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New Business Models for Learning
we need them badly…and we have to invent them

By Marc Prensky

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"Our margins are so high they should probably be illegal".
– Seller of a currently popular item

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New business models – everybody talks about them and nobody has figured them out. In this age of the never-ending conference, this would probably be the most fruitful one we could organize.

So I'm going to try to set one up. Any one want to join me?

There are various ways to define "business model." (see below) I define it as **the way to get content and tools built by creative people into the hands of users, with everyone satisfied that they are fairly compensated and charged**. The business model is certainly one of the most difficult pieces of the educational products equation.

I have heard some, particularly academics, throw up their hands and say – "I have nothing to add here: the business model is the role of business people." But because *no one* currently has the answer, it makes no sense for anyone smart and concerned to bow out of this discussion claiming non-expertise or ignorance. This has been, in the past, the plight of our education system in general – the really smart people haven't given it as much thought as those motivated by dollars. I think this may be changing, as I will discuss. Typically in this country we don't just leave our government to the experts without submitting our opinions, ideas, and suggestions. Neither should we suppress our opinions (or not form any) about how things should work in all parts of education. Otherwise it might just be "The Governator" who decides!

The business model is also, of course, a tough piece of the entertainment equation, and we are already seeing changes in that industry that can hopefully light our way to something new in education.

My Position

Twenty five years ago, a naive classical guitarist who wanted to earn a decent living, I entered Harvard Business School, expecting them to teach me "how to do business." What I discovered, to my considerable shock and dismay, was that they couldn't teach me that, because, in fact, no one really knew! People make up their business models and procedures as they go along, mostly failing,

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occasionally succeeding. So despite my fancy degree I, too, have no definitive answers (or even claimed expertise) on this, but I will try to offer here some observations, thoughts and ideas.

In a nutshell, I believe we are about to see a profound shift away from the profit model as a motivator and bringer of software-based innovation and products in education, towards a process of creation for its intrinsic rewards, along with new processes of successful group innovation. This will happen (and is happening) in many other areas as well, but, given its unique public/private structure, I think education will be particularly affected. Combined with computer technology's profound "disintermediation" effect, which eliminates the need for a "middleman" structure between producers and consumers of creative products and tools, what we will soon see, I strongly suspect, is a sea change in the way people view creation and consumption of educational products.

It is our job to be sure they have a financial model all can live with and thrive in.

We already see the beginnings of these changes in markets such as music and movies, where behavior referred to by parents as "stealing" is considered normal and acceptable by their kids. If instead of taking a "Clockwork Orange" approach to re-indoctrinating our kids to our "old" ways of thinking we instead take the position that they may be pointing the way to something better, we might, at this critical juncture in time, come up with some useful new ideas.

In my thinking about this issue, the work that has been the most influential for me is that of Lawrence Lessig of Stanford Law School, particularly his book *The Future of Ideas*. This is further expanded upon on his site and weblog. (See: http://lessig.org/blog/.) Although Lessig's ideas are not specifically aimed at education, but rather at all intellectual property, his thesis is, I think, an important one for us. It is that innovation is fostered by openness and sharing within an "innovation commons," not by privately held intellectual property, and that creators and owners of intellectual property can benefit more from deciding how much to share for free – with certain conditions – than they can from keeping it all to themselves.

What's a Business Model, Anyway?

When we say "business model," what are we really talking about? You saw my definition above. But not everyone agrees. My friend the venture capitalist tells me a business model is just "a way to make money." (As in a recent investment report, "We believe the company offers investors an extraordinary business model that drives visibility, scalability and flexibility, and the X company's strong first quarter results support our investment thesis." Source: knowledgenotes@thinkequity.com)

Still, whatever your definition, it is clear that some "business models" are better than others in terms of the value they offer the customer. Despite my business school training, it is hard for me not to wonder whether "we have an extraordinary business model" is often not just code for "how long until the customer understands exactly what we are doing?" As we have recently seen with Napster, Linux, and the World Wide Web, many extremely smart people are innovating today not for a share of the pie, but because they object to the idea of there being a pie (of outrageous profits) to be shared. I think this is and will certainly be the case in education.

As is hopefully by now clear, my own view of a useful business model in education software is certainly not "a way to make money." It is rather a way for all the people in the supply chain to be motivated to continuously innovate and produce results that help improve the education of our kids, as well as a way for all educational consumers, whether they be school districts, schools or individual learners, to be able to (and to afford to) use only the very best products available, and upgrade them continuously.

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My venture capitalist argues that education is similar to pharmaceuticals – you have to have the high profits in order to fund continued investment in research, most of which doesn't pan out. I think this is a false analogy, and that there are ways we can get our R&D paid for in other ways. It is important that we do so, since few, if any, of the companies selling educational software today are making money on a fully-costed basis (i.e. when all the investment that went into them is considered.)

