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# The 4A's of Learning Design

## Neil Lasher

## An Instructional Design Model for Task-Based and Workflow e-Learning

**Why a new instructional design model for e-learning?**

**Model or Theory**

There has been much written in the field of instructional design and much confusion as to the difference between model design and cognitive theory.

- It is said that designers rarely work according to theories. They merely work intuitively (Gros B 1997).
- It is maintained that much of instructional design theory is no longer applicable in the current context of rapid change, global communication and high technology (Reigeluth, 1996).

Reigeluth's assertion is that instruction is "anything that is done to help someone learn".

Both models and theories help us to make sense of our world. Instructional models are guidelines, or sets of strategies, on which the approaches to teaching are based. Whether implicit or explicit, whether formal or informal, whether derived from impulse or from research, a model offers its user a means of understanding difficult problems by giving structure and meaning. It provides a plan, making it possible both to visualise the whole picture and also break it down into discrete, manageable units.

In the context of learning, theories describe the ways that people believe we learn new ideas and concepts. Often, they explain the relationship between information we already know and the new information we are trying to learn.

The 4A's of learning design is an instructional design model for task-based and workflow e-learning. Applying this model will ensure the design of a module of learning that fits into today's current context, delivering the correct content to fit the current need in an environment often where the development falls to the technologist rather than the trainer.

**Some History**

**It has been 50** years since we were blessed with the rules for taxonomy by Benjamin Bloom. In 1956 Bloom headed a group of educational psychologists who developed a classification of levels of intellectual behaviour important in learning. Bloom found that over 95 % of the test questions students encounter require them to think only at the lowest possible level...the recall of information.

The result was an instructional design theory that based itself around asking 'powerful' questions. These techniques are still widely used today in the classroom and by coaches to ensure students gain a better education from being tasked to respond to questions after thinking and replying, rather than giving closed answers such as 'Yes' or 'No' or a choice of one of four multiple choice answers. Attempts to bring this instructional design theory to e-learning have been less than successful with many of the questions requiring closed answers.

**It has been 40** years since we were introduced to Robert Gagne. Gagne first attempted to classify the types of learning.

Gagne first presented a *theory*. In 1965, he published The Conditions of Learning. This outlined the relationship of learning objectives to appropriate instructional designs, identifying five categories of learning. In his later book, The Principles of Instructional Design, Gagne set out his *model* with 'The Nine Events of Instruction'. These have become the industry standard for an instructional design model.

| Instructional Event |
| --- |
| 1. Gain attention |
| 2. Inform learners of objectives |
| 3. Stimulate recall of prior learning |
| 4. Present the content |
| 5. Provide "learning guidance" |
| 6. Elicit performance (practice) |
| 7. Provide feedback |
| 8. Assess performance |
| 9. Enhance retention and transfer to the job |

When used in the classroom there is no better model in existence today. However many e-learning authors today have interpreted no fewer than 3 of these nine events by relying almost exclusively on questions and answers, often confusing or closed.

**Example**:  A question seen in a recent course

It is unlikely that a student who is unskilled in untangling negative statements

(a) will quickly understand multiple choice items written in this way
(b) will not quickly understand multiple choice items written in this way
(c) will quickly understand multiple choice items not written in this way
(d) will not quickly understand multiple choice items not written in this way

This question informed the user when their answer was wrong and required them to try again until they got it right.

With e-learning relying so heavily on questions and answers, we have created a culture of training by testing. And with 'forced' results of 100% how do we measure the true results?

