EDUCAUSE

In partnership with Jisc

Technology in Higher Education: Guiding Aspiring Leaders

February 2016

Technology in Higher Education: Guiding aspiring leaders

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Introduction

In 2014, EDUCAUSE, the association of IT leaders in higher education in the United States, and Jisc, the national organisation supporting the use of digital technologies for higher education and research in the United Kingdom, convened a working group of ten leading UK and U.S. IT leaders to define the characteristics of the higher education technology leader. This group developed a model, shared in the March 2015 report **Technology in Higher Education: Defining the Strategic Leader** (http://bit.ly/1PZbSx2), to help the higher education community better understand the various roles that technology leaders need to play and the skills necessary to fulfil those roles. One of the significant findings of the project was the difficulty many aspiring technology leaders have in making the step up to a leadership role.

The success of the project was due in large part to simply providing a forum for peers from different countries, often working at different scales, to exchange ideas and experiences on common issues they faced. Keen to work together further, EDUCAUSE and Jisc convened a new working group in May 2015 of ten UK and U.S. IT leaders and challenged them to explore the question "**How do we best prepare the next generation to lead?"**

The working group members were given a number of guiding questions to help them in their discussions:

- What guidance and assistance can help aspiring IT leaders navigate routes and pathways to progress to leadership roles?
- What can current IT leaders do to provide a pipeline for ambitious staff and future leaders?
- How can we ensure that the higher education sector will realise the full benefits of digital technology in education and research by recruiting, training, and retaining the best in IT talent?

It is important to provide some context of the environment in which higher education IT lives. There has been an evolution in the business of higher education. Today's institutions need to adopt new models to stay competitive and focus on outcomes, cost-effectiveness, and responsiveness. These needs have been coupled with the rapid development of technology across all layers of society and throughout the institution. In a unique position at the centre of so much change is the higher education IT leader, a complex and demanding position that requires a range of skills to be successful.

In this environment, then, the members of the working group acknowledged at the start of the project that it would be impossible to provide a single, clear pathway to IT leadership that can be universally applied in institutions of varying size and maturity. This report summarises the group's discussions over the course of the yearlong project, including, in the form of a pull-out guide, some practical steps that can be taken by aspiring leaders and their managers to help them progress in their careers. It does not aim to provide a universal solution that can be applied in all contexts.

We do hope, however, that the report and our findings cause a conversation in the higher education community. We're hoping to elevate discussions on IT leadership in higher education that to date have primarily been held on an individual or organisational basis and to raise awareness of those discussions at a sector level. And by drawing attention to this area, we hope to send a clear message to all members of the sector that if they want future technology leaders to be equipped to help transform higher education, then support needs to be provided early in their careers. The rapid pace of change in technology and higher education alike mean the role of the IT leader will be both challenging and one that will continue to evolve in the coming years. It is crucial to do what we can to future-proof the profession by preparing tomorrow's higher education IT leaders now.

Who, what, and when

As a way to approach this problem, early group discussions fell into three broad categories of questions:

- Who in higher education IT would benefit most from training in leadership skills?
- What skills should be focused on?
- When in the career development of an individual should the skills be fostered?

Who

The group started by identifying three stages of an IT professional's career. It should be noted, however, that an individual may or may not progress through all these roles or even all the stages.

The working group chose to focus its attention on the **middle** stage. IT professionals at this stage in their career should already have some sense of the career path that they would like to take and some awareness of whether they would be interested in moving into leadership. The working group acknowledged that IT leaders may not necessarily come from IT. In addition, there may be many leaders in an organization and that not all of them may want to or will become CIOs. By focusing on this middle stage, leadership roles and skills can be developed that will be necessary for many kinds of leadership in the IT organization.

It is also at this middle stage where the most professional development growth is likely to occur—that is, where leadership training will be most useful and necessary and where the working group's advice and guidance would be most effective. This approach aims to provide IT professionals at this stage with a clearer path to move along and a sound understanding of the requirements of a leadership position.

Entry

Entry-level staff
You have typically been working in the profession for one to two years.

Skilled technical professional
You have been working in the profession for over two years. You are a skilled and experienced professional. Your role does not include leadership and management duties.

Middle

Team leader / Supervisor
You may lead ad hoc teams or have a more formal management role. Your leadership is typically limited to managing one team. This is your first stage in the developing leader.

Middle management / Technical lead / Architect
You lead a number of teams. You are likely to sit on the IT executive management team. Titles in this stage may vary widely, as will leadership experience and expertise.

Upper

Head / Director
You lead the operational day-to-day delivery of IT systems, reporting directly to the IT leader.

IT leader / CIO
You are the most senior executive in the institution responsible for the information technology and computer systems that support enterprise goals.

What and when

Having agreed to focus on providing advice and guidance to IT professionals in the middle stages of their career, the group set about identifying the necessary skills and experience these aspiring leaders would need to develop to progress to an upper-stage IT leadership role. The professional would already need to have some skills, some would need to be developed, and others would need to be mastered. To help determine what those skills and experience might be, the group began by revisiting the ten roles from the Model of IT Leadership described in **Technology in Higher Education: Defining the Strategic Leader** (http://bit.ly/1PZbSx2) (see figure 1).

