Leading by Gut or by Data: The Data-Driven State of Higher Ed Decision Making

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Foreword
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In recent years, the idea of data-driven decision making has been propelling much of the higher education narrative. As many industries work to incorporate data and analytics into their organizational processes, education providers are also tasked with adopting a more thoroughly informed management approach. A 2013 report titled *Building Organizational Capacity for Analytics*[1] highlighted that "enhanced analytics is critical to both optimizing student success and achieving institutional effectiveness." Undoubtedly, a data-driven mindset should penetrate all levels of higher education decision making, from program development to student retention and graduation.

In an increasingly competitive higher education environment, the benefits of advanced data collection and analytics permeate all aspects of both student success and institutional success. Yet, while higher education has been flooded with calls to adopt a data-driven mindset, the adoption of this ethos is proving difficult for many institutions to implement. In an attempt to understand how higher education institutions have actually incorporated the use of data and analytics into their decision making, Helix Education and UPCEA (the University Professional and Continuing Education Association) have partnered to conduct a study of the use of metrics and the creation of a data-driven environment.

The primary goal of this research was to outline the current landscape of decision making among higher education providers and assess the role of data in management and leadership. While many institutions have introduced some data analysis activities to inform some decisions, this research reveals that for a majority of education providers, data science and analytics are being underutilized when making decisions about program development, marketing, enrollment, and retention services—a reality leading to a waste of both financial resources and

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[1]https://net.educause.edu/ir/library/pdf/PUB9012.pdf

staff time. For example, almost half of those surveyed indicated that they have no formalized system in place to determine which new programs are developed, and the majority of institutions don't know their estimated conversion rate from inquiry to enrollment. While higher education is slowly adopting technologies and processes that drive data integration and analysis, the majority of institutions are hamstrung by a lack of data integration or capacity for data analytics.

A secondary goal of this research was to assess how colleges and universities are mitigating barriers to the data-driven mindset. Many embrace the idea that experience and intuition are not enough to make efficient and effective decisions at all institutional levels. For those institutions that acknowledge gaps in their capacity to be data-driven, this research shows that many are looking to outsourced partners for help.

Snapshot of Key Findings

- Eighty-three percent of respondents indicated no knowledge of the cost-per-inquiry of their most effective marketing channel for undergraduate inquiry, and more than half made the same indication for graduate inquiry.
- Sixty-eight percent of respondents don't know their estimated overall conversion rate from inquiry to enrollment.
- Less than half of respondents have a formalized system in place to determine which new programs are developed.
- Only 38% of respondents reported close integration between marketing, enrollment management, and advising teams.

Methodology

UPCEA and Helix partnered to gather more data on a number of important topics related to higher education metrics. The survey was produced and administered in February and March 2016. While 480 individuals participated in the survey, 391 qualified under the following study categories: enrollment marketing, enrollment operations, retention operations, online program management, program development, and data/analytics.

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Study Demographics/Survey Profile

Most of those who responded identified themselves as having leadership roles, with 62% indicating titles of program director or manager, or dean or other leader (Figure 1). Of the 480 individuals surveyed, 391 qualified under the following study categories:

- Enrollment marketing: 74
- Enrollment operations: 32
- Retention operations: 8
- Online program management: 88
- Program development: 151
- Data/analytics: 38

Figure 1: Respondent Title (All Respondents)

- Program director or manager
- Dean or other leader
- Marketing Leader
- Enrollment Leader
- Other

Source: 2016 Helix Survey
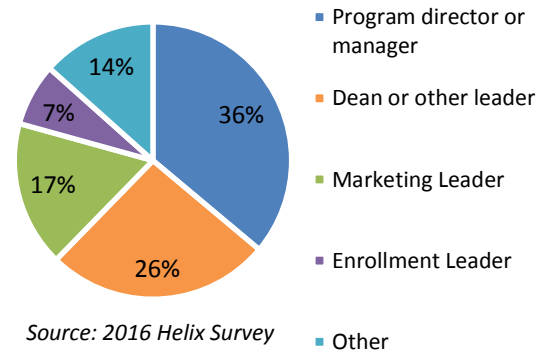
Additionally, these findings are bolstered by an UPCEA survey conducted from late August to October 2014 in which 215 marketers and institutional representatives were surveyed with a 49% response rate. The error margin for that survey is plus or minus 5% at 95% confidence.

