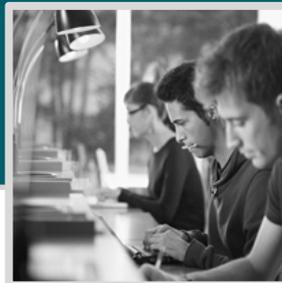
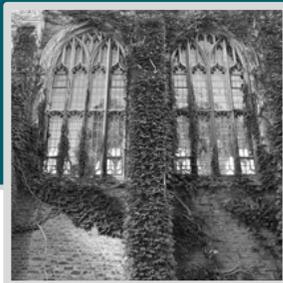


# Trends in Higher Education Marketing, Recruitment, and Technology

March 2014



In the following report, Hanover Research explores a variety of trends that have developed within higher education marketing, enrollment, branding, and recruitment. A close consideration of how technology is impacting higher education is also discussed, including emerging trends in the use of technology to both attract prospective students and boost overall student engagement.

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## EXECUTIVE SUMMARY AND KEY FINDINGS

In the following report, Hanover Research examines recent trends and developments in higher education related to branding and marketing, recruiting and enrollment, and technology.

### KEY FINDINGS

- **One of the most notable trends in higher education branding and marketing is that institutions are dedicating far more attention to these functions than in previous years.** Many universities have hired marketing professionals from the corporate world, including CMOs, and have invested significant time and money to create strong institutional brands.
- **Perhaps the largest area of innovation and growth in higher education marketing and branding, as well as in recruitment, is in the online and digital space.** Although there is still some doubt that institutions are using technology to its full potential, particularly with social media and other emerging platforms, a recent survey by the University of Massachusetts Dartmouth indicated that nearly 100 percent of institutions polled use some form of social media as part of their marketing and overall operations.
- **Among the most important tools for social and online marketing is an effective and intuitive website, which should be considered the “ultimate brand statement” for an institution.** Websites often feature elements and layouts so as to streamline and highlight content, including navigation bars, engaging visuals such as slideshows, and prominent “call to action” buttons that encourage students to apply, for example.
- **Despite increased digital activity, a recent survey found that the most effective marketing strategies for universities are nevertheless events-based and involve direct interaction with potential students.** Radio ads, asking current students or alumni for applicant referrals, and online college fairs were deemed least effective, while the most effective methods of outreach were open houses and campus visit days for high school students.
- **Recruitment strategies in higher education increasingly focus on international students and non-traditional and adult learners.** Colleges and universities in both Canada and the U.S. are competing for international students on a growing scale, with Canada increasing its international enrollments by 94 percent over the last decade, and the U.S. increasing international enrollments by nearly ten percent over last year.
- **Despite the increase in popularity of online education, few top-tier universities have robust online education offerings outside of continuing education programs and MOOC courses.** A random sampling of ten institutions in the top 100 Academic

Ranking of World Universities (ARWU) showed that only two out of ten offer traditional online courses (non-MOOC and non-continuing education).

- **Newer methods of online and technology-enhanced course delivery, including “flipped classrooms” and gamification, are showing promising student outcomes.** “Flipped” and gamified instruction models in particular have resulted in greater student engagement. Adaptive learning technology has also enjoyed significant interest, and new technologies are currently under development by Fujitsu, MIT, and the Apollo Group.

## SECTION I: BRANDING AND MARKETING

As universities find the need to appeal to an ever-increasing and diverse student base, successful branding and marketing have become increasingly important activities for institutions. Universities must now go to greater lengths to differentiate themselves from competitor institutions. Successful branding can help with increasing enrollment, expanding fundraising capabilities, and other outcomes. A recent Perkins+Will white paper summarized the multi-faced nature of branding, and its significance, as follows:<sup>1</sup>

Today, effective strategic planning and brand management require more than traditional advertising, marketing or identity development. Institutions that craft, present and manage a unified brand message, experience and environment achieve a competitive advantage in recruiting, retaining and building loyalty amongst their students, parents, staff, faculty, alumnae and donors.

Communicating a brand successfully to students, both current and prospective, requires strategic planning and effective tools. This section will explore some of the recent ways branding and marketing has been used in the higher education industry.

### OVERALL TRENDS

As indicated above, institutions are focusing on branding and marketing far more than in previous years. Many have hired marketing professionals from the corporate world and invested significant time and money to create strong institutional brands.<sup>2</sup> In some cases such as at Northwestern University in the U.S., this has meant creating Chief Marketing Officer (CMO) positions and making brand creation and marketing campaigns a core function of the institution.<sup>3</sup>

For some institutions, this sort of re-trained perspective and corporate mentality has drawn praise as well as rebuke. Purdue University, for example, spent a half million dollars in 2010 on its "Makers, All" branding campaign which was poorly received by students and alumni.<sup>4</sup>

However, there is evidence that universities do not have to spend significant amounts of money to be effective. Elliance and other industry experts identify several top trends from

<sup>1</sup> "Harnessing the Power of the University Brand: Five Steps to an Effective Branded Facility." Perkins+Will.

<http://www.perkinswill.com/files/Branding%20for%20Higher%20Education.pdf>

<sup>2</sup> Kiley, K. "A New Brand." Inside Higher Ed, October 4, 2011.

[http://www.insidehighered.com/news/2011/10/04/former\\_corporate\\_marketers\\_taking\\_communications\\_roles\\_on\\_university\\_campuses](http://www.insidehighered.com/news/2011/10/04/former_corporate_marketers_taking_communications_roles_on_university_campuses); Armini, M. "Beware Higher Ed's 'Mad Men'." Inside Higher Ed, May 27, 2010.

<http://www.insidehighered.com/views/2010/05/27/armini>

<sup>3</sup> Morrison, M. "Why Higher Education Needs Marketing More Than Ever." *Advertising Age*, October 22, 2013.

<http://adage.com/article/cmo-strategy/higher-education-marketing/244820/>

<sup>4</sup> "Purdue Spent \$500K on Controversial Branding Campaign." Inside Higher Ed, June 27, 2011.

<http://www.insidehighered.com/quicktakes/2011/06/27/purdue-spent-500k-controversial-branding-campaign>

2013, and many of these branding and marketing approaches are feasible for most colleges and universities. Unsurprisingly, they are heavily centered on the use of technology.<sup>5</sup>

- **Responsive website design:** Institutions are placing more emphasis on responsive web design to create intuitive and easy to navigate websites that can be viewed on multiple devices and platforms.
- **Search engine optimization:** Administrators want their institutions to receive a prominent spot in search engine results, particularly Google. Especially for institutions that offer niche programs, it is increasingly important to ensure that search results include these programs at the top.
- **Use of web analytics:** Colleges and universities are relying on data-driven analytics to determine who, how, and where they are reaching their audiences. The use of analytics software is increasing as the higher education web ecosystem is becoming increasingly complex, and the amount of material institutions have online is expanding (domains, subdomains, etc.). Getting a better handle of this data is a new area of concentration for colleges and universities.
- **Strategic social media:** While recent polls indicate nearly every institution of higher education use some form of social media, it is unclear that many are realizing any ROI on simply establishing Facebook or Twitter accounts. These trends are explored further in this section.
- **Mobile development:** Alongside the rise of mobile technology and connected devices, colleges and universities are making greater investments in having a mobile presence. This includes not only mobile versions of websites and other content, but also making a greater amount of course content mobile-friendly.
- **CMS and CRM systems:** Alongside the use of web analytics and other methods of harnessing “big data” in higher education, colleges and universities are relying more heavily on content management and customer relations systems. CRM systems are especially important tools for admissions professionals engaged in outreach to prospective students.