The working group agreed that IT professionals working in the middle stage typically would need to have full or partial competency in at least six of the ten roles in order to progress to a leadership position:

Figure 1

- **Relationship builder:** Working in parallel with winning trust from the rest of the organization, the IT leader builds relationships and fosters links with a wide range of stakeholders, both within and outside the institution.
- **Master communicator:** The IT leader understands when and how to adapt messages for different people. The leader further knows how to tell a story, share a vision, and be "multilingual", that is, capable of speaking to technical audiences as well as to nontechnical, business, research and other audiences.
- **Promoter/persuader:** Once an idea is formed of how best to support positive change within the institution, the IT leader works to influence a wide variety of stakeholders and convince them that the solution, process, or technology is correct.
- **Coach:** The IT leader is a coach for leadership, stakeholders, and IT teams so that all are appropriately aware of and able to exploit the technology's potential.
- **Team builder:** It takes a high-performing team and strong coalition to get results; the IT leader builds consensus and inspires.
- **Ambassador:** The IT leader promotes a positive image of IT. Through contextual understanding, the IT leader is aware of political sensitivities and maintains a broad and even-handed view.

One of these six roles (relationship builder) is a primary role, defined as needing time to develop and perhaps more difficult to achieve. Primary roles are interdependent and are the most valuable roles that an IT leader plays. The other five are discrete roles. Whereas primary roles are typically ones that a successful IT leader will play consistently (and simultaneously), discrete roles may only be needed at specific times.

It was recognized early on that, depending on the size and maturity of their institution and on their particular position within the organization, staff in the middle stage may give greater focus to some of these roles over others.

The working group agreed that the other roles in the model, particularly the core and primary roles found at the centre of the model (strategist, trusted advisor, visionary) would need to be developed later in one's career and were not so amenable to training. The only discretionary role that wasn't included was the role of change driver. It was felt that this role is primarily deployed at the upper stage and that the six identified roles would need to first be developed before the change driver role could be taken on.

Once the six roles were identified, further questions arose for the group to discuss:

- Would each role need to be fully developed during this stage?
- Are there expectations that some roles required or deserved greater attention than others?
- Where should the priorities be?

Ultimately, the group determined that the development of these skills falls into a continuum rather than a black and white picture (see figure 2) As a result, the roles could be prioritized in terms of how much time should be spent developing the skills and building the experience needed to fulfil these roles before entering the upper career stage into IT leadership.

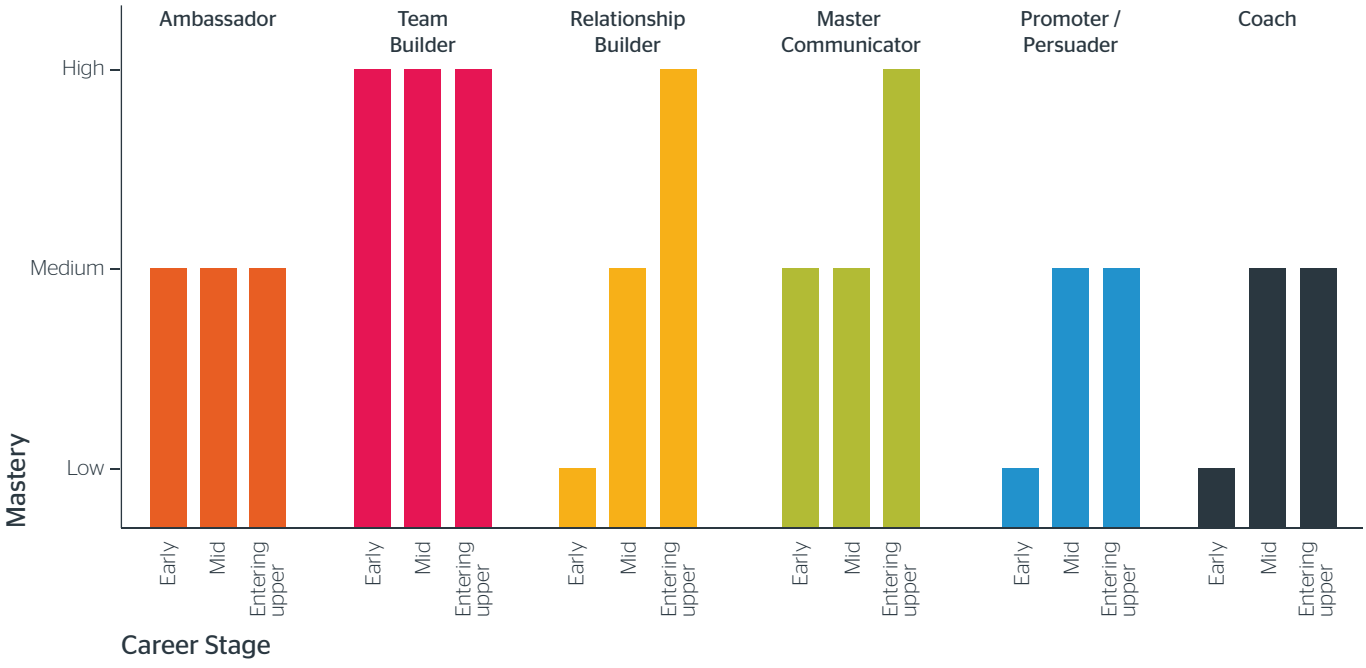

Figure 2

Low priority

As an IT professional entering the middle stage of your career, you will encounter some expectation that you are able to perform the following roles well. Only moderate continued development of these roles is expected as you progress through the middle stage to enter into the upper stage.

