

Innovation, Research & Practice: the State of (eLearning) Research in Higher Education



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Overview of Presentation

I have bracketed eLearning in the title of my presentation because while I am going to be talking about research in that specific field – eLearning and educational technology, I think many of my comments will be applicable to other areas of educational research.

What I'm going to do in my presentation is take quite a critical look at the current state of eLearning research. While I will be quite critical, I plan to end on a positive note with some concrete suggestions for the way forward and some examples of the kind of research and publication endeavours we should be looking towards as the future.

As I mentioned, I spent seven years editing the Journal of Distance Education which was one of the first distance education journals. It began publication in 1986 and has since broadened its focus to include online learning and e-learning and, of course, there are now many other journals that have this focus.

I also serve on the editorial boards of several other international journals that have educational technology focus so I have had an excellent opportunity to see a lot of new research that is submitted for publication and my perspective on the state of e-Learning research is based largely on this experience, as well as my own reading of the research.

I have divided it up in three parts: first I'll take a look at **the current state of research**, then I'll talk about **the way forward** and I will conclude with some **examples** of what I consider good work in this field.

1. The Current State of Research

In reviewing the current state, I will talk about two main issues:

1. Quality

- a. Relevance or lack of relevance of much of the current research
- b. Abstracted nature of research
- c. Methodology and research process issues - ahistorical

2. Publication Issues

- a. How our current publication models impede the free flow of information and the timely dissemination of new research

So let me start with the first topic, quality.

Lack of Relevance

Significance

One of my biggest beefs with current research in e-Learning is that, for most part, the issues being researched are, more often than not, irrelevant to practitioners. While they may be well-designed, properly conducted and even produce “significant” results, they are, in reality insignificant and irrelevant.

And here we need to distinguish between significance in a statistical sense and significance in it’s everyday use. As an example, there are all sorts of correlations that are statistically significant but not very meaningful or useful.

There is the famous example of **increased ice cream sales being correlated to an increase in murders** in some big American cities but we know that ice cream doesn’t cause murder so this result, while statistically significant, isn’t very useful or meaningful.

Now e-Learning research isn’t quite that bad but it is full of studies that produce results that have little or no relevance to teachers and instructors.

Analysis of online discussions

My favorite example is all the research that has been done on **analyzing online discussion** forums and I’m guilty of this as this was topic of my doctoral dissertation but I have an excuse. I did my research about 20 years ago when this was relatively unresearched topic.

Impractical recommendations

My point about a lot of this research is the results point to all sorts of ways that instructors might organize online discussions, test students in advance to try to create ideal groups, or formulate specific ways to

manage online discussions but for the most part, the recommendations are just not practical because the average instructor just doesn't have the time or the expertise to do the things that are recommended.

For example, often to implement the recommendations requires an ongoing analysis of the discussions which is extremely time consuming and requires a level of expertise that most instructors won't have. So the results of this kind of research might be quite interesting, but at practical level, they are often quite meaningless.

Wrong questions

But the lack of relevance goes deeper than that. I would argue that most of the research that is being published in the fields of e-Learning educational technology is asking the wrong questions and looking at the wrong issues.

Researchers are researching issues that are relatively easy to research. And this is why we continue to see endless studies that analyze the content of online discussions and look for some kind of meaning. Why? Is it because they really think they are going to find some deep and meaningful answers to age old questions? No, they do it because the data is accessible and in a form that makes it relatively easy to analyze.

Examples

To give you a flavour of what I am talking about I took a quick look at the current issues of some well-known distance education journals. Here is what I found:

The first study was investigating the issue of cognitive presence in online learning. Cognitive presence is one of the elements of the Community of Inquiry framework which has been studied extensively, more often than not, produces results that have little practical relevance. This one is an example. It concludes;

"Findings revealed that learners did not report a high level of cognitive presence. It might be due to (a) the use of old textbooks and materials, (b) the lack of appropriate teaching practices and approaches, (c) the lack of adequate time, (d) the lack of effective instructional activities and strategies, (e) the lack of meaningful online interactions, and (f) the lack of instruction on critical thinking and problem solving skills.

And here is my favorite part:

"Thus, it is suggested that online learning environments be properly designed if higher levels of learning or successful e-learning education is expected."

Online learning environments should be properly designed. Who would have known that?

But wait, it gets better. Here's another one.

In this study, authors were investigating the effectiveness of specific instructional strategies in online courses. They developed what they call a learning trajectory which they say provides an explanatory framework and they conclude:

"In this proposed framework, continued instructor monitoring and mediation of a consistently utilized set of inter-related instructional strategies was critical to initiate and facilitate the development of a functioning community of learners."

Really?. Continued instructor monitoring, and the use of interrelated instructional strategies. Who could have guessed it would be so simple?

And finally, here is one which investigated student perceptions of online mentoring in a doctoral program. That's another thing about eLearning research. It's very big on perceptions. We don't like to actually collect data through observation of phenomenon, no we prefer to ask people what they think.

