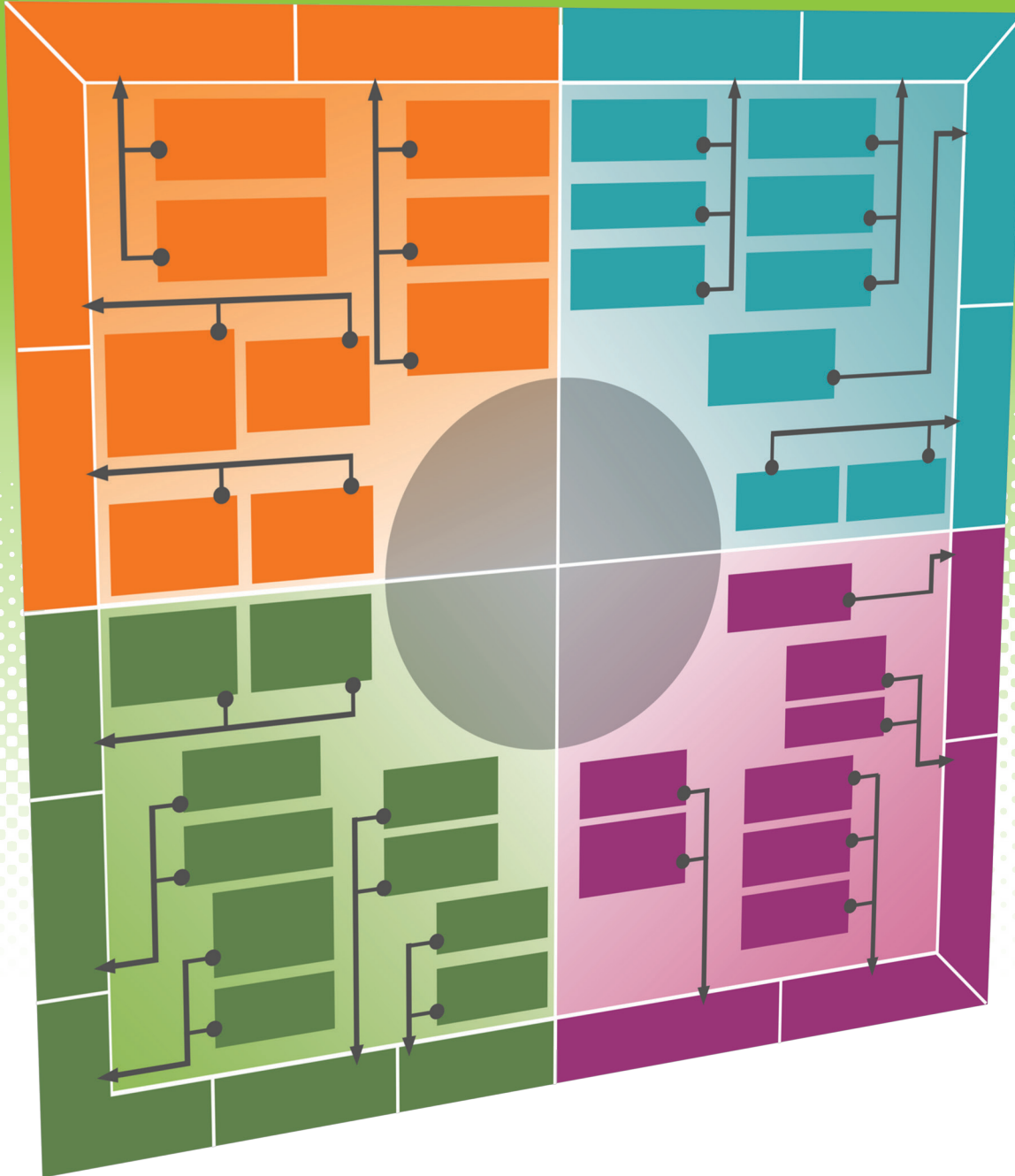# CCAF Context Design
Road Map for e-Learning

BY ETHAN EDWARDS
CHIEF INSTRUCTIONAL STRATEGIST

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LEARNING. FOR A CHANGE.

Context is one of the four critical components of Michael Allen's CCAF-based Design Model for designing instructional interactivity (that defines good interactivity as having Context, Challenge, Activity, and Feedback). Context refers to everything that surrounds and establishes meaning in a good interaction. It communicates to the learner how new skills relate to prior knowledge, the work or performance environment, and to real life. It creates a platform on which challenges can be built and made compelling. Context provides the scaffolding to make sense of the various controls that empower the learner to engage in activities to meet the challenge. Context prepares a platform through which feedback and reference resources will naturally flow.