- **Ambassador:** You should already have skills necessary to perform the role of ambassador at a competent level on entering the middle stage. It could possibly be seen to be more significant than other roles during the early stages of one's career when you may have more direct contact with the end user. However, you are also an ambassador for your institution and the sector. It is important that you work to continually demonstrate this skill. A moderate amount of time will be spent on this role, but this is unlikely to increase over the course of the middle stage.

- **Team builder:** It is likely that you will have already developed team builder skills earlier in your career. Your previous experience will help you fulfil this role a moderate to significant amount of time in this middle stage of your career. However, the notion of a "team" changes at different levels, and therefore it will continue to be an important role. Given your already established level of competency in this role, it is anticipated that there will be little development in this stage.

Medium priority

Steady development of the necessary skills for these roles is a requirement before you can progress to a leadership position in the upper stage. However, expertise over these areas is not expected to occur until you have reached that stage.

- **Promoter/persuader:** It is likely that you will not have spent much time in this role in the early stage, though the most influential promoters include individuals with a network of contacts and relationships at the appropriate level, whether grass roots or senior management. At the middle stage, regular and steady development is expected in this role, and you will need to play this role on a more frequent basis. In order to promote IT and persuade stakeholders about IT's benefit, you must also learn about the stakeholder needs, wants, and drivers and, very importantly, who the stakeholders can influence for you. As a result, before you enter the upper stage it will be expected that you will have developed the necessary skills to undertake this role as part of a leadership position.

- **Coach:** As with other roles, coach is one that may not be required at the early stage, but it is expected that significant portions of your time will be spent in this role before you progress to a leadership role.

High priority

You will need to have developed significant skills to fulfil these roles at a high level by the end of the middle stage of your career. Further, of the six roles focused on in this stage, the greatest amount of skill development is expected for these two roles.

- **Relationship builder:** Time spent in this role may vary depending on your position and institution. That said, good cross-functional relationships allow you to do good things, whereas poor relationships mean you are getting by, at best, and this skill should be developed as soon as possible. By the end of the middle stage it is expected that a significant portion of your time will be spent in relationship building and that you should have developed the skills necessary to fulfil this role expertly before advancing to upper leadership.

- **Master communicator:** You are already expected to demonstrate competency in communication skills in the earliest roles in your career. As you progress toward more senior roles, the amount of time spent in this role increases. This is an essential trait of any IT leader, and staff who naturally have this skill, or develop it earlier, often tend to rise faster in their career. Similar to relationship builder, it is crucial for people looking to progress to the upper career stage to have well-developed skills to fulfil this role.

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IT Leadership in Higher Education: A Guide to Skills Development

February 2016

IT Leadership in Higher Education: A guide to skills development

Introduction

In May 2015, EDUCAUSE and Jisc convened a new working group of ten UK and U.S. IT leaders and challenged them to explore the question "How do we best prepare the next generation to lead?" The working group first shared our thinking with peers in the higher education IT community at the 2015 EDUCAUSE Annual Conference in October 2015.

This was also an opportunity to gather input from a wider audience into discussions that up until then had only been conducted among a small group of IT professionals. Perhaps the most significant outcome of this early sharing was feedback from the audience that a guide that would help aspiring leaders gauge their current skill levels and understand where growth might be needed and that could identify some ways to help develop leadership capabilities would be most beneficial. The result is this guide.

This brief guide offers practical support and advice that can help prepare aspiring leaders for the challenges of their first IT leadership role. The full working group report, Technology in Higher Education: Guiding Aspiring Leaders, provides background and additional detail for the material in this guide, but the guide is intended to be useful as a stand-alone support tool. It focuses on those staff who are in the middle stage of their career progression (i.e., team leaders or supervisors and middle management, technical leads, and IT architects) and provides concrete steps to support the skill development needed to fulfil the following IT leadership roles: ambassador, team builder, relationship builder, master communicator, promoter/persuader, and coach.

The guidance outlined here is aimed at two groups:

- **Aspiring leaders:** What skills are needed to fulfil these roles and what support is necessary to develop these skills?
- **Current IT leaders:** What should current IT leaders do to support the development of their staff?

Instilling leadership concepts into the IT organization impacts staff at all stages of their career. This guide works with the following assumptions:

- **Leadership can happen anywhere:** Leadership can happen at any stage of one's career. IT professionals can and should build and practice leadership skills throughout their career, and IT organizations should encourage staff by introducing this concept early and providing a supportive environment to inspire leadership.
- **IT is a culture of service:** For IT to be a strategic player in higher education, and for staff to become strategic IT leaders, there has to be some common understanding of the nature of IT as a service organization.
- **IT is of strategic importance:** Emphasizing the strategic importance of IT is a responsibility for IT staff at all levels and particularly for IT leaders. But to do this well, staff need to understand the business of the organisation and communicate the value of IT in helping meet institutional strategic objectives.

Key roles and skills

You may be just starting off as a team leader or in early management, or you may be a more experienced manager or a technical lead and perhaps even hold a place on the executive management team.