Anyway, after an exhaustive study of nine subjects, that's right NINE, the researchers came to this startling conclusion:

"Increased dialogue using multiple modes of communication and the structure provided by e-mentors contribute to the reduction of transactional distance (Moore, 1973) thereby enhancing the dissertation experience for online students. " N=9

What I find truly amazing about this one, besides the superficiality of the conclusions is that Michael Moore said this 40 years ago! It's his well-known theory of transactional distance. They even cite him.

The truly depressing thing about these studies is that they tell us absolutely nothing of practical value. They provide no useful guidance to practitioners and they make no theoretical contribution.

I could go on and on with this. You only have to look at any current issue of a journal that publishes research on eLearning to find many other examples of research like this.

Lack of Context

But there is more substantial critique that has been put forward by people like Neil Selwyn, Martin Oliver and Norman Friesen, who argue that we need to be taking a much more critical perspective in our research.

They argue that the academic study of educational technology tends to be dominated by a focus on the abstracted and decontextualized study of how people can learn with digital technology.

Now this is fine, in principle, but the problem, they argue, is that the research doesn't often enough take into account the practical, on the ground realities of using educational technologies.

“the academic study of educational technology needs to be pursued more vigorously along social scientific lines, with researchers and writers showing a keener interest in the social, political, economic, cultural and historical contexts within which educational technology use (and non-use) is located.”

This means a greater focus on the “ ‘here and now’ realities rather than future possibilities and potential s of educational technology” – Selwyn (2010)

Which involves a critical approach which “seeks to develop analyses of educational technology that are context rich rather than context free.” – Selwyn (2010).

This is particularly relevant to international development contexts where educational technology is presented as the solution to the economic and social problems of developing countries. Often, however, the implementations do not take into account the local realities: the lack of infrastructure, the economic realities, the dominant perspectives on teaching and learning that may conflict with those implied in the educational technology implementations. And research tends to focus on the technical and technological and fails to dig into these deeper issues.

Methodology and Process Issues

My final critique of the quality of e-Learning research is about the methodology and research process used.

Sample size

We have issues of sample size: we just saw an example of a study done with a sample of 9. Now qualitative researchers will argue that sample size doesn't mean the same thing as it does in an experimental study and this is certainly true. But regardless of the research paradigm, you do need to collect enough data and even for most qualitative studies, a sample of nine is not likely to be very useful.

Inappropriate generalizing

There is also inappropriate generalizing from very small samples...so generalizing to everything instead of contextualizing the generalizations. And it isn't just from small samples. Even with large samples we often find inappropriate generalizing, or at the very least, no acknowledgement of any limitations. So, for example, if the study involves students in a particular program at a particular level then perhaps you can generalize to other students in similar programs at the same level but certainly to all students, everywhere.

Reviewing existing research

Failing to ground the new research in past research and literature is also a common shortcoming. Educational technology is a field that doesn't seem to want to acknowledge the past. We are always focused on the new, new thing even if it isn't that new.

MOOCs are a good example. When you listen to all the hype around MOOCs you would think online learning had just been invented and that we didn't have nearly 20 years of experience and mountains of research on effective practice. My favorite example is Daphne Kollner, from Coursera, who talks about how they have discovered that you can't just leave students on their own in online learning environments and that there needs to be pacing...set deadlines for completing certain tasks and that the key to it all is good instructional support. A quick review of the literature would have found that this was researched many years ago and in fact is a lesson learned even earlier in the pre-Internet days of distance education. The problem is, every new educational technology is seen as something new and distinct...but it isn't.

Anecdotal evidence

Other problems include not grounding the research in a theoretical framework and relying on anecdotal evidence. Again, there is nothing wrong with anecdotal evidence but it shouldn't be used to make generalizations. It really should be the starting point for research.

This is one my major criticisms of a lot of the so-called research on digital learners, the so call digital natives or the Net Generation. A lot of the claims about how young people are using new technologies, how they adapt to it easily and are sophisticated users, able to multitask effectively were based on anecdotal evidence...observations of children in classrooms and at home by teachers and parents. These observations were then spun out into grand claims about an entire generation...books were written, and catchy terms were coined and this became an industry and had a profound impact on the educational discourse. The key point is that the fundamental claims were not based on sound research.

But, as I said, anecdotal evidence has its place. This is what got me started with my Digital Learners in Higher Education research project which I will describe later.

So those are my criticisms of the quality of eLearning research. I want to talk now briefly about some of the publication issues.

Dissemination Issues

I want to raise two issues and they are both related to our ability to freely disseminate and access new knowledge:

1. The role of proprietary journals and publishers
2. The scholarly publication process.

The role of proprietary journals and publishers

Let's look at the first one, the role of proprietary journals and publishers.

The current model is ridiculous. Academics who are funded by the taxpayer conduct research that is funded by the taxpayer then they give away the results of their research to publishers who then sell it back to the public institutions who have paid for it in the first place.

Why do we continue to do this?