Context should be designed as carefully as other components of interactivity, even though it is not uncommon to see e-learning shoe-horned into a pre-existing template or standard shell without any regard for the content at hand. When we design context, we ask, "What world can we create that will engage the learner in interacting with these intended outcomes?" In answering that question, we often come up with a good idea for an interaction setting (for simplicity, I'll refer to that as the IDEA), but then find that it falls flat somehow in its delivery. In truth, the context is more than just the IDEA—it is also necessary to decide specifically how it will be transferred to the learner's mind.

A fully developed context does more than just describe a scenario. In conveying the IDEA, the context simultaneously:

1. establishes a visual style that creates memorable imagery and connections
2. applies a narrative glue that will keep the learner's attention and guide them through the module

3. creates the framing environment that can impact the way the learner applies the new skills
4. provides a particular communicative tone to the dialog

An Example

For example, here is a screenshot from an e-learning example that is part of a bank teller training curriculum.

The context IDEA here is to place the learner in a banking situation where he/she will make decisions about individual financial instruments they encounter. In conveying this IDEA, the context also builds four specific elements:

Environment:
The Environment is realistic. The checks are meant to look like actual checks, with specific and accurate detail. The background imagery suggests an actual teller window looking out into the lobby. This provides many clues as to where and how the lesson content will apply to the learner's actual job.

Visual Style:
The Visual Style is a little cartoonish—simplified and sparse. This creates a useful separation from the complexity of the real world. It removes the distraction of potential irrelevant diversions and also somewhat eases the stress from what can be an environment of elevated pressure.

Narrative Glue:
The Narrative Glue here is created primarily through a goal of completion. The progress indicator shows the expected length of practice and is enough to propel the learner through repetition that could otherwise be off-putting.

Tone:
The Tone is professional. This is material of substance and consequence for the organization and the learner and it's delivered without embellishment.

Those were four choices made about context that turned out to be very effective. Alternatively, the context could have been a bank manager talking to the teller, or a game where checks were being passed across the screen and the user had to click on those that were non-negotiable (meaning a check doesn't meet one or more of six criteria for being legally approved), or a series of workbook-like questions with diagrams to convey the content. These all might be valid IDEAS for the context, but each would create a different Environment, Visual Style, Narrative Glue, and Tone for the instruction, which, in turn, affects how memorable and meaningful the training will be.

The goal of The CCAF Context Design Road Map for e-Learning is to help designers move toward better choices in how context creates these four elements.