No longer new to the profession but not quite in an upper leadership position yet, you'll want to assess your skills at this stage and identify which ones you need to build for key IT leadership roles. The following table shows the leadership roles that were identified by the EDUCAUSE/Jisc working group as needing the most attention and requiring development at this stage. This table includes definitions for each role along with the skills needed to perform them (for the purposes of this guide, we use the word "skills" to encompass skills, general knowledge, and competencies).

Role	What is it?	Skills
Relationship builder	Builds relationships and fosters links with a wide range of stakeholders both within and outside the institution.	» Ability to build relationships » Ability to identify and nurture talent » Ability to inspire » Ability to persuade » Ability to promote collaboration » Ability to set and manage expectations » Technology awareness
Master communicator	Understands when and how to adapt messages for different people; knows how to tell a story, share a vision, and be "multilingual", that is, capable of speaking to technical audiences as well as to nontechnical, business, researcher, and other audiences.	» Ability to build relationships » Ability to inspire » Ability to persuade » Ability to set and manage expectations » Credibility » Cultural awareness » Diplomacy » Ability to communicate (written and oral) » Technology awareness

Role	What is it?	Skills
Promoter/Persuader	Works to influence a wide variety of stakeholders and convince them that the solution, process, or technology is correct.	» Ability to build relationships » Ability to inspire » Ability to persuade » Ability to set and manage expectations » Business acumen » Credibility » Cultural awareness » Diplomacy » Ability to communicate (written and oral) » Technology awareness
Coach	Coaches leadership, stakeholders, and IT teams so that all are appropriately aware of and able to exploit the technology's potential.	» Ability to set and manage expectations » Business acumen » Critical thinking » Cultural awareness » Ability to think innovatively » Technology awareness » Ability to communicate (written and oral)
Team builder	Builds high-performing teams and strong coalitions to get results; builds consensus and inspires.	» Ability to build relationships » Ability to identify and nurture talent » Ability to influence » Ability to inspire » Ability to persuade » Ability to promote collaboration » Ability to set and manage expectations » Critical thinking
Ambassador	Promotes a positive image of IT; through contextual understanding, is aware of political sensitivities and maintains a broad and even-handed view.	» Ability to build relationships » Ability to inspire » Ability to set and manage expectations » Accountability » Business acumen » Credibility » Cultural awareness » Diplomacy » Foresight

Skills assessment: How do you rate?

Use the checklist below to assess your current level of ability in these leadership skills and help identify which skills need further development.

It is recommended that you do this in consultation with a mentor or peer who might be able to provide you with additional feedback on your capabilities and who might help point out areas of excellence and growth areas. In addition, please note that some of the IT leader roles are dependent on the context (e.g. a smaller organisation may need to emphasize the more technical capabilities, while a larger organisation may need to emphasize the more strategic roles). As such, consider which skills you will need to develop to meet the roles needed at your organisation.

Finally, your results on the assessment will be used to help you as you determine which support mechanisms (described in the following section) will be most useful for you. It is important to remember that this assessment is a snapshot of your current capabilities; as such, we recommend that you periodically (e.g. biannually) retake this assessment to gauge where you have made progress and where you may need to focus your development.

Skill	Aware	Basic	Intermediate	Advanced	Expert
Accountability If you say you'll do something, you need to do it; if you don't, you need to be held to account. IT leaders are accountable to the institution as a whole, not just within IT.					
Diplomacy You understand your organisation's political dimensions and know how to communicate with different campus departments and leaders. This skill includes the ability to build champions to help sell IT's case for us, to get the institution to own our ideas.					
Ability to build relationships Today's leaders need broad networks for comparison and innovation. Relationships need to be built across the institution, and networks should be developed in peer organisations in and out of higher education.					

Skill	Aware	Basic	Intermediate	Advanced	Expert
Ability to communicate (written and oral) An IT leader acts as translator and talks about how to leverage technology to solve issues and problems where they reside. A leader also helps colleagues think ahead and consider what the future might look like. You are able to effectively present ideas in both written and oral formats, to a variety of audiences, including students and academic staff.					
Credibility Credibility is belief in your individual ability to deliver through others to meet commitments. It's far easier to lose credibility than to earn it; the best approach is to over-deliver and under-promise.					
Cultural awareness You understand the culture(s) of your organisation and are able to navigate across the organisation to achieve outcomes in an inclusive manner. You are empathetic to concerns and appreciative of the diverse nature of institutional communities and professional groupings, recognising the value they bring to the vibrant nature of learning and scholarly activity.					
Foresight You are able to make sense of trends and identify likely outcomes, drawing on a range of cultural, informational, and relational resources to identify potential views of the future.					
Technology awareness You stay abreast of current and emerging technologies but balance that awareness with an understanding that you can't be the expert in all areas of IT. IT leaders need to trust their staff to be the technology experts, know how to ask the right questions, and use people skills to learn what is necessary.					
Ability to identify and nurture talent You are able to find and retain good people and attract high-quality IT professionals into the profession.					
Ability to influence You are able to make a compelling case for IT, build buy-in, and increase understanding of issues and opportunities. You develop credibility and goodwill by acting as an honest broker when potential arises. An essential aspect of this skill is that you are seen to act for the organisation, not yourself.					