Baseline Data Sentiments

It has been predicted that analytics will play a prominent role in moving higher education forward. In *Game Changers: Education and Information Technologies* and the report *Building Organizational Capacity for Analytics*[2], Linda Baer and John Campbell point out that "analytics can be used to examine key institutional issues, such as enrollment or retention, which by their nature are complex and often sensitive." Yet while the call for advanced application of data has gained traction in higher education, many institutions have yet to adopt an integrated, predictive and responsive approach to data science and analytics.
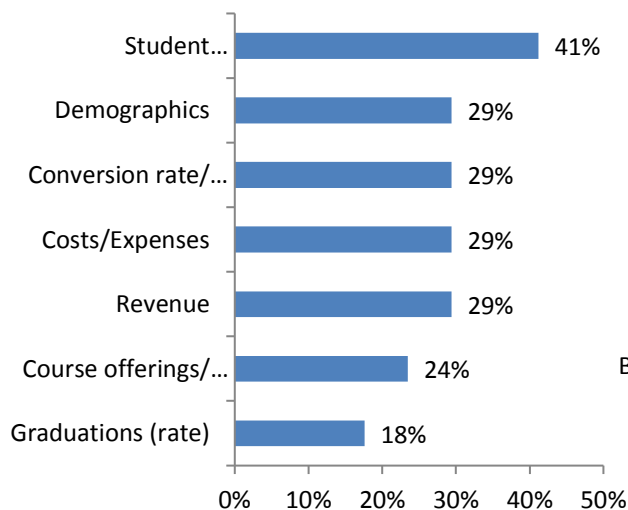
Though they may be lacking in a holistic and integrated approach to analytics, institutions show marked interest in the potential for data in higher education decision making. Survey respondents indicated interest in tracking variables and elements related to student performance (41%), demographics (29%), conversion rate/recruitment (29%), costs/expenses (29%), and revenue (29%), among others (Figure 2). Additionally, respondents indicated a desire to include data in decisions about programs (42%), management and growth of enrollment (32%), student support (26%), and marketing/communications (26%), as well as other less common topics (Figure 3).

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[2] Ibid.
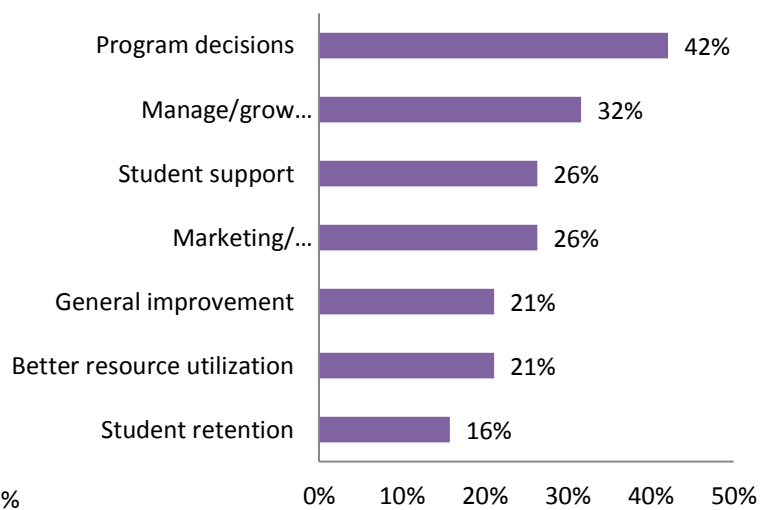
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This notable interest in tracking data indicates a cultural shift in the value of data analytics in higher education. Publications like Game Changers have called for the embrace of a data-driven mindset as recently as 2013. The fact that survey respondents reported interest in tracking additional data and using that data to inform decisions is a promising finding of this research.

