

## On "Educational" Computer Games

Submitted by Sarah Fitz-Claridge on 8 July, 2003 - 21:12

Computer games are wonderful tools for education:

*Now, why is playing video games good for you? They provide a unique learning environment. They provide something which for most of human history was not available, namely, an interactive complex entity that is accessible at low cost and zero risk.*

However, there is one kind of video game that users typically find rather boring, namely the self-proclaimed **educational** (<http://www.reuters.com/%20newsArticle.jhtml?type=technologyNews&storyID=3043411>) games:

*Of the three games in the math title, "DigiHog Drop" is easily the most challenging. Players must make complete equations using little creatures marked with numbers. "Asteroid Smash" is a moderately mindless arcade game where players shoot asteroids that are labeled with solutions to various equations. In "Galactic Pinball," players use the arrow keys to roll a ball into a hole that corresponds with the answer to a math question.*

The salient feature of these games is that the task you are expected to perform has nothing to do with the logic of the situation in the world portrayed in the game. If you were actually going through an asteroid field your priority would not be to hit the asteroid with a certain number on it. The criterion for what you have to hit next has not been designed for the purpose of making the game enjoyable but with a predetermined ulterior motive. Thus the game has no integrity; this not only impedes the creative designer but, more importantly, limits the amount of creativity that the player can put into the game. Which makes it more boring and *less* educational. That some students may prefer these games to a standard lesson is a sad reflection on the nature of lessons: it does not alter the fact that "educational" games are a bad way to learn arithmetic, or English or history or whatever. Solving the *interesting* problem in the computer game has no bearing on what  $8+8$  is, or how to conjugate a verb, or how to spell "cat", or why Churchill decided not to appease Hitler. If someone is interested in these problems they won't be interested reproducing some list of facts, whether written on asteroids or not, but in the explanations behind these facts and that is the one thing these games do not address.

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### Comments

#### **Investing creativity**

Submitted by a TCS reader (not verified) on 9 July, 2003 - 03:08

*the game has no integrity [which] limits the amount of creativity that the player can put into the game*

Please can you expand on this slightly. Does mild revulsion at the game's agenda makes it impossible for one to play it whole-heartedly without jeopardising one's self-respect?

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## **Not all are bad!**

*Submitted by a TCS reader (not verified) on 9 July, 2003 - 11:59*

Some educational games are silly and boring, but perhaps it's too exaggerated to say that ALL are bad and completely useless. I agree if a kid wants to shoot stuff, you should buy Bugatron :) But some educational games for toddlers are cool, I've found some in [Flix \(http://www.flixprod.com/\)](http://www.flixprod.com/), they seem to not mix game objectives. We like [Boowa & Kwala \(http://www.boowakwala.com\)](http://www.boowakwala.com/) too. [Leo \(http://eraserewind.blogspot.com/\)](http://eraserewind.blogspot.com/) (Why isn't the P tag working as I want it!)

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## **Integrity**

*Submitted by a TCS reader (not verified) on 9 July, 2003 - 20:22*

Game with no integrity = game that doesn't really make sense, stupid, crappy game, based on false ideas about what "education" is.

Like how you learn more maths from shopping than from watching "Numbertime", which is an "educational" maths programme that basically manages to make maths irrelevant, pointless, stupid and dull while patronising its viewers half to death into the bargain.

Alice

[http://libertarian\\_parent\\_in\\_the\\_countryside.blogspot.com/](http://libertarian_parent_in_the_countryside.blogspot.com/)  
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## **Integrity**

*Submitted by a TCS reader (not verified) on 9 July, 2003 - 23:58*

A feature of fiction (including games) is that the world of the story should have a consistent internal logic. Then one experiences/manipulates within the context of this consistent world.

Reason crunches patterns to give plausible guesses. Learned body skills are an application of consistent solution to a predictable problem.

Feed in an inconsistent world and you are, at best, doing two simultaneous, orthogonal things. At worst, neither.

"Educational" problems *can* be consistent, eg: a crypto puzzle in a spy game. Just takes more creativity than possessed by most "teddy bears and primary colors" edugame companies.

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## **It's really up to the kids, not to you!**

*Submitted by a TCS reader (not verified) on 10 July, 2003 - 07:24*

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You know, kids might like the 'Numbertime' program, might like the teddy bears and the primary colours \*hint  
\*hint\*

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## **Quite Right! But...**

*Submitted by Sarah Fitz-Claridge on 10 July, 2003 - 09:13*

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*You know, kids might like the 'Numbertime' program, might like the teddy bears and the primary colours \*hint  
\*hint\**

And if they do, then of course they should have access to it. Just as, if they want to go to school, their parents should support them in that. TCS criticisms of these things does not imply any suggestion that children should be denied those choices.

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## **Investing creativity**

*Submitted by a TCS reader (not verified) on 13 July, 2003 - 17:41*

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*Feed in an inconsistent world and you are, at best, doing two simultaneous, orthogonal things. At worst, neither.*

I get the bit about the educational game being phony because it's two very different tasks bolted together, one the lure and the other the 'educational' bit.

What interested me was the way that the piece seemed to refer to creativity like it's a fundamental thing, like knowledge.

I wondered if you believe that creativity is a resource that our minds recoil from doling out when our moral or esthetic values are offended.

Could it be also that the game sends out a signal that the sanctioned 'educational' bit isn't actually very valuable, because if it was, why does the player have to be tricked into learning it?

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## **Educational games**

*Submitted by Woty on 14 July, 2003 - 05:17*

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I generally agree with the criticism of educational games, but I think some can be useful in a limited way. Some information is useful to know, but boring to memorize, and some things require practice that can be boring. Educational games can sometimes make this sort of memorization and practice more pleasant.

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