Beyond the changes brought by technology, marketing and branding trends have shown a progressive reliance on more creative outreach efforts, as well as design and advertising campaigns.<sup>6</sup> Some are more artistically-oriented than others, but most attempts are to appeal more personally to students that may be interested in higher education. Examples include placing QR codes (to interact with smartphones) in public places, crowdsourcing

<sup>5</sup> Noaman, A. “Higher education marketing trends for 2012-2013.” Elliance, August 9, 2012. <http://aha.elliance.com/2012/08/09/higher-education-marketing-trends-2012-2013/>; Joly, K. “One Design to Rule them All? Responsive Website Design in Higher Education.” University Business, February, 2012. <http://www.universitybusiness.com/article/one-design-rule-them-all>; Dixon, C. “Finding the Right One: Mobile Technology in Higher Education.” Educause, November 1, 2012. <http://www.educause.edu/ero/article/finding-right-one-mobile-technology-higher-education>

<sup>6</sup> Carey, K. “The Brave New World of College Branding.” The Chronicle of Higher Education, March 25, 2013. <http://chronicle.com/article/The-Brave-New-World-of-College/138107/>

photos and videos to share campus events, making creative advertising videos (with the intent to go viral), and upgrading housing and other facilities to attract students.<sup>7</sup>

More traditional marketing and branding strategies, such as open house events and sponsored visits for students are also still extremely popular, as the next section will discuss in more detail.

## BRANDING AND MARKETING STRATEGY

According to a recent report by communications agency Noir sur Blanc, “93% of administrators in higher education already considered their institution to be a brand.” However, that same report notes that “in many cases, this is really more wishful thinking than objective truth. In reality, only the larger institutions have adapted their communications policies to include the brand angle and integrated it into their strategies.”<sup>8</sup>

As institutions turn more to guidance from corporate CMOs or otherwise pursue a fundamental revamp of their marketing and branding strategies, several successful guidelines have emerged for higher education. The same Noir sur Blanc report emphasizes four main elements to branding strategy for higher education:<sup>9</sup>

- **Branding requires “patient and rigorous effort,”** and relies heavily on timing. A university brand can be damaged much more quickly than it can be successfully built, so consistency in purpose and messaging is necessary. For instance, “a mediocre ranking is not catastrophic, but a series of low rankings can do long-term damage to the image.”
- According to Noir sur Blanc, **“it is very important to keep promises, particularly when it comes to the quality of the education provided.”** Institutions must be committed to maintaining and improving quality. In turn, their “communications must constantly be underpinned by facts, data, and irrefutable evidence: rankings, accreditations, applicant data (number and quality), recruitment of professors, placement of graduates, agreements with prestigious partners, media presence [...] anything that demonstrates the quality, as the excellence of the institution helps craft and strengthens its brand.”
- **“It is essential to ensure consistency among positioning, identity, strategy, stated goals, and communications.** [...] It is also important to carefully monitor the consistency not only of the messages expressed by the communications department, but also those of the professors, students, [and] governing authorities [...] They must all speak with the same voice.” Institutions should ensure that their

<sup>7</sup> “20 Cool Trends in College Marketing.” Best Colleges Online, November 30, 2011.

<http://www.bestcollegesonline.com/blog/2011/11/30/20-cool-trends-in-college-marketing/>

<sup>8</sup> “Higher Education and the Challenges of Communication.” Noir sur Blanc White Paper. p. 26.

<http://www.case.org/Documents/Browsebyprofessionalinterest/HigherEdandCommunicationEnglish.pdf>

<sup>9</sup> Ibid., p. 27-29.

brand is not diluted by attempting to “cover every market at once and meet everyone's expectations.”

- Institutions should **leverage multiple angles in order to maximize growth of a brand**. This includes mobilizing alumni networks and current students to be brand ambassadors; maximizing merchandising potential (e.g., branded clothing and apparel, gifts, and other items, particularly related to athletics); and taking advantage of event organization in order to attract greater public attention (e.g., conferences, galas, or forums for students and businesses).

Canadian institutions have employed these types of branding and marketing strategies, but the country as a whole has also prioritized “increasing its market share of international students.”<sup>10</sup> This is likely the most significant trend of note in Canada over recent years, and its impact on enrollment in Canada is discussed in greater detail in the next section. In terms of branding and marketing, Canada has attempted to redefine its national education system as wholly different from others in the global marketplace.<sup>11</sup>

A 2012 government report entitled “International Education: A Key Driver of Canada’s Future Prosperity” outlines strategies for marketing and recruiting, including:<sup>12</sup>

- **Prioritizing specific markets** - The provinces identified Southeast Asia, the Caribbean, the Middle East, and Africa as priorities beyond “the more established markets”;
- **Extending the Canada brand** – Because international students often select their country of choice first and then select the institution, universities should ensure to develop comprehensive communications strategies for prospective students from priority countries that promote the Canada brand “in all areas of marketing, media relations, event promotion, and digital communications.”
- **Employing a sophisticated digital communication system**, including a website that is easy to navigate, highlights the advantages of studying in Canada, and may include video testimonials of current international students, for example. Social media resources such as China’s version of Twitter, called Weibo, can also be very valuable marketing tools.

Some of the digital efforts endorsed by Canada and that are being used by institutions to promote their brand are discussed below. Nevertheless, a 2013 survey of international students revealed that “direct email or phone conversation was more than twice as

<sup>10</sup> Kizilbash, Z. “Branding Canadian Higher Education.” Canadian Bureau for International Education, 2011. <http://net.cbie.ca/english/documents/CBIE-research%20-%20Kizilbash%20-%20EN%20FINAL.pdf>

<sup>11</sup> Ibid.

<sup>12</sup> “International Education: A Key Driver of Canada’s Future Prosperity.” Advisory Panel on Canada’s International Education Strategy, Foreign Affairs and International Trade Canada, August 2012. p. 45-55. [http://www.international.gc.ca/education/assets/pdfs/ies\\_report\\_rapport\\_sei-eng.pdf](http://www.international.gc.ca/education/assets/pdfs/ies_report_rapport_sei-eng.pdf)

important as social media” for students to get information on institutions.<sup>13</sup> The survey found that the university website was the most important source of information, followed by an electronic prospectus, input from friends, advertisement emails, and university fairs.<sup>14</sup>

## SOCIAL AND DIGITAL

One of the most significant ways branding and marketing of higher education has changed in recent years has been in the online space, using a variety of new platforms for external engagement and communication. The terms “social” and “digital” refer to the use of both social media and digital marketing more generally, and include the role of effective and intuitive websites. Institutions are making greater use of social media and digital platforms like Twitter, Facebook, YouTube, and podcasts to market their programs, while website design and interface is proving a crucial component in how colleges and universities present themselves to prospective students.

