a sense of achievement for learners, providing them with choice, and supporting learner growth by having them share their knowledge as experts with other learners.
- **Confidence**—Confidence in the task and their own ability improves the motivation level of learners. This can be done by giving a specific roadmap of learning objectives and achievements, and providing feedback to the learners in a positive tone.
- **Satisfaction**—By showing learners that the knowledge they have gained is beneficial, learner satisfaction can be boosted and can increase the impetus for participating in more training programs.

**Table 1 ARCS Categories**

| <b>Attention</b>                                              | <b>Relevance</b>                                            | <b>Confidence</b>                                                           | <b>Satisfaction</b>                                             |
|---------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------|
| A1 Perceptual arousal<br>A2 Inquiry arousal<br>A3 Variability | R1 Goal orientation<br>R2 Motive matching<br>R3 Familiarity | C1 Learning requirements<br>C2 Success opportunities<br>C3 Personal control | S1 Intrinsic reinforcement<br>S2 Extrinsic rewards<br>S3 Equity |

Picture credit: CI484 Learning Technologies

While ARCS was established as a framework for learner motivation, the importance of learners to elearning projects has made ARCS a model for approaching the design and development of L&D courses as well.

As an instructional design process, the 4 elements of ARCS can be translated as:

1. Identifying the elements of human motivation
2. Determining the requirements for motivation based on audience analysis
3. Designing and developing learning material and strategy that can trigger learner motivation

#### 4. Implementing learning material and strategy

There are numerous ID strategies and models to choose from. Hopefully, this section will have made it a little easier to discern the specifics of each so that you can decide which one is best for your learning design project and stakeholders.

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## Part 3

# Important Considerations During The Instructional Design Process

## Learner-focused Approach

The primary focus of any instructional design method is to serve the learner. One, if not the most, important metric for success of a project is how learners perceive the course.

Empathy for the user is something many agile software development processes advocate, and for good reason. The thought behind this, of course, being that without understanding what the learner expects and aims to achieve, any iteration or development cycle is bound to come up short.

[Design thinking](#), which is now increasingly being incorporated into learning development, advocates making user research the first and foremost task in design and development. The merits of this approach can also be seen in the technology and techniques that are being used for serving eLearning content. Narratives and gamification are just two examples of techniques that put learner engagement on top and construct the course around the learner rather than the curriculum.

Say, for example, that your L&D course was targeting sales staff for better performance on their quotas. In a learner-focused approach, the instructional designer would first analyze why the sales staff was unable to meet their goals; what challenges hampered them.

They would then formulate a plan to deliver the required training so that this gap in goals and current performance can be bridged. The appropriate format and delivery method would then be identified before developing the course. Post-delivery, feedback would be collected from stakeholders and subsequent iterations would be setup based on this feedback.

## Stakeholder Validation—Prototyping

Often the biggest trouble for instructional designers is getting everyone to see the same picture, especially at the beginning of the project when solutions are not yet concrete. Getting clients, SMEs and internal stakeholders to get behind the same vision and getting buy-in from them can be cumbersome no matter what approach you're using.

Creating low-level prototypes to demonstrate and validate ideas gets people to the table. This is an idea even the [SAM's savvy start](#) touches on. Typically, a savvy start brainstorming and information gathering session can last for 2–3 days. But this kind of time commitment from all stakeholders is not always possible. Often, people are collaborating remotely and this becomes a challenge.

In such cases, a one-day session followed by building prototypes of the solutions explored is good practice. These prototypes can be evaluated in follow up meetings, whether face-to-face or remote, and further ideas explored. Especially when working with SMEs, this approach can have great dividends.

It is important to remember that a prototype is not just a storyboard for the course. While the storyboard would lay out a rough blueprint for the course, including media, text, navigation details etc, a prototype is effective for testing out specific concepts or ideas without implementing all of the functionality.

## Quality and Timely Feedback

One of the main problems that has time and again been pointed out in ADDIE, or in any linear model, is that feedback is not collected early enough and as a result development and design cycles become long and pointless, without much collaboration.

The importance of feedback cannot be overstated enough and as projects have become more complicated, teams have realized the need to collect feedback early and often. Reviews of eLearning projects after each iteration are an increasingly common practice among teams today.