**In 2005 Josh Birsin** reported that the biggest priority for learning was to align with business strategy.



Top Learning Priorities for 2005
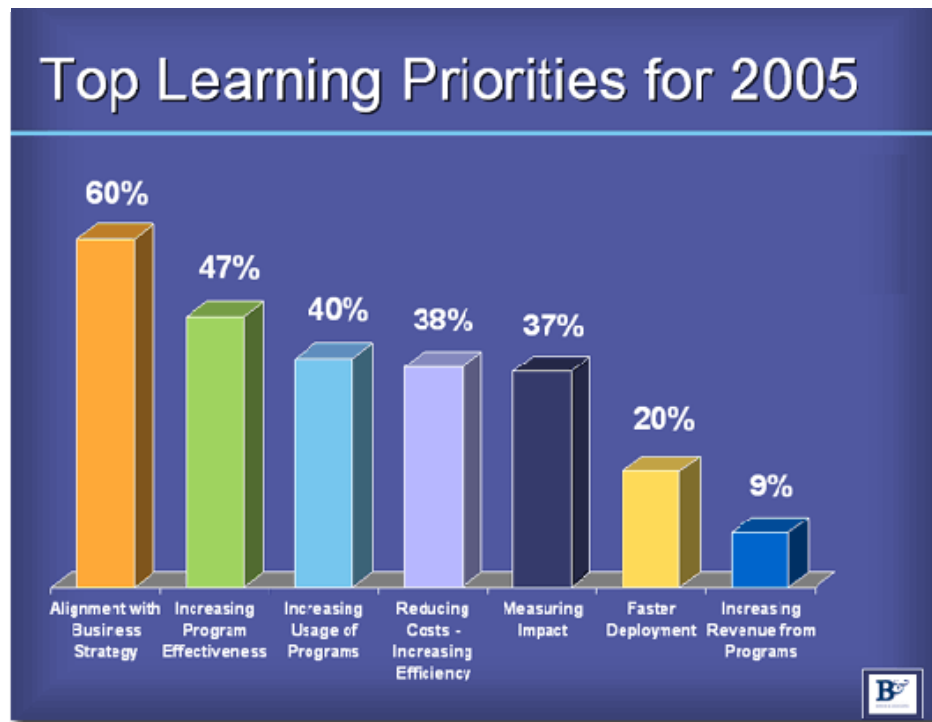
To reach this goal a shift is required in the approach we take to 'train' staff, (or - in today's world of e-learning - ask our staff to 'learn'.)

We need to predict the needs of the user and move very quickly to select the most useful content and delivery techniques. We cannot expect that the user will spend all day every day learning. In the last year we have seen a major shift towards workflow learning, (task based) informal learning and far smaller modules of embedded learning in systems.

The instructional design model for informal and workflow e-learning until now did not exist. We were working with a hybrid of many styles of design concepts and a few new techniques we had learned along the way. The days of - Tell them what you are going to tell them….tell them….ask them questions to see if they understood….then tell them what you told them – are not relevant in the e-learning world, even if still valid in the classroom. What is obvious is that we are spending too much time with questions, and, as Benjamin Bloom recognised 50 years ago, all we are testing is the lowest level - the recall of information.

**The 4A's of Learning Design - An Instructional Design Model for Task-Based and Workflow e-Learning.**

The model consists of four key areas.

**Attraction:**

An attractive module draws the user in, engages them and leaves them satisfied. **Attraction** will ensure the user wants to use this intervention instead of another.

**Attention:**

Previous models have focussed on how to get the attention of the user. This model shifts the focus to the content. The first 'A' has already attracted the user. **Attention** therefore can be about the content, narrowly focusing the learning.

**Availability:**

Albert Einstein said with great wisdom, "It's not what you know, but knowing where to find it" **Availability** ensures the content is up to date and always retrievable.

**Application:**

The most important stage of the learning intervention design is to entice the user to apply what they have gained in knowledge to a real life situation. **Application** drives the motivation to use the new information.

## Attraction:

### *Why this? – Why not an alternative?*

The design of each module should first take into account the reason for the module itself. Is it necessary? Does it fulfil a particular need? Does it have an objective the user will be able to use today? What makes it attractive and why should the user want to use it instead of referring to an on-line search engine for the information it may deliver? Is it engaging, even if short? Will it draw the user in and leave the user satisfied? Does it contain the information the user needs in a simple transferable format?

### *Easy to use*

Each module should be intuitive. No module should have to contain instructions for use. The module should have a logical flow to inform the user, not try to trap or get the user to answer a question incorrectly.

**Example:** A question with three possible answers, that does not allow a user to proceed until they get it correct, possibly only after the third attempt, leads to frustration, and should be avoided.

### *Quick to finish*

Each module should be relatively quick to finish. Users are gaining best knowledge transfer and longer term retention from shorter task related modules. This begins the overlap into the second 'A' Attention.

**Example**: Three five minute modules each with a single point will be more effective than one of 15 minutes that covers three similar points. The user may have to go through two points he does not require to get to the third.

## Attention: (Focus)

### *To the point*

Modules should be narrowly focussed to a single learning point. Consideration should be towards understanding rather than to simple knowledge transfer.

### *Consider the needs of the user*

Users have stated repeatedly in many surveys and feedback forms what they like and why they leave courses incomplete. The design of the small module must take the cultural knowledge of the user group into account. The user who is requesting how to do a 'something' does not need to be led to the 'something' via a number of previous steps. Consider just-in-time to often be an urgent need of the user and provide a direct single intervention that would be exactly what the user needs and no more.

