Infusing technology to boost completion: A practical approach

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Abstract

Dissatisfied with consistently low graduation rates, a community college in the Mid-Atlantic region of the United States formed a cross section of student affairs professionals and created 'Project Graduation' to address the problem. Analysis of graduation related practices and procedures resulted in the identification of factors that contributed to the problem. Utilizing technology, student data was extracted at various completion parameters. Inefficient, manually, paper driven and labor intensive procedures, caused eligible graduates to get lost in the system and leave the college without conferred degrees.

Through a business process review and analysis of qualitative and quantitative data, an action plan was implemented to identify, communicate with, and graduate eligible students. Data mining initiatives produced immediate results, noticeably increasing the number of graduates. Via extensive use of technology, a systematic outreach process was created to support and propel students through critical milestones. Technology assisted the implementation of an Opt-out process, replacing the former Opt-in process that required student initiation, resulting in lost graduates. This process shift enables increased vital student contact, thus providing timely interventions that facilitate successful on-time degree completion. In examining factors such as characteristics of the millennial student and the current economy which requires an increase in an

educated and skilled workforce, recommendations are provided for greater, more effective use of technology to streamline student affairs operations.

Introduction

The Obama administration has established an expectation of all colleges that receive federal funding to increase the number of graduates by 50 percent by the year 2020. Although the figures of total college graduates vary by state, a theme that remains constant among higher education institutions is the ability to develop action plans to meet higher demands with shrinking resources. A large portion of college funding is allocated to student services functions including but not limited to admissions and recruitment, academic planning and advising, enrollment services, registration, financial aid, student accounts, career counseling and job placement, and tutoring services. As student populations change in their expectations of methods used by colleges to provide student services, allocation of funds in building and maintaining a robust institutional technology infrastructure has become the norm (Moneta, 2005). Nationally, the integration of technology within student affairs has occurred in response to the immersion of technology to better serve distance education students (Hirt, Cain, Bryan, & Williams, 2003); however, community colleges continue to struggle on how to streamline all of its student services through the use of technology.

Technology is becoming the driving force in this new millennium, and as such student affairs personnel must be willing to sit at the table when decision-making occurs on the types of technology to be acquired, its impact and use, required training, and implementation (Kleinglass, 2005; Kuh, 2009). Training of student affairs professionals in the area of innovation through technology is seldom considered by financial officers; however, the use of technology is becoming the norm for optimal student service (Kretovics, 2002). Student affairs professionals

identified the lack of use of technology in graduation related activities as one of the factors impacting the graduate rate at a community college located in the northeastern region of the United States. This College is considered to be the largest two-year institution in the state in which it is located as evident through its enrollment of approximately 17 thousand students. Although it has the largest student enrollment among 18 other community colleges, it ranked 13th in graduation rates in 2011. Dissatisfied with this reality, student affairs professionals began to analyze processes including enrollment functions from recruitment and admissions to graduation. Being 13th with its graduation numbers, while showing the highest student enrollment in community colleges throughout the state, was a mismatched reality.

Methods

Project Graduation, a team of several members of the Student Affairs Division, was formed to analyze the number of *lost* graduates produced by the College. The composition of this group included counselors, enrollment and registration specialists, academic advisors, administrators, and support staff. The core team was divided into four subgroups which focused on (1) data mining and manual audits, (2) persistence and progress initiatives, (3) systems and process improvements, and (4) graduation campaigns and promotions. These subgroups worked on the following tasks:

- The data mining and manual audits subgroup focused on data mining to find eligible candidates, performing manual audits of their records, and assisting with the graduation process.

- The persistence and progress initiatives subgroup focused on developing initiatives for students at the 32 credit and 48 credit milestones. These milestones were identified as

retention risk zones when most students leave the institution. The subgroup also focused on educating students on the importance of graduating before transferring.

- The systems and process improvements subgroup focused on analyzing graduation processes and practices to identify areas for improvement. The subgroup also worked on identifying ways in which automation and technology could support/enhance graduation related activities.