Figure 2: What variables and elements are you most interested in tracking?

Category	Percentage
Student…	41%
Demographics	29%
Conversion rate/…	29%
Costs/Expenses	29%
Revenue	29%
Course offerings/…	24%
Graduations (rate)	18%

Source: 2016 Helix Survey

Figure 3: What types of changes are you trying to affect based on findings from your data?

| Category	Percentage
Program decisions	42%
Manage/grow…	32%
Student support	26%
Marketing/…	26%
General improvement	21%
Better resource utilization	21%
Student retention	16%

Source: 2016 Helix Survey

Data Gaps

While the industry is moving to embrace certain aspects of a data-driven strategy, institutions reported a number of notable gaps in the practice of data analytics. This study revealed a high level of uncertainty related to critical metrics across the administrative spectrum. While the baseline sentiment of survey respondents toward data showed a desire to incorporate data into decisions about such things as resource utilization, programs, marketing, and enrollment, the data shows these desires are founded on the reality that institutions are not currently utilizing data in these areas. These data gaps can be found in three prominent areas: budget allocation and conversion rates, program development, and integration.

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Budget Allocation and Conversion

Perhaps the most notable finding of this study is the lack of awareness of basic marketing and enrollment metrics. Eighty-three percent of respondents indicated no knowledge of the cost-per-inquiry of their most effective marketing channel for undergraduate inquiry, and more than half made the same indication for graduate inquiry (Figure 4).

**Figure 4: Cost-per-inquiry of most effective marketing channel for an undergraduate inquiry and a graduate inquiry**
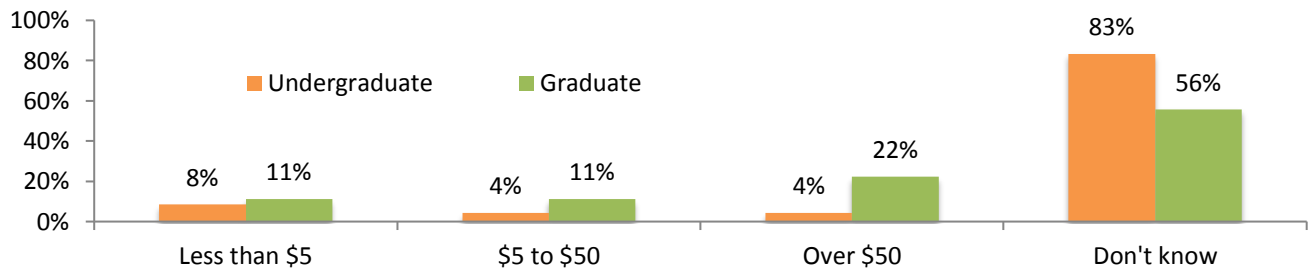
Source: 2016 Helix Survey

Additionally, almost half (47%) of respondents indicated no knowledge of the estimated cost to enroll a single student (Figure 5).

A lack of awareness of basic metrics like cost-per-inquiry and cost-per-enrollment is problematic on a number of levels. Detailed knowledge of the performance of all activities within the enrollment funnel is imperative for efficient allocation of budget and effort throughout the enrollment process. Without these metrics, marketing and enrollment leaders are not equipped to make ROI determinations for the activities within their enrollment funnel.

Figure 5: What is your estimated cost per enrollment?

