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Learning in a Flash

Abstract

Text is no longer the primary means of learning transfer. Character-based simulation, in which animated characters provide a social context that motivates learners, can improve cognition and recall and bodes well for high-impact e-learning.

Keywords

e-learning, content, character-based simulation, cognition

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Learning in a Flash

By Olivier Serrat

Knowledge Solutions

Slowly, E-Learning Comes of Age¹

Text is no longer the primary means of learning transfer. Character-based simulation. in which animated characters provide a social context that motivates learners, can improve cognition and recall and bodes well for high-impact e-learning.

business, community, educational, and governmental organizations it has for some time been an article of faith that the delivery of content through information and communication technologies can-through democratization of and access to knowledge-greatly expand the realm of how, when, and where increasingly mobile learners can engage. The world over, e-learning-viz, all forms of electronically supported learning and developmentis mooted as a cheap and effective way to provide people the everyday learning opportunities required, cradle to grave, to improve organizational outcomes



in the modern labor market.²

Notwithstanding, 20-odd years after the World Wide Web was launched in 1991, it

Education is not the filling of a pail, but the lighting of a fire.

-William Butler Yeats

must be admitted that key concepts and understandings of e-learning are still emerging. In brief, most of the difficulties that have beleaguered attempts transfer knowledge to

- E-learning intersects numerous fields of thought and practice. These Knowledge Solutions do not take up "higher-end" matters such as the role of e-learning in knowledge management, organizational performanceboth individual and collective, or organizational change.
- Take the education sector. As you would expect, e-learning is suited to flexible, distance learning. Because knowledge is no longer tethered to lecterns or a teacher's desk tertiary and secondary education is seen prone to technological disruption just as encyclopedias, journals and magazines, movies, music, newspapers, and television, to name a few other information-centric industries, became from the early 2000s. (Certainly, brickand-mortar institutions of higher learning are growingly challenged by commercial providers of lecture series; for-profit universities; nonprofit learning organizations, e.g., the Khan Academy; online services, e.g., iTunes U; and specialized training centers that issue instruction and credentials in sundry trades and professionsall of whom can easily scale delivery of online instruction.) But, there is more: e-learning can also be used in conjunction with face-to-face teaching in blended learning mode, be that synchronous or asynchronous. Therefore, some think that the traditional model of instruction in universities—the main societal hub for higher education since the end of the 11th century-will soon be inverted: instead of attending lectures on campus and after that heading off to work on assignments students will first scrutinize online material and then gather in hybrid learning spaces to explore a subject in rich conversations (or laboratory exercises) with professors and fellow students. Proponents of blended learning reckon that the Flipped Classroom model may even enhance critical thinking. (Paradoxically, since economic reasons determine much in higher education, traditional but exclusive face-to-face tuition may become the privilege of a few while demand for global standardization in some fields may lower the level in many cases. In reality, consolidation and diversification are not mutually exclusive.)

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electronically owe, so far, to exagerated weight on specific technologies—typically to transmit for easy (re)use much smaller units of content than traditional educational and other learning and development settings do—at

the expense of a commitment to improving the experience and outcome of learning.³ (Easy things first, one might argue.)

The point is that digital media alone does not guarantee message uptake: like any learning process, e-learning depends on effective communication of human knowledge in social context.⁴ Still, even if one-way communication attenuates the learning experience, the technical affordances⁵ of the internet

The function of education is to teach one to think intensively and to think critically. Intelligence plus character—that is the goal of true education.

—Martin Luther King, Jr.

mean that such communication is for sure here to stay (and hopefully improve). Therefore, especially in the ever more common mode of self-paced, solitary learning, the greatest challenge of e-learning is to make training programs a dynamic, immersive experience akin, to the extent possible, to the learner engagement that occurs in a lecture hall or classroom.

I would rather entertain and hope that people learned something than educate people and hope they were entertained. —Walt Disney

Making E-Learning Come Alive

In the digital world of the 21st century, text is no longer the primary means of learning transfer: people, certainly those in the workforce who have grown up with computer games, are more and more drawn to multimedia. Flash animations⁶ that skillfully entice⁷ people to construct their own meaning from

content and apply instruction to their lives after program completion are a working example. Character-based simulation, for one, bodes well for high-impact e-learning. Animation is the act, process,

or result of imparting life, hence, activity, interest, motion, spirit, or vigor. (Else, it is the quality or condition of being lively.) Animated characters⁸ that in well-designed social roles speak, interact, and guide the learning experience can through storytelling⁹ enhance e-learning by providing a "real world" social context, e.g., a case study, that motivates learners, thereby improving cognition and recall for learning outcomes.

In all aspects of life, we take on a part and an appearance to seem to be what we wish to be—and thus the world is merely composed of actors.

-François de La Rochefoucauld

Byron Reeves¹⁰ recognizes that human-media interactions are intrinsically social: therefore, character interfaces

•••••

³ In the education sector, to use our example, most internet classes have consisted largely of videotaped lectures, sometimes broken into brief segments and punctuated by on-screen exercises and quizzes. Elsewhere, automated Powerpoint presentations are still a staple.