The US education system is an extremely fragmented market in almost every one of its segments.   In K-12 there are 15,000 school districts (http://nces.ed.gov).   We have 4,100 colleges and junior colleges with an average of perhaps 30 departments each. This system has produced two results, neither of which is good. In some instances, the combination of state regulation and the search for buying power has led to an "either/or" system, such as in textbooks, where either a state buys X company's product or it buys Y's, not both. In other instances it has led to a hodgepodge of software bought by individuals for their own purposes, little of which works together.

Both of these models are disastrous for educational software. In the first case, since we are still in a huge state of creation and innovation, it is important that we don't box ourselves in to any one solution. But our software *does* need to work together.

Despite a large number of products out there, I would argue that *none* of the educational software we really need has been built yet. What we *have* built, however, are a large number of good bits and pieces, scattered about in hundreds of different software offerings. Almost every product contains a few good (or great) gems of ideas among a lot of so-so (or terrible) stuff. (To get an idea of some of the software products available to "mine" for these gems, see www.socialimpactgames.com.) Among the products we need to look at, are edutainment software, education software, health and medical software, socially oriented software, corporate and military applications, and, increasingly, offerings from the games world.

Each of these individual products has solved some tiny piece of the education software puzzle extraordinarily well. If we could just combine all the very best features of every vendor's products right now, we would no doubt have something relatively decent to start out from. But unfortunately, given our current business model, we can't. Because as soon as we have companies and products, we have "proprietary intellectual property."   A recent issue of the newsletter "Knowledge Notes" (contact: knowledgenotes@thinkequity.com) has the following entry:

> *SkillSoft settles lawsuit with NETg:* The companies have agreed to end their five-year long litigation in which NETg alleged that SkillSoft and certain of SkillSoft's executives who were former employees of NETg had taken alleged NETg trade secrets. Under the terms of the agreement, SkillSoft will pay NETg $22 million in July 2003 and $22 million in July 2004. SkillSoft emphasized that the company continues to deny any wrongdoing. SkillSoft has also agreed not to make certain specific modifications to its IT courses for a limited period of time. In exchange, SkillSoft and the employees named in the suit have received a complete release from any liability related to NETg's intellectual property.

This is really not the best way to create innovative educational software.

But what about "free markets," "competition," "supply-and-demand," the American way? Unfortunately, I don't think these are going to do the job for us in educational software, because it is a very special kind of market. They might perhaps work in the long run, if we want to wait a few generations until we really know what's best and then let people compete to produce it most cheaply. But if we want innovation sooner, rather than later, I think, along with Lessig, that we are much better off with an "innovation commons."

What does this mean practically? Here's an easy example. Today in your browser, if you see something on a Web page that you like and would like to add to your own page, you can click on "Source," copy the code and immediately stick it into your own page. We need the equivalent of that for educational software.

So if, for example Chris Dede at the Harvard School of Education has a feature in his "MUVEES" software (http://www.digitaldividenetwork.org/content/stories/index.cfm?key=263) that is useful to someone else, that feature should be immediately available to them, either for free or at a low cost that encourages them to use it.   Anyone should be able to come to Chris' site and "improve" his software, without destroying it (this is known as "wiki").   If I love the way the company Imparta (www.imparta.com) does the coaching in their software (I do), I should be able to take that and use it – maybe not down to the same animated character and cute voice they use, but almost. If Professor Gee of the University Wisconsin loves the way a game like *Rise of Nations* introduces the player to their game (he does), he should be able to copy this in any educational software he or his students create.

"That's a great ideal," some will say, "But if we allow this, how will the creators of those products make a living? And more importantly, will they continue to innovate?"

This is precisely what "new business models" is about. In fact, there are already a number of possible ideas on the table.

One of those, proposed by Lessig, is the following: Let the creators specify when their creation can be used for free, and what else, if anything must be given in exchange. He defines a spectrum, from giving the property totally to the public domain, to requiring attribution for its use, to requiring an identical "open" license for any work that uses it, to restricting some of the uses to which it can be put, such as derivative works. So instead of automatically controlling everything, the creator of the property looks along the spectrum for where the greatest benefit is to him – e.g. giving it away with attribution (if he wants to get it known), giving it away non-commercially only, giving it away with no changes allowed, and so on – and chooses a license accordingly. (See http://creativecommons.org/learn/licenses/) There are special variants of these types of "open source" licenses, like GNU (http://www.gnu.org/gnu/thegnuproject.html) and "copyleft (http://www.gnu.org/copyleft/), for software.

Lessig's argument is that these kinds of models will keep the innovation going *and* let the creators be compensated. For educational software to succeed, this is something I think we very much need.

How might it work? One possible way is that people making any non-educational software, including games, edutainment, productivity, or system software, could decide to make their code or graphic assets available for free for the educational world, while retaining the rights in other worlds. Many of the kinds of teaching and engagement elements we want in our educational software come from games, which, it turns out, are excellent teaching tools. (See James Paul Gee, http://www.wired.com/wired/archive/11.05/view.html?pg=1) Wouldn't it be great if we could just take these and use them? Getting back to the pharmaceutical analogy, it would be like the companies' selling their drugs for high prices in the US and giving them away in Africa. Another way to look at it is that educational R&D was being supported by commercial game players and software purchasers.

