

Who is Driving Data Access and Usage? The Role of Tech and Data Teams

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Abstract

The role of information technology (IT) teams appears to be very different in higher education than it is in the business world. In business, CIOs and other managers of IT departments have made significant strides towards achieving strategic alignment. In higher education, however, it appears that professional, continuing, and online (PCO) education unit directors and IT managers speak a different language, and as a result, PCO directors are not able to take full advantage of data or technology when making decisions. To test this theory, UPCEA and TMMData gathered survey responses from PCO leaders and technology professionals in higher education to determine whether the relationship between the two groups is truly as poor as hypothesized.

Key Findings

- One-third of PCO unit leaders responded that IT exceeds their expectations while sixty percent of IT managers felt they did.
- Both IT managers and PCO leaders agree that IT departments lack resources, IT managers feel more strongly that they are lacking resources.
- Forty-Five percent of IT managers are somewhat satisfied in their ability to provide data to the PCO unit and thirty-four percent of PCO unit leaders are very or somewhat satisfied with their ability to access data for use in decision making while fifty-three are dissatisfied.
- PCO unit leaders and IT managers responded that more intuitive software features and improved system infrastructure would be most beneficial.
- Both leaders and managers recognize that they need some way to make data more accessible.

Overview/Background

In a 2009 study published by Educause, only 24% of higher education CIOs felt that deans or department heads could accurately describe how the IT department sets its goals while nearly half disagreed or strongly disagreed.¹ These figures indicate that leaders played a marginal role, if any, in how their IT department was directed. Without direction, it is likely that the two departments' goals were misaligned; that is to say that the goals of the deans or department heads differed from the goals of their IT unit.

Table 1: Top 10 IT Issues (2015-2017)

2015 Educause Top 10 IT Issues	2016 Educause Top 10 IT Issues	2017 Educause Top 10 IT Issues
Hire & retain qualified IT staff , & updating the knowledge & skills of existing staff	Develop a holistic, agile approach to information security	Develop holistic, agile approaches to reduce exposure to information security threats
Optimize the use of technology in teaching & learning in collaboration with academic leadership	Collaborate to understand & support innovations & changes & to optimize technology use	Effectively apply data & predictive analytics to improve student success & completion
Develop IT funding models that sustain core service, support innovation, & facilitate growth	Improve student outcomes through an institutional approach that strategically leverages technology	Ensure BI, reporting, & analytics are relevant, convenient, & useful for data-informed decisions
Improve student outcomes through an institutional approach that strategically leverages technology	Ensure adequate IT staffing capacity & staff retention	Reposition or reinforce the role of IT leadership as a strategic partner with institutional leadership
Demonstrate business value of IT & how technology & IT can help achieve institution goals	Improve institutional data management through standards, integration, protection, & governance	Develop IT funding models that sustain core services, innovation, & growth
Increase IT's capacity for managing change	Develop IT funding models that sustain core services, support innovation, & facilitate growth	Improve data management through data standards, integration, protection, & governance
Provide user support in the new normal—mobile, online education, cloud, etc.	Develop effective, easily accessed & used BI, reporting, & analytics methods	Prioritize IT investments & resources in the context of increasing demand & limited resources
Develop mobile, cloud, & digital security policies that work for the institutional community	Enterprise level integration for scalable, constituent-centered systems, processes, & analytics	Ensure adequate staffing capacity & staff retention
Develop an enterprise IT architecture that can respond to changing conditions & opportunities	Create IT organizational structures & strategies with flexibility to support innovation & ongoing changes	Next-gen IT: Develop & implement agile, scalable, cost-effective applications, architecture, & sourcing
Balance agility, openness, & security	Provide scalable & well-resourced services, facilities, & staff to support online education	Collaborate to apply tech to learning , reflective of pedagogical innovation & institutional mission

Source: Educause 2014-2016

The top IT issues for higher education IT managers differ from those of a CIO in business. The top issues for higher education IT managers trend toward security, data and data analytics and may be significantly different from those of the dean or PCO unit leader.

