

“A Different Stage of Imagination”: How Do We Create “Smart” Colleges?

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www.edpath.com/thefource.html

In a 1971 BBC Radio interview, J.R.R. Tolkien was asked about Middle-earth, the mythical land in which he set both *The Hobbit* and *The Lord of the Rings* trilogy. Dennis Gueroult, host of the BBC's program 'Now Read On,' was known for provoking comments from his subjects:

D. Gueroult: It seemed to me that Middle-earth was in a sense, as you say, this world we live in, but this world we live in at a different era.

J.R.R. Tolkien: No ... at a different stage of imagination ... yes.¹

The idea of a "different era" versus a "different stage of imagination" underlies a challenge confronting education in general, but one that is particularly vexing for community colleges in the U.S., colleges in Canada, and further education (FE) institutions [also referred to as foundation degree granting colleges) in the UK. For the purposes of this article, and consistent with the Canadian and UK use, the term "college" will be used to represent two-year associate degree granting institutions in the US and Western Canada and further education institutions in the UK, as opposed to four-year and graduate institutions, generally referred to as universities.



Stuck in Middle-earth

Colleges are stuck in a Middle-earth-like place where government expectations have been steadily mounting. Yet at the campus level, academic life marches on in

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a logic-defying context of historic practice, decreasing funding, and a continuous renewal of out-sized goals and responsibilities. The missions of colleges, like those of the Hobbits in *The Lord of the Rings*, are obscured by the immensity of the territory they need to traverse and the exigencies at hand. There is always too much to do, too many new pressures and a chronic deficit of human, financial and physical resources. Nevertheless, the colleges are expected to see, act on and ultimately master the whole set of responsibilities at once. Some of them manage to do this ably, often as a result of above-average budgets or near-heroic efforts by unusually gifted individuals; others struggle to effectively uphold their various missions, but the vast majority is – yes – caught in the middle.

Colleges Expected to Step Up

Unfortunately, there is no omniscient narrator to string together a coherent and reassuring story for the colleges. Since the onset of the global recession, national, state and provincial governments, as well as national foundations, have expected colleges to step up and become the engines of economic recovery. Millions in funds have been allocated to new educational initiatives, programs and projects. However, little overall guidance has been provided on how colleges can feasibly do more, in more complex ways, with fewer

¹ To hear the BBC radio show, see http://www.youtube.com/watch?v=9-G_v6-u3hg

resources than before. How can new initiatives be integrated effectively into existing college structures? Should colleges themselves change how and what they do? Where and how is technology to be used in new and more efficient ways? In conversations I have had with college leaders in the three countries,² a variety of strategies are being used to manage multiple demands and in changing student and employment patterns. However, what is lacking in these endeavors is a broad framework for driving change in ways that respond to both the pressure of challenging economic times and to changes in how information systems and social media function in our lives.

There is no grand map for navigating this complex new territory. Neither is there a “different stage of imagination” being employed to enable us to rethink how to organize the college landscape.



Surprisingly, all three of America’s car manufacturers, after having nearly dissolved in this recession, have reorganized and pushed past their historic inertia. Consequently, they have recently found themselves back in the black ink of profitability. On the contemporary end of the corporate spectrum, Silicon Valley has managed to ramp up profitability by creating and then feeding the global social media fixation, which shows no signs

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of waning. When looking to these and other examples of lean management and bold innovation in a down economy, it is important to question whether there are similar opportunities for colleges to design a new existence around new economic, social and technical realities.

Answer: Three Vexing Questions

Three core questions are raised in this article, each of which is concerned with optimizing three roles inherent to colleges: managing the multiple missions of the colleges, giving students greater responsibility over their learning, and making investment in education more efficient.

Colleges

How can colleges become more successful at managing their multiple missions on constrained budgets in a manner consistent with the changes in the digital and consumer worlds, the commercial use of efficient management technologies, and innovative new systems powering the delivery of government and other nationwide services?

Students

How can students, traditional and adult, have more supportive student services, more meaningful and individualized edu-

² For more on these conversations, see:
<http://www.blackboard.com/CMSPages/GetFile.aspx?guid=6032f8df-b6ba-4510-81d2-3198459529dc>
<http://www.blackboard.com/CMSPages/GetFile.aspx?guid=cd63f2d7-7339-4c9c-a097-bfce93ff5781>
http://www.blackboardinstitute.com/pdf/Tipping_Point_WhitePaper.pdf

cational experiences, and take more control of and responsibility for their learning and its relationship to their careers?