According to one recent analysis, which refers to the university website as “the ultimate brand statement,” a homepage is a key component in the student experience, and can make or break decisions about whether to attend:<sup>15</sup>

A university's homepage is the hub of its web presence and in attempting to appeal to a diverse range of visitors, the challenge is staying intuitive and uncluttered... If visitors have to go back to your homepage every time to find the content they're seeking, they aren't likely to stay on your site very long. Website navigation is an integral component of overall site architecture from which all content can flow from.

To achieve this, it has become common for universities to ensure their homepage is a clearly laid out portal to all of the content that students are looking for online. This means websites often now feature elements such as “well-placed navigation bars” and engaging visuals (e.g., slideshows, multimedia content, etc.), and ensure that “calls to action” (e.g., “Apply Now” buttons) feature prominently throughout the website experience.<sup>16</sup>

Broader trends in the use of social media platforms, however, have shown that while their use at colleges, universities, community colleges, and other academic institutions has exploded in the last few years, the success of such enterprises is uncertain. Most institutions have experienced significant growing pains in their attempts to manage the variety of

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<sup>13</sup> “Competing Globally: Understanding the decision making processes of prospective international students.” Hobsons, May 2013. p. 6.  
[http://www.hobsons.com/uploads/documents/hobsons\\_international\\_student\\_decision\\_making.pdf](http://www.hobsons.com/uploads/documents/hobsons_international_student_decision_making.pdf)

<sup>14</sup> Ibid.

<sup>15</sup> Quinn, P. “Consistent Website Experiences with Intuitive Navigation.” *Higher Education Marketing*, November 13, 2013. <http://www.higher-education-marketing.com/blog/intuitive-navigation>

<sup>16</sup> Ibid.

initiatives that are taken up by various programs, departments, academic units, and schools, which in many instances leads to a duplication of efforts.<sup>17</sup>

A 2011 social media survey of more than 950 institutions showed that a full 96 percent of respondents were actively using social media, but that many are struggling to manage their social media initiatives. As one of the researchers noted, “There’s a lot of chaos [...] If the evolution of social media is like raising a child, we’re at the end of the toddler years.”<sup>18</sup>

The University of Massachusetts Dartmouth has been conducting surveys for several years that track the use of social and digital media by universities as part of outreach and marketing. The latest poll indicated that 100 percent of respondent institutions are now using some form of social media – but there is no reliable data on how effective the use of such tools are in terms of enrollment or elevating institutional value.<sup>19</sup> In terms of the specific platforms used, the survey highlighted wider adoption of the following social media platforms:<sup>20</sup>

- Facebook is the most common form of social networking being used, with 98% of colleges and universities reporting having a Facebook page
- 84% report having some form of an institutional Twitter account
- 86% report having an institutional YouTube channel/presence
- 66% report maintaining some kind of blog
- 41% report the use of podcasting
- 47% of admissions professionals report using LinkedIn

Data from recent years show significant growth in the adoption of social media such as podcasting and LinkedIn:

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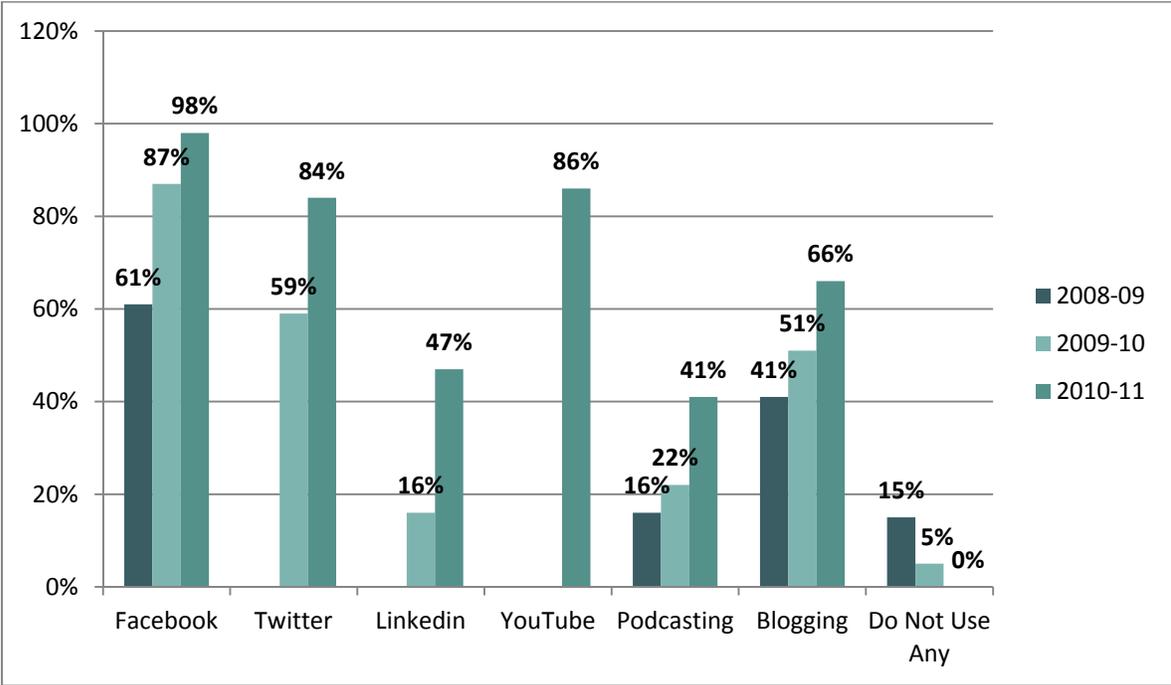
<sup>17</sup> Ratliff, A. “Are They Listening? Social Media on Campuses of Higher Education.” *The Journal of Technology in Student Affairs*, Summer 2011. [http://studentaffairs.com/ejournal/Summer\\_2011/AreTheyListening.html](http://studentaffairs.com/ejournal/Summer_2011/AreTheyListening.html)

<sup>18</sup> Russell, P., “Survey Finds Educational Institutions Developing Social Media Policies, Struggling with Resources and Measurement,” *Council for Advancement and Support of Education* News Release, April 19, 2011, [http://www.case.org/about\\_case/newsroom/press\\_release\\_archive/socialmediasurvey2011.html](http://www.case.org/about_case/newsroom/press_release_archive/socialmediasurvey2011.html)

<sup>19</sup> Barnes, N. and Lescault, A. “Social Media Adoption Soars as Higher-Ed Experiments and Reevaluates Its Use of New Communications Tools.” U-Mass Dartmouth Center for Marketing Research, 2012. p. 5-10. <http://www.umassd.edu/media/umassdartmouth/cmr/studiesandresearch/highered.pdf>

<sup>20</sup> *Ibid.*, p. 2-3.

**Figure 1.1: Trends in Social Media Usage Among U.S. Colleges and Universities, 2008/09 – 2010/11**



Source: Center for Marketing Research, U-Mass Dartmouth<sup>21</sup>

<sup>21</sup> Ibid., p. 3.