As Megan Torrance, CEO of TorranceLearning, [wrote](#) in an article:

*“Frequent communications with business sponsors, with subject-matter experts, with learners, and within the team are essential. Not only does this help you manage the day-to-day workflow, but it is also a key method for gathering changes and ensuring that you’ve got the message right. Agile teams connect daily to coordinate their efforts in what’s called a daily scrum, or a synch-up, or a huddle, to name a few commonly used terms. In these meetings, team members share what they accomplished in the previous day, what’s planned for the day ahead, and what they’re stuck on and need help for. Customers and SMEs are involved in daily or weekly*

*meetings, depending on the pace of the project. Learners are involved at each iteration in the feedback-gathering process.”*

As the ADDIE model has evolved, the evaluation phase has also evolved, centering around feedback from stakeholders and a periodic cyclic approach, rather than a checkpoint in the list.

However, two issues with collecting feedback early and often, while using any instructional design method, are

1. Meetings are not always possible on a daily or weekly basis with different stakeholder, and
2. Organizing this volume of feedback from various eLearning reviews can be tedious.

This is where [zipBoard](#) helps teams. All reviews can be gathered asynchronously, whatever the process being used and however distributed the team may be.

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## Part 4

# What Is the Role of An Instructional Designer

The Instructional Design competencies have been identified by the [IBSPI](#) (International Board of Standards for Training, Performance, and Instruction) and although this isn't an exhaustive list, key skills can be broadly categorized under Professional foundations, Planning & Analysis, Design & Development, and Implementation & Management.

In context of this background, let's take a look at some of the key responsibilities an Instructional Designer undertakes while working on eLearning projects:

### 1. Planning And Analysis.

Building blocks of designing instruction for an eLearning course entails a thorough “needs assessment” of the targeted demographic: Learners' goals, concrete understanding of their expectations from the course, likely study environment, ease or comfort level with a variety of technologies, etc. Based on the relevant data collated, an Instructional Designer would then “design a curriculum”, identify which methodologies would be used to deliver curated content, and zero-in on existing and emerging technology that will form part of the final course.

### 2. Design And Structure.

Primarily, the success to an effective and appealing eLearning course boils down to the fluidity and structure of the content –despite availability of top-notch content and seamless technology–

to ensure that learners remain engaged and courses see a minimal attrition rate. The Instructional Designer's prime focus would be on how content is required to be organized: Flow of information is sequential and smooth without losing context, moving from complex, simple, or elaborate concepts in an uncluttered manner that caters effectively to a wide variety of learners, an essential hallmark of eLearning courses.

### 3. Collaboration With Subject Matter Experts.

Christy Tucker [explains](#) that an instructional designer, in close collaboration with the respective Subject Matter Expert (SME), will be responsible for not just curating the most relevant content to include in the course, but will be required to devise modes of assessment and interactions (tests, quizzes etc.) to ensure optimum efficacy of the eLearning course.

### 4. Multimedia Tools.

Within just one segment of an eLearning course, a user can find themselves going through a gamut of tools: Infographics, mini-videos, graphs, links to sources, PDF extracts etc. It would be awfully easy for it to become overwhelming for a first time learner who is required to consume this wide range of data. And here's where an Instructional Designer comes in the picture: In collaboration with the tech-team, design team and the Subject Matter Expert, the Instructional Designer would brainstorm in context of aesthetics (size, font, design, and experience), placement, frequency of use of tools, content format, and more, to ensure learners are not overwhelmed by the experience.

### 5. Implementation And Management.

The Instructional Designer, in addition to all the above, is also required to maintain relationships with a wide range of interested parties on the team (faculty, Subject Matter Experts, students, tech teams) with the least amount of friction as possible. This would require enormous amounts of communication of all kinds (writing, speaking, listening, presenting) as this job essentially personifies "collaboration" in order to keep teams running as well-oiled machines, implementing decisions after thorough discussions, and managing people with enmeshed roles; a visual review tool like zipBoard could seamlessly complement this process of collaboration ensuring these goals are met with relative ease.

## What Kind Of Evolution Could The Role Of The Instructional Designer Role Undergo In The Future?

[Justin Ferriman](#) believes that an Instructional Designer in contemporary times would need to wear multiple hats and juggle roles far more frequently than in the past. Times have changed when proficiency in a couple of core skills sufficed; Instructional Designers must develop skills that allow them to don the roles of a facilitator, researcher, and innovator amongst others.