Governments

How can government funders, foundations, academic alliances, corporate partners and vendors work more efficiently with colleges instead of making large-scale investments that tend to be episodic, ad hoc, and programmatic without a cohesive and sustainable framework to guide their efforts?

Of course, there is no one set of answers to these questions. Nevertheless, attempting to systematically find answers to these problems should matter to stakeholders because colleges, quite literally, are positioned at the crossroads of the lives and careers of citizens with the potential to contribute to sustained recovery for our economies and societies.

Inertia: The Existing Landscape

Every segment of the education sector is confronted by the need to modernize in order to support the success of the 21st century student, run programs more efficiently and accessibly, and work effectively with outside funders, vendors, publishers and open services. Because colleges manage so much diversity – in the student population on the one hand, and with a broad and changing range of programs on the other – it is difficult to establish even a stationary picture of the multiplicity of issues competing for attention on a college campus.

No other segment in the education sector is tasked with such wide-ranging responsibilities as are colleges. Schools produce

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high school or secondary school graduates and universities produce bachelor’s, master’s,



and PhD degrees. In contrast, colleges exist at the nexus of transitions, special cases, and competing priorities. Because flexible entry requirements enable almost anyone to enroll, many students require significant amounts of remedial education, also known in the U.S. as developmental education, in order to engage in college-level work. Remediation is a testament to the failure of schools to produce graduates who are generally capable in reading, writing and secondary school math. Colleges, then, are expected to bridge the gap between low school achievement and college-level study, a task that threatens to overwhelm many of them. Furthermore, the majority of remedial or developmental students do not succeed in college, due in part to ineffective design of remedial education courses and inadequate staffing.³

³ For a snapshot of remedial education statistics, see http://nces.ed.gov/programs/coe/pdf/coe_rmc.pdf

Living Up to Well-Intentioned Rhetoric

Equally challenging are the dual responsibilities of re-credentialing adults who wish to change careers, and bringing unemployed adults back into the workforce. Lofty government expectations hurt rather than help on this front. On both sides of the Atlantic, a belief is perpetuated among policymakers that education’s Middle-earth can rescue the economy by developing in-demand skills and matching them to available jobs at just the right moment.⁴ In the US, substantial funds have been advanced for this purpose. Most pronounced are the work of the Gates and Lumina foundations and the work of the White House and the Vice President’s wife, Jill Biden, herself a community college professor. However, the reality of re-training outcomes is not living up to the investment or well-intentioned rhetoric.⁵

On a number of counts, community and further education colleges are doing well what they are fundamentally designed to do: produce graduates with associate degrees and certifications in mid-level professional fields like nursing, healthcare, teaching, engineering, business skills, and a number of specialized fields. Even in the midst of immense challenges and competing priorities, colleges manage to accomplish these aims. Yet colleges have not been able to play a significant role in restarting the economy nor to sending young people into the workforce in droves. Neither are they capable of making up for

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exceedingly inadequate academic preparation in school, a responsibility that ought to have rested squarely on the shoulders of schools, families and students themselves.

X, Y & Z: Plotting the Future

“Frodo began to feel restless, and the old paths seemed too well-trodden. He looked at maps and wondered what lay beyond their edges” (*The Fellowship of the Ring*, J.R.R Tolkien).

Like *The Lord of the Rings*, a useful starting point is a map, or a framework, to help place



the various constituencies across this vast “middle-education” territory. While real men might not like to ask for directions, they appreciate well-drawn maps even if they, like Frodo, wonder what lies beyond their edges.

Instead of a terrain map with north, south, east and west, a Middle-earth map

⁴ For more on the British government’s view of Further Education, see: <http://www.bis.gov.uk/assets/biscore/further-education-skills/docs/s/11-1374-skills-investment-statement-2011-2014>
<http://www.bis.gov.uk/assets/biscore/further-education-skills/docs/n/11-1384-new-challenges-new-chances-summary-responses-to-consultation>

⁵ The most recent Economic Report of the President (2011) highlights the continuing mismatch of jobs and skills: <http://www.nber.org/erp/ERP-2011.pdf>

of the various college functions could be plotted on a Cartesian plane, with an x and y axis standing in for the compass directions. The vertical axis, y, (south-to-north) could be the academic experience axis, while the horizontal axis, x, (west-to-east) could be the axis of economic opportunity. The academic axis moves from school (south) through college (north). The economic axis moves from unemployment or under-employment (west) to economic opportunity or employment (east) - [[click here for a diagram of this concept](#)].