Skill	Aware	Basic	Intermediate	Advanced	Expert
Ability to inspire You have a clear vision of what is desired and can convey this to others through your language, gestures, and emotional intelligence. This skill helps during planning and in gaining buy-in, as well as challenging your team to achieve excellence in their work.					
Ability to persuade You are able to recognize different world views and beliefs and understand what is important to other people. In this way, you can express how IT will relate to various communities and shepherd these communities toward good solutions.					
Ability to promote collaboration You are able to bridge between silos in your organisations and build consensus within and across units and departments.					
Business acumen You understand the enterprise, the challenges that the business of the university faces, and how IT provides value and alignment with business goals.					
Ability to set and manage expectations You manage expectations by openly discussing goals, how they might be accomplished, and how success will be measured. To be effective, you must understand the context and others' understanding of an issue, communicate with key players on a frequent basis, and work to make sure that expectations are realistic and achievable.					
Critical thinking You are able to make sense of complex, varied, and incomplete situations; appreciate different viewpoints; structure data; and synthesise quickly. You can see the overall strategic picture and its impact and ensure that decisions and actions are measured, timely, and appropriate.					
Ability to think innovatively You ask questions and identify opportunities from a diverse range of sources, using that information to build a compelling case for change. Your innovative thinking challenges the current narrative and the status quo, and you look for new ideas from both inside and outside the organisation.					

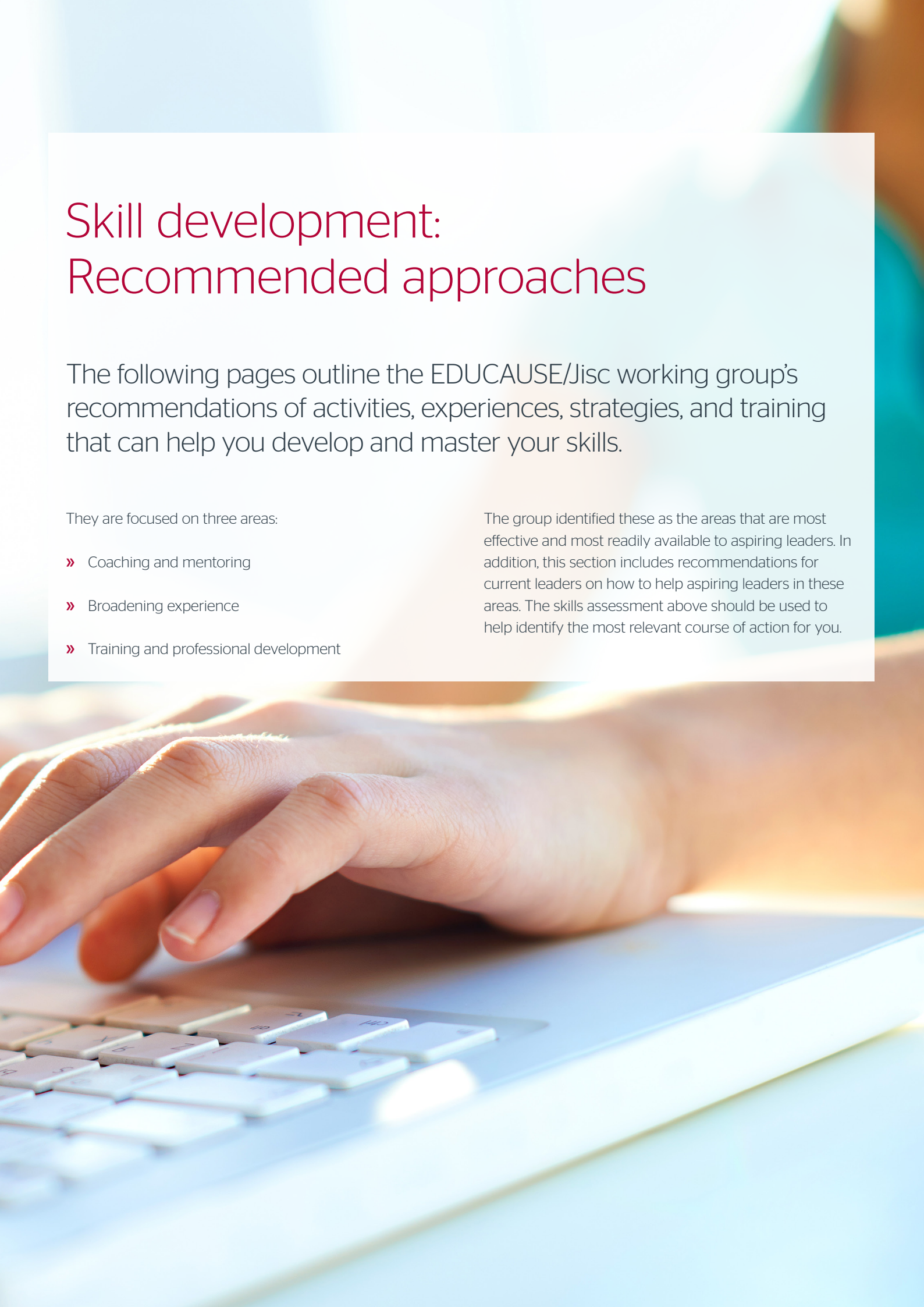
Skill development: Recommended approaches

The following pages outline the EDUCAUSE/Jisc working group's recommendations of activities, experiences, strategies, and training that can help you develop and master your skills.