In recent years, there has been explosion in the number of people accessing alternative forms of learning: Wide disparity in age groups, work experience levels, learners at different career stages has been constantly fluctuating.

As the learner/user profile begins to evolve, the role of the Instructional Designer is bound to evolve at a rapid pace as well. [Connie Malamed](#) is of the view that in the future, Instructional Designers, in addition to creating courses for a specific user profile, would also begin to play a crucial role in enabling learning via online communities, social media technologies, curating content, and providing guidance to faculty and teaching experts on how to generate more relevant content.

According to [Shauna Leblanc Vaughan](#), it will be key for Instructional Designers to acquire familiarity with user experience (UX) to holistically comprehend learners' interactions and responses to content when transmitted over a range of devices.

Other experts in the field like Sahana Chattopadhyay are of the [view](#) that there is a massive transformation due in the field of Learning and Development over the next few years impacting learners, instructors, and every other professional that plays a role in curating, creating, and designing learning content. Wearable technologies, open resources like MOOC, the rise of self-learners with a consumerist mindset, morphing of the traditional mode of learning with eLearning will blur the demarcations between the two and professionals like Instructional Designers would have to take on the mantle to design and create experiences that are seamless across different ecosystems.

Given the pace of change in this continually evolving field, Instructional Designers that can keep up with the change and transformation that's just over the horizon, have immense career growth to look forward to.

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## Part 5

### E-Learning Experts on Instructional Design

To round up our series on Instructional Design, we spoke to experts from the industry and e-Learning professionals who have adapted and applied this theoretical knowledge into practical use. They shared with us their take on instructional design, what ID processes they use, what challenges they face etc.

Alexander Salas | Instructional System Designer, CPLP

[Alexander Salas](#) is an award-winning Certified Professional in Learning and Performance and instructional designer specializing in elearning and augmented reality for workplace learning.



*“As we know for the last 60 years, Instructional Systems Design (ISD) brought a systematic approach to the development of training programs. The emphasis is on “systematic” because that’s what ADDIE guides us to do in every training intervention. The Analysis and Design phases are the most critical in my opinion as they can make or break the rest of the stages.*

*One key thing to consider though is that ISD was not created for every purpose of every organization. ISD has academic and military roots, it was not meant for workplace learning (except in a huge organized entity with a fat budget like the US military).*

*For example; it’s unrealistic to think that a small company with two instructional designers would be applying the full spectrum of ADDIE. It would take a very long time. This is why, we can see many IDs in our industry that are truly just content developers without a systemic approach.*

*Finally, I would say that if you lead an organization that truly wants to gauge the impact of its training initiatives, any approach you take should involve the five stages of ADDIE.”*

## Guy Wallace | Performance Analyst & Instructional Architect

[Guy Wallace](#) is a Performance Analyst and Instructional Architect. He has been designing and developing Learning and Performance Support content for Enterprise Learning and business critical target audiences since 1979. He has also developed his own process of implementing training and development called Performance-based Accelerated Customer/Stakeholder-driven Training & Development (PACT).



*"I use my own methodology which was developed in the early 1980s. It enables both staff and subcontractors at our consulting firm to conduct planning, analysis, design, development, pilot testing, and revision & release—the 6 Phases of my ADDIE-like framework—with more consistency and predictability in time burden, cycle times and costs.*

*We use standard templates for data capture and reporting, but these are adapted if needed. We use teams in a system called Facilitated Group Process of Master Performers. Master Performers include subject matter experts, managers/supervisors and other novice performers.*

*This team of Master Performers is built at the Analysis stage and the Design team is a subset of the members of this team. It helps speed up the process and ensure quality and authenticity from the get-go.*

*Facilitating a team of Master Performers can be tough duty but it is worth the investment. It leads to better accuracy, completeness and appropriate data."*

Erich Renken | Sr. E-Learning Instructional Designer, United Educators

[Erich Renken](#) is a senior e-learning instructional designer at United Educators and has been developing and managing the development of digital learning for more than twenty years.