How to Use the CCAF Context Design Road Map for e-Learning

This road map is designed to help you come up with ideas, not deliver a definitive solution. You will still need to think from a content point of view about what is a relevant context that will provide a meaningful framework to support your specific challenges. That is, you still need to come up with the IDEA. Sometimes that IDEA may be fully formed and this road map will help you specify the details. Other times you may struggle for how to envision a useful context, and perhaps these questions and suggested consequences will help focus your development of a good IDEA. This may sound a little loose, but for good or bad, that is the nature of design.
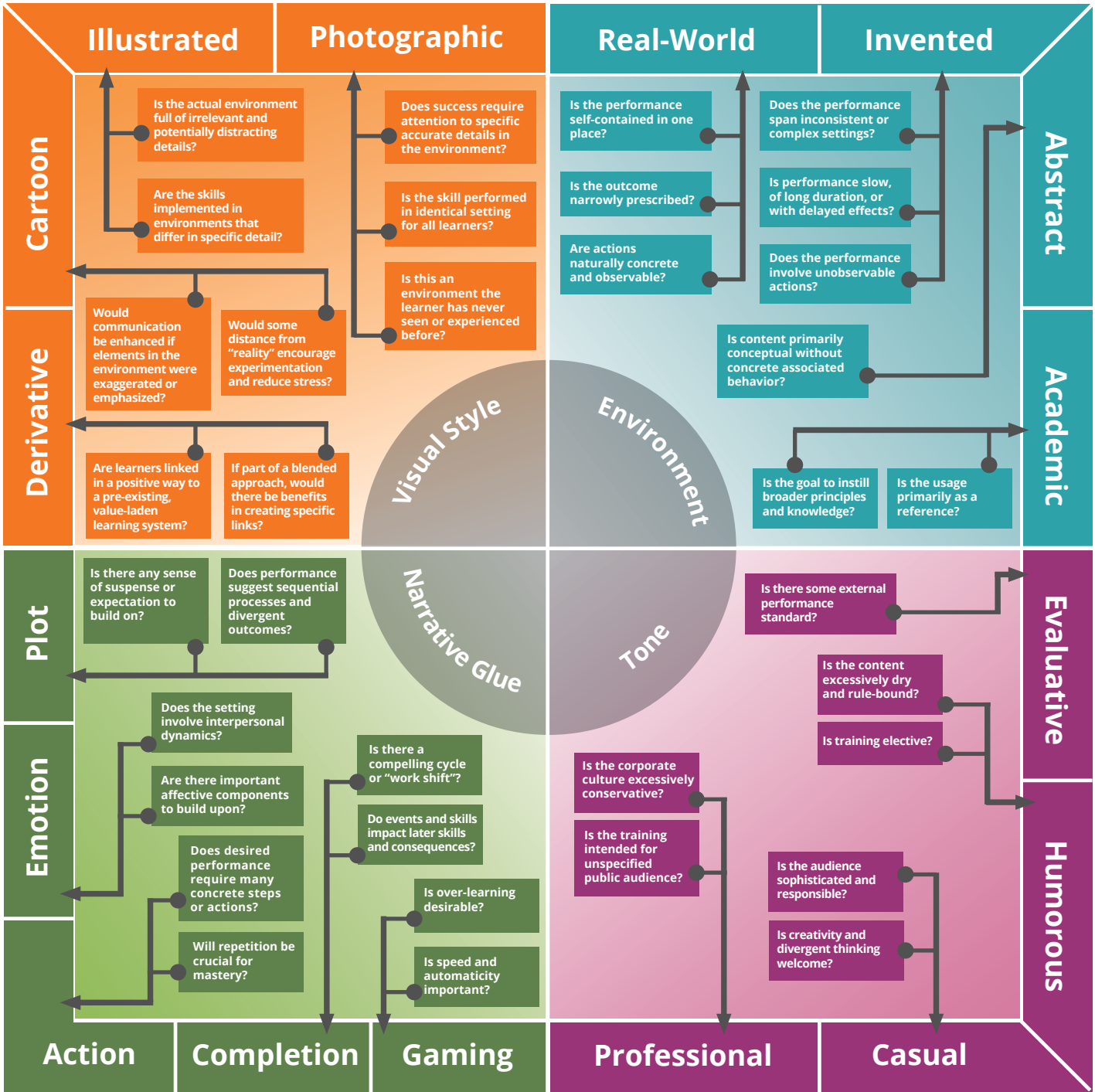
Here are the chronological steps I suggest you take for using this road map:

1. Start in the center and choose a quadrant to start exploring. It doesn't matter where you begin as you'll eventually work your way through all four elements. Ask yourself each of the questions. If the answer is YES, then follow that area out to the descriptor label on the border. If you can't answer a question, you may want to do some more analysis to find the answer. Even if you get a "yes," and especially if it is a wishy-washy "yes," you may want to keep exploring the questions. If you find paths leading to two different design choices, that's okay. You may want to weigh the importance of the questions as you make design choices.

2. Read the descriptions of each element that appear in this guide after the road map to consider the pros and cons of pursuing the suggested approach. Spend a few moments and think about how the elements apply to your IDEA.

3. When you are satisfied with your result, go back and repeat the process with another quadrant.

4. Use your results to guide the prototyping of the interactions. You will still need to balance your design with other constraints that impact the finished work such as: timelines, resources, your skills, etc. But, your choices will be guided by intention rather than chance or habit.

A few disclaimers:

• There could be many more questions added to this road map. However, I've found the included questions to be most useful while trying to maintain a manageable scope. As you gain insight, add your own questions.

• These elements are not unrelated. It is possible, and often desirable, to create hybrids: the Narrative Glue might combine Action and Gaming, etc.

• These are guides, not cookbook instructions. There is no single "correct" design. This road map is intended to provide assistance and clarity in making some decisions that otherwise might feel like barricades.

• By necessity, this map suggests a rigorous, linear structure that may feel cumbersome. As you gain comfort with these ideas, you will internalize many of these design issues and these choices will come naturally (and not necessarily linearly) as you consider your IDEA. But, following this map will be very helpful as you begin to explore these contextual elements of design.