Both of these vectors are important, if not critical to the needs of students and in fulfilling the intents and plans of governments and influential foundations.

The vertical progression of getting young people from secondary school to college is now considered an imperative for regional and national employment and economic growth. The new equivalent of a high school or secondary diploma is, at a minimum, an associate degree in the U.S., a college diploma in Canada, and a foundational degree in the UK. In other words, in the U.S., Canada and the UK, a secondary or high school diploma is outmoded as an entrance ticket to the working world. Today, the very minimum required is a college degree or, depending on the sector, certification in a skill or industry.

Likewise, the horizontal progression from unemployment or underemployment to more meaningful and fairly remunerated employment is economically essential. At the speed with which new job categories are emerging, re-training and re-skilling are critical functions. In fact, it has been argued by the White House that there are growing numbers of mid-level

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The physical college campuses exist at the intersection, or origin point, of the x and y axes. This Middle-earth center point is where the academic axis intersects with the economic axis. It is a real place intended to turn knowledge into economic potential. Similarly, the college campus generally plays a vital role in service of its local community, as well as the industries and non-profit organizations located within its geographic reach.

On the campus, the administrative activity of the college is carried out; students attend class; part-time faculty and adjuncts make their way from all compass points to campus; and education and training take place, often with the participation or input of local businesses or industries. If the college has online programs, they are likely operated centrally from the campus.

However, this view, with the x, y-axes and the origin, is decidedly two-dimensional. Enter the z-axis. Normally the z-axis turns a plane into a three dimensional representation, but in this case, think of it as

⁶ For more on this, see the Interim Report from the President's Jobs Council: http://files.jobs-council.com/jobscouncil/files/2011/10/JobCouncil_InterimReport_Oct11.pdf

The constituencies (students, companies, governments) that rely on the services of the colleges, or could rely on them more, are increasingly living outside of Middle-earth.

a third dimension representing time. For any busy student working full or part-time, or adjunct working more than one job, or administrator managing multiple and diverse programs, time is the one variable that cannot be expanded. While a campus can be built or an online program added to a college’s course catalogue, time is non-elastic. Both place, the campus, and time, the ability to attend or teach class, are variables that affect every service a college provides and must therefore be regarded as central considerations in rethinking the future of colleges.

Fog versus Clouds: Internet Time, Smart Connections

The constituencies (students, companies, governments) that rely on the services of the colleges, or could rely on them more, are increasingly living outside of Middle-earth. They are living on and in Internet time and smart phone culture and are woven together in various global social webs that are driven by “big-data” and “smart” systems.

I have come to characterize the confrontation between a) what the constituencies need and how they operate and b) how campuses manage and teach, with the designation “*the Fog versus the Cloud.*”⁷

“Cloud” is used here as a term for what is virtual, server-based and controlled by the Web or mobile networks. The Cloud has

some interesting aspects. Not only does it learn very quickly about its users; its activities are actually based



on their behavior. It is able to mine data about them, and to synthesize that data, feed it back, and share it with researchers, advertisers and others who value it.

The “Fog,” on the other hand, is what has materialized over time in the form of physical campuses and government agencies. It is highly regulated. Unlike Clouds, which form a typically benign canopy over our heads, the Fog shrouds us from gaining a clear view of what is going on around us in the education space and in the other important parts of society.

Education technology, digital learning content, education websites, online learning and mobile education apps *are not* the Cloud. While certain aspects of education may now be Cloud-based, the Cloud is concerned specifically with users’ identity, users’ data, and the interaction between all users and their aggregate data. Such systems are “smart” because they match resources to users based on algorithms that are capable of getting more accurate over time.

Education technologies are largely “dumb” in that they do not know who their users are. Without manual feedback, they also don’t know what their users are doing, what content they are engaging with, or how to customize experiences based on user behavior. On the other hand, the “smart” information systems underpinning

⁷ For the original published reference to the Fog versus the Cloud concept, see http://www.fundacionbankinter.org/system/documents/8519/original/FTFXV_ENG_Final.pdf

websites like Amazon, Google and Facebook know their users very well. In theory, education information systems ought to be able to parallel other smart and secure systems and draw from the huge and growing knowledge base of communities being served by *smart* Clouds.