## SECTION II: RECRUITMENT AND ENROLLMENT

There are a number of trends in recruitment and enrollment that are having a significant impact on how institutions go about attracting students. This includes shifts in demographics and increased mobility of students, as well as the increasing cost of higher education in many countries. A Lawlor Group report from 2013 highlights recent developments in higher education that will affect enrollment and recruitment:

### 2.1: Top Ten Higher Education Trends for 2013, Enrollment and Recruitment

TREND	EFFECT/IMPACT
<b>Money Woes</b>	Many families are experiencing a diminished ability to pay for a college education. Compared to pre-recession levels, median household income, home equity, and net worth are all down. Meanwhile, college tuition costs have continued to climb steadily, even after financial aid is factored in.
<b>Penny Pinching</b>	Even more families are re-evaluating the price they are willing to pay for a college education. The cost of a college education is bumping up against the ceiling of what families will consider paying. Even students from upper-middle-income families are experiencing higher levels of student debt and factoring in the cost of post-graduate study and the ROI of majoring in certain fields.
<b>Public Perception</b>	Media coverage and legislative attention are shaping public opinion about the value of a college degree. While an overwhelming majority of the public believes a college education is necessary to get ahead, a “value gap” has opened up in the polling because far fewer people believe going to college at any price will be worth the financial investment. Government funders, as well, are looking to make their appropriations contingent upon institutional performance measures.
<b>Need for ROI</b>	Families are seeking evidence of successful results to justify their college investment. Higher education has become less an end in itself and increasingly a means to an end—primarily an economically viable career path. In calculating a college’s value proposition, families factor in outcomes as well as cost and prestige. They expect proof of high graduation rates and graduate employment at acceptable salary levels.
<b>Different Demographics</b>	The number of high school graduates is shrinking, but the proportion that is ethnically diverse is growing. The country’s changing demographics, combined with a widening gap between the nation’s rich and poor, mean more first-generation students and students from socioeconomic backgrounds that not only make paying for college a challenge, but also often leave them underprepared for college-level study.
<b>Older &amp; Wiser</b>	Non-traditional-age students still represent a largely untapped market. During the economic recession, more people age 25 and older returned to college, but that bump reached its peak in 2010. But non-traditional students are also more likely to drop out in their first year, so they seek convenient course scheduling, assistance in the financial aid process, tutoring and counseling services, and centers for veterans.
<b>Transfers</b>	More students are attending multiple institutions in their pursuit of a degree. Transferring is increasingly becoming a cost-conscious part of students’ long-term plans to affordable degree completion. Pluralities of students who transfer from a private non-profit institution attend two-year public institutions, with four-year public institutions being their second most popular destination.

TREND	EFFECT/IMPACT
<b>Engaged Consumers</b>	Growth in mobile online access and social media use is allowing people to instantly verify any claims a college makes. “Generation C” (the C is for “connected”) is not bound by age brackets, but rather by shared behavior—their use of real-time social, local, and mobile technology. They find it increasingly easy to investigate institutions’ reputations via online networks, word-of-mouth recommendations, and other communication channels beyond the colleges’ direct control.
<b>Targeted Data</b>	The widespread use of data analytics in other industries is leading students to expect personalized and relevant communications. The digital information that can be captured about even those students who do not explicitly make their interest known to a college has enhanced targeting capabilities. And since private non-profit institutions are known for providing personal attention, families do note any disconnects in that brand attribute during the admissions process.
<b>MOOCs &amp; Online Education</b>	The proliferation of massive open online courses (MOOCs) is drawing attention to how college credits are awarded. All types of online and hybrid courses are thriving as the marketplace seeks cost-effective access and convenient delivery, and the American Council on Education is determining whether some MOOCs are similar enough to traditional college courses that they should be eligible for transfer credit.

Source: The Lawlor Group<sup>22</sup>

Many of these are unsurprising, such as the rise of MOOCs and other online offerings, shifts in public perception of higher education and its value, and perhaps most notably, changes in demography and the need to tap into two very important markets: adult learners and international students.

### RECRUITMENT EFFORTS: COMMON AND EFFECTIVE STRATEGIES

A poll conducted by Noel-Levitz in 2013 asked admissions officers what the five most effective marketing strategies were for the prior year. Figure 2.2 shows which strategies were the top ten strategies for recruitment at polled institutions.

<sup>22</sup> Table contents quoted from: “Ten Higher Education Trends for 2013.” The Lawlor Group, January 2013. <http://www.thelawlorgroup.com/pov/focus/1301-ten-higher-education-trends-2013>

**Figure 2.2: Top Ten Strategies and Tactics for Recruitment, by Institution Type (2013)**

RANK	FOUR-YEAR PRIVATE	FOUR-YEAR PUBLIC
1	Campus open house events	Campus open house events
2	Campus visit days for high school students	Campus visit days for high school students
3	Encouraging prospective students to apply on the admissions website	Encouraging prospective students to apply on the admissions website
4	Encouraging prospective students to schedule campus visits on the admissions website	Weekend visits for high school students
5	Using enrolled students in marketing/recruiting	Encouraging prospective students to schedule campus visits on the admissions website
6	Weekend visits for high school students	Community College articulation agreements
7	Routine contacts by admissions office professional staff to assess student reactions to financial aid awards	Campus visit events designed for school counselors
8	Campus visit events designed for school counselors	Using enrolled students in recruitment/marketing
9	Tele-counseling program to coordinate continuous, regularly scheduled flows of phone calls at a high volume	College-paid trips to campus for prospective students
10	High school visits by admission representatives to primary markets	Off campus group meetings for prospective students and/or their parents

Source: Noel-Levitz<sup>23</sup>

Notably, most of these are event-driven and involve direct interaction with prospective students. Thus, while institutions are indeed relying on social media and digital presence to define their brand and attract students, traditional forms of outreach are still among the most effective and popular recruitment strategies that institutions use to increase enrollments.

Other findings from the poll about marketing in higher education include:<sup>24</sup>

- Among the least effective strategies and tactics for both private and public four-year institutions were radio ads, asking current students or alumni for applicant referrals, online college fairs, and billboard/bus/outdoor advertising.
- Running television ads was rated a top practice in 2013 only by two-year public institutions, but was not being used by more than a quarter of survey respondents in this sector.
- Four-year public institutions increased their volume of written contacts (direct mail, e-mail, and texting), and their purchasing of search list names from list vendors since Noel-Levitz's 2011 study.

<sup>23</sup> "2013 Marketing and Student Recruitment Practices Benchmark Report." Noel-Levitz, 2013.

<https://www.noellelitz.com/papers-research-higher-education/2013/marketing-student-recruitment-practices-benchmark-report>

<sup>24</sup> Ibid., p. 1-4.

- Only about one-third to one-half of respondents reported having a strategic, multi-year enrollment plan that they believed was of high quality.
- The preferred method of communication with potential students during first and subsequent contacts is email, though mailers and brochures are still used by a significant number of institutions.