Source: 2016 Helix Survey

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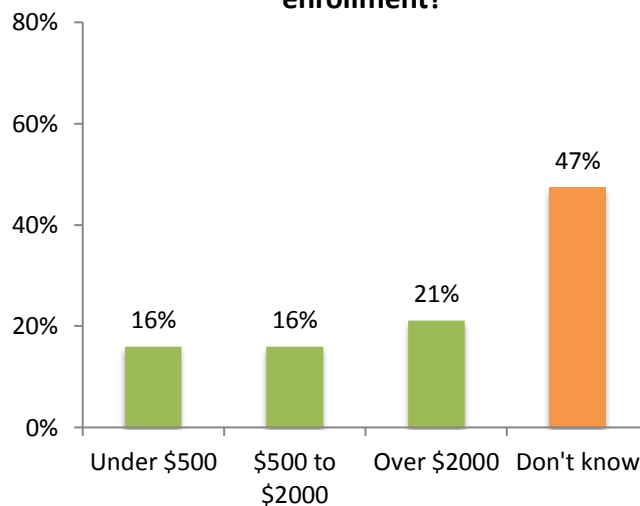
In addition to a lack of awareness of the cost-per-inquiry and cost-per-enrollment, more than two-thirds of respondents (68%) reported uncertainty regarding their overall conversion rate from inquiry to start (Figure 6). This number is striking, and this knowledge gap compounds the budgetary attrition caused by not knowing the ROI for marketing and enrollment activities.

Figure 6: What is your estimated overall conversion rate from point of inquiry to first-day start?
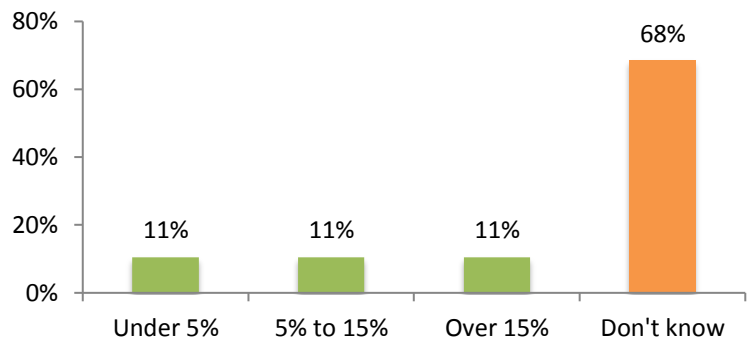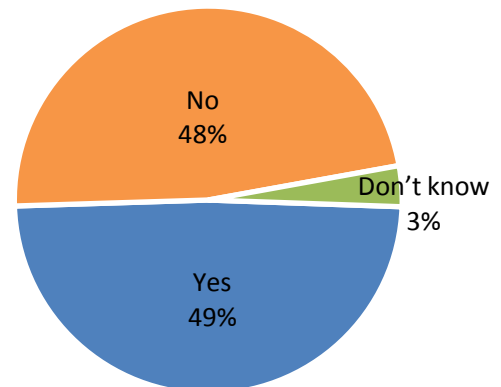

Source: 2016 Helix Survey

Program Development

There are a number of data metrics that can be folded into the development of any new program. Factors related to demographics and economics of the target market—as well as logistical indicators relating to mission alignment, resources, and financial costs/opportunities—all underpin effective and efficient program planning. While a data-driven mindset provides notable benefits for program development, the industry is split when it comes to the formalization of a program development process. Less than half of respondents (49%) indicated that they have a formalized system in place to determine which new programs to develop (Figure 7).
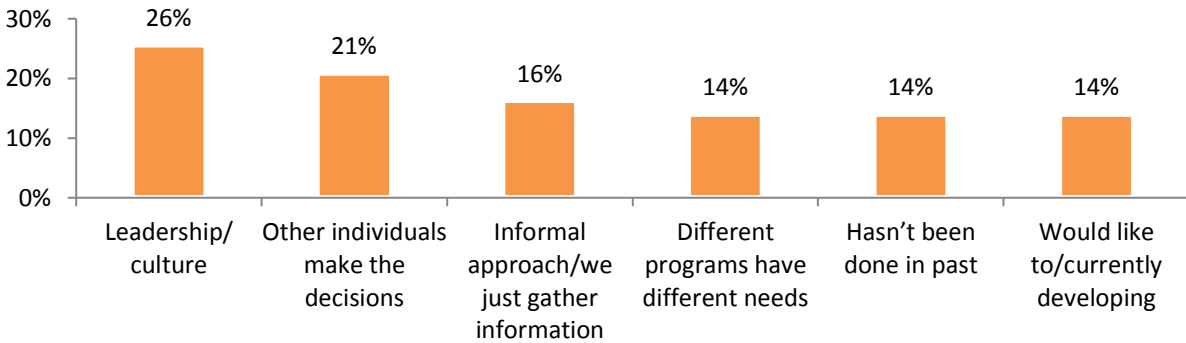
Figure 7: Do you have a formalized system in place to determine what new programs are developed?