- The graduation campaigns and promotions subgroup focused on increasing advertisement campaigns, developing year round campaigns, promoting commencement and graduation, utilizing social media, and expanding the website.

The investigation began with an environmental scan of the graduation practices and graduation procedures of all community colleges in the state. In addition, several four- year colleges were examined to compare processes. The results demonstrated a consistency in systems and processes. Each of the 18 community colleges required students to submit an application to graduate and had three graduation cycles with associated deadlines. Only a small minority of colleges used an electronic student portal to inform students of deadlines and more than 70 percent used a paper application. Although the graduation rates varied in comparison, none of the findings clearly demonstrated the utilization of innovative methods with consequential effects to ranking.

To further identify gaps in internal processes and to streamline operations and eliminate inefficiencies in procedures, a business process review (BPR) was conducted. The graduation certification process was analyzed including the processes that lead to graduation such as academic program evaluation, academic advising, communication management, graduate identification and processing. Parameters used to identify the College's lost graduates included

(1) all students who had achieved at least more than 60 college credits, (2) students with final grade point average of 2.0 or above, (3) students who were not coded as graduates in the student data management system, and (4) students who were no longer attending the institution. Quantitative data yielded 1,878 student records that met the criteria of lost graduates. The team also implemented student questionnaires through emails and letters sent to lost graduates which yielded qualitative data on student lack of knowledge about their graduation eligibility. Based on this preliminary data, it became apparent that the College's enrollment services processes needed to be evaluated further and modified to meet technology-oriented student expectations of service and implement check points for quality assurance.

Findings

Project Graduation team findings indicated students were expected to apply for graduation, a student initiated practice requiring students to Opt-in to graduate. Students were independently responsible to submit an application to graduate. These applications to graduate triggered the Graduation Evaluator to manually look-up the individual student record and assess graduation readiness. If a student did not complete and submit an application he/she would not graduate. Three graduation cycles existed, May, August, and December, requiring students to be aware of deadlines to appropriately submit an application to graduate. The application came in the form of paper and an electronic format which consisted of an online PDF form that required students to print, complete, mail and/or hand deliver to the College. This system became complicated for students and produced a counter-intuitive process with unrealistically early deadlines. For a student to graduate in the May cycle, he/she had to successfully complete the application in December. Unfortunately, this information was not well publicized and difficult to locate on the website, resulting in randomly submitted applications. Additionally, late

applications caused deadlines to be internally treated as "soft" deadlines. The graduation process, which included receiving applications, evaluating graduation eligibility, communicating with students, graduating them and ordering diplomas, was the sole responsibility of one person. Given the manually driven nature of this process, the sole ownership of it made it difficult and sometimes impossible for other employees to assist students when needed.

It was also found that although students were being advised by academic counselors, several students were not aware that they had successfully achieved completion of all program requirements. Qualitative data yielded comments that reflected a lack of student knowledge regarding their eligibility to graduate. "I didn't know I had all the requirements to graduate," (Student A), "No one told me," (Student B), and "Oh my God, I could have graduated a long time ago," (Student C). Due to a lack of systematic outreach to students during their academic career at the College, many students transferred without graduating. Graduation for other students was delayed due to several reasons including taking the wrong courses, taking too many courses outside their academic major thus running out of financial aid, taking the wrong academic major or, in some instances, not even knowing what academic major they had declared. Graduation was also delayed as a result of missed deadlines or not knowing what the deadlines were. In monitoring the data of lost graduates, the following was found:

- 235 students had completed allprogram requirements, but had nevergraduated and were no longer enrolled at the college.

- 398 enrolled students were identified aseligible candidates for graduation at the successful completion of the current semester. Of those 398 students, 185had never submitted an application. They were not slated to graduate as they had missed the application deadline.

- 1066 students were missing only one to three courses. They were no longer enrolled at the college; they had left before completing their degree or graduating.