They are focused on three areas:

- Coaching and mentoring
- Broadening experience
- Training and professional development

The group identified these as the areas that are most effective and most readily available to aspiring leaders. In addition, this section includes recommendations for current leaders on how to help aspiring leaders in these areas. The skills assessment above should be used to help identify the most relevant course of action for you.



Coaching and mentoring

Coaching and mentoring are development techniques based on the use of one-to-one discussions to enhance an individual's skills, knowledge, or work performance.

Coaching typically involves a short-term relationship that focuses specifically on a task at hand and its outcome. Mentorships are usually long-term, collaborative relationships that are more concerned with personal and career growth and development on a larger scale. Having a person to bounce ideas off of and to get advice from is an invaluable tool in sharpening one's skills.

Top tips for aspiring IT leaders

- ☐ Seek peers to extend your personal network and identify potential mentors or coaches. Don't be frightened to ask for help. It can be as simple as asking someone to join you for a discussion over a cup of coffee. Peers will generally be pleased to help and will know whom to call when they are stuck.
- ☐ Think outside the box when reaching out, e.g.:
  - › Find a senior mentor who knows nothing about your technical expertise or area of speciality. This will help you learn to communicate about your work in a nontechnical way.
  - › Try to get time with a successful person whom you find challenging or difficult to deal with to gain insight into what has made them efficacious and give you a different point of view.
- ☐ Think about professional networking groups (such as the **EDUCAUSE Constituent Groups** educause.edu/discuss), both inside and outside your sector, and seek to play an active role in them. This provides opportunities to learn from others' experiences and compare them with your own.
- ☐ Use support tools on mentoring to help with your preparation. EDUCAUSE maintains a number of resources **on mentoring** (http://bit.ly/248uS2j).

Finding a coach or mentor

A short working group poll revealed that, while formal and/or informal coaching and mentoring opportunities are available at most institutions, more than a third (36%) of the respondents indicated that coaching and mentoring needed to be found outside their institution. If something isn't available to you locally, you can still find support through peer networks, regional and national organizations, or even outside IT or higher education.

Poll results from the session "Preparing the Next Generation to Lead" at the 2015 EDUCAUSE Annual Conference.

http://bit.ly/1ToFSVo

Recommendations for current IT leaders

- ☐ Encourage staff not only to seek coaches and mentors for themselves but also to serve in these roles to others as they move through their careers, no matter the stage. It's not until you take on these roles yourself that you truly realise how effective coaching and mentoring can be and the positive impact it can have.

- ☐ Use 360-degree feedback in your teams. It's usual to receive annual performance reviews; however, these tend to only focus on the views of your direct supervisor. In contrast, 360-degree feedback seeks honest feedback not only from more senior staff but also from peers and direct reports. Because this type of feedback is typically anonymous and often facilitated by a coach, it can be detailed, insightful, and useful in understanding where skills are strong and where development is needed.

I was lucky enough to be mentored by a successful chief executive who knew nothing about IT. Sure, he had an appreciation of its importance to the business; however, there was no point in staying on safe ground for me and discussing stuff I knew about because he would just have gotten bored.

I learned about presentation styles, communication skills, and how to write executive/board papers from this chief exec. I use these skills today when I am talking to hugely knowledgeable and experienced technical colleagues to help all of us focus on broad outcomes rather than specific technical milestones.

Peter O'Rourke, Director of IT, University Campus Suffolk

The university where I work runs a mentoring scheme and tends to match mentors and mentees together from different parts of the organisation. Mentoring people from other business units really tests my own skills. I have to abstract the skills away from my own domain and apply them to other areas. It strengthens my own leadership skills by mentoring others. It's always fascinating, and I learn a lot from working closely with colleagues from across the university in this way, building deep relationships that I would not have the chance to do were it not for this scheme.

Stuart Lewis, Head of Research and Learning Services and Deputy Director Library & University Collections, University of Edinburgh

Broadening experience

It is important for IT leaders to have a broad view of the institution and an understanding of the impact that IT can have on its users, in different departments, and in support of the institutional mission.

A key way of gaining this insight is by looking for ways to broaden your experiences and to acquire new skills, knowledge, and experience in other departments/institutions.

Top tips for aspiring IT leaders

- ☐ Seek opportunities to broaden your experience and networks through organisations such as EDUCAUSE (read about **volunteer opportunities** http://bit.ly/20XZCUM) and Jisc. Volunteer to be a reader for a conference or join a committees, working groups, or customer engagement groups.

- ☐ Look for opportunities to work or collaborate with others outside your immediate team, organisation, and sector. See where others are being innovative or even where things may not be going so well. When taking advantage of these opportunities, think about how you might learn from and implement the best ideas in your work, team or instition. Some ways to identify opportunities include:

  - › Meet with campus peers outside IT
  - › Seek potential job shadowing experiences or job swap opportunities
  - › Find a mentor who may be able to help

- ☐ Visit other departments in your institution and talk to staff in these areas about their work. It is important to understand the core business of the institution, typically research, teaching and learning to know how IT is contributing to institutional goals. Doing this also builds good relationships as you show interest in these other areas of work, not just inward on IT.

- ☐ Engage your user population. Go out and talk to your customers (e.g. faculty and staff) and have them explain how IT has an impact on their work or part of the organisation, including what it would be like without the IT services that support their part of the organisation. You may want to ask them to look to the future and describe a part of their work that would be vastly improved by sci-fi type technology, then ask them to look back ten years and think about the technology that is available now that wasn't available then.