A 2014 study published by MIS Quarterly examined whether IT-business strategic misalignment leads to inefficiency in the corporate world. It found that when not aligned, IT departments often worked on projects that were not useful to the company, resulting in wasted resources. On the other hand, companies that did have some degree of strategic alignment were often able to achieve sustainable profits.²

1 <https://net.educause.edu/ir/library/pdf/ekf/EKF0805.pdf>

2 <http://aisel.aisnet.org/cgi/viewcontent.cgi?article=3209&context=misq>

In response to these findings, many corporations are taking significant steps towards narrowing the communication gap between business leaders and IT departments. In a 2015 State of the CIO survey, 55% of CIOs indicated that aligning IT initiatives with business goals was their top priority. Sixty-four percent said they frequently consult with the CEO about strategy and planning, and 72% identified business strategy as a major area of focus for the next three to five years.³

This chart shows that three of the top five CIO initiatives in 2015 are aligned with business goals. The number one goal of CIO's is aligning IT initiatives with business goals. CIO top initiatives focused on business goals stayed pretty much the same in 2014 and 2015 demonstrating a consistent alignment with overall business strategies.

Table 2: Business Goals and CIO Initiatives

		2014		2015		
TRANSFORMATIONAL	Aligning IT initiatives with business goals	1	55%	1	54%	↓
	Implementing new systems and architecture	3	45%	3	44%	↓
	Cultivating the IT/business partnership	4	42%	4	43%	↑
	Leading change efforts	6	35%	5	42%	↑
	Redesigning business processes	9	24%	9	28%	↑
FUNCTIONAL	Improving IT operations/systems performance	2	50%	2	50%	
	Cost control/expense management	5	40%	6	41%	↑
	Managing IT crises	13	19%	12	21%	↑
	Negotiating with IT vendors	9	24%	11	22%	↓
	Security management	9	24%	7	31%	↑
BUSINESS STRATEGIST	Driving business innovation	7	31%	8	29%	↓
	Developing and refining business strategy	8	27%	10	24%	↓
	Identifying opportunities for competitive differentiation	12	20%	13	18%	↓
	Developing new go-to-market strategies & technologies	14	17%	14	13%	↓
	Studying market trends/customer needs to identify commercial opps.	15	16%	15	11%	↓

Q. Which of the following activities best characterize your focus and how you spend your time in your current role?

Source: State of the CIO, 2014 and 2015

While corporations have become more efficient and aligned with their IT departments, it appears that higher education institutions do not share the same focus and remain unable to fully utilize the technology and data available to them. UPCEA and TMMData conducted a survey among 35 PCO unit leaders and 20 IT managers at higher education institutions to test this theory.

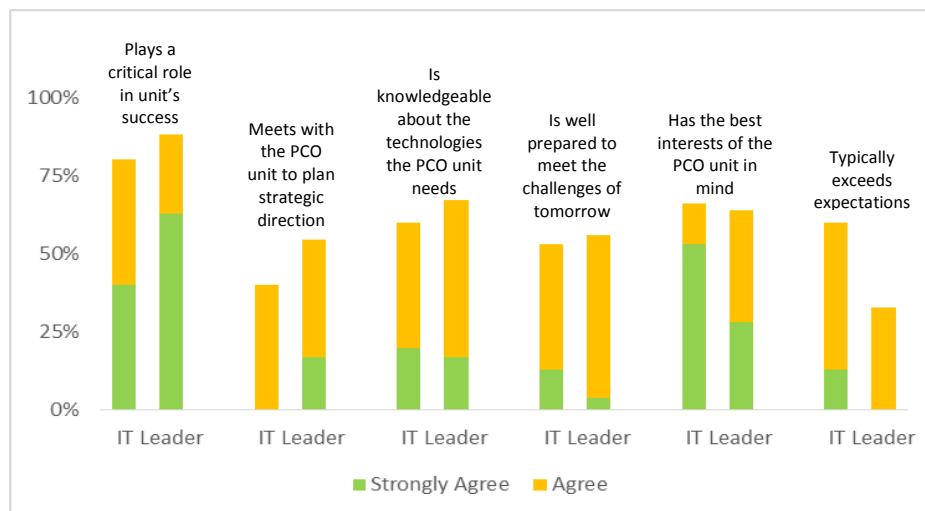
³ https://www.scribd.com/document/251731632/State-of-the-CIO-2015#fullscreen&from_embed

Detailed Findings

IT needs are being met, but not necessarily to full expectations. The two groups agree that IT plays a critical role in the success of the PCO unit and that IT is generally knowledgeable about the unit’s needs. However, only one-third of leaders responded that IT typically exceeds their expectations, while 60% of IT managers felt they did. Such a difference indicates that either