Source: 2016 Helix Survey

With a lack of formalized systems in place for new program development, education providers are making decisions based on a number of subjective, non-data-driven, factors. When asked why the provider had no formalized system in place, respondents answered that leadership/culture and the decision making of other professionals at their institution were the two biggest reasons at 26% and 21% respectively. Other reasons included the varying needs of different programs and the lack of precedent, both at 14%. None of these reasons reflect the use of data-driven methods, but rather a reliance on intuition when making programmatic decisions. In fact, the only semi-data-driven reason indicated was the existence of an informal approach of information gathering at 16% (Figure 8).

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Figure 8: Why do you not have a formalized system in place to determine what new programs are developed?

Bar chart values:
- Leadership/culture: 26%
- Other individuals make the decisions: 21%
- Informal approach/we just gather information: 16%
- Different programs have different needs: 14%
- Hasn't been done in past: 14%
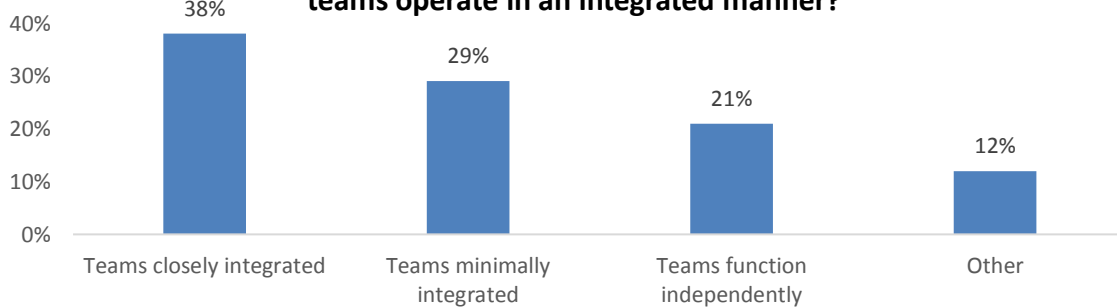- Would like to/currently developing: 14%

Source: 2016 Helix Survey

Integration

Data integration is imperative to close the loop on both student and institutional success. By integrating knowledge across teams, systems, and administrative activities, institutions can arm themselves with a more holistic approach to decision making. However, only 38% of respondents reported close integration between marketing, enrollment management, and advising teams (Figure 9). This fact, coupled with the reported lack of ability to determine ROI on marketing and enrollment activities, raises concerns about the efficiency of the current operations and marketing strategies of the majority of the education providers surveyed. Without clear knowledge of key performance indicators and an integrated system for sharing information, institutions are inadvertently turning their enrollment funnels into enrollment sieves, with a number of opportunities for prospects and students falling through the cracks.

Figure 9: Do your marketing, enrollment management and advising teams operate in an integrated manner?


Bar chart values:
- Teams closely integrated: 38%
- Teams minimally integrated: 29%
- Teams function independently: 21%
- Other: 12%

Source: 2016 Helix Survey

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Bridging the Gaps

To mitigate the challenges inherent in adopting a data-driven mindset, many higher education institutions are turning to outsourced partners. Outsourcing is on the radar in higher education now more than ever; the emergence of digital media has added complexity to enrollment operations by creating new channels of marketing such as SEO and a maze of social media options. Institutions utilize outsourcing to complement marketing operations for which they do not have the internal resources or expertise to manage. Outsourcing needs vary among higher education providers and are related to the size of the department's marketing budget. With a majority of respondents indicating the use of outsourced marketing, it seems that outsourcing will continue to be a major practice among higher education marketing departments during the foreseeable future.