The CCAF Context Design Road Map for e-Learning

Visual Style

Illustrated / Cartoon

- Is the actual environment full of irrelevant and potentially distracting details?
- Are the skills implemented in environments that differ in specific detail?

Photographic / Cartoon

- Does success require attention to specific accurate details in the environment?
- Is the skill performed in identical setting for all learners?
- Is this an environment the learner has never seen or experienced before?

Illustrated / Derivative

- Would communication be enhanced if elements in the environment were exaggerated or emphasized?
- Would some distance from "reality" encourage experimentation and reduce stress?
- Are learners linked in a positive way to a pre-existing, value-laden learning system?
- If part of a blended approach, would there be benefits in creating specific links?

Environment

Real-World / Abstract

- Is the performance self-contained in one place?
- Is the outcome narrowly prescribed?
- Are actions naturally concrete and observable?

Invented / Abstract

- Does the performance span inconsistent or complex settings?
- Is performance slow, of long duration, or with delayed effects?
- Does the performance involve unobservable actions?

Academic

- Is content primarily conceptual without concrete associated behavior?
- Is the goal to instill broader principles and knowledge?
- Is the usage primarily as a reference?

Narrative Glue

Plot

- Is there any sense of suspense or expectation to build on?
- Does performance suggest sequential processes and divergent outcomes?

Emotion / Action

- Does the setting involve interpersonal dynamics?
- Are there important affective components to build upon?
- Does desired performance require many concrete steps or actions?
- Will repetition be crucial for mastery?

Completion / Gaming

- Is there a compelling cycle or "work shift"?
- Do events and skills impact later skills and consequences?
- Is over-learning desirable?
- Is speed and automaticity important?

Tone

Evaluative

- Is there some external performance standard?
- Is the content excessively dry and rule-bound?
- Is training elective?

Professional

- Is the corporate culture excessively conservative?
- Is the training intended for unspecified public audience?

Casual / Humorous

- Is the audience sophisticated and responsible?
- Is creativity and divergent thinking welcome?

Visual Style

The Visual Style refers to the style in which information is presented to the learner. These categories are not necessary parallel or exclusive.
In general, these categories inform choices you will make about how your e-learning course will look and how it will reveal its content to the audience.

Photographic

Photographic images are either authentic or manipulated and used to illustrate the world in which the interactivity exists. This style is useful in providing a sense of acute realism, detail, and immediacy.
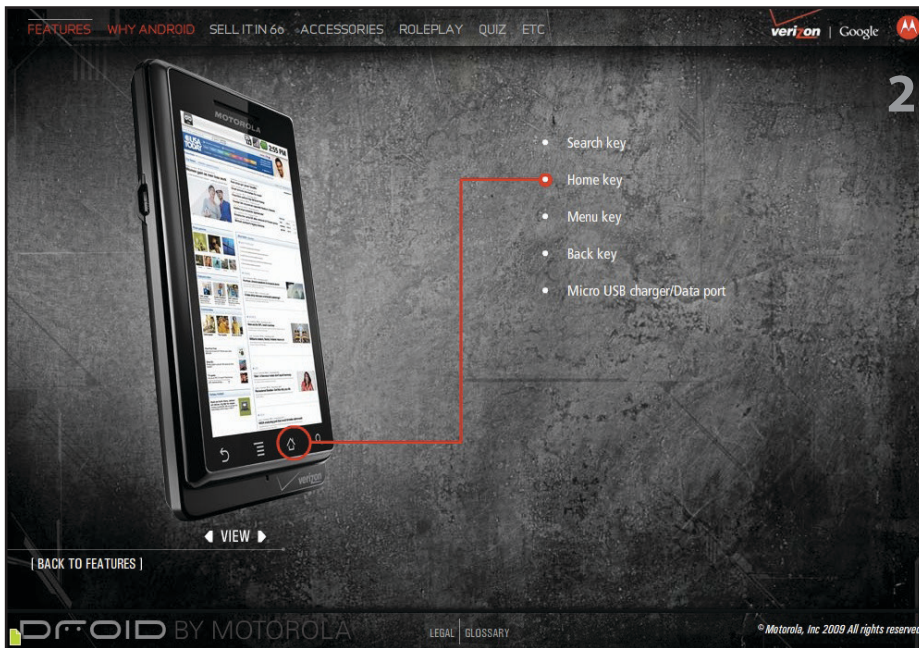
Pros: Professional, documentary feel, visually rich.