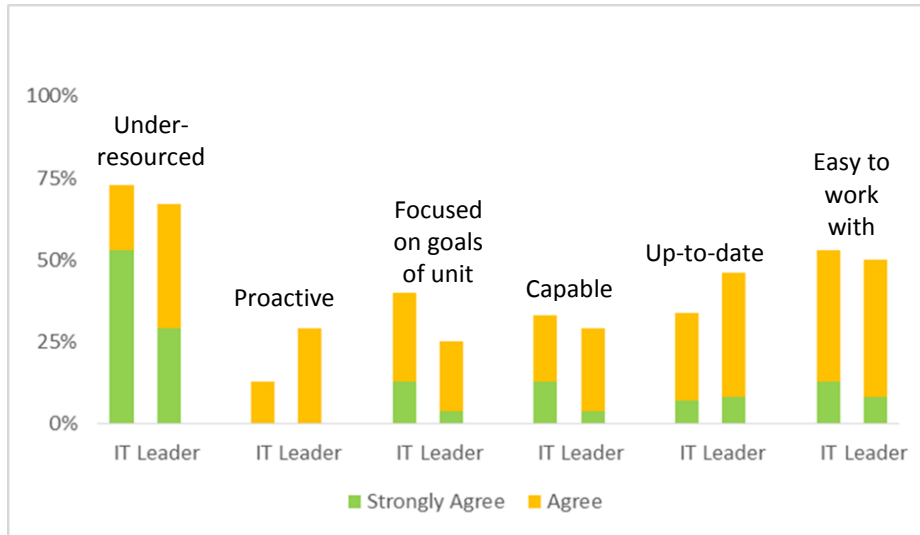
- IT managers and leaders have very different expectations.
- The two groups lack the communication or technical skills necessary to utilize the work done by the IT department, and thus PCO leaders believe that the department is underachieving.

Chart 1: IT Manager and Leader Responses



The survey results also showed a difference in perception about the performance of the IT unit. Though both the IT managers and unit leaders agree that the IT department lacks resources, IT managers feel more strongly that they are lacking. This disparity may contribute to the differences seen, as a lack of sufficient resources limits the performance in the other categories. Specifically, without enough resources to focus solely on the PCO unit, the IT staff likely has other duties when not directly responding to a PCO task. As such, the inability to devote sufficient time or staff to the PCO unit likely prevents the IT department from being as proactive or as focused as leaders would hope.

Chart 2: IT Performance



IT managers and PCO leaders were also asked how satisfied they are with their ability to provide and access data. Forty-five percent of IT managers are somewhat satisfied (but none very satisfied) in their ability to provide data to the PCO unit. Only 34% of PCO leaders are very or somewhat satisfied with their ability to access data for use in decision making while 53% are dissatisfied. Again, this difference in perception could be due to different expectations between the two groups, PCO leaders lacking the technical skills required to use the data that IT provides, or that IT managers don't explain the data in non-technical terms.

Chart 3: Satisfaction scale for data access - Leaders

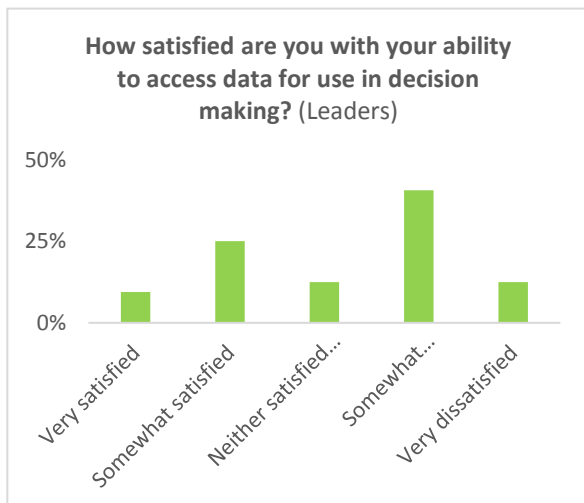
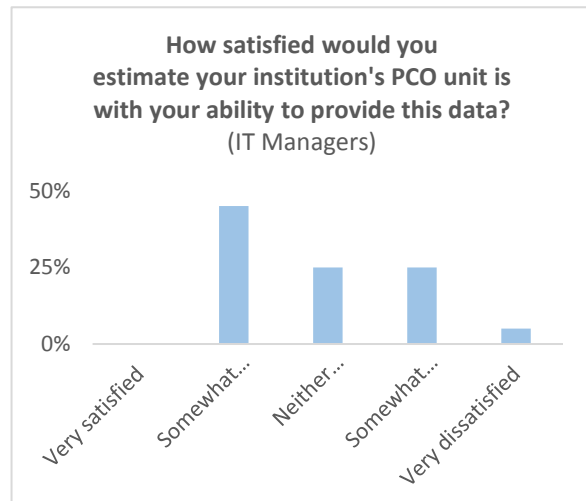


