Realizing Potential: Innovation Beyond the Cliché

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Realizing Potential: Innovation Beyond the Cliché

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Abstract

How well have we been doing at exploiting the fruits of modern technology to develop truly innovative and impactful educational products for the university student and educator? How might we do better still? In this joint paper, Burton (creator of Ideas Roadshow) argues that a vital first step towards a more promising future lies in adopting a “first principles” methodology: identifying the specific pedagogical challenge before subsequently investigating how technology might productively address it, rather than unreflectively applying technological advances to existing frameworks. Meanwhile, Fischer, Head of Acquisitions at UNCG, responds to these claims by providing an independent librarian’s perspective.

Taking Stock

All too often technological progress gets confused with contextual innovation. When the context in question is strictly technological (the production of a newer, better smartphone, say), there is naturally no difference between the two. But for those who work outside the domain of technological development per se, it is essential to consistently ask how new advances in technology might be most productively applied to their particular environments.

This straightforward, common-sense notion can sometimes be harder to apply in practice than one might naively expect, particularly for librarians and other purveyors of high-level intellectual and educational content. In a world where “information consumers” are madly scrambling towards the widely hyped “next best thing,” holding one’s head above the fray to deliberately investigate best practices and calmly explore substantive possibilities can often prove to be extremely challenging. Yet it is little short of essential in order to make fundamental progress.

Lessons From the Past

Historians of science will point out that there is often a pronounced delay between the discovery of new forms of technology and their direct application towards the creation of truly transformative (i.e., disruptive) products. Inevitably, in the first instance at least, modern technologies are simply unthinkingly applied to older, established idioms.

So it was, for example, that the advent of television initially resulted in the none too riveting spectacle of news presenters being filmed reading their reports as if on radio. Half a century later, we see a strikingly similar phenomenon occurring within the educational sphere, as the development of widely affordable, high-resolution video cameras has principally resulted in merely recording standard talks and lectures.

So much, so familiar. But an added complication arises in the modern context: that of the increasingly democratizing effect of contemporary information technologies. Whereas in the past, the transition from radio to television was an opportunity exclusively in the purview of those select view who could afford to own a television station or run a film studio, the barrier to entry for both production and dissemination of high-quality videos has effectively been reduced to zero.

Meanwhile, a very different challenge exists for the modern librarian: with so much broadly similar material “out there,” how to choose?1 What are the appropriate criteria for determining


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the maximum utility of existing films, multi-media and video material? What sorts of highly relevant content might already exist, buried in archives or in huge, aggregated collections?

Locating overlooked jewels is one thing. But, as noted above, by far the greatest opportunity for long-term impact lies in developing innovative, transformative products that directly capitalize on the potential that the new technology suddenly makes possible.2

Might it be possible for librarians to take a more proactive role in this key activity, dynamically influencing matters so that increased numbers of highly innovative products get created in the first place?

First Principles

In order for librarians to elevate themselves to a more active position as innovation catalysts, it is essential to take a step back and focus on first principles of the teaching and educational experience.

What are the core challenges of today’s academic environment? What sorts of products might concretely address those challenges? How might they be used and accessed? By whom?

Answers to these questions will inevitably vary widely from institution to institution and from individual to individual. But we believe that the following represent three widespread concerns:

1. Intimacy: As class sizes swell and communications technology extends the academic environment (real or virtual) to ever-increasing numbers of participants, a constant concern is how to preserve (or in some instances, reestablish, or even create) a key sense of intimacy between student and faculty member. Might it be possible to harness the very technology that is in some ways structurally weakening these bonds of intimacy to create specific tools that will explicitly redress this?

2. Flexibility: The modern academic experience is much less rigidly structured than it once was, both in terms of an increasing overlap between previously segmented subject areas and an ever-expanding profile of the “typical student” (together with that of the “typical professor or expert”). How might we create new tools to explicitly assist this natural trend towards a more flexible approach to the academic experience, both in terms of subject areas and their participants?

3. Critical thinking: The quest to instill rigorous critical-thinking skills in students is hardly particular to the modern era, yet remains the sine qua non of the academic experience and a vital measure by which all academic institutions are judged. In an age of substantially increased distractions to all participants, it is very much worth examining how we might use modern technology to develop enhanced critical-thinking tools.

The Ideas Roadshow Experience

These, then, are three fundamental concerns that we are convinced are common to all in today’s higher education space. Doubtless there are more. But in the interests of providing a concrete example of the prospective utility of this “first principles” approach to the development of new pedagogical tools, we describe how this framework clearly maps onto our motivations in creating Ideas Roadshow.

