

Is it Time for a Change? The Environment Model (Nov 12)

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Arguments for and against return on investment (ROI) in eLearning have been with us for over 10 years. There has been even more discussion, and presentations at conferences in recent months, questioning whether eLearning is providing any value at all within organizations.

Over the last 12 to 18 months, conversations between some thought leaders in the eLearning industry have turned away from eLearning as a tool for providing training to eLearning both as performance support and as a means of improving business performance. Many of these thought leaders have come to the conclusion that, although we have relied heavily on eLearning as a method to deliver "cheaper" training, the handwriting is on the wall. They suggest that eLearning, as it stands today, is not providing sufficient value to organizations for them to continue to use it in any way other than for tick box compliancy.

In the last 50 years, "training and development" has undergone many changes. The innovation and implementation of technology to learning is still fairly new in the grand scheme of things. Those of us who are truly honest with ourselves agree that, for the most part, the learner does not have a good time in an eLearning course. The question is often now posed: is eLearning to be scrapped as a total loss or are we to change the way we are doing things?

(Editor's note: for a quick summary of the Environment Model, see Sidebar 1.)

Sidebar 1 *The Environment Model: Key Points*

The Environment Model is:

- A realistic, serious game you create in a parallel universe to the one you work in
- A complete duplication of your workplace using technology to deliver, not using 3-D walk-around technology, delivered using simple decision trees and well-designed flowcharts
- Delivered using the desktop and mobile devices, using similar technologies to eLearning, voice on a telephone and SMS to a mobile phone
- An environment where your staff can go to experience real-world issues and challenges that happen in your business every day, get feedback from peers, see the results of their decisions and understand the implications before they do it for real
- Not restricted to a single entry point to get in or single door to get out, but a series of paths through everyday life in your organization in an environment which is safe, where a wrong decision or poor decision will not cost vast sums of money or time.
- Not a place where you go to specifically do a course, but a place where you can experience

Positive deviancy

For me the answer is the latter, to change. However, we must make fundamental changes to the way we design, deliver, and measure.

Instructional design ideals have changed dramatically over the last 10 years. The designs for “training” have slowly moved towards designs for “learning.” At the same time, as technology has taken hold as a means of delivery, designers have also changed more towards the delivery of information. Instruction appears to have been forgotten other than by a select few who have held onto the earlier ideals.

Even with these changes, there still appears to be an underlying belief that eLearning delivers instruction and that this instruction should be delivered in courses and tracked by a management system that will document the details of who did what and when. If you are reading this article and this is your understanding, please open your mind to something very different happening around you.

The first major changes to eLearning methodologies have just begun. The Experience API (Tin Can) is changing the way we look at data, use data, and design technology events so we can deliver best value with our information. Learning on demand will be the new pull from the learner. In his recent book *Learning on Demand*, Ruben Tozman lays out a different mind-set for learning development. The semantic web plays a major part in this design methodology.

Recently I have been described as a “positive deviant,” one who brings to organizations great disruptive technologies which trigger learning and change. I am not sure I am comfortable with the concept of “disruption.”

Sugata Mitra speaks of creative disruption, and many instructional designers feel that “creatively disruptive” is a great badge to wear. As a businessperson, disruption or the mere thought of the commotion that goes with it is negative for me. My goal is to deliver complementary technologies that do not disrupt, but that deliver a challenging and enabling method to work smarter, harder, more efficiently, and most of all with better value. Now, that feels better to me than being disruptive. This article is not meant to be disruptive, but to add value through a new system of eLearning and experience with the knowledge of three acts.

Act 1: Tracking

For the purposes of this article, put aside what has become known as tick-box compliancy training and all other forms of learning and training delivered by eLearning.

Since 1999, when the first learning management systems (LMS) arrived on the scene, we have had a change in culture, placing a huge emphasis on the process of tracking. You may disagree with that assertion, but hardly a day passes that, while talking to someone from learning and development, I do not hear, “Can we track that?”

This year has seen the release of a new standard, commonly known as Tin Can. Its real name is the Experience API. This new standardization, created by the same people who brought you SCORM, is the next generation of data capture. Its uses include learning materials and a wide range of other content types. The output of the new standard is known as a statement. This statement can contain an infinite number of verbs. A new system, known as the Learning Record Store or LRS, collates these verbs.