### *Direct information – with links to the theory*

It is as important to provide the theory as the learning itself, however this model suggests that the theory is NOT part of the learning intervention, but a link to it elsewhere. Ensure you offer just the direct information to keep the attention of the intervention directly to the point. Provide the user with links to further information, which is clearly marked as the theory behind the learning.

**Example:** For a website that explores 12 different theories of learning, visit [www.funderstanding.com/about_learning.cfm](www.funderstanding.com/about_learning.cfm)

### *Learn, use and forget*

The internet, with its direct access to vast quantities of information, has changed the way we work. (Back to back meetings, high volumes of data, ease of access and less time to think.) In doing so it has changed the way we think about the need for information and the way we learn what we see or read. Information is changing in many areas at such a vast rate, that what we may learn in an intervention today is no longer relevant tomorrow. Just-in-time and workflow models satisfy these issues.

This model suggests we focus on the short term memory rather than the longer term memory for the actual information being delivered in the intervention. The short term focus is to deliver information in a way that can be easily and instantaneously transformed by the user to fulfil the need of the current task. Instructional design considerations should be towards helping the user complete the current task quickly, on time and without error.

On completion of the task the user can afford to forget the information used as the next time the user requires the information, the culture will suggest he returns to the module as it may have changed.  The module design must accept that not every user is here for the first time, so the layout for recall is very important.

### *Up to date*

Modules may contain both process and data, either of which may change with version. Each module should set out as part of the learning if/where the module has changed since the previous version. The significant data in the module may be the reason the user is returning to this module, not to re-learn the process.

In creating modules that are updated from previous versions, with the knowledge that users will return each time the information is required, there exists an opportunity to add relevant information that may not be directly a part of the intervention the user was expecting.

**Example:**  Processes in scientific industries have not changed in many years. The formulae may not be easy to remember, therefore the user will return to look up such formulae without being aware that a new Health and Safety notice may have been published. Drawing attention to such changes and delivering them along with the data the user came to find is a new way of  keeping the user up to date.

## *Always re-findable*

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'Re-findable' in this instructional design model focuses not on how to find the module in the system, but how to find the data in the module.

Previous models have suggested that we constantly change the look and feel of our learning modules so the user does not get bored and always sees something fresh. This model suggests that once your module is designed leave it for perpetuity.

A returning user has an expectation. Let that expectation be satisfied, or the user will be confused and have to start over again. Consider in your design the returning user. Why will they return, what will be the need?

Make notice to the user where change has been made, reference a change history where required to satisfy the users need to know how it was before.

## Application:  (Motivation to apply)

### Content must suggest usage

Maybe the single most important area of this instructional design model is the motivation to apply.

Each intervention must not be purely theoretical. Provide different options for different user circumstances, including for example seniority, experience and organisational context. Highlight the different outcome if the process or data you are offering is used. Excite the user during the intervention so they will want to use what the module contains.

Each module should suggest to the user that they go and use the information they have gained or process they have learned… now.

### Real time application for use – do not over complicate - no assessment

It is tempting at this stage of an instructional design model to follow all those that have gone before and throw in some form of assessment. Did the user learn what we just told them?

This model does not contain an area of assessment.  Provide assessment at the right time and as a separate intervention when the user has had time to reflect, explore the theory or actually use what they have learned in a task they are working on.

Assist the user by providing checklists or job aids as part of the learning intervention. This is something they can take away and follow to complete a task, when the task or process may be complicated.

Do not overcomplicate by asking a set of questions that may cause confusion to the user, especially when most questions that can be posed in e-learning require the user to think only at the lowest possible level…the recall of information.

### Example

A course recently reviewed contained:

- a 10 question pre assessment,
- each of the modules had a 5 question 'what did you learn' test
- at the end the user was subjected to a 20 question 'end of course' test

In approximately an hour of learning the user was presented with and had to answer 50 questions.

**Implementation**


To implement this model of design may require a major shift in the way you are creating e-learning today.

In particular:

- A stronger focus on attracting the user.
- Keeping modules to a single learning point.
- Not changing design, even if revising content.
- Consideration for the returning user.
- No assessment.
- Motivation to apply.

In addition

Informal learning modules and workflow learning techniques do not always require delivery via a LMS.  Not every item of information transferred by e-mail,  phone or by internet search is tracked and recorded. Informal learning modules should fall into the same category.

Speed of access has become an issue for the user. Getting to the learning they require, completing the learning and getting back to the task, has become a deciding factor to which learning they undertake and are willing to complete. We should be mindful of this.


The 4A's of learning design is an instructional design model for task-based and workflow e-learning. The fourth 'A', Application, suggests we motivate to apply. Why don't you go and use this model right now….




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