Almost two-thirds (65%) of respondents stated that they either partner completely with outside vendors or blend their operations between in-house methods and outsourcing partnerships for their enrollment marketing (Figure 10). One-third of study respondents indicated that they handle all of their enrollment marketing operations in-house. Respondents also indicated that SEO/Online marketing is the most outsourced marketing type at 64%, followed by traditional media marketing at 52%, and media buying at 24% (Figure 11).

Figure 10: Which of the following best describes your enrollment marketing efforts?
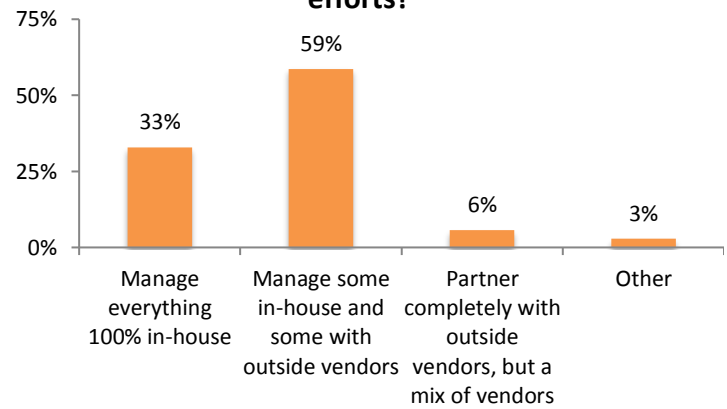
Source: 2016 Helix Survey
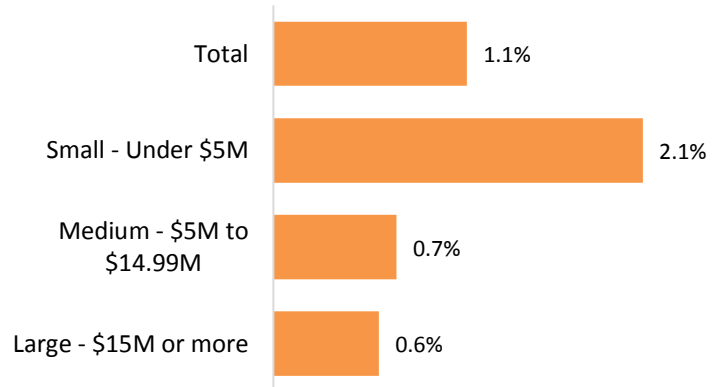
Figure 11: What do you outsource?