An Electronic Arts senior executive succinctly explained to me that the reason EA does not make "educational" titles is that "We expect a title to sell a minimum of 1 million copies at $50. Entertainment titles at best sell 300,000 copies at $30." Since they don't intend to make the educational games anyway, what will they lose if they give their code away for free to the educational world (OK, maybe last year's code)? Do we have enough millionaire programmers with leisure time who could stitch it together for our use? Probably.

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Another possibility is to encourage the games companies to *change* their business models and build exciting, best-selling games that are, in Jim Gees' words, "laden with knowledge yet still open-ended and fun."   This is already happening with many games about warfighting, sports, driving, flying and even business (i.e. "Anything Tycoon") and first response (i.e. "Emergency Whatever.")   Many of these games begin to fulfill Jim Gee's vision and succeed in the marketplace. I certainly hope that this continues, and that there is only one best-seller list of games, all of which are both fun and educational.

But even if Electronic Arts, or Sony, or Nintendo decided today that they were going to produce titles that both taught material and entertained, for much of the curriculum-based stuff we want kids to learn it still wouldn't happen. The reason is that when we're teaching things that involve more thinking than doing, we don't yet know how to design the games and software in the way that is most effective. Some learning theorists would say "No matter what it is, base it on doing rather than thinking." But simply making the geometry and trig learner a "pyramid builder" may not turn out to be fun, at least until we get much more creative. And especially until we all share our ideas.

That is why I think that while we wait for some "great" products, to emerge from companies and brilliant individuals, our best bet for getting good results quickly is what some have called "the "hive mind."

In this "hive mind" business model, we make sharing the norm, set up a very open, low constraint infrastructure (a World Wide Web specifically equipped with hooks needed for education), and let everyone – companies, students, teachers – contribute ideas and modules voluntarily, with no expectation of financial gain from the educational arena – they must earn their living somewhere else. Properly managed, his model, the practical details of which I will explain more in later articles, will produce, I believe, extraordinary results. I think creators will be flocking to contribute and that their contributions will be of a high caliber. Their rewards will come from seeing education grow and flourish on the one hand, and from getting their work and skills known on the other. The Internet, and especially its much faster successor the Internet2, will more than support this model.

One reason I am so confident of this is that this is, to a large extent, the model that is emerging in the games world. In this business model, company or organization supports the game's infrastructure, and the cost is spread among the users at an affordable amount each. But much of the work – and especially much of the innovative work – is contributed by the players. In this case of education, the "players" are our students and teachers worldwide.

When I mentioned this model to my venture capitalist friend, she protested that "game players are a bunch of crazy geeks who are "nutso" (my word, hers was stronger) over their games," and that "such creativity will never happen in education." Well if it doesn't happen, I despair we'll ever get the educational software we truly need. Because if we educators don't have the passion to create it ourselves, even if someone gives it to us full blown it won't work. Even the resources of a George Lucas won't help, as he – a devoted proponent of exciting education software – found out sadly, as he refolded Lucas Learning back into his parent company, LucasArts.

But I maintain that we as educators *do* have the passion to create the software our students need, given the right infrastructure and opportunities. Certainly many of our older students and younger teachers have this passion, and there are many among the "Digital Immigrants" who do as well!

Much of the money needed for the infrastructure and for particular problem solving can come, at least initially from government and foundations (it's really not that much.)   Another model would be commercial sponsorship, even though many educators may dislike this. There are other models as well, such as getting business consortium or the military (with its large school system for dependents) to help fund the infrastructure.

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My point is *not* that any of these are the answer, but rather that we all really do all have to think about this "business model thing," rather than waiting for it to just "emerge." We need to begin taking the initiative and collectively designing and setting up a system that works. For example, I have suggested that universities take responsibility for different subject matters. That's one way, but maybe there's another way, or several and new partnerships that can be formed.

But I am absolutely convinced that "leaving it to the marketplace" to do the innovation for educational business models won't work to our advantage.

Of course, some will ask "What about venture capitalists like Michael Milken and projects like the University of Phoenix? Haven't they been successful?" Unfortunately, while Leapfrog has done well (it makes physical products), none of Milken's other investments in educational software have. And while the University of Phoenix has been a bright star, if you stick as they do to markets where people really want something – in this case technical skills and degrees – you don't necessarily need to be the most innovative to succeed.

But we do. Our kids today are *not* clamoring for the education we offer. To interest them, and the kids of tomorrow, we need something better, something that crosses new boundaries, something that represents the best of what we all, collectively, can create. And this, I think, requires a "commons," and an open business model. But there may be other effective models as well, tailored to different circumstances.

So I propose those of us who really care about the issue all get together to discuss it. We can begin with an online discussion group and hopefully proceed within a year to a full fledged conference.

If you are interested, please email me at marc@games2train.com. Thanks.

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