## INTERNATIONAL RECRUITMENT

Among the most competitive areas for colleges and universities – particularly in Canada, but increasingly across the globe – is the international/foreign student market. The U.S., Britain, Australia and other English-speaking countries are competing for largely the same students, and some warn that soon the number of programs available to international students in these countries will outstrip the number of students “on the market.”<sup>25</sup> While this may seem alarmist, the combination of increased mobility of students and the lower number of first-time applicants at universities in English-speaking countries has created enormous pressures to compete for international students.<sup>26</sup>

In addition to the marketing and recruitment strategies outlined above, including strategies to attract international students, some institutions have elected to hire companies such as Pearson to engage in direct targeting of international students on their behalf. The company’s “Progression +” website gives “students (most likely exam clients) admission and pathway information” on universities that partner with Pearson.<sup>27</sup>

Alongside its Degree Course Finder service for students, Pearson is now enabling a new marketing channel direct to students, for a fee. Institutions can decide their level of collaboration with the website, starting at just a listing and extending to being specifically promoted at one of the company’s 80 centers worldwide.

The U.S. has been particularly aggressive in its recruitment of international students, particularly Chinese students. International student enrollments in the U.S. for 2012-2013 increased by nearly 10 percent over the prior year, with some of the biggest changes coming from Saudi Arabia, Kuwait, Iran, China, and Brazil.<sup>28</sup> To achieve these numbers, U.S. institutions have had to change their strategies for recruitment such as maintaining a presence at conferences and job fairs overseas, offering generous financial aid packages to international students, as well as improving social media outreach efforts.<sup>29</sup>

<sup>25</sup> “The Competition for International Students is Getting Tougher.” Lund University, January 27, 2012. [http://www.lunduniversity.lu.se/o.o.i.s?id=24890&news\\_item=5787](http://www.lunduniversity.lu.se/o.o.i.s?id=24890&news_item=5787)

<sup>26</sup> “International Student Mobility Trends: Towards Responsive Recruitment Strategies.” World Education News and Reviews, March 1, 2013. <http://wenr.wes.org/2013/03/wenr-march-2013-international-student-mobility-trends-2013-towards-responsive-recruitment-strategies/>

<sup>27</sup> Custer, S. “What’s next in student recruitment for the year ahead?” The Pie, January 10, 2014. <http://thepienews.com/analysis/whats-next-in-student-recruitment-trends-to-watch-in-2014/>

<sup>28</sup> “Open Doors 2013 – Fast Facts.” Institute for International Education, 2013. <http://www.iie.org/~media/Files/Corporate/Open-Doors/Fast-Facts/Fast-Facts-2013.ashx>

<sup>29</sup> “International Recruitment Resources: Education USA.” National Association for College Admission Counseling. <http://www.nacacnet.org/media-center/briefing/international/Pages/InternationalResources.aspx>

As mentioned in the last section, the Canadian Ministry of Foreign Affairs, Trade, and Development has made the recruitment of foreign students and international engagement in higher education a national priority.<sup>30</sup> According to the Canadian Bureau for International Education (CBIE), the work has paid off, as international student enrollment in Canada for 2013 was up by nearly 100 percent over the decade prior.<sup>31</sup> The success of the “Imagine” brand campaign, which “conveys a message of openness and support through the concept of ‘empowered idealism,’” along with efforts at the national, provincial and institutional levels, led to a proposed \$23 million action plan through 2015 to further support international recruitment.<sup>32</sup>

## ADULT LEARNERS

Outside of international student recruitment, trends in higher education indicate that another key audience for enrollment is adult and non-traditional learners. In the United States, the number of adult learners returning to higher education, particularly for continuing education, has been rapidly increasing. According to the National Center for Education Statistics, “in recent years, the percentage increase in the number of students age 25 and over has been larger than the percentage increase in the number of younger students, and this pattern is expected to continue.”<sup>33</sup> By 2020, the percentage of enrollments for students 25 and older is projected to increase by 20 percent over 2010 levels.<sup>34</sup>

In Canada, similar trends are expected. According to the Centre for the Study of Education and Work’s WALL Surveys, there has been “a rapid intergenerational increase in the extent of engagement” in adult further education, and at least half of the population aged 25-64 pursues some kind of continuing higher education.<sup>35</sup> In addition, the same surveys indicate that as of 2010, almost 20 percent of that age bracket was facing problems of unmet need in further education. Figure 2.3 indicates the growth in further education participation rates among adults in Canada over the last several decades:

<sup>30</sup> “Canada’s International Education Strategy: Harnessing our knowledge advantage to drive innovation and prosperity.” Ministry of Foreign Affairs, Trade, and Development Canada. <http://international.gc.ca/global-markets-marches-mondiaux/education/strategy-strategie.aspx?lang=eng>

<sup>31</sup> “A World of Learning: Canada’s Performance and Potential in International Education.” The Canadian Bureau of International Education, 2013. p. iii. [http://net.cbie.ca/download/CBIE\\_A%20World%20of%20Learning\\_English\\_web%20high%20res.pdf](http://net.cbie.ca/download/CBIE_A%20World%20of%20Learning_English_web%20high%20res.pdf)

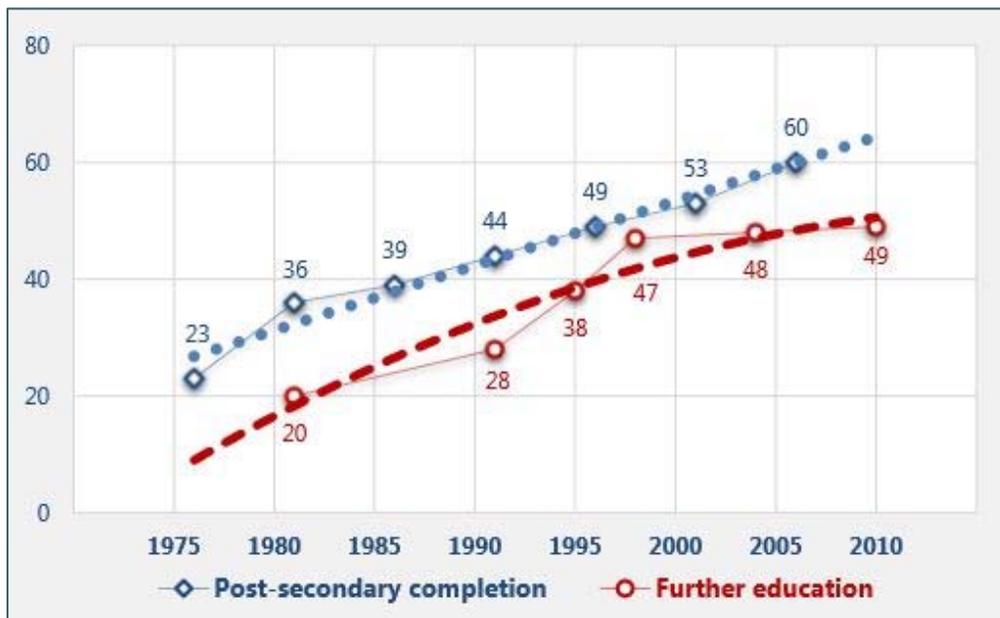
<sup>32</sup> *Ibid.*, p. 2.