Cons: Necessarily includes irrelevant details, may be difficult to stage desired range of scenarios, can be a challenge to integrate intrinsic feedback fully, and may be difficult to update or edit.

Illustrated

Illustrations are drawn or rendered images used to create the learning space. They can span any number of styles including: flat, 3-D, realistic, stylistic, or varied color pallets. This type of graphic is very useful for establishing a signature "style," limiting or accentuating content, and establishing symbolism.
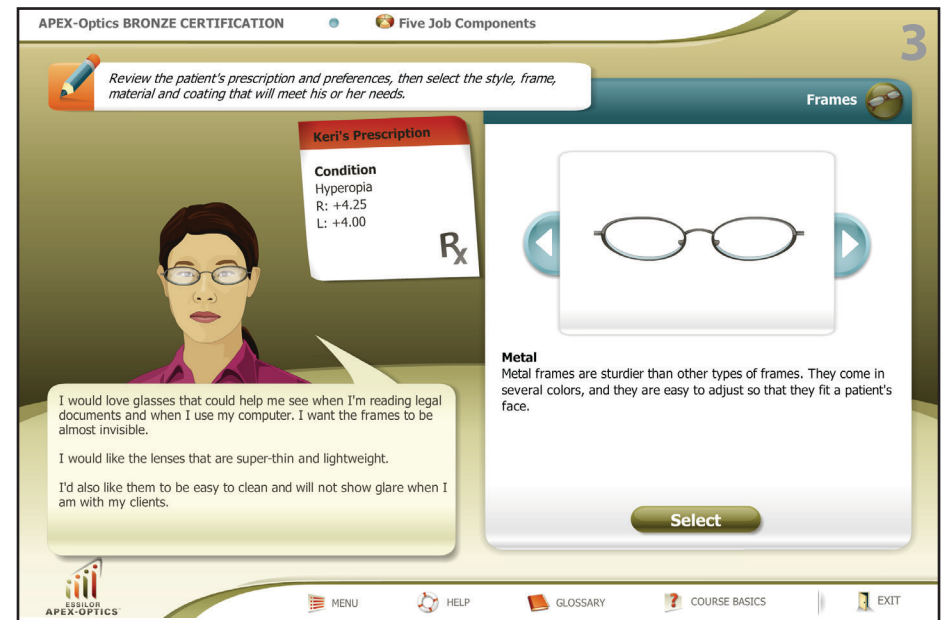
Pros: Can create any feel or mood desired; easily adjusted, very flexible; may suggest general environments, can decrease ambiguity.

Cons: Requires graphic illustration ability; can create a disconnect with real world.

Visual Style

The Visual Style refers to the style in which information is presented to the learner. These categories are not necessary parallel or exclusive.
In general, these categories inform choices you will make about how your e-learning course will look and how it will reveal its content to the audience.

Cartoon

Cartoons are drawn images in an informal sketched style, typically a non-realistic or semi-realistic drawing or painting, intended for caricature, humor, or symbolic representation.
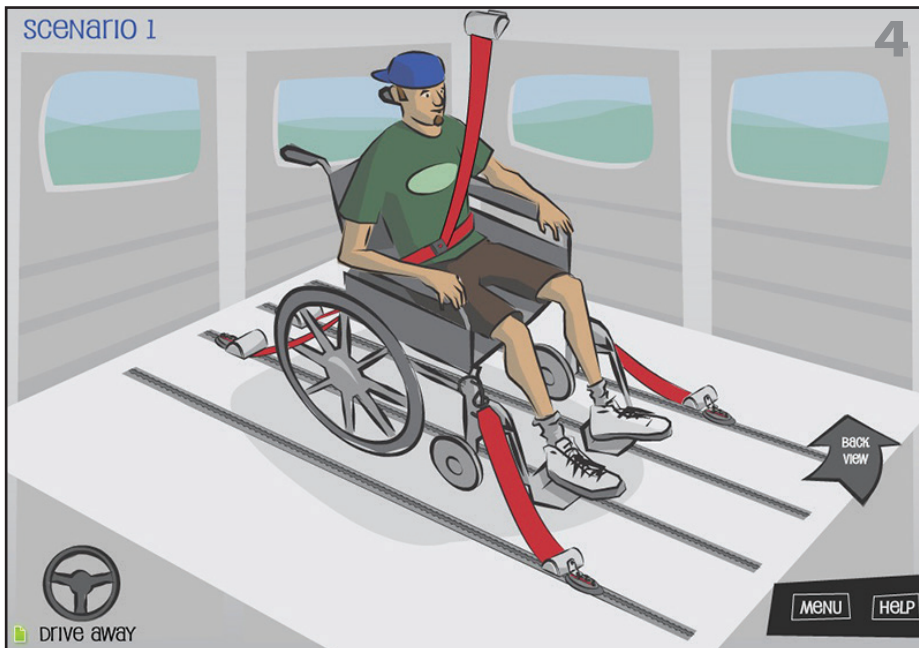
Pros: Can create a very accessible, friendly environment for some audiences. Is effective in creating a Narrative Glue where the learner may identify with a particular personality.