Chart 4: Satisfaction for data access- IT Managers



When surveyed about how the PCO Unit could improve its ability to use data, leaders and IT managers responded that more intuitive software features and improved system infrastructure would be most beneficial. Leaders indicated that they require a way to access the data without technical knowledge, while IT managers require a platform to organize data more effectively. Regardless of the exact process, both leaders and managers recognize that they need some way to make data more accessible.

Chart 5: Improve your ability to use data - Leaders

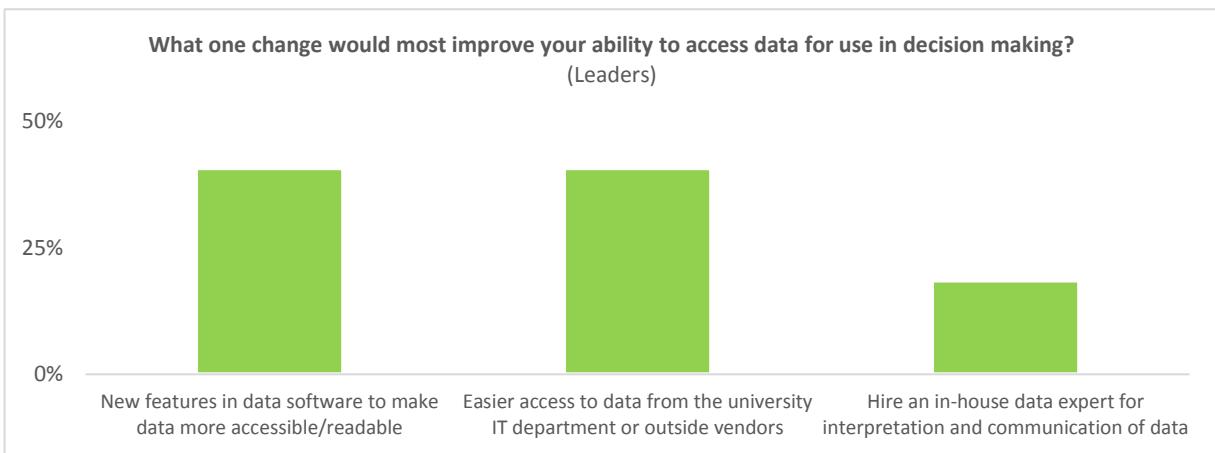
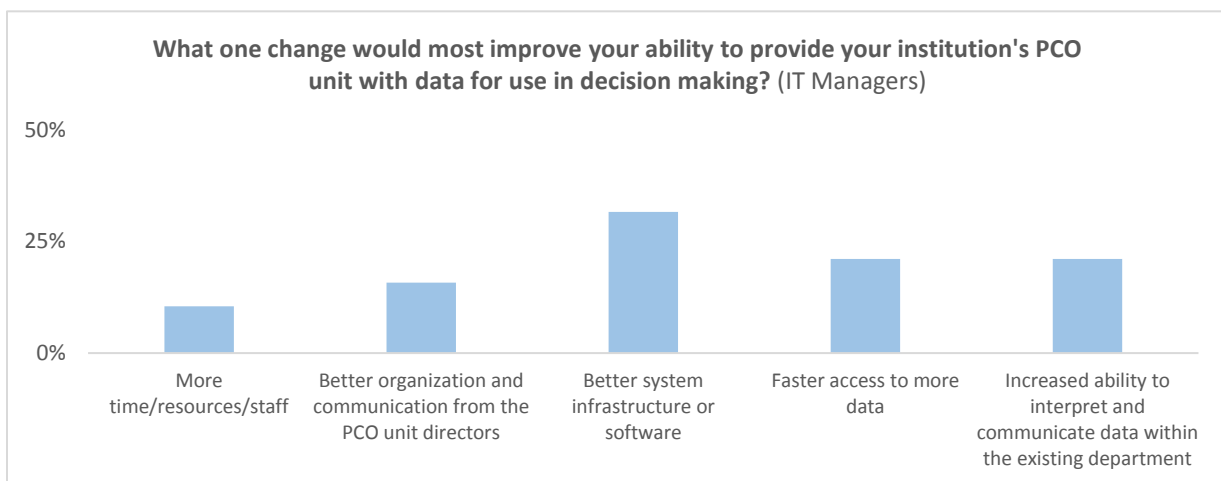