Different to a learning management system, the LRS, with the correct reports, may provide us with a detailed level of analytics. The result will be that we can see not only the way that people are using online systems but we will also be able to identify trends and provide future material according to anticipated needs.

To be able to use the data stored within the LRS requires, first, a fundamental change: to move away from the concept of tracking, releasing ourselves from the burden of knowing who did what and when, and replacing this with where they did it, how they did it, and why they did it, and identifying what they are liable to do next.

The LMS will remain in order to provide the tick-box service that we have been providing to fulfil the needs of those requiring compliancy. We are about to see each and every LMS vendor adding the LRS to their existing system. Much thought and planning is required before you make this move. In my opinion, LRS data and LMS data should be kept separate and used for different purposes.

Act 2: Branching—Decision Tree—the Score (the Environment Model)

At a recent conference, a participant asked a speaker, “How do we know if people are doing better?” The reply was that they would score better in the tests. I argued this point for quite some time, but it was obvious that the people in the room had fallen into the trap of believing that eLearning courseware is always followed by a test and that was all that is needed. They did agree that the testing only supplied some metrics of that point in time and didn’t suggest the user would do something differently in the future.

I was inspired to begin a search to find a way to deliver material using “e” (as in “eLearning”) that could measure a change in behavior and could show that a value gain to the organization had been started. No tests. No failures.

The result is the Environment Model.

Based on the concept of the artificial neural network, this is a mathematical model that defines a direction or path through a set of differing content (Figures 1 and 2). The model uses a layer of artificial intelligence to store parameters called “weights” that further manipulate data and allow an interconnection pattern between different layers of learning.

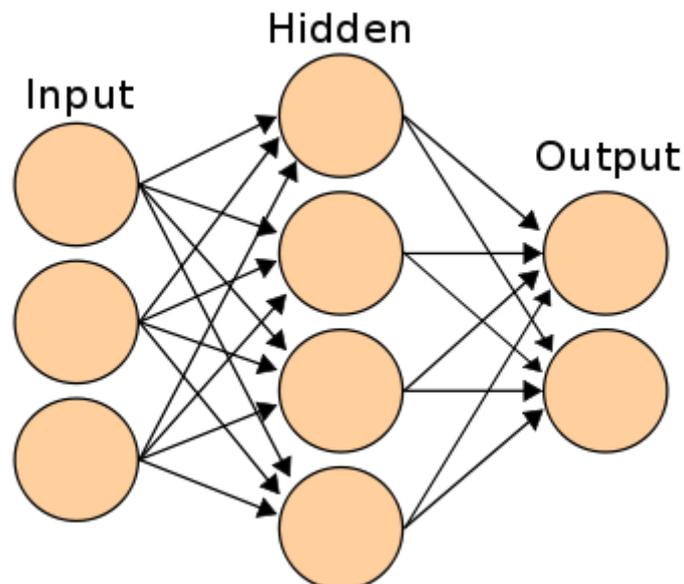


Figure 1: Standard artificial neural network; note there are multiple inputs and multiple outputs

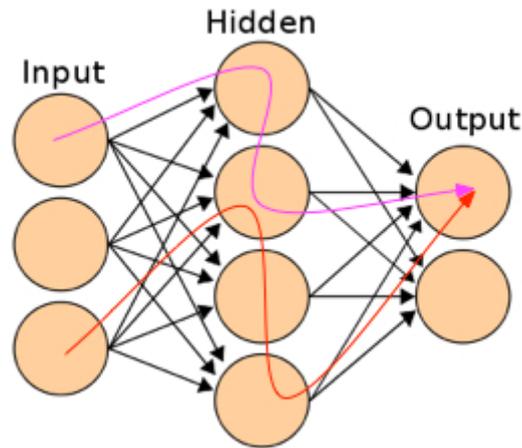


Figure 2: Different journeys through the network can start in different places and have different routes, but may end in the same place

The Environment Model is similar to neural branching, but in a safe, controlled environment where the system presents the user, on their journey through the network, with everyday issues on which they must make decisions.

On first entering the environment, the system introduces the user to a set of persons with whom they will interact. This set of users will remain the same throughout future visits; this will increase realism.