Cons: Requires extreme competence in creating an authentic Cartoon environment, may appear trivial, demands a carefully skilled narrative voice.

Derivative

Derivative is a representation of some other learning environment. It may be rendered in any style—photographic or illustrated.

Pros: Automatically assumes the authority, significance, and familiarity of the model source.

Cons: Can unnecessarily limit the variety and extent of interaction.

Environment

The Environment refers to the world or surrounding elements evoked by the context. The Environment may be represented in various styles or formats, but no matter the variation, it is the elements that ground the content into some tangible arena for the learner to connect to.

Real-World

Real-world environments try to recreate the actual performance environment as accurately as possible given the constraints of screen size and media. The intention is to give the learner an experience that feels as much like the real world as possible.

Pros: Automatically sets the stage for transfer from the learning environment to the performance environment; naturally communicates relevance; provides plenty of opportunity for helpful modeling; useful for introducing a new environment.

Cons: May be unclear if teaching a seldom occurring or subtle phenomenon. Reality might be extraordinarily boring when recreating a virtual representation; might deflect the main interactivity away from that which needs the most attention.

Invented

An Invented environment creates a fanciful or artificial world that is linked to real-life phenomena but can be manipulated to focus the learner's attention on particular skills or ideas as needed.

Pros: Allows creating variable focus on just those elements in the skills and content arenas that actually need a training treatment.

Cons: May create a disconnect with transfer to the actual performance environment. Requires careful design sensibility to achieve a convincing context.

Environment

The Environment refers to the world or surrounding elements evoked by the context. The Environment may be represented in various styles or formats, but no matter the variation, it is the elements that ground the content into some tangible arena for the learner to connect to.

Abstract

An Abstract environment attempts to present information and skills in a manner somewhat removed from concrete environments. Abstract environments include structures like visual-spatial content maps, knowledge networks, or relationships between concepts.

Pros: Can be very efficient in communicating sophisticated content and higher order skills to a knowledgeable and skilled user base. Is applicable to a wide range of application environments.

Cons: May not provide enough fundamental concrete knowledge and specific performance hooks for low-level learners, or learners whose responsibility is limited to a very regimented performance expectation.

Academic

Academic means relying on established "Academic" environments, like textbook, workbook, or test, to provide meaning. This may seem like "Abstract," but it is sort of the opposite and generally more severely limited by the meaning of the Academic method being represented.

Pros: Is a very quick way to establish authority and expectation.

Cons: Generally relies more on coercive motivation than meaningful inclusion of the learner in the training activity.

Tone

Tone refers to the voice or mood of the overall interaction. Its impact is centered on the affective factors that can impact learning, regardless of actual content presentation or evaluation methods.

Professional

A Professional tone is the most traditional and default tone. The style is somewhat formal and serious, often academic, and official.

Pros: Automatically commands a level of importance. Is consistent with most traditional training references so it is easily modeled on existing sources.

Cons: May be off-putting, stodgy, and easily ignored.

Casual

Casual is whimsical and adds a playful or even quaint element to the tone. Applied in a professional environment, it can add character, light-heartedness, flow, and individuality that enhances the distinctiveness and memorableness of a presentation.

Pros: Makes content more memorable, accessible, human, interesting.

Cons: Requires great skill in achieving a level that is neither cloying nor contrived. Can be perceived as not serious by outsiders.

Tone

Tone refers to the voice or mood of the overall interaction. Its impact is centered on the affective factors that can impact learning, regardless of actual content presentation or evaluation methods.