- ☐ Get involved with events such as student orientation, freshers' week, or open days for some direct contact with students and to get a better understanding of their IT concerns or how they encounter IT services. Without that direct contact, we can think our services are good and miss the troubles that people are having. Equally, we risk missing out on being able to celebrate and show off how good our services are.

- ☐ Become a member of a national sector organisation (e.g. the British Computer Society in UK) to engage with senior IT professionals outside higher education at regular intervals.

- ☐ Understand the business of the institution Understanding the strategic priorities of the business and its KPIs will help you better understand how IT can facilitate the institution's achieving its organisational aims and objectives.

Making the case for broadened experience

When asked what the biggest deterrent is to encouraging IT staff to gain wider experience in other departments or organisations, 57% of respondents in an informal poll indicated that the number-one reason was a shortage of staff and that the team members are needed for their current work. It can be difficult to find the time to get this experience and to make a case for it with your supervisor. Perhaps you'll need to start small with events, volunteer hours, or a joint task force before suggesting something more significant, such as a job switch or time embedded in another unit. Working to find the right opportunities that will provide you with a true learning experience may take time, but is sure to be worthwhile in the end.

Poll results from the session "Preparing the Next Generation to Lead" at the 2015 EDUCAUSE Annual Conference.

http://bit.ly/1ToFSVo

I am an IT professional. However, I currently choose to work outside the core IT department of the university. Working in the library still has very similar IT challenges: storage, infrastructure, systems, software development, cloud hosting, etc. But by working in other areas of the university I am able to gain experiences of applying IT skills in new areas and build an awareness of other aspects of the university.

Stuart Lewis, Head of Research and Learning Services, Deputy Director Library & University Collections, University of Edinburgh

Recommendations for current IT leaders

- ☐ Help your IT teams identify the benefits of their work to the wider institutions and learn to speak the language of business and academia.
- ☐ Learn to let people go. It is a challenge for many IT leaders to generate opportunities to give their team experience in other areas. This includes encouraging them to leave the department and gain experience elsewhere. By allowing people to move into other areas, either within the institution or outside, you are enabling them to gain experience and build skills, particularly when there may not be an opportunity to move forward in the IT organization itself.
- ☐ Coach people to look elsewhere for work experience that will help develop the broad range of skills required for senior leadership. Ways to do this include:
  - › Encourage IT staff to join cross-organisational projects. You may also want to ask more confident staff to join your projects to build their competence early on.
  - › Encourage staff to work in other departments, even if only for a few hours. Clearly communicate about and support experiences at the institution that are available outside IT.
  - › Provide opportunities for aspiring leaders to gain experience by attending meetings and decision discussions through shadowing senior staff.
- ☐ Run a summer work-experience scheme, for example, ask for volunteers from other departments or the student body to help with IT infrastructure work. This helps create a body of people to attract to the industry and gives your current staff an opportunity to engage with a broader group of people on IT projects.
- ☐ Equip aspiring leaders in your team with the right communications tools to help share the message of the strategic importance of IT.

Training and professional development

Professional development opportunities and training courses equip aspiring leaders with necessary skills. These opportunities may range from in-depth cohort programs to shorter in-person or online training classes focusing on a specific skill.

Top tips for aspiring IT leaders

- ☐ As you advance in your career, the professional accreditations that you may have needed for your technical job roles will become less important. Instead, professional development and training becomes more important in leadership skills such as those outlined in this guide.

- ☐ Find out about training and professional development opportunities that might be offered at your institution and pursue those that will help you build leadership skills and gain experiences such as those discussed above. If your institution doesn't offer training in these areas, or in an effort to supplement this training, identify opportunities through professional organisations such as Jisc and EDUCAUSE.

- ☐ Seek and participate in leadership management programs, such as the **EDUCAUSE Institute** (http://bit.ly/1R6JY1i) (e.g. New IT Managers Program or Leadership Institute), the UK Leadership Foundation for Higher Education (e.g. **Future Professional Directors programme** http://bit.ly/1RKwB9b), or **MOR Associates** (morassociates.com/leadership) leadership training.

For me, the EDUCAUSE Institutes—the Management Program, Leadership Program, and Frye Leadership Institute (now Leading Change Institute)—were less about "training" for management and leadership and more about broadening and expanding my circles of professional acquaintances. These relationships have proved to be invaluable to me as I've progressed through my career.

Melissa Woo, CIO and Vice Provost for Information Services, University of Oregon

Recommendations for current IT leaders

- ☐ Identify ways to bring training to your staff (for instance, from commercial vendors) or work with other campus stakeholders to start an internal campus leadership development program.

- ☐ Build a clear training pipeline, helping make connections so that the organisation has a focus on developing for the future.

- ☐ Provide training about what research, teaching, and learning, the core business of a university, actually mean so that IT staff can better understand what IT services are necessary to support these goals, how to work with stakeholders and how to collaborate to identify needs.

- ☐ Build awareness among higher education senior management of the role of IT as a strategic enabler.

The main things that stuck with me from the leadership programme were "action enquiry" and personality types. To this day, I question how I make decisions, and I inquire if the landscape has changed since the last time I engaged a similar decision. It also helps me understand how others are making decisions, especially when I don't agree with them. I see people as individuals who need separate approaches to maximise their potential.