*"I understand why a waterfall process is attractive to an organization. With waterfall, you can easily create high-level milestones ("analysis done by this date, storyboard done by this date, development done by this date, etc."). It can make project management easier. There's an implicit risk built into that mindset, though, and that's the idea that the deliverable will be ready to move into the next phase. I know from experience it doesn't often happen that way. There are usually several items that require significant rework.*

*Agile addresses this issue by using more frequent deliverable. When I'm producing a course, I commit to weekly builds that I post on zipBoard for review. This helps me address issues earlier in the process when they're "cheaper" (in terms of both time and money) to fix. Sounds great, right? By the time you're done with your iterative approach, everything's perfect. Well, no. Here are some of the struggles with an agile approach that must be overcome.*

*SMEs will comment on items that you don't want to hear about. By the very nature of an iterative approach, your deliverables will be incomplete. Getting the SMEs to focus on their areas of expertise without commenting on the incomplete items can be challenging. When I'm prototyping courses, I'll often use scratch audio or images pulled from a Google search to populate my content. These are quick placeholders until I can produce them later. Invariably, though, I'll get more comments about the placeholders than I get about the content.*

*A lot of times SMEs are used to a waterfall mindset where they're the last line of defense between a course developer and putting the course into the LMS. As such, they feel compelled to comment on every aspect of a prototype that's unfinished. It's your job to make it infinitely clear what their role is.*

*SMEs will get content fatigue. Asking SMEs to review weekly builds is asking a lot. Most SMEs aren't solely focused on your project. Their time is limited. Because of this, many of them will stop reviewing the builds. To combat this, I try to be very explicit about what's changed between the builds. If a SME reads my summation of the delta and it doesn't apply to them, I'm fine with them not looking at that week's build.*

*It's a little like "The Boy Who Cried Wolf." If you cry "Wolf!" every week and you don't need them, eventually the SMEs are going to stop coming. Maybe some SMEs don't need to be involved in reviews every week. Maybe some SMEs don't need to be involved until later in the process. Appreciate the time they're spending and make it clear when you really need them."*

Jan Thorien | Sr. Manager of Training-Content Development, Wayfair

[Jan Thorien](#) previously worked at SVP of eLearning and Media Production at Citi, where she established the first eLearning / multi-media team and training department for consumer learning, supporting global training initiatives for Citigroup Global Consumer Banking operations, with 57 centers in 25 countries. She will be working with Wayfair as Senior Manager of Training-Content Development.



*"A one size fits all approach is rare these days. We probably find ourselves as Instructional Design and Development professionals familiar with various ID models, adapting our design and development models intuitively based on the training need, the time-frame, and the organization's environment.*

*For example, developing training modules for software application work-flows being developed by scrum teams, requires leveraging an iterative, incremental time-bound approach. Developing training for more static content e.g. compliance training or leadership training, could leverage a more waterfall type approach. Both however, are influenced by the organization's environment and needs at the time.*

*Financial technology (a.k.a. Fin-Tech), greatly influenced the design and development approaches my Learning Organization and Development team leveraged for our projects. We found ourselves in "new territory" innovating, experimenting, failing, failing fast and learning the best way to quickly design, develop and implement training on our ever-evolving banking mobile apps. This training must be rolled out to our customer contact agents before the applications are made available to our customers. This meant we were developing training at the same time the applications themselves were being developed.*

*If all the parties involved in producing each short, on-line training module (business stakeholders, application developers, designers, and legal/compliance approvers) could be a dedicated, self-governing, cross-functional scrum team like the application developers, we could leverage all of the efficiencies this brings to creating these training modules. Since this is not the reality, we eventually developed a hybrid approach, leveraging analysis from ADDIE, and iteration and prototyping from Agile and SAM.*

*Initially our design and development ratios increased as we tried to accommodate for the changing software requirements during this phase. We realized that we needed to leverage another aspect of the Agile model; Minimal Viable Products (MVPs). We created our on-line micro-learning simulations of the application flows as low-interactivity (Level 1) rather than a more complex Level 2 or 3. We embedded them into the training module that provides the context. We could make the changes more quickly (be more agile), reducing development time, yet keep the iterative approach aligned with the pace and changes of the three-week scrum sprints. We are watching closely to ensure that although our simulations were less robust, they will still be effective.*

*This is an example of why I enjoy and am passionate about the instructional design, L&D profession. It is never static, demands ingenuity, creativity, and problem solving. We must flex to the ever-evolving needs of the organizations we support. Today, designing for modern learning provides this opportunity.”*

Richard Sites | Chief Learning Officer, American Association for Physician Leadership

[Richard Sites](#) has over 25 years of experience designing and implementing web-based training, and the processes which support its design and tools to support improved workplace performance. He is also the co-author of the book—Leaving ADDIE for SAM—with Dr. Michael Allen that highlights the Successive Approximation Model (SAM) and the Savvy Start.