1. Intimacy by proxy: Recognizing that the technological advances responsible for small, affordable, high-quality video cameras entail an inherent portability, we concluded that a productive way to establish a strong sense of intimacy between student and faculty was by developing informal recordings, one-on-

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one conversations with leading domain specialists in the comfort and privacy of their homes or offices. While this technique is clearly distinct from actual exchanges between students and professors, and is obviously not meant as a substitute for such interaction, our experience is that it nonetheless can provide an added measure of intimacy that is increasingly lacking in the contemporary academic realm. By explicitly constructing a dynamic of dialogue between a curious non-specialist and a domain specialist, we establish a proxy for the student so that he can feel some sense of genuine participation in the discussion. Meanwhile, by chatting in a relaxed fashion about her ideas in a familiar environment, the expert naturally projects a more accessible and less formal demeanor, excited by the prospect of simply focusing on the subject matter devoid of any other personal or administrative constraints. The goal is thus to develop a substantial treatment of ideas combined with personal anecdote in such a way that the student will naturally find both deeply motivating and fully accessible.

2. Flexibility through interdisciplinarity: Academic administrators have long recognized and encouraged interdisciplinary thinking, to the extent that it is something of a near-tautology to claim that truly innovative ideas almost always occur on the boundaries between disciplines. But stating such sentiments is quite different from understanding how, precisely, to move forwards: how to concretely navigate between the Scylla of specialized, impenetrable silos and the Charybdis of some naïve, wooly “everything is connected” worldview. After all, disciplinary boundaries exist for a reason: studying medieval history is obviously different from studying molecular biology or music theory or mathematics. How, then, to make connections while rigorously maintaining high standards? How to pursue academic excellence while encouraging flexibility?

We concluded that the challenge can be met in two largely overlapping ways: by choosing a mode of engagement that would naturally highlight the benefits of interdisciplinary thinking, while actively selecting interlocutors who were particularly successful role models of flexible, multidisciplinary approaches throughout their own highly productive research careers. By combining a naturally multidisciplinary format with the opportunity to engage naturally broadminded and wide-ranging participants, we consciously aspired to create a flexible, multidisciplinary outcome in a straightforward, unconstrained way.

3. Critical thinking from substantive questioning: All educators focused on the development of critical-thinking skills value the importance of questioning received wisdom as an essential aspect of personal intellectual development. Yet however broad-based the understanding might be that students ought to routinely engage their curiosity through active questioning, the modern curriculum is typically so charged with content that there is scant opportunity for the professor to properly cover core material, let alone stimulate additional student questioning. Moreover, even when such occasions exist in principle, the social dynamics of an undergraduate experience often make it extremely problematic for students to indulge in any fundamental questioning that might inadvertently expose them to ridicule from their peers. For all that the time-honored mantra, “There’s no such thing as a stupid question” is consistently invoked in classroom settings throughout the nation and around the world, most educators will agree that the barrier to spontaneous student interaction is usually still prohibitively high. Ideas Roadshow explicitly addresses this issue by creating a format where the students’ proxy unhesitatingly asks probing, often basic,
questions to the domain expert, thereby triggering a wealth of supplementary content while tangibly demonstrating to the students the efficacy of open, honest engagement. Moreover, our experience is that most guests clearly value the opportunity to clarify and justify their views through an open and respectful exchange, even to the point of admitting that the conversational format helped them better frame, and sometimes even better appreciate the subtleties of, their respective positions.

Conclusions and Future Possibilities

Whether or not the reader is convinced that Ideas Roadshow achieves all that we set out to do is, of course, not the essential point of this paper. The methodology inherent in this “first principles” approach naturally transcends any one product or producer; and different institutions will unquestionably have different educational needs and correspondingly different pedagogical priorities.

But what is much less debatable in our mind is that the time is clearly ripe for individual institutions to drive the innovation process forwards by first focusing on their specific pedagogical needs and desires and then explicitly harnessing technology as an active enabler of those needs.

Such an attitude will also require, we believe, a subtle shift in the interactions between librarians, professors, and students, requiring all to be considerably more entrepreneurial and engaged in the production of innovative educational materials. Many postsecondary institutions already contain a wealth of practical and theoretical talent on their own campuses at the student, staff, and faculty level (computer gaming, modeling, ICT, film schools) that could, and should, be leveraged to produce high-level bespoke products at many distinct levels.

Prospective philanthropists and community representatives from the ICT sector (a growing force in philanthropic support and governance) could play an increasing participatory role with both targeted funding and in-kind assistance. Student and faculty feedback on existing materials and suggestions for enhanced products should be actively solicited, together with a variety of practical student research projects to dynamically test the waters. This article is primarily concerned with educational and pedagogical materials, but, of course, the same principles apply to more ostensibly research-related content, many of which would naturally lend themselves to this framework.

What does all this mean, specifically, for libraries and librarians?