<sup>33</sup> “Fast Facts - Enrollment.” National Center for Education Statistics, 2012. <http://nces.ed.gov/fastfacts/display.asp?id=98>

<sup>34</sup> *Ibid.*

<sup>35</sup> Livingston, CW, and Raykov, M. “Adult Learning Trends in Canada – Basic Findings of the 1998, 2004, and 2010 Surveys.” Centre for the Study of Education and Work, 2013. p. 4-5. <http://www.wallnetwork.ca/Adult-Learning-Trends-in-Canada-2013.pdf>

**Figure 2.3: Post-secondary Completion and Further Education Participation Rates, 25-64 Year Olds, Canada, 1976-2010 (by percent)**



Source: Centre for the Study of Education and Work<sup>36</sup>

Recruiting these students will tap an unmet demand and growing market segment for both countries, and has required recruitment strategies that speak directly to this demographic. While some of the methods are the same as recruiting “traditional” students (e.g., quality communication methods, effective websites, using social media, etc.), other trends are noticeable in how institutions make their programs more attractive to adult learners. One of the most common practices is the design of highly flexible programs that meet the needs of working professionals, including expanding offerings in the part-time and evening course segments, and increasing the number of options for online education.<sup>37</sup> Additional strategies institutions have pursued include providing greater flexibility for transfer credits, improving lead quality when identifying students, and designing programs specifically for students as opposed to merely adapting existing programs.<sup>38</sup>

### CHANGING ADMISSIONS STANDARDS

For some institutions, one practice that feeds directly back into the expansion of enrollments for foreign and adult students is the lowering of admissions standards in order to boost numbers. This naturally brings both positive and negative effects to a university, and there has been brisk discussion about this topic more generally in a variety of venues, and on several fronts. While the net positive impacts of lowering enrollment standards are

<sup>36</sup> Ibid., p. 5.

<sup>37</sup> Quinn, P. “Recruiting Students for Continuing Education.” Higher Education Marketing, October 25, 2013. <http://www.higher-education-marketing.com/blog/recruiting-students-continuing-education>

<sup>38</sup> “Nontraditional Student Recruitment: Key Trends and Case Studies of Effective Practices.” Hobsons. [http://www.hobsons.com/uploads/documents/hobsons\\_whitepaper\\_mediaservices.pdf](http://www.hobsons.com/uploads/documents/hobsons_whitepaper_mediaservices.pdf)

likely an increase in admissions and thus higher enrollment numbers (and revenues), the net negative impacts can be far more significant.

One recent article from 2013 entitled “The Paradox of Increasing both Enrollment and Graduation Rates: Acknowledging Elephants in the Ivory Tower,” discusses this issue.<sup>39</sup> It examines the effects of lowered admissions standards on universities facing both lower graduation rates and reductions in state funding. Using evidence-based cases, the article concludes that there are several ways universities have subtly changed the dialogue surrounding higher academic standards for incoming students in order to not appear as though standards actually are made lower.<sup>40</sup> This, according to the author, is a worrying trend, and one that any institution hoping to merely boost enrollment figures should be mindful of.

In several cases, particularly at Arizona State University, the suggestion is made that opening the floodgates in this way can easily lead to lower graduation rates overall when compared to similar institutions (ASU admits 90 percent of applicants but has a six year graduation rate of 57 percent). This can have a severe impact on rankings, institutional profile and reputation, and an overall strain on resources that could better serve students more likely to succeed in the long run.<sup>41</sup> A similar argument was made in the 2011 book *Uneducated Guesses: Using Evidence to Uncover Misguided Education Policies*, which explores links between universities that made the SAT and other standardized tests optional for incoming students, and how this led to underperforming students and inflated national rankings for some universities.

Other institutions have chosen to relax standards in other areas to boost their international enrollments in particular, such as required language proficiency, in favor of admitting those students that exhibit strong academic backgrounds. A trend in recent years for U.S. institutions has been to admit international students with weak language skills (but strong academic skills) on a conditional basis, allowing students to strengthen language abilities once admitted.<sup>42</sup> These types of admissions are often called “intensive English enrollments,” and several institutions have reported a distinct increase in enrollments as a result of such admissions policies that feature remedial language programs.<sup>43</sup>

However, relaxing standards in these realms is not without problems from the perspective of university admissions. Particularly among Chinese students, there have been issues with students offering falsified credentials, thanks in part to a reliance on education agents and consultants that act as intermediaries to shepherd foreign students through the application

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<sup>39</sup> “The Paradox of Increasing both Enrollment and Graduation Rates: Acknowledging Elephants in the Ivory Tower.” <http://sciedu.ca/journal/index.php/ijhe/article/view/3567/2214>

<sup>40</sup> Ibid.

<sup>41</sup> Ibid.

<sup>42</sup> Fischer, K. “Colleges Extend Conditional Admissions to Pull in More International Students.” *The Chronicle of Higher Education*, August 8, 2010. <http://chronicle.com/article/Colleges-Extend-Conditional/123783/>

<sup>43</sup> Ibid.

process at U.S. institutions.<sup>44</sup> The results of such practices are disheartening. A Chinese consulting company, Zinch, published a report in 2012 that found that “90 percent of Chinese applicants submit false recommendations, 70 percent have other people write their personal essays, 50 percent have forged high school transcripts, and 10 percent list academic awards and other achievements they did not receive.”<sup>45</sup>

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<sup>44</sup> Bartlett, T. and Fischer, K., “The China Conundrum,” in Araya, D. and Marber, P., eds., *Higher Education in the Global Age: Policy, Practice, and Promise in Emerging Societies*. London: Routledge, 2013. p. 114-15.  
[http://books.google.com/books?id=QN4kAgAAQBAJ&printsec=frontcover&source=gbs\\_ge\\_summary\\_r&cad=0#v=onepage&q&f=false](http://books.google.com/books?id=QN4kAgAAQBAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false)

<sup>45</sup> *Ibid.*, p. 115.

## SECTION III: TECHNOLOGY AND HIGHER EDUCATION

### ONLINE LEARNING

Online education has evolved to such a degree that as a method of educating and as a platform for global branding, it bears little resemblance to what it was merely a few years ago. Institutional strategies for how to engage with these changes have evolved as well, given how colleges and universities worldwide have responded to some of the latest developments in online learning. Changing trends in educational technology are thus the driving force behind many of the educational strategies institutions now introduce. These include new delivery methods, increased access to courses (e.g., MOOCs), and different ways of employing technology in teaching (such as “flipped classroom” teaching, “gamified” courses, and employing adaptive learning).

Online is a medium that continues growing at a robust rate. A 2013 report from the Sloan Consortium, an organization that has tracked developments in online education in the United States for over a decade, found that “the number of students taking at least one online course has now surpassed 6.7 million.”<sup>46</sup> Online enrollments continue growing at a robust rate, forcing many institutions to engage with the online space more vigorously, or perhaps for the first time.

The same report indicated that nearly 70 percent of chief academic leaders say online learning is critical to their long-term strategy.<sup>47</sup> However, not all institutions are shaping their online strategies around simple popularity of courses, or even the explosive public discussions surrounding concepts like MOOCs. Indeed, most top-tier universities do not offer online courses at all, save for limited engagements with MOOC providers such as Coursera or EdEx. For instance, the top two institutions in the United Kingdom – Oxford and Cambridge – have publicly stated that neither intends to join the MOOC movement, despite moves by competitors to do so.<sup>48</sup>

Figure 3.1 presents a random global cross-section of institutions from the Academic Ranking of World Universities (ARWU) for 2013, based on whether the institutions in question offer online courses in three areas:

- a) As part of continuing education programs;
- b) As a MOOC option (either independently or in coordination with a provider), or

<sup>46</sup> Allen I.E. and Seaman, J. “Changing Course: Ten Years of Tracking Online Education in the United States.” The Sloan Consortium, January, 2013. 3-6. [http://sloanconsortium.org/publications/survey/changing\\_course\\_2012](http://sloanconsortium.org/publications/survey/changing_course_2012)

<sup>47</sup> Ibid.