*“I often get asked—and for good reason—which ID model I use. Having co-authored two books on SAM, the answer might seem obvious. But there’s a little more to it than that.*

*I am a strong believer in an AGILE approach to instructional design—so much so that I can barely understand the reasoning behind other, more linear approaches.*

*Now, I get it. A linear approach to design is clean, clear and easily understood by all involved. The steps/stages are obvious and purposeful. There are recognizable moments for approval and review. But that’s where the benefits of a linear approach end—for me at least.*

*Instructional design processes should be focused on effectively creating effective instruction. Most of the time, I see people focused solely on the process itself, with little to no concern for what is being built.*

*“But if I can create an efficient process, the product will be good!”*

*This is the mantra of so many people in our field. They have this belief because they have been measured and judged by their organizations on the efficiency of their process. Rarely, however, does anyone in their organizations wonder about the measurement of “a good instructional product.” Efficiency matters—and it rightfully should.*

*But an efficient process should not outweigh a quality product. At the end of the day, the instructional event should produce some change in the people consuming the product. We need to have a clear set of principles for the form, function and intent of the instructional product before we start the process of designing and developing it.*

*So, when you ask me what ID model I use, I am likely to answer SAM, because it is built upon (and seeks to fully employ) the instructional principles which I feel produce the most effective product. Without the ability to iterate a design and challenge its usefulness (which SAM excels at), the execution of good design is so difficult.*

*Also, SAM seeks to provide numerous opportunities for collaboration. Too many instructional products are built by one- or two-person teams. Good instructional products require input from many perspectives during the design and development process. SAM offers the best chance to turn those perspectives into the inspiration which drives future iterations.*

*Finally, SAM provides clear explanation for the purpose and use of iterations. Many contemporary models (like the ones included in this blog post) like to show curved arrows pointing back to a previous step or two. This is the classic ADDIE adaptation. But just because you CAN loop back doesn’t mean you SHOULD, and do you even know WHY you would? These are not questions answered by these curved arrow-filled pseudo-models. It is critical that you—and everyone in the project—understand why an iteration will occur, what is going to happen when it does, and the purpose of each iteration throughout the project.*

*So, that's why (at least briefly) I choose SAM for the design and development of engaging, performance changing instructional products."*

## Shannon Tipton | Chief Learning Officer, Learning Rebels

[Shannon Tipton](#) has worked with organizations to modernize onboarding programs, leadership curricula and enhance sales training programs through the use of blended and microlearning techniques. She has spent over 20 years developing successful learning strategies and infrastructures, and has worked with teams to help businesses realize their full potential.



*"There have been some articles and blog posts doubting the relevance of instructional design and of the role of an instructional designer. I even saw this tweet the other day (in part):*

*"When will instructional designers get their heads out of their "you know what" and understand their roles are dying out."*

***First—rude.***

***Second—wrong.***

*The role of the instructional designer has never been more alive and exciting. As with any role in an organization, from CEO to Marketing to HR, job roles are evolving.*

*The range for an instructional designer has opened. A progressive instructional designer is one who is looking at blended approaches and how they can be incorporated to enhance traditional models. They are looking at microlearning, augmented reality and video creation as means of learning retention and spaced practice. Even when creating training for classrooms—there is a variety of ways to blend or flip a classroom to make them more effective, engaging and further embed learning. Evolving.*

*When an e-Commerce client asked me for additional learning support to upskill their staff of instructional designers, another class was not the answer. Using the tool UMU.com and Slack,*

*and following the foundations of the ADDIE model, we provided 4 weeks of carefully crafted microlearning elements to drip feed to the team. The feed was delivered once a week culminating in a design project. Spaced learning and practice retrieval accomplished in an infinitely more interesting and time friendly manner. Evolving.*

*Dynamic instructional designers are learning how to take data and create powerful infographics. They are taking subject matter experts (SME), recording them and creating organizational podcasts or “radio stations”. They are gathering informed end-users and helping them create user-generated content that can then be curated, reviewed, organized and made accessible to the masses. Evolving.*