Source: 2016 Helix Survey

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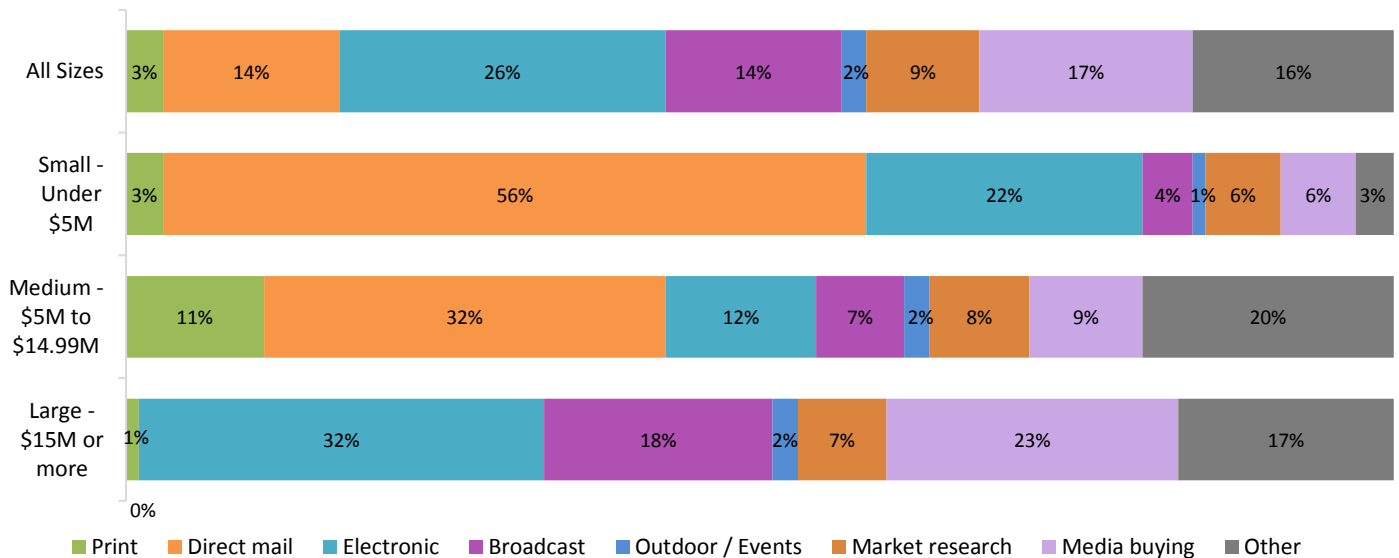Data-Driven Enrollment Growth
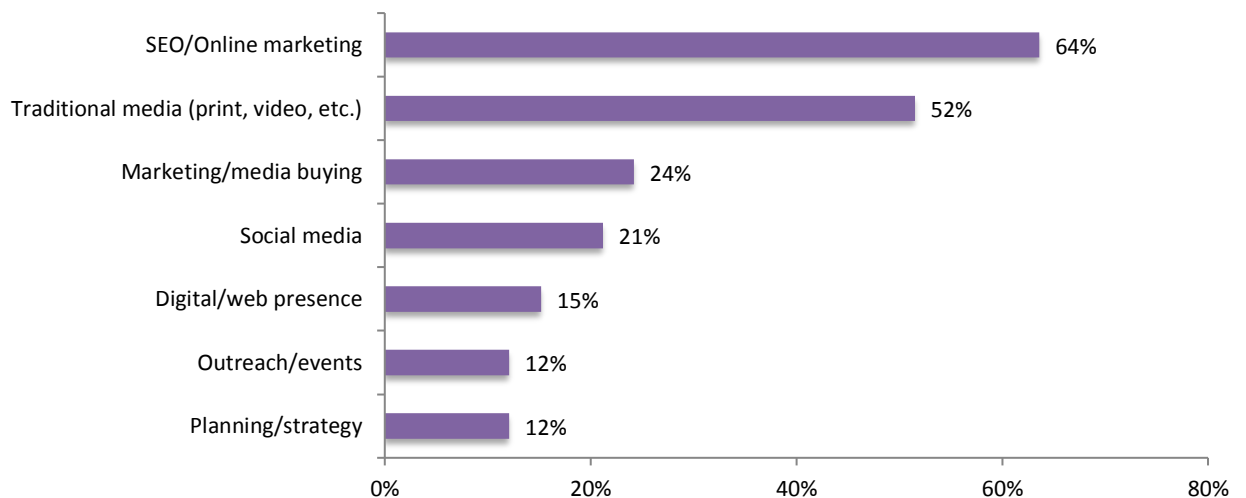
The 2014 UPCEA marketing survey also revealed that the type of outsourcing an institution utilizes is dependent upon the size of its marketing budget. For example, small institutions most often outsource for their direct mail campaigns (56%) as well electronic marketing (22%). Medium-sized institutions, however, outsource their direct mail marketing at 32%, still a significant portion of their overall budget, but far less than at smaller institutions. Medium-sized institutions also spend nearly an equivalent

Figure 12: Outsourcing Budgets, Percent of Gross Revenue

Source: 2014 UPCEA Marketing Survey

amount on print (10%) and electronic marketing (12%). Most large institutions do not outsource their print or direct mail marketing; they do, however, outsource electronic marketing (32%), media buying (23%), and broadcast marketing (18%).