<sup>48</sup> Parry, M. “Leading British Universities Join New MOOC Venture.” *The Chronicle of Higher Education*, December 13, 2012. <http://chronicle.com/blogs/wiredcampus/leading-british-universities-join-new-mooc-venture/41211>

- c) As part of normal institutional course offerings – here labeled “traditional online courses,” indicating courses offered online, for credit, either as standalone courses or as part of a larger degree program.

**Figure 3.1: Online Courses Available from Institutions in the “Top 100 Academic Ranking of World Universities (ARWU), 2013”**

RANKING	INSTITUTION	ONLINE COURSES BY AVAILABILITY		
		CONTINUING & EXECUTIVE EDUCATION	MOOC/OPEN COURSES	“TRADITIONAL” ONLINE COURSES
1	Harvard University	Yes	Yes	No
2	Stanford University	Yes	Yes	No
5	University of Cambridge	Yes	No	No
10	University of Oxford	Yes	No	No
20	Swiss Federal Institute of Technology	Yes	Yes	No
21	The University of Tokyo	No	Yes	No
28	University of Toronto	Yes	Yes	Yes
42	University of Copenhagen	No	Yes	Yes*
61	University of Munich	No	Yes	No
85	Ghent University	No	No	No

\*Students taking online courses for credit must be enrolled in a university abroad; students may only take courses for a maximum of two semesters

However, the trend towards online education is not without its critics. The disruptive innovation that is online learning, many have argued, may offer lower costs and increased revenue, but comes at the price of inferior quality and diminished performance.<sup>49</sup> Critics of moving away from standard practices and expanding both delivery methods and revenue generation models through online education underscore the risk-averse nature of traditional postsecondary institutions, and those currently running them. Given recent financial troubles experienced by for-profit institutions, many in the non-profit world feel validated in their skeptical position – and have even argued that the troubles of for-profit educators will prove beneficial for non-profit education.<sup>50</sup> In addition, there remains a problem with the legitimacy that faculty grant to online education, and this may be the lasting impediment to wider adoption.

<sup>49</sup> Sheets, R., et. al. “Rethinking Higher Education Business Models: Steps Toward a Disruptive Innovation Approach to Understanding and Improving Higher Education Outcomes.” Center for American Progress. March 28, 2012. [http://www.americanprogress.org/wp-content/uploads/issues/2012/03/pdf/higher\\_ed\\_business\\_models.pdf](http://www.americanprogress.org/wp-content/uploads/issues/2012/03/pdf/higher_ed_business_models.pdf)

<sup>50</sup> Ladd, L. “For-profit higher education setbacks may transform nonprofit learning.” Grant Thornton. April 29, 2013. <http://www.grantthornton.com/issues/library/articles/nfp/2013/NFP-2013-04-For-profit-higher-education-setbacks.aspx>

Most of those closely watching the evolution of online education nevertheless agree that technology and the internet is fundamentally transforming higher education, and whether it takes the form of MOOCs or not, the change is here to stay.<sup>51</sup> As a recent article in *Inside Higher Ed* reported, “MOOCs may have snared most of the headlines, but the traditional, credit-based online learning continued to chug along just fine last year.”<sup>52</sup> The growth rate is slower than it has been in recent years, yet online education is nevertheless moving forward. As Figure 3.2 indicates, in the United States the number of students taking some form of online course has risen steadily over the last ten years:

**Figure 3.2: Growth Rates of Postsecondary Online Enrollment, United States, 2002-2011**

YEAR	STUDENTS TAKING AT LEAST 1 ONLINE COURSE	ONLINE ENROLLMENT INCREASE OVER PREVIOUS YEAR	ANNUAL GROWTH RATE ONLINE ENROLLMENT	ONLINE ENROLLMENT AS A PERCENTAGE OF TOTAL ENROLLMENT
2002	1,602,970	n/a	n/a	9.6%
2003	1,971,397	368,427	23.0%	11.7%
2004	2,329,783	358,386	18.2%	13.5%
2005	3,180,050	850,267	36.5%	18.2%
2006	3,488,381	308,331	9.7%	19.6%
2007	3,938,111	449,730	12.9%	21.6%
2008	4,606,353	668,242	16.9%	24.1%
2009	5,579,022	972,669	21.1%	27.3%
2010	6,142,280	563,258	10.1%	29.2%
2011	6,714,792	572,512	9.3%	32.0%

Source: Babson Survey Research Group<sup>53</sup>

## CHANGING METHODS OF DELIVERY

Within the broader realm of technology trends in higher education, online education is far from the most dynamic. Several new forms of content delivery that involve new technology have emerged that have the potential to change pedagogical norms. Among the most recent developments include concepts such as the “flipped classroom,” adapted learning and experiential learning, and innovative approaches to instruction like “gamified” teaching and learning. These trends are explored further below. The focus in this section is, however, on emerging technologies, as opposed to more established ones such as hybrid or collaborative teaching/learning platforms, multimedia-driven instruction, and other technology employed to attract new students over the last few years.

<sup>51</sup> Karabell, Z. “College is Going Online, Whether We Like It Or Not.” *The Atlantic*. May 17, 2013. <http://www.theatlantic.com/business/archive/2013/05/college-is-going-online-whether-we-like-it-or-not/275976/>

<sup>52</sup> Lederman, D. “Growth for Online Learning.” *Inside Higher Ed*. January 8, 2013. <http://www.insidehighered.com/news/2013/01/08/survey-finds-online-enrollments-slow-continue-grow>

<sup>53</sup> Allen, I. “Changing Course: Ten Years of Tracking Online Education in the United States.” Babson Survey Research Group. January, 2013. 3. <http://www.onlinelearningsurvey.com/reports/changingcourse.pdf>

## GAMIFICATION

A number of changes to learning management in the last decade (and even within the last year) go beyond mere Web 2.0 integration, and this is an example of one that institutions hope boost enrollment. This is the trend of introducing game-based learning platforms and “social learning” models, as presented by companies like Curatr and others.<sup>54</sup> This is an example of much more “engaged” eLearning, and which borrows from concepts and experiences seen in video gaming cultures, as well as those underpinning the majority of 21<sup>st</sup> Century social media interaction. The idea is that students in the current generation have undergone a different neurological development than previous generations, and that this was largely the result of being born into a technology-centric learning environment.<sup>55</sup>

Studies have identified several areas where gaming has a positive impact on learning more generally:<sup>56</sup>

- Engaging learners in learning environments
- Increasing motivation
- Intensifying retention of information
- Improving problem-solving skills

As a model of learning in an online higher education environment, game-based or gamified learning involves a much more significant level of interaction from students than more passive activities such as message boards.<sup>57</sup>

## FLIPPED CLASSROOMS

“Flipping” the classroom refers to a “pedagogical model in which the typical lecture and homework elements of a course are reversed,” and in-classroom experiences reconstructed to rely less on passive learning and more on active engagement.<sup>58</sup> The concept behind flipped classrooms again has much to do with accessibility and convenience, as it allows students to consume the core elements of a course whenever, regardless of time or place. This means professors can re-allot classroom time completely and make room for other

<sup>54</sup> “Curatr - Overview.” Curatr. <http://www.curatr3.com/>

<sup>55</sup> Tham, R., et. al. “Is Game-Based Learning an Effective Instructional Strategy to Engage Students in Higher Education in Singapore? A Pilot Study.” *Journal of the Research Center for Educational Technology*, Vol. 8 (1), Spring 2012. pp. 2-10. 3. <http://www.rcetj.org/index.php/rcetj/article/view/160/261>

<sup>56</sup> Ibid.