*The life of the instructional designer is not in its declining years—it’s vibrant, it’s challenging, and it’s fun! Just like any other piece of art, we create pieces for people—not for us. People write because they have a story that needs to get out, they paint because a scene moves them. We create because we want to help people do their jobs and to be the best versions of themselves. It’s just that your art form isn’t done with paint brushes or modeling clay, your main tools are your mind and your imagination.*

*So, instructional design is at a critical and exciting point. It is far from dead; it’s an art form evolving and coming to life.”*

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## Part 6

# E-Learning Tools for Instructional Designers

Listed in this section are an extensive list of eLearning tools and resources that help build eLearning courses better and faster. From authoring tools, to review tools, to icon resources, these are all the eLearning tools that help instructional designers:

## Authoring Tools

Authoring tools put together the basic blocks of an eLearning course. They stitch together the fundamental content that will reach the user.

- [Adobe Captivate](#)

Pricing: Subscription—\$29.99/month; Full License—\$1,099 Student & Teacher Edition—\$349

- [Articulate 360](#)

Pricing: Existing customers—\$599/user first year(Individual), \$799/user first year(Teams); New customers—\$999 /user annually(Individual), \$1,299/user annually(Teams)

- [Lectora Inspire](#)

Pricing: Starts at \$2,174. This includes 1st year maintenance and support + training, along with the license.

- [LearnDash](#)

WordPress based LMS used by Fortune 500 companies, universities and training organizations. Pricing: Starts at \$159 for 1 site; \$329 for unlimited sites.

- [iSpring Suite](#)

Pricing: 1 lifetime license—\$670; 3 lifetime licenses—\$1,870; 5 lifetimes licenses—\$2,990.

- [Adapt Learning](#)

Open source tool supported by a growing community. Pricing: Free

- [Elucidat](#)

Pricing: On request, contact [hello@elucidat.com](mailto:hello@elucidat.com)

- [Shift Learning](#)

Pricing: Lite (\$120/month or \$1200 annually); Power User (\$350/month or \$3500 annually); Enterprise (\$850/month or \$8500 annually)

- [Composica](#)

Pricing: Depends on users; \$99/month billed annually(1 user), \$495/month billed annually, \$1,782/month billed annually.

- [Twine](#)

An open source tool for prototyping branching scenarios but can also be used as an authoring tool for branching scenarios.

- [gomo learning](#)

Pricing: Authoring+Hosting—Small package(\$178/month or \$1780 annually), Medium package(\$498/month or \$4980 annually) ; Authoring—Personal(\$89/month or \$890 annually), Small Team(\$249/month or \$2490 annually)

- [ProProfs](#)

Offers online training software, an LMS, quiz maker and survey maker to simplify eLearning content creation. Pricing: based on number of learners—Team (\$79/month), Business (\$199/month), Enterprise (\$799/month).

- [Koantic](#)

Offers interactive video tool as well. Pricing: Video Only—\$9/month (or \$90 annually), 1GB storage, video courses only; Starter—\$39/month (or \$390 annually), 2GB storage, unlimited courses; Professional—\$199/month (or \$1990 annually), 10GB storage, unlimited courses, Team collaboration.

- [Adobe Presenter](#)

Pricing: Subscription—\$14.99/month, Full License—\$499, Upgrade—\$199, Student & Teacher Edition—\$149

## Review Tools

Reviewing courses is essential feature for eLearning tools to keep all stakeholders updated and on the same page. They also ensure that the course is up to the mark and as per specification.

- [zipBoard](#)

Visual review and collaboration tool with a responsive interface that allows unlimited collaborators.

Pricing: 1 project free forever; Starter—\$29/month (5 projects); Team—\$59/month (20 projects); Enterprise—custom pricing

- [Review My eLearning](#)

Collaborate with stakeholders and review your eLearning courses slide-by-slide.

Pricing: Small—\$15/month (1 course); Medium—\$29/month (5 courses); Large—\$59/month (20 courses); Enterprise—\$99/month (unlimited courses)

- [eBridge](#)

Store files on the cloud and access them for review, at any time, anywhere.