What’s Next?: Moving Past Middle-earth

Cloud-based systems, or education information systems, will not replace the existing college, even with the current frenzy of online and blended learning. Rather, they would delegate certain functions to the Cloud and as a result make person-to-person and blended interactions richer and make administrative functions more efficient and user-friendly. Thus, the Cloud would not replace the Fog. It would help clear up the Fog, facilitating a more rewarding student experience and a much better investment of government funding.

What separates the Fog from the Cloud are three core principles that correspond to the



questions raised earlier about the roles of colleges, students and governments.

Colleges

Colleges have allowed governments, foundations, businesses and industry groups on the one hand, and parents, schools and universities on the other hand – that is, their constituencies – to dictate multiple directions for the future of the colleges without providing the maps and navigation to reach the intended destinations. At

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the same time, most of these same constituents are already operating outside of Middle-earth in the new world of access, data and identity.

Students

Students need to be directly, not tangentially, involved in their own learning and its relationship to their economic potential. Cloud-based systems, the best of which are very secure, manage user identities as the core of their businesses, incentivizing young adult users to “own” and care for their identity. These cloud-based systems also serve industries that deal with large amounts of sensitive customer information, ranging from social networks to online banking. In general, today’s young adults are required to have well-defined identities in order to operate in the social or financial space. Why would we not allow them the same with their learning and earning potential?

Certainly neither federal nor national agencies, many which are themselves using the Cloud to advance their own missions, have offered innovative solutions for shepherding colleges through the challenges they currently face or the new ways of operating online. One look through IBM’s *Smarter Planet*⁸ web pages demon-

⁸ For an overview of IBM’s “SmartCloud,” see <http://www.ibm.com/cloud-computing/us/en/> For an overview of IBM’s “Smarter Planet,” see http://www.ibm.com/smarterplanet/us/en/?ca=v_smarterplanet

strates some of the incredible things taking place through Cloud-based technology, but educational progress is not among them. Even IBM’s Jeopardy-winning Watson computer has not been applied to the challenges of 21st century education. But there is no reason why such smart systems could not be unleashed to help the colleges help learners and employers. Colleges need to be seeking out the kind of systemic innovations that other sectors, including business and government, have embraced, and to be spending fewer resources on individual or ad-hoc grants, projects and programs that do not contribute in a sustainable way to growing core institutional development and innovation.

Governments

Governments should stress the use of data mining, analytics and assessment in which teaching and learning, performance and feedback, student progress and problem-solving are part of “smart” systems to which all learners, instructors and experts are connected, or could be connected. The lesson to take away from the large and sometimes questionable education investments of the recession years to date is that money alone is not the answer. In too many cases, massive expenditures disseminated by national foundations and trusts, government agencies and state or provincial governments have not made a discernible difference to aggregate student learning outcomes and economic potential.

The “New” New

Patching up a broken, outdated system is not the answer. Creating the future has to become the “new” new. This would entail first mapping the multiple missions of colleges onto a well-understood, well-modeled matrix; then ascertaining which functions can be more effectively served by and moved to the Cloud, such as transfer and articulation.⁹ From there, it would be decided on an ongoing basis which college functions in addition to courses could be improved by blending on-campus and online practices, leaving the remainder of on-campus learning and support richer, more valuable and more rewarding for students and the other constituencies served by colleges. This could be the beginning of a *smart-college* model.

Once a new model is explored in earnest, and the era of scatter-shot approaches turned into tactical components in an overall strategy, then the idea of a “*different stage of imagination*” can prevail over a “*different era*” that relies only on improving the past organization of colleges, not on creating the future.

If systemic and fundamental reorganization in education is going to occur, it will likely have to come from colleges because of their flexibility. Only by working in concert with the “*smart*” corporations and organizations that have made proven innovations to old forms, as well as those that have rewritten how we operate in the our new hyper-connected world, can colleges move from being the step-children of education to helping to define and propel our economies.