⁴ The Knowledge Solutions on e-learning and the workplace contend that if e-learning is to justify the publicity that surrounds it proponents should understand its organizational environment and evolve design principles. See ADB. 2010. *E-Learning and the Workplace*. Manila. Available: www.adb.org/publications/e-learning-and-workplace. And, for sure, learners learn in different ways: some learn best by engaging in dialogue; others do so by reading text, watching a demonstration, or playing a game—each takes a different path. Through large-scale data processing and machine learning, information and communication technologies may in the not-too-distant future incorporate adaptive learning routines that help tailor a learning environment to the needs and learning styles of individuals— at any rate where a body of knowledge can be made explicit. A far cry from what is currently at hand, such technologies would measure meaning, promote learning, and evaluate new understandings and capabilities. But, we are not there yet. What is more, pace the availability of technology, purveyors of e-learning must also be equipped with systems and competences for content creation and management, learning activity delivery, and learning management.

⁵ These include cloud-based computing, digital textbooks, high-quality streaming video, just-in-time information gathering, and mobile connectivity.

⁶ A Flash animation is a film created with Adobe Flash or similar software. Such software manipulates vector and raster graphics to animate drawings, still images, and text.

Media psychologists say the "e" in e-learning should be understood to mean exciting, energetic, engaging, and extended, not just electronic.
Avatars, especially, but also actors, pedagogical characters, and personas are four terms for objects that represent (or stand in for) humans

⁹ Organizations are rediscovering the significance of the primeval skill of storytelling. In a globalizing world, this owes to quickening realization that technology, more precisely for information and communication, is but a reproducible tool. Tools are designed for functionality and assessed against utility and reliability; but they can neither create complex meaning and understanding nor help frame common values and beliefs, essential to resilient human organization in conditions of uncertainty; on the other hand, stories do just that, not least of all by disclosing and leveraging tacit knowledge, meaning, human capital. Resilience is the capacity to undergo deep change without or prior to a crisis; here, tools are not enough.

¹⁰ Byron Reeves. 2004. The Benefits of Interactive Online Characters. Center for the Study of Language and Information. Stanford University.

bring much-needed social intelligence to e-learning. Specifically, from a teaching perspective, the 10 benefits of character interfaces Reeves identifies derive from the fact that

- Characters make explicit the social responses that are inevitable (in human-computer interaction).
- Interactive characters are perceived as real social actors.
- Interactivity increases the perceived realism and effectiveness of characters.
- Interactive characters increase trust in information sources.
- Characters have personalities that can represent brands.
- Characters can communicate social roles.
- Characters can effectively express and regulate emotions.
- Characters can effectively display important social manners.
- Characters can make interfaces easier to use.
- Characters are well liked.

Don't lies eventually lead to the truth? And don't all my stories, true or false, tend toward the same conclusion? Don't they all have the same meaning? So what does it matter whether they are true or false if, in both cases, they are significant of what I have been and what I am? Sometimes it is easier to see clearly into the liar than into the man who tells the truth. Truth, like light, blinds. Falsehood, on the contrary, is a beautiful twilight that enhances every object.

Designing Character-Based Simulations

Characters never tire and are always available; all the more reason, then, to design them well with emphasis on interactions between actors in the interface, not technology. To enhance learning comprehension, characters usually assume one or more of four roles to guide learners through a training program: (i) authority figure, (ii) cooperative co-learner, (iii) expert instructor, and (iv) peer instructor. Notwithstanding, in any case, the characters must exude authenticity,¹¹ entertain, and demonstrate soft skills through voice, first and foremost, as well as body language.

-Albert Camus



Note: Of course, even if this is less frequent, a fifth role for a character might also be that of a learner, e.g., a professional or student, who develops a skill, gains knowledge, takes up beliefs, or acquires a behavioral tendency. Source: Author.

¹¹ Does the design tell a story with a human element? Are the characters likeable? Do they have feelings? Where do they exist, live, or work? What contextual background can one give to make them more realistic? What tone of voice might best reinforce content?



Jennifer De Vries¹² offers helpful tips for designing character-based simulations:

- Create Life-Like Characters. Be purposeful about seemingly trivial and non-instructional characteristics such as body language, clothing, hairstyle, speech and idiom, and, especially, voice.
- Plan the Scenes Before Development. Plan scenes with storyboarding techniques and pace them for learners.
- Check for Understanding. Ensure that characters interact with learners in common situations and verify with questions that learning objectives are being met.

Never in the history of cinema has a medium entertained an audience. It's what you do with the medium. —John Lasseter

- Focus on Learning Objectives. Get to the point: character development can be distracting.
 - Use Text to Speech before Recording the Final Script. Draft the script first and use plain text on screen until it is finalized and recorded in audio with real voices.

There have been great societies that did not use the wheel, but there have been no societies that did not tell stories. —Ursula K. Le Guin • **Consider a Multi-Skilled Team.** Engage a script writer to craft the storyboard and draft text; a graphic artist to draw the characters, backgrounds, and other artwork; and a web developer to integrate Flash, wave, graphic, and other files.

• **Run a Pilot.** Pilot test to gather what normal questions learners may have, that should reasonably be addressed by the characters.



¹² Jennifer De Vries. 2004. Character-Based Simulations: What WorksTM—The Use of Character-Based Simulations in E-Learning. Bersin & Associates.







Further Reading

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Asian Development Bank

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