Pricing: On demand

- [ReviewLink](#)

Supports SCORM 1.2 and SCORM 2004 content from Lectora, Articulate and Captivate. Add unlimited reviewers and even review mobile courses.

Pricing: Starting at \$29/month (Small team); \$49/month (Medium plan); \$108/month (Large plan); \$128/month (unlimited plan)

- [Adobe Captivate Reviewer](#)

Adobe add-on for the Captivate authoring tool.

Pricing available on demand

## Animation Tools

Animation tools help increase engagement in courses. They add another layer for keeping the users invested in the subject matter. A number of eLearning tools offer innovative methods to add animation to courses.

- [Adobe Creative Cloud](#)

Includes Character Animator, Photoshop, Illustrator

Pricing: Business—All apps(\$69.99/month), Single App (\$29.99/month); Individual—Starting at \$9.99/month to \$79.98/month

- [BranchTrack](#)

Scenario based eLearning tool. It's compatible with Lectora, Articulate and Adobe Captivate. Allows adding characters, backgrounds and voice over also.

Pricing: Professional—\$242/month (30 simulations per author); Enterprise—\$300/month (50 simulations per author); Interactive video—\$575/month (interactive branching videos, 100 GB)

- [GoAnimate](#)

A simple DIY animation tool with minimal setup, ideal for small teams and freelancers.

Pricing: GoPublish—\$39/month; GoPremium—\$79/month, GoTeam—\$159/month

- [PowToon](#)

Create animated videos and presentations with this free tool. The paid plan has watermark removal, HD videos etc.

Pricing: Pro—\$19/month, Business—\$59/month. There are also special educational plans for students and classroom teaching, or the option to pay per bundle of videos.

- [Prezi](#)

Aimed at non-designers, it helps make engaging presentations swiftly with templates. It also offers tracking features.

Pricing: Standard—\$10/month; Plus—\$20/month; Premium—\$59/month (billed annually)

## Interactive Video Tools

- [Wirewax](#)

Detects faces & objects and offers quite a bit of customization in interactive videos. A free editor for non-commercial use is available. Paid plans with extensive features start at \$100 per month.

- [Rapt Media](#)

Build cloud-based interactive video with Google Analytics and a host of other third party integrations. Pricing available on request.

- [Klynt](#)

Add YouTube video and make it embeddable on any webpage. 14-day trial available with paid plans starting at € 499 as a one time fee.

- [HiHaHo](#)

Add questions to interactive videos, add menu to organize content and highlight parts of the video. Personal plan at \$9.97; pro plans start at \$97.

- [Hapyak](#)

Create interactive videos with personalization, extensive integrations and analytics. Plans start at \$500/month with unlimited videos and unlimited views in each plan.

## Screen Capture

- [Evernote](#)

Capture screens and make notes directly from your web browser. Paid plans starting at \$3.99/month.

- [SnagIt](#)

Create animated GIFs, capture infinite scrolling screens and edit your captures. Full license priced at \$49.95. Subsidized plans for education and government projects.

- [ShareX](#)

Screen capture, file sharing and productivity tool—all in one. Great part is that it's open source.

- [Jing](#)

Part of the product suite that hosts SnagIt and Camtasia. Add visual elements to images and share them. It's also free!

- [LICEcap](#)

Capture the entire screen or parts of it and directly create a .GIF. It is also completely free to use.

- [Awesome Screenshot](#)

Store and organize screenshots, share feedback on them and it's all free.

## Survey Tools

Survey tools are important for user research before and after course development. These are some tools that can be used in the eLearning domain for this purpose.

- [Survey Monkey](#)

Pricing: Basic plan—Free; Select plan—\$10/month; Gold plan—\$23/month; Platinum plan—\$62/month

- [Typeform](#)

Pricing: Basic—Free(100 responses/month); Pro—\$29/month(unlimited responses); Pro+ —\$59/month(unlimited responses)

- [Google Forms](#)

Pricing: Free for individuals, For work—\$10 per user per month (for Teams); starting at \$5 per user per month (for companies and enterprises)

- [Zoho Survey](#)

Pricing: Basic plan—free(150 responses/survey); Standard—\$24/month(unlimited responses); Premium—\$29/month(unlimited responses, CRM integration); Enterprise—\$49/month(unlimited responses, CRM integration, admin setup, user management)

- [Survey Gizmo](#)

Pricing: On demand

- [Survey Planet](#)

Pricing: Free plan(unlimited surveys, questions and responses), Pro plan—\$20/month or \$180/year (everything in free plan + export survey results as CSV, PDF etc, notifications, remove branding)

## Screencast Tools

More than just recording or capturing your screen, show mouse clicks along with the regular cursor. Record and upload your sessions to communicate with fellow team members or insert it into a course for learners.