- 80 could be eligible to graduate with minor interventions such as, course substitutions, change of major or change of curriculum year. These proposed interventions were reviewed and, where appropriate, received approval from academic deans and/or administration.

- 99 had insufficient degree course requirements with a total of approximately four or more courses needed to complete their academic programs.

Discussion

Several of the issues identified pointed to problems with the "Opt-in" process which required students to request assistance, submit paperwork applications, and remember arbitrary unrealistic deadlines (see Appendix A). The "Opt-out" concept was introduced (see Appendix B). Students would no longer be required to apply to graduate. Instead, technology would be used through a series of queries and reports to identify students who are two semesters away from graduating, students who are entering their final semester, and students who have met all degree requirements at the completion of their current and last semester. To better communicate and educate students, a systematic outreach approach was developed. This approach includes contacting students at various milestones throughout their academic career to help them stay on track, assess their progress, and avoid errors that prevent students from leaving without graduating. Through the linking of communication management with academic student evaluations via the student data management system, a process that was conducted manually was streamlined to include student identification and communication between students and academic counselors at the completion of certain college-credit milestones towards graduation. In addition,

a more efficient, streamlined, and automated system to support the Opt-out concept was developed through the use of technology including:

- The application and associated deadlines were eliminated and replaced with outreach to students when they were ready to graduate via the student portal.

- A link was created and added to the student portal named "Confirm My Graduation". Students would use this to communicate with college personnel for graduation evaluation purposes and student self-service tracking.

- A dedicated graduation e-mail box was created, with the Graduation Evaluator having ownership, but allowing other approved employees to access it and assist with student questions. This reduced the workload on one person and increased customer service to the students as they would receive more timely responses.

- The communications field of the student data management system is now being used to incorporate graduation communications to students.

- The commencement webpage was enhanced to include graduation information, informational and inspirational videos, announcements, and resources.

- The college website was enhanced to contain more information on the importance of graduating before transferring to a four-year institution.

- Multiple "100 Day Countdown" clocks were purchased and installed throughout the College so that graduation and commencement would remain a prominent focus for eligible students, and to motivate students who may not be eligible yet, thus helping these students to remain focused on persistence and completion.

- Automated student outreach was developed for significant milestones including the 32 credit completion, the 48 credit completion, and the degree/certificate completion.

- The decision was made to print the student diplomas in-house. Past practice of outsourcing this process necessitated much longer lead times for ordering, thereby reducing the flexibility, and turnaround time to provide students with their diplomas.

- An electronic calendar was created to ensure smooth operations of the processes associated with graduation.

In addition to early identification of potential graduates, there are other benefits to enhancing graduation processes through technology. Use of technology driven solutions allows student affairs personnel to proactively outreach to students, eliminate arbitrary and unrealistic deadlines, eliminate applications and related processes, and improve the ability to track students' progress towards graduation. Streamlining processes routinely and collecting and analyzing data provide the ability to evaluate the impact of graduation related activities through verifiable and quantifiable data, thus supporting data driven decisions. This facilitates a culture of evidence, measurement, continuous improvement and excellence. Consistent implementation and use of technology could replace manual archaic paper driven practices allowing for implementation of early intervention systems and problem resolution. The ability to optimize technology, to gather and analyze student graduation data, enables the measurement of student needs and success in quantitative and qualitative ways. Successful implementation of these changes could influence persistence and retention rates and increase graduation numbers. Another benefit of enhancing graduation related practices through the use of technology includes an increase in alumni pool, which could provide funding and scholarship opportunities thus creating positive public relations. Ultimately, this could translate into enrollment growth and increased student success.

Recommendations

As the federal call is for colleges to become accountable for producing college graduates who are ready to enter the workforce while spurring the economy, it is imperative that student affairs professionals become trained, acquainted, and invested in the decision-making process of technology requirements and acquisitions. Technology has a direct impact on effective student services. Online student services must include the gamut of enrollment services including recruitment, admissions, advising, counseling, registration, financial aid, retention, transcript receipt and evaluation, and graduation.