We believe that librarians could, and likely should, play a much more active role as interinstitutional coordinators and purveyors of innovative content, proactively seeking out productive partnerships with forward-thinking publishers when the occasion demands, and going it alone when it doesn’t.

By both experience and disposition, librarians are highly sensitive to specific anxieties and frustrations of both faculty and students, and thus are ideally poised to make active contributions towards innovative solutions, rather than simply finding themselves in a fundamentally reactive position of sifting through a steady bombardment of often inappropriate mass-market solutions.

Moreover, as the information-content centers unwedded to any particular subject area, yet responsible for all, academic libraries are ideally placed to take a more active leadership role on behalf of the entire institution to directly drive the creation of the next generation of innovative products that will explicitly serve that specific community’s teaching and research interests.

Of course, not all such resources will be produced locally; and there are many occasions when librarians will naturally opt to seek out productive partnerships with external vendors to most productively improve the faculty and student experience.

But whether such solutions are developed internally or externally, we maintain that the primary determining factor to success lies in
Adopting the aforementioned first principles approach of first identifying key educational needs before then turning one’s attention to how current technology might specifically meet it.

—Howard Burton, CEO, Open Agenda Publishing

A Librarian's Response

Academic librarians seek ways of working with faculty and students to enhance and support the learning process through instruction, services, and collections. There is value in first determining educational needs and then looking at how technology can help to fulfill those needs. Librarians listen to faculty and students and then seek out effective solutions. Sometimes that can be promoting services or resources that are already available. It could mean developing internal technology projects or finding the right provider externally. Networking with publishers, vendors, and other content providers offers opportunities for librarians to share expectations and needs of the academic community.

How Do We Know the Needs of Faculty and Students?

At the University of North Carolina at Greensboro (UNCG), classified by The Carnegie Foundation as a Research University with High Research Activity and serving 16,000 FTE students, the librarians actively connect with faculty. Faculty members talk to librarians about changes in their curriculum or in methods of instruction by working directly with Library Liaisons. It can be fairly informal situations as well, where a librarian may be working on a campus committee or serving in some other way that leads to conversations in which a problem is shared, and the library can respond.

Assessment is a key method for determining campus needs for users of all kinds. In 2008 and 2012 the University Libraries conducted LibQual+ surveys that included comment sections that were very helpful in identifying areas of service that needed improvement or were newly recognized. The library worked cooperatively with campus IT and the Office of Research to conduct a faculty survey on research and data needs, including data storage and data management plans. Other surveys and assessment methods are used, so that in conjunction with personal interactions, informal conversations, meetings with departments, and direct requests, librarians can partner with faculty to answer needs.

Climate in Higher Education

In all aspects of our culture, organizations are expected to be nimble, responsive to consumer desire for customized experiences and products, and able to incorporate the latest technology in serving users.

The NMC Horizon Report: 2014 Higher Education Edition offers a look at trends and challenges in higher education technology. The New Media Consortium and EDUCAUSE produced the report, and several of the issues raised can inform the process of identifying a need and then using technology to develop a solution. One of the developments described in the Horizon Report is the flipped classroom model. Students watch streaming films or clips, listen to online lectures or podcasts, consult open educational resources, and work in online communities with fellow students prior to class, so that classroom time can be spent on adapting what they’ve learned to practical, collaborative projects and discussion. Academic libraries support this by providing resources and also services that go beyond information literacy to teaching and supporting media literacy and digital literacy in conjunction with the activities of the faculty.

Media at UNCG

The media component of our collections is evolving quickly. The need for streaming film accelerated in the summer of 2013 when a significant number of language classes were moved from face-to-face instruction to online instruction. We very quickly learned about streaming rights and added new streaming platforms. Faculty needed to be able to offer streaming for films they had formerly shown from DVDs in the classroom. The flipped classroom model demands that libraries offer a variety of streaming film options to accommodate
classroom instruction that is augmented by preparation outside of class. With that model in mind, it is clear that the Ideas Roadshow films could be successfully incorporated into curricula. The films have a question and answer approach but are truly more of a conversation than an interview. The films could inspire local conversations and film production as well.

There are numerous payment models available for streaming film including one-time purchase with hosting fees, licensing for a semester or a year or more, evidence-based with use statistics determining the make-up of future collections, and patron driven acquisition. UNCG offers many streaming film platforms, and all those payment models are in use. Just this month the Ideas Roadshow films became available via the Kanopy platform, which now makes it possible for students and faculty to access the titles.

Striving to solve the needs of faculty for streaming film has resulted in the University Libraries testing a variety of models for licensing streaming media because the providers and platforms needed by faculty to serve their curricular needs cannot be handled by one primary vendor. Actively communicating with the providers offers an opportunity for librarians to share the needs of the academic community, and providers gain information that informs further innovation.

—Christine Fischer, Head of Acquisitions Department, UNCG

References