⁹ For an overview of transfer and articulation issues, see <http://www.edpath.com/images/Transfer.pdf>

About the Author

Gordon Freedman, president of the National Laboratory for Education Transformation, a new non-profit organization, has a long history of trying to find both the logical and the cultural levers for modernizing education. Freedman spent nearly six years as Blackboard’s Vice President for Global Education Strategy. Freedman was a pioneer in the early development of online learning for both high school and university courses and programs, including participating in building state-funded virtual schools and in converting college and university continuation education programs from land-based operations to online providers. Later he co-founded the first publicly funded K-8 International School. Freedman is also currently an editorial board member of The SOURCE. Below is a brief Q and A that The SOURCE conducted with Freedman to get an update on his views about community colleges. For more information about Freedman, please see <http://www.gfreedman.info/>.

The SOURCE: What made you start thinking about community colleges and further education as being institutions that could lead the way toward educational innovations?

Freedman: Community colleges are both the most challenged institutions and the most organized for change. They have shown unbelievable flexibility in adapting to change over the last twenty years. But now, they confront sea changes in how people interact, carry out business and learn. So, they need to, and I believe are able to, move beyond looking at change simply as adapting. But they can’t do this alone. They need to work with those aspects of society that have made big changes. Silicon Valley, Detroit, IBM and others have started to build the new realities.

The SOURCE: Some of what you are saying sounds like “Big Brother,” are you talking about the college world looking like Google or Facebook in the future?

Freedman: No, not at all. While the data systems operating out of view at Google, Amazon, Twitter and Facebook are truly amazing for what they do in those worlds, some corresponding sets of innovation need to come in a next wave of information systems-based technology to the colleges. Right now we are stuck in old technologies, rather than moving toward “smart” information systems. If General Motors can get to profitability through reorganization, reinterpretation of cars and through constructive use of smart technologies, community colleges can do the same. In fact, to keep their students and their programs, they are going to have to adapt to the future. So, it’s all about integrating the virtual and the physical in very specific ways, down to the level of the individual student and up to the level of senior administrators.

The SOURCE: Does the physical campus become more important or less important in your view of the future?

Freedman: The campus becomes a “smart” hub, using people’s time much more wisely and efficiently. If a service can be moved to the Cloud instead of making students or perspective students drive for a long time and stand in long lines, then that should happen. If a small seminar, a learning community, a corporate-college program, or a developmental program needs people working together physically, then the college needs to make that happen effortlessly. It’s all part of putting the right mix together for the right programs and the right people. Every student has to count; and every student needs to be accounted for.

The SOURCE: You seem to know both the community college space in the U.S. and the Further Education space in the UK. How did that come about?

Freedman: I realized a while ago the tremendous value of community colleges, but also how they struggled to get everything done in comparison to school districts and four-year and graduate universities. As this value dawned on me, I realized that they were the best positioned of the institutions to translate education into employment, but were the least well organized and were slow to adopt technologies that could change them. In a variety of my roles working for companies and non-profits, I spoke with hundreds of community college leaders and personnel, got to know their associations in the US and the UK, and some of their governance structures.

About The SOURCE on Community College Issues, Trends & Strategies

This is the eighth report posted on the website of The SOURCE on Community College Issues, Trends & Strategies inside The SOURCE Library section, published by Lorenzo Associates, Inc.

These reports are designed in a way to be easy to read and follow, with relatively large serif type and wide line spacing, in a two column format. Graphic images, live links, sub-headlines and various bold type are added to make everything a bit easier on the eyes. We hope you like our style. It is a fairly simple graphic design, but it is also challenging and time-consuming to make it all look right.

The mission of The SOURCE is to provide free, timely, accurate, and highly informative resources to community college faculty, staff, administrators and students. In addition to publishing reports like this one, The SOURCE aggregates and publishes an enormous number of links to outside news, feature articles, reports and organizations related to the community college sector inside 11 topic-related SOURCE Silos: Online Education; Miscellaneous News, Reports, Articles & Stats; College Readiness; Remedial Education; College Completion & Retention; Workforce Development; Technology Adoption; Data Analysis & Assessment; Funding, Economics and Financial Aid; and Transfer & Articulation; and Organizations.

The SOURCE also publishes a free, self-subscription-based electronic newsletter, "SOURCE Updates," that aggregates all the links that are posted to The SOURCE website every other week.

All this and more, is freely available through The SOURCE website at <http://www.edpath.com/thefource.html>.

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