The millennial student requires a seamless transmission of automated processes that would require less in-person contact, thus increasing student affairs professionals' level of knowledge regarding technology and its requirements. Resources must be allocated to develop the level of technological expertise of student affairs professionals, which in turn would help in providing the optimal service that students expect. A one-stop student service model requires all functions of student service to be available to all students in an electronic format. Automation and streamlining of processes could result in effective use of human resource.

In relation to Project Graduation, automated, continuous data mining needs to be performed to flush the graduation pipeline and to extract students who are getting ready to graduate or are approaching critical retention and persistence milestones towards graduation. This student data could be used to create customized virtual student communities, to foster collaborative learning and engagement in virtual learning experiences for all students.

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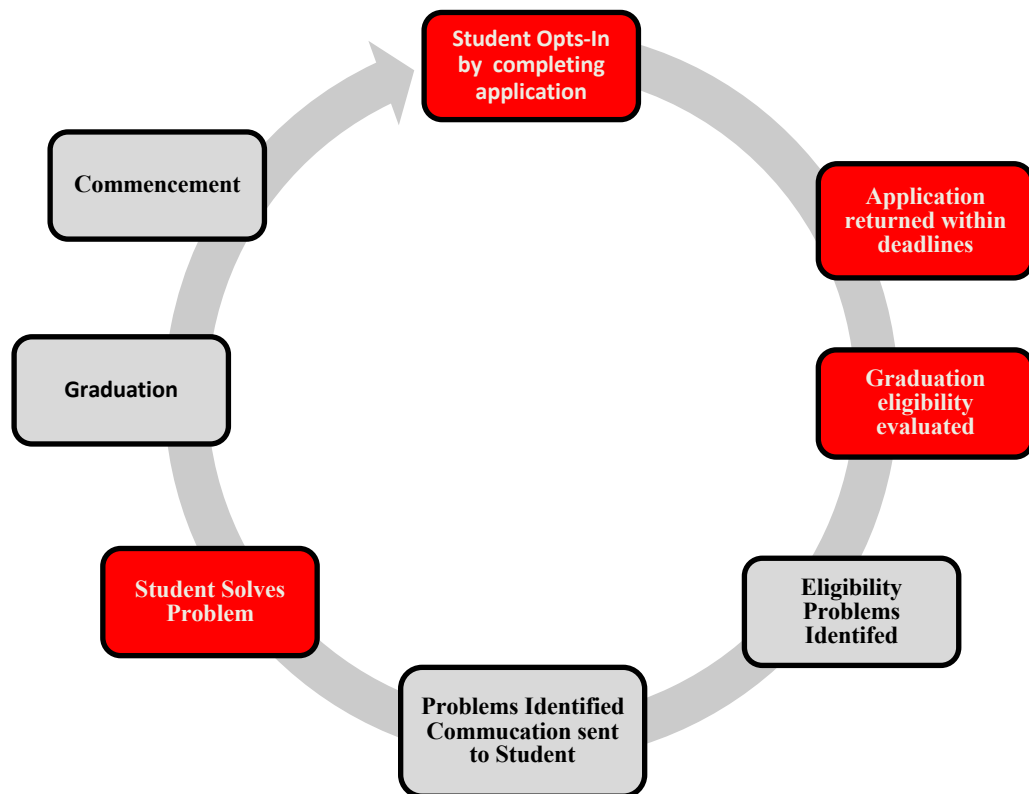Kuh, G.D. (2009) What student affairs professionals need to know about student engagement. Journal of College Student Development, 6(50), 683-706.

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Appendix A

Student Initiated Opt-in Process

Denotes proven problem areas

Appendix B

College Initiated Opt-out Process

College outreach at 32 credit completion

College outreach at 48 credit completion

College outreach at program completion

Congratulations Letter Sent Student can Opt-out

Graduation

Commencement