Humorous

Working in the same direction as Casual, Humor attempts to engage the learner through amusement. The difference is subtle but does represent a different tonal approach.
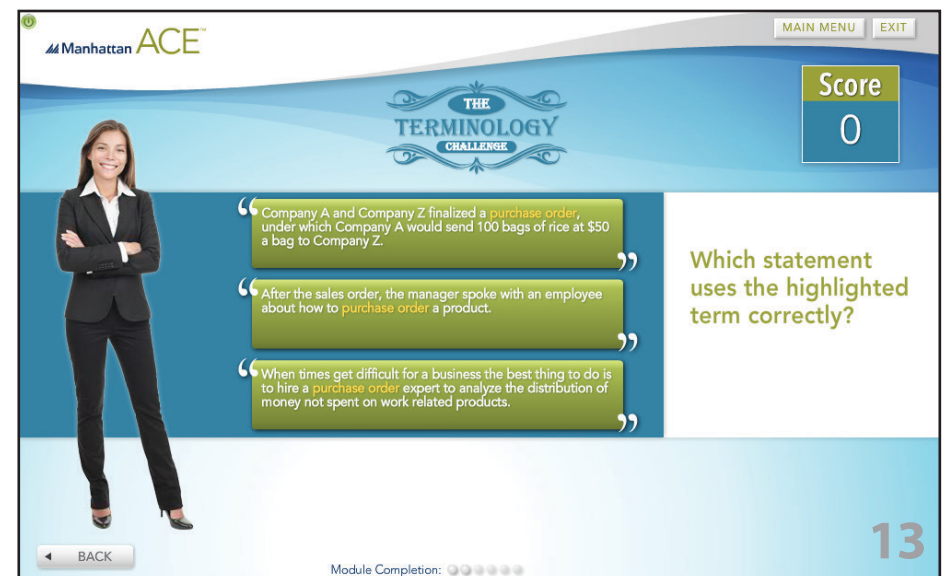

Pros: Is generally very enjoyable and memorable; makes learning feel enjoyable

Cons: Is almost unbearable if too specific, limited, or mean-spirited.

Evaluative

An Evaluative tone sets a testing or quizzing mood. It is often paired with an Academic environment. This "no fooling around" atmosphere elevates focus and performance as the main desired outcome.

Pros: Can create focused performance, appeals to "professionals" who otherwise feel that "training methods" are unnecessary.

Cons: May provide an unforgiving or pressured learning atmosphere that doesn't encourage exploration or reflection.

Narrative Glue

The Narrative Glue refers to the hook or through-line that will maintain the learner's interest and lead the learner's attention from the beginning to the end of the experience.

Plot

Plot refers to the events that make up a story, particularly as they relate to one another in a pattern, sequence, cause and effect, or how the viewer experiences the narrative. Simply put, Plot gets the reader from Point A to Point B.

Pros: Compelling when tightly integrated with the purpose of the narrative. Suspense, character, conflict, and climax can all be part of Plot. Writing can still create interest using Plot devices even when the content is primarily expository.

Cons: May deflect interest away from the actual content if not constrained. Can get in the way when text is to serve a reference purpose.

Emotion

Emotion consists of affective elements that impact our senses beyond the objective content at hand. Emotions such as love, sadness, empathy, surprise, and humor, in addition to tapping into existing memories, can elevate the significance and impact of an experience.

Pros: Ability to tap into multiple sensory and cognitive domains, encourage more complete immersion in and connection with the content. Simply expressing information in human terms is sufficient.

Cons: Difficult to execute. Can easily feel forced and insincere.

Narrative Glue

The Narrative Glue refers to the hook or through-line that will maintain the learner's interest and lead the learner's attention from the beginning to the end of the experience.

Action

Continuous Action and effort can be an essential tool in bringing a learner along through a lesson sequence. Like in an action movie, progress is achieved simply through constant and constructive activity.


Pros: Learners maintain a near-constant state of accomplishment. Great for skills that require practice and specific performance more than thoughtful reflection and subjective decision making.

Cons: If Action isn't tightly linked to real-world application, can work against transfer to work environment.