- [Articulate Peek](#)

Part of Articulate 360's package.

- [Camtasia Studio](#)

Produce videos for the web using H.264 format.

Pricing: Single user license available for \$199. Subsidized licenses for educational projects.

- [ShareX](#)

ShareX is a free and open source program that lets you capture or record any area of your screen and share it with a single press of a key.

- [CloudApp](#)

Pricing: Free version available; Pro: \$8/mo; Team (starts at 2 users): \$9/mo/user; Business (starts at 3 users): \$17/mo/user.

## Video Tools

These tools help capture video, customize and annotate on it, and also edit it to make it suitable for the project. These are the eLearning tools for getting video right.

- [Microsoft Office Mix](#)

Free PowerPoint add-on, great for building interactive quizzes and reports.

- [Active Presenter](#)

Record video, edit it, add annotations and multiple layers to the video.

Commercial license starting at \$149.

- Adobe [Premier Pro](#) & [After Effects](#)

Part of Adobe's Creative Cloud suite, these offer exquisite video editing features and the option to add effects.

Pricing: Business—All apps(\$69.99/month), Single App (29.99/month); Individual—Starting at \$9.99/month to \$79.98/month

- [Apple Final Cut Pro X](#)

Wide range of post production options for video editing. Available only for Mac users.

- [Screenpresso](#)

Lightweight screen grab tool with in-built image editor. Also available as iOS and Android screen capture application.

Basic functionality free, while paid plans start at €28.89 per user.

- [TinyTake](#)

Capture images, record videos, annotate on them.

Commercial plans starting at \$9.95.

- [Camtasia](#)

Allows creating videos in multiple formats, editing options and special effects to them. Simple interface and easy for beginners.

Single user license available for \$199. Subsidized licenses for educational projects.

- [Quick Time](#)

Especially useful for Mac users as this eliminates the need for any external screen recording software.

Basic version is pre-installed on Mac systems and free for download for Windows users. Pro version is paid and allows creating slideshows, adding special effects etc. apart from screen capture.

## Audio Tools

A good soundtrack enhances the course's effectiveness. It keeps the learner engrossed and gives the instructional designer another dimension to work with.

- [Audacity](#)

Free tool to edit audio and add effects to your course

- [Text to Speech](#)

Create an audio that has all the text converted to speech, simply paste the text and convert

- [LMMS](#)

Free tool to mix audio for your course

- [Sound Forge](#)

Professional quality audio mixing; starting at \$59.99

## Graphic Design and Prototyping Tools

These tools come in handy for extra illustrations, statistical charts and summary infographics. They are all available as free resources with option to upgrade for more extensive features.

### Graphic design

- [Canva](#)
- [Easel.ly](#)
- [Genial.ly](#)
- [Infogr.am](#)
- [Visme](#)

### Mocks and Prototypes

- [Figma](#)
- [Adobe XD](#)
- [Sketch \(for Mac only\)](#)

### Icon Resources

- [Fontawesome](#)
- [Flaticon](#)
- [Fontello](#)
- [Icons8](#)
- [Iconmoon](#)
- [Iconfinder](#)
- [TheNounProject](#)
- [Iconmonstr](#)
- [zipBoard's Icon Set for Education](#)

## About zipBoard

zipBoard is an online collaboration software, providing solutions for visual review, bug tracking, client feedback, and project management. It makes collaboration easier for agile teams. You can either use zipBoard when iterating over a new product or adding features to an existing one. It is widely used by web developers, designers, project managers, and QA. At zipBoard we understand how challenging it is to explain reviews verbally and that is why we have equipped zipBoard with all essential tools to enhance your visual review and project management workflow experience. We provide you a visual platform to stay updated on your web projects. It's an online whiteboard on top of your website to discuss, comment, annotate, share feedback, and assign tasks. No more emails, spreadsheets, skype calls, or complicated code to track issues for your web projects. Just browse, capture, comment on zipBoard.

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