Not only is it immoral and financially stupid, it restricts access to what is often vital research knowledge.

Costs: up to \$40,000 per issue. Harvard spends \$3.7 million per year

Now we do have an alternative and it is called the open access journal. Fortunately, there are more and more of them. Of course proprietary journals will try to portray open access journals as fly by night and of questionable quality and there is no question that there are some questionable OA journals but there are

also many questionable proprietary journals. The licensing of the journal is in no way related to its quality. We need to be very clear about this. What determines the quality of a journal is its editorial team, and the peer review process it uses. How the articles are published is irrelevant.

The Scholarly Publication Process

The second issue I want to raise is the whole scholarly publication process.

Our current process is antiquated and out of date. It is based on a print production model and was designed to serve a time when new knowledge was not being developed as rapidly as it now is.

Take this example from my own experience. We collected data for our digital learners research project in 2008. It took us nearly four years to write up the second phase of the research and submit it for publication. We did this in February this year. It took nearly seven months for our article to be reviewed. When we got the review back, we were told we would need to make some revisions. Assuming we do that in a timely fashion, we are not likely to have final acceptance of the article before the end of the year, nearly 12 months after we submitted it. But that doesn't mean it will be published then. The journal we submitted to only publishes three times a year so it is quite possible that the article won't be published April of 2014, and even that is not a certainty. But assuming that, it will be nearly 14 months after we submitted it and six years after we collected the data! Now we're not dealing with life and death research on health issues that could have serious implications for people's health and welfare but we are dealing digital technologies which we all know change very rapidly. Six years ago, the iPhone had just been introduced and the tablet phenomenon hadn't started. Facebook was just taking off as was Twitter.

We need find a way to get new knowledge disseminated much quicker so that it isn't out date by the time it is published and with the Internet we have the tools to do this but we continue to use a pre-Internet dissemination model.

2. The Way Forward

So far I have been pretty critical of the quality of eLearning research and how our publication models delay and restrict access to new knowledge but I want to end this presentation on a positive note by offering some suggestions for how we move forward and then give you some examples of things that I think are being done right.

First of all, to address the quality issues I think we need to start to redirect the focus of our research so that we are doing three things:

a. Applied Research

Researching issues that have an applied dimension. Issues that matter to practitioners. Our research needs to produce results that help improve practice. It needs to provide practical benefits that can be applied in real educational contexts. Our research needs to also move beyond the micro level but avoid being so abstracted that it is meaningless. It needs be contextualized and deal with the issues which teachers and educators are dealing with in their daily practice, not issues that only matter to academics or that deal only with the potential of technology in ideal environments.

b. Critical Perspective

And this relates to the second point which is we need to follow the advice of Selwyn and others and we need to apply a critical perspective to our research . This means researchers and writers showing a keener interest in the social, political, economic, cultural and historical contexts within which educational technology use (and non-use) is located and dealing with the “here and now” and not just the future potential of technology used under ideal circumstances.

c. Open Access

For the Publication issues, there are two things we can focus on:

The first one is simple: abandon the proprietary publishing model under which we give away our publically funded research to big publishing conglomerates and then buy it back with tax payer dollars and move instead to an open access publishing model.

Of course, this sounds easy but I know that publishing is tied very closely to academic promotion and that the indicators are based on citations in a limited set of journals which tend to be proprietary so there are some significance systemic issues that need to be addressed before this can become a reality but we need to make a commitment to addressing them.

I have personally made a commitment to publish only in open access journals and serve as a reviewer only for open access journals. I think if all make this commitment we can change the publishing model.

d. Alternative Modes of Publication

Secondly, we need to look at alternative modes of publication that allow for the more rapid dissemination of new knowledge. As an example, why do most online journals still follow an issue based publication model? By this I mean, they publish articles in batches once they have enough to “fill” an issue. But this is a holdover from the print model when there were minimum and maximum limits to how much could be published. With online delivery, why aren't we publishing an article as soon as it has been reviewed and edited? Some journals are doing this but most aren't. This introduces unnecessary delay. I instituted this at the Journal of Distance Education which I edited for seven years and we will be doing the same thing with the Journal of Learning for Development.

But we should be doing more than just publishing articles. Shouldn't we be making more effective use of the interactive capabilities of the Internet. What about making journal website more “social”, encouraging discussion and debate about the issues raised in articles? What about looking at alternatives to the blind, peer review process that can serve to filter out perspectives that challenge the status quo? One interesting example I have come across is a journal called Hybrid

Pedagogy:<http://www.hybridpedagogy.com/index.html> which publishes short-form collaboratively peer-reviewed articles and multimedia work related (however loosely) to digital and analog pedagogy.

3. Examples

I want to conclude by telling you about two examples of research-related endeavours that I am involved in that I think address some of the concerns that I have expressed about the quality of eLearning research.

The first is a new applied research journal that we have launched at the Commonwealth of learning and the second is an international research project I have been leading for the past 5 years.

- JL4D
- Digital Learners in Higher Education

Thank you.