Completion

Completion can sometimes reinforce or simply replace a meaningful Narrative Glue by clearly setting a goal and tracking the learner's progress toward that goal. The goal can be tied to other context elements or simply stand on its own.
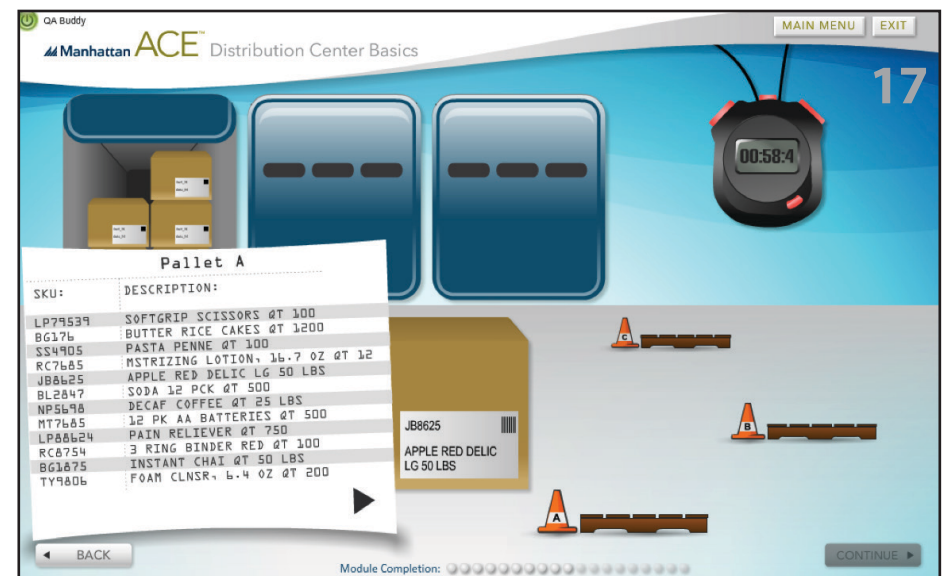
Pros: Unambiguous and clear. Deflects a potential sense that the lesson is "wasting time."

Cons: Can sometimes feel arbitrary and irrelevant if not connected to some other element in the lesson or in the blended learning or work environment.

Narrative Glue

The Narrative Glue refers to the hook or through-line that will maintain the learner's interest and lead the learner's attention from the beginning to the end of the experience.

Gaming

Gaming is creating an artificial world of challenges, rewards, rules, incentives, and identities to engage the learner over time. (Note: all of the Narrative Glue elements are likely to be part of a game; here context is explicitly designed to appear as part of a defined game.)

Visual References

1. Frontline Loss Prevention: Negotiability. Courtesy, Union Bank of California.
2. DROID by Motorola. Courtesy, Motorola, Inc.
3. APEX-Optics Bronze Certification. Courtesy, Essilor of America.
4. Wheelchair Securement. Courtesy, River City Public Transit – The Center for Transit e-Learning (C-TEL).
5. Law Enforcement Response to Terrorism. Courtesy, California Commission on Peace Officer Standards and Training (POST).
6. AutoNation Used Vehicle Sales Associate. Courtesy, AutoNation, Inc.
7. Journeys Sales Training. Courtesy, Genesco, Inc.
8. Supervisor Effectiveness: Diversity. Courtesy, Corning Incorporated.
9. APEX-Optics Bronze Certification. Courtesy, Essilor of America.
10. How To Sell To Women. Courtesy, Motorola, Inc.
11. Journeys Sales Training. Courtesy, Genesco, Inc.
12. DBi Laborer. Courtesy, DBi Services.
13. Supply Chain Basics. Courtesy, Manhattan Associates
14. Supervisor Effectiveness: Substance Abuse. Courtesy, Corning Incorporated.
15. Pediatric Weight Management. Courtesy, Kaiser Permanente.
16. Railroad Safety for Professional Drivers. Courtesy, Operation Lifesaver.
17. Distribution Center Basics. Courtesy, Manhattan Associates.
18. Restaurant Cook-time Training. Courtesy, Denny's.

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Pros: Can be very engaging, maintaining learner interest over multiple sessions and performance levels. Can provide intensified practice opportunities that would be unworkable in traditional environments. Can foster interaction between students through leaderboards, social media, etc.

Cons: Can be very expensive to do well. Poorly executed games can be less engaging than boring content delivery. Can be viewed (often mistakenly) as trivial.

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Ethan Edwards
chief instructional strategist
@EthanAEdwards

Ethan Edwards draws from more than 25 years of industry experience as an e-learning instructional designer and developer. He is responsible for the delivery of the internal and external training and communications that reflect Allen Interactions' unique perspective on designing and developing meaningful and memorable e-learning programs. Edwards is the primary instructor for ASTD's e-Learning Instructional Design Certificate Program. In addition, he is an internationally recognized presenter on instructional design and e-learning, has written many white papers on creating effective e-learning, and regularly blogs for Allen Interactions' e-Learning Leadership Blog. Ethan holds a master's degree and significant doctoral work in educational psychology from the University of Illinois – Urbana Champaign. Find Ethan on Google+.

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