Chart 6: Improve your ability to use data – IT Managers



Actions to Consider

In order to optimize the PCO unit's ability to use data to make decisions, there are several actions to consider. First, higher education institutions should establish a culture of inclusion, openness, trust and shared goals between the PCO unit leaders and IT managers. Involving IT managers in strategic planning where the PCO unit leaders should convey directly to IT managers what kind of data or technology they are looking for. IT managers should take this opportunity to convey to PCOs their capabilities to make improvements or recommendations for data collection, data distribution and data analysis. When applicable, outside resources should be included in the strategic planning process. Doing so aligns the goals of the two groups and ensures that a productive data driven environment is developed.

As noted, we see that the business community has engaged IT at a very high strategic level resulting in utilizing data to make better business decisions. While PCOs are satisfied with IT's technical performance, IT is confident they have the ability to do more and want to contribute more to the strategic planning process. Involving IT in strategic planning eliminates inefficiencies and ensures resources are properly focused.

Higher education institutions need to make investments to maximize the capabilities of PCO units and IT departments to make effective data driven decisions, either by training PCO leaders to access the data more effectively, or by devoting more resources to the IT department. Both departments may be under resourced with technology, staff and training. As collaboration efforts commence consideration of professional development for IT Staff, systems and services acquisitions and peer to peer education are recommended. The relationship between PCO leadership and IT managers must improve in order to fully utilize the abilities of tech and data teams and for successful institution and student goals.

Summary

Higher education institutions should establish policies that encourage collaboration between PCO unit leaders and IT managers to equally contribute to strategic planning.

- Assess whether IT plays a significant role in strategic planning. IT is often brought in for technology planning, however needs to be included in the strategic planning process.
- Create a culture of inclusion include PCO unit leaders, IT managers and external resources. IT managers must accept invitations and participate.
- Identify what IT and data flows are critical to the success of the organization. Include institutional goals and student goals.
- Build mutual trust and accountability. Open and honest communication will build trust and opportunities to meaningful participation.
- Establish open communication around technology and data resources. A clear understanding of technology and data resources capabilities and data needs need to be defined.
- Clearly identify institutional goals and student goals. The two goals will vary, however, each department must understand what data and data processes are critical to each.
- Establish ongoing engagements to follow up on progress, strategic planning updates and technological advances. Institutional goals will change and as technology progresses, processes may also change.
- Consider external resources/vendors in the strategic planning process when considering systems and service acquisitions. External parties often have access to the most up to date technology and industry trends.
- Identify outside partners to provide an objective and nonthreatening perspective which is also not necessarily self-serving.
- Inventory current technology infrastructure and process. This process should include external resources for a fair assessment and evaluation of current systems and processes.
- Discuss thoroughly buy vs build decisions. Fully vet this process, again, external resources may provide value input when considering buy vs build decisions.
- Provide IT professional development opportunities. Keep your IT staff current on technical skills and technology.
- Peer to peer education. PCO unit leaders and IT managers need to have a better understanding of data needs and capabilities, as well as business literacy to make effective data driven decisions.
- Understand each department's budgets. Include a detailed discussion of financial resources and allocations.
- Calculate the opportunity cost of not implementing new or improved technologies to achieve the goals in the strategic plan.
- Share marketing objectives and strategies. Strategic alignment will ensure resources are allocated properly and efficiencies developed.

About the Authors

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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.

About TMMData

TMMData is a premier provider of data integration, preparation, and management software. A wide range of data users gain complete, seamless access and automated data transformation using TMMData's unique software, which combines the processing capabilities of extract, transform and load (ETL) systems with the accessibility of online data management systems. TMMData allows marketers, data analysts, and other line-of-business users to customize direct data outputs for delivery to any business intelligence or platform, enabling holistic evaluation and confident, informed decision-making.