<sup>57</sup> Gibson, D. “The Potential of Games and Simulations in Higher Education.” *Next Generation Learning*, January 17, 2013.

<sup>58</sup> “7 Things You Should Know About Flipped Classrooms.” *Educause*, 2012. <http://net.educause.edu/ir/library/pdf/eli7081.pdf>

activities, such as experiential or collaborative learning opportunities as opposed to passive learning through lectures:<sup>59</sup>

By leveraging online platforms, lectures can now be pre-recorded and core content accessed by students anytime, anywhere, and as many times as they need. This means that classroom time can instead be used to augment the lecture content, whether through discussion, group exercises or quizzes.

As a trend within higher education, the “flipped” model has gained some high-profile supporters, especially in the United States. Among the more high profile institutions using the flipped classrooms model include Stanford University, which is currently working in conjunction with the Khan Academy to deliver medical education.<sup>60</sup> Course lectures move online in the form of videos and other digital content, and in-person sessions become optional interactive sessions. By moving content out of the classroom, the hope is that students will both progress faster and be able to narrow in on a specialization more quickly.<sup>61</sup> In addition, the flipped model engages students much more fully, as it pays attention to why students miss classes in the first place, and allows them to swap lectures for something practically oriented during their classroom time.<sup>62</sup>

Several other top tier ARWU-ranked U.S. universities have also adopted a flipped classroom approach to various subjects, including engineering at Boston University (#75), chemistry and biology at Duke University (#31), and economics at Vanderbilt University (#49). At Boston University, a computational fluid dynamics course was “flipped” to turn classroom lectures into a mixed cohort of graduate students and seniors that used that same period as an opportunity to interact and compare software solutions and notes on their individual progress with one another. The shift was one from whiteboard to workshop: “Creating an active and engaged learning environment is automatic when flipping a class, and with today’s technology for creating multimedia learning materials, it can be done without losing any of the content.”<sup>63</sup>

In Canada, the University of British Columbia has also reported success in using the flipped classroom model in a physics course. By way of an experiment, one section of the course was taught “traditionally” and another was taught using a flipped approach. The results showed that for students in the flipped section, “engagement nearly doubled and attendance increased by 20%.”<sup>64</sup> Furthermore, students in the flipped course scored more than twice as well as students in the traditional section, and 90 percent of the students in

<sup>59</sup> Proulx, C. “5 Ways Technology Will Impact Higher Ed in 2013. *Forbes*, December 11, 2012.

<http://www.forbes.com/sites/groupthink/2012/12/11/5-ways-technology-will-impact-higher-ed-in-2013/>

<sup>60</sup> Straumsheim, C. “Flipping Med Ed – Stanford University and Khan Academy use flipped classroom for medical education.” *Inside Higher Ed*, September 9, 2013. <http://www.insidehighered.com/news/2013/09/09/stanford-university-and-khan-academy-use-flipped-classroom-medical-education>

<sup>61</sup> *Ibid.*

<sup>62</sup> *Ibid.*

<sup>63</sup> Dwortzan, M. “‘Flipped Classroom’ Energizes Computational Fluid Dynamics Course.” Boston University. <http://www.bu.edu/phpbin/news-cms/news/?dept=666&id=59184>

<sup>64</sup> Deslauriers, L., et. al. “Improved Learning in a Large-Enrollment Physics Class.” *Science Magazine*, Vol. 332, 13 May, 2011. p. 863. [https://info.maths.ed.ac.uk/assets/files/LandT/Deslauriers\\_Science\\_May2011.pdf](https://info.maths.ed.ac.uk/assets/files/LandT/Deslauriers_Science_May2011.pdf)

the flipped section reported enjoying the interactive learning methods of the flipped model.<sup>65</sup>

### *ADAPTIVE LEARNING*

Even more recently, very innovative work has come from the unlikely partnership between Fujitsu and the Massachusetts Institute of Technology. In mid-2013, the two announced that both had worked on a new adaptive eLearning platform, which it hopes to introduce a personalized online learning platform.<sup>66</sup> Of note is that while both describe the platform as revolutionary, it still stems from an asynchronous learning concept. Named “Guided Learning Pathways, the platform hopes to address problems in online learning, such as the lack of customizability to individual learners’ needs, and finding the proper fit between students and appropriate learning materials.<sup>67</sup> The research led to two new breakthroughs:<sup>68</sup>

Two technologies have been developed and applied in the research. One is navigation technology, which can organize massive online learning materials into multi-layer topics. The other technology developed is the students’ learning behavior simulation based on an advanced probabilistic learner model.

These technologies break up atomized elements (“nuggets”) of student learning based on their interactions online very similarly to how companies like Google or Facebook use algorithms to estimate what users are looking for or like, or how Netflix makes suggestions on what users may like to watch based on previous viewing habits.<sup>69</sup> The result is a personalized pathway through the material students take on over the course of a program.<sup>70</sup>

The Apollo Group – a long time standard-bearer in online education – announced it had made a near \$1 billion investment in its own adaptive online learning platform and associated infrastructure.<sup>71</sup> The company recently received a patent “for an adaptive activity stream related to its online learning platform,” which is likely key to the success of its future in online learning.<sup>72</sup> Little about how this system will work is currently available, but observers have pointed to the importance of data mining and related personalization processes to its success – much like Fujitsu and MIT have seemingly operationalized.

<sup>65</sup> Ibid., p. 864.

<sup>66</sup> “Fujitsu and MIT Announce First-of-its-kind Breakthrough Higher Education Learning Platform.” Fujitsu, June 17, 2013. [http://www.fujitsu.com/us/news/pr/fla\\_20130617.html](http://www.fujitsu.com/us/news/pr/fla_20130617.html)

<sup>67</sup> Ibid.

<sup>68</sup> Ibid.

<sup>69</sup> Ibid.

<sup>70</sup> Ibid.

<sup>71</sup> Hill, P. “The Billion-Dollar Bet on an Adaptive Learning Platform.” *e-Literate*, February 1, 2013. <http://mfeldstein.com/the-billion-dollar-bet-on-an-adaptive-learning-platform/>

<sup>72</sup> Hill, P. “University of Phoenix Patents Adaptive Activity Stream for Its Learning Platform.” *e-Literate*, January 29, 2013. <http://mfeldstein.com/university-of-phoenix-patents-adaptive-activity-stream-for-its-learning-platform/>

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