Figure 13: Outsource Type by Institution Size

Print   Direct mail   Electronic   Broadcast   Outdoor / Events   Market research   Media buying   Other

Source: 2014 UPCEA Marketing Survey

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The Future for the Data-Driven Institution

This research reveals that while the idea of data-driven decision making is working its way into the cultural framework in higher education, institutions need to move beyond the cognitive embrace of a data-driven mindset to the practical implementation of data analytics. It is true that "in every category except talent, education is least prepared for ease of data capture, has the least capacity for IT intensity, least reflects the data-driven mind-set, and is the least likely to have overall data availability."[3] Thus, higher education must make concerted efforts to incorporate data into all aspects of institutional operations, including recruitment and marketing, program development, instruction, retention, and beyond. In an industry where student success equals institutional success, colleges and universities have a responsibility to utilize data to create better programs, plug revenue holes, and reduce student attrition throughout the student lifecycle.

Create Better Programs

Predictive analysis is vital in new program development, specifically in terms of feasibility.[4] As institutions adjust to the changing markets, learning modalities, and student demographics, leaders must work to more formally incorporate data in program development. In addition to program development, institutions must drive assessment efforts of program performance and relevance with formal metrics. By considering predefined metrics related to program feasibility and performance, education providers will optimize expenditures, better serve their student body, and more fully pursue their missions.

Plug Revenue Holes

As the findings on budget allocation and conversion revealed, the opportunities for financial attrition are numerous for the non-data driven institution. "Higher education providers miss out on revenue when they do not make their decisions based on predictive analysis; missing out on potential enrollments is missing out on significant revenue. For example, missing out on 100 students with tuition at $30,000 a year translates to a loss of $12,000,000 in revenue over four years."[5] By closely monitoring metrics regarding marketing and enrollment activities,

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[3] Ibid.

[4] Eduventures - *Predictive Analytics in Higher Education: Data-Driven Decision Making for the Student Lifecycle.* N.p., 27 Feb. 2013.

[5] Ibid.

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institutions can better optimize their budget allocation.

Reduce Student Attrition throughout the Student Lifecycle

The student lifecycle is ripe with opportunities for students to fall through the cracks, yet data can be strategically leveraged to reduce student attrition throughout the entire student experience. "Colleges and universities collect mountains of data in their student information, learning management, and other systems. At the same time, students come and go—often at predictable 'loss points,' such as the transition from high school to college, during remedial education, and so on."[6] Institutions that incorporate predictive data models can work to optimize student recruitment to target best-fit students and maximize retention efforts to support students through to graduation.

Increase Capacity

A salient notion underpinning the discussion of data analytics in higher education is one of capacity. While technologies and solutions are increasingly becoming available to institutions, higher education must balance these efforts with the time and resources needed to employ them. "The truly strategic issue facing higher education today is not just the availability of particular tools, applications, and solutions: It is the ability of individual institutions and the higher education industry as a whole to deploy/acquire in a purposeful and continuous manner the full set of organizational capacity and behaviors needed to optimize student success."[7] The decision for institutions looking toward a data-driven future is tinted by a general question of capacity. For many small- to mid-sized colleges and universities, the decision to conduct data analytics in house makes less sense than working together with an outsourced vendor.

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[6] "*Game Changers: Education and Information Technologies.*" *Educause Homepage. N.p.,* 2012

[7] Op.cit.

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About the Authors

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About Helix

Helix Education provides colleges and universities a comprehensive suite of technology and services to power data-driven enrollment growth 8x faster than the industry average. The company's three solutions — Outsourced Program Management, Enrollment Marketing and Retention Services — have successfully helped institutions find, enroll, retain, teach and graduate post-traditional learners for more than 30 years. Its enrollment growth solutions are powered by a proprietary technology ecosystem that aggregates data across the student lifecycle to better understand an institution's best-fit students' journey, and implements actionable intelligence to improve outcomes for students and institutions alike.

About UPCEA

UPCEA is the leading association for professional, continuing, and online education. Founded in 1915, UPCEA now serves most of the leading public and private colleges and universities in North America. For more than 100 years, the association has served its members through its Center for Research and Marketing Strategy, Center for Online Leadership, innovative conferences, and specialty seminars. The Center for Research and Marketing Strategy is the benchmarking, research and consulting arm of the association, formed to meet the research needs of its members.

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