A node (the circles in Figures 1 and 2) is a location the user passes that contains a “weight.” The decisions the user makes and the paths the user follows determines the nodes the user passes through. The system can generate a background value score from the node weights. Using the Experience API will allow sending a statement at each node, thus creating a picture of the path traveled. Analysis of this information will provide trends in decision-making and allow for a real-time view of the paths taken and decisions made.

After users exit the environment, an administrator (or the artificial intelligence layer) can entice them back by sending information via email or SMS about what they did and the consequences of their decisions. Once the users return they may be introduced to new knowledge and enticed to make different decisions. These latter decisions may increase the background value and therefore show both a value gain to the organization and a change in behavior.

Each intervention will not have a single starting place, but multiple starting points. The output of the intervention can be one of many places that the journeyman (new word for user) can exit. The route from entry to exit is the path, and it forms one section of the journey. Dependent on the nodes that the user touches during the journey, the outcome value will be different (Figure 3). In other words, the organization may value one path more than another. Further intervention into the process and decision-making would allow the user to return, make different decisions, and follow a different path.

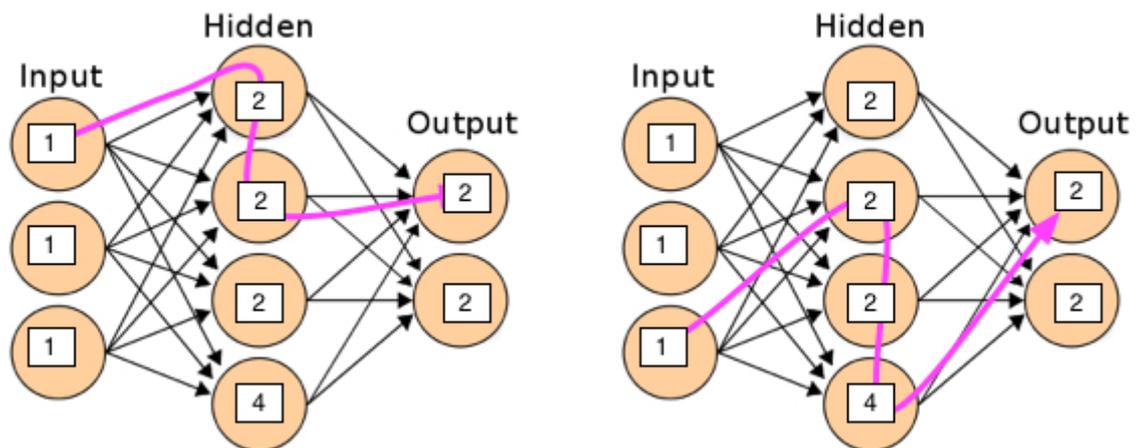


Figure 3: The difference between the first journey (left; score 7) and the second (right; score 11) show a behavioral change; the decision-making was different, resulting in a different path

The point to note is that there is no completion status. With the Experience API (Tin Can) this is not an issue: each journey will create multiple “statements,” showing the path and the value.

Adding a central place for information and inter-organization social networking will further allow journeymen to interact and discuss issues with peers, thus enhancing the experience.

Act 3: Creating a realistic environment

The realistic environment is key in providing success in this model. Although developers, with technology as their central focus, will immediately jump to 3-D models and walk-around games, that is not the vision of the approach for this model. Creating walk-around models and avatars may be suitable for some audiences, but the vision is for a serious game, one that uses photographs, text, video clips, and conversations in technology delivery. This will focus the journeymen and the developer on the content and the outcomes, not on the delivery technology.

A realistic environment is one in which events and actions in the game mimic, in fine detail, that which takes place every day in your organization.

A realistic environment will not be one thrown together using rapid tools, but one the developer carefully creates over a period of time. This means splitting your organization into departments and sub-departments and roles to re-enact everyday issues, decisions, and consequences.

The journeymen must enter the environment when requested to do so by the system, either through an email or SMS message. However, they can enter any time they wish to test their abilities or try out scenarios where they wish to learn.

Start here

The environment should become the first port of call in an organization for every learner wishing to test out his or her ability and to experience everyday issues they may have to confront during their employment.