Robert Stockton, Head of Learning Resources and Information Technology Services, Glyndwr University

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Conclusion

When EDUCAUSE and Jisc first partnered in 2014, we wanted to understand the challenges IT leaders faced. We understood well enough how technology can strengthen higher education, but we shared a concern that IT leaders may still experience numerous barriers in shaping institutional strategy and transformation. We began by listening to a small group of IT leaders from a wide range of U.S. and UK institutions. Together we shaped a model for IT leadership, but we kunderstood this was only a first step.

We know there isn't a single, clear pathway for IT leadership. At the same time, we remain concerned that, despite the confidence we have in the higher education IT leader model and despite a wide range of existing leadership programs, not enough work has been done to understand how to equip professionals for the kind of roles IT leaders are expected to play in their day-to-day work.

From early in our partner discussions, we were concerned that if current IT leaders faced significant challenges, then it was highly likely that aspiring IT leaders in higher education would find it tough, perhaps even tougher, to take on the roles we know are needed for IT leadership. So we began a new project, knowing from the outset that it would be a difficult topic to address and that we wouldn't find a simple or straightforward answer to our question of how to help prepare the next generation of IT leaders.

Through our latest project we focussed on those working in the middle stages of their career, anticipating that those in the early stages are focussed on learning the job and figuring out if this is actually the kind of career they might like to pursue. We expect that at the middle stage of a career, professionals will start reflecting on their experience and showing interest and appetite to gain a wider set of skills and, in doing so, gain some leadership skills.

We know that many of the professional development programmes currently offered aren't geared specifically to IT leadership, or they may need to be updated to match today's IT leadership needs (e.g. negotiation, vendor management, and more). There is no formal program that we are aware of that provides a contextual framework for "outside" experiences for IT staff and the individual's overall career plan and goals. And, despite efforts in our community to provide mentoring opportunities, we still lack robust networks of mentors and coaches for aspiring senior managers in higher education IT.

We think this project is another small step toward helping people think positively and take ownership of their career in higher education IT. We have identified some opportunities for those who are hoping to become IT leaders or who are interested in developing leadership. We have identified what we believe to be the key roles and the stage of one's career when it makes the most sense to help develop the leadership skills needed for those roles. Our guide aims to serve as a tool to help gauge strengths, weaknesses, and, importantly, ways to build the capabilities needed.

The challenges faced by those working in higher education IT will require our continued support and attention from senior leaders in higher education. Here's just a flavour of the discussions we'd like to explore in the future, as partners and with our community:

- **Retention:** How do we ensure that aspiring technology leaders can build the necessary skills without moving to another organisation or sector?
- **Recruitment:** How do we attract the right talent from both inside and outside higher education?
- **Diversity:** How do we ensure that our workforce is diverse in background, colour, sex, and experience?

We invite others to join us in this effort and hope that our findings serve to stimulate further discussion and progress.

Biographies: Working group members

Michael Cato, CIO, Vassar College

Michael leads IT strategy and operations as CIO of Vassar College, a highly selective coeducational liberal arts college consistently ranked among the top liberal arts colleges in the country. Since joining Vassar in 2013, Michael has led the Computing and Information Services (CIS) division to adopt new approaches to better serve the college community. These efforts include developing project management methodologies, initiating IT service management principles, and implementing an intentional organizational culture program. Michael previously served as Interim Vice Chancellor for Information Technology and CIO at the University of North Carolina at Charlotte. Degrees held include a BSc in Zoology from Andrews University and an MBA from Wake Forest University.

Drew Cook, director of ICT, University of Lincoln

Drew is Director of ICT for the University of Lincoln and joined both the university and the education sector in January 2012. Prior to joining the University of Lincoln Drew spent over 25 years in a range of roles gaining experience in creating and implementing ICT strategy while working for global businesses, including most recently as IT director for Staples supporting the retail, e-commerce, and logistics operations in the UK and the Staples European B2B operation.

Stuart Lewis, Head of Research and Learning Services, deputy director Library & University Collections, University of Edinburgh

Stuart is Deputy Director of Library & University Collections at the University of Edinburgh, with particular responsibility for research and learning services. His specific areas and interests include research data management, scholarly communications, digital library software development, and projects and innovations. Stuart's career has spanned both technical and library domains, having spent much of his career leading software development teams within higher education, both in the UK and New Zealand. As a software engineering graduate and chartered member of the British Computer Society, Stuart mixes his interests in both IT and libraries to work at the forefront of digital library technology.

Gerry McCartney, Vice President for Information Technology and CIO, Purdue University

Gerry is one of the nation's leading technology innovators in higher education. While under his leadership as CIO, Purdue University developed the nation's largest cyberinfrastructure for campus faculty; became the world's leader in tools for scientific collaboration by developing scientific research hubs and DiaGrid; and became the national leader in developing classrooms apps that boost student success. This was accomplished while simultaneously reducing the operational budget by $10 million and consolidating units in a 2011 campus-wide restructuring of information technology resources.

From 1993 to 2004, Gerry was associate dean and chief information officer at the University of Pennsylvania's Wharton School. Gerry is currently the Purdue Olga Oesterle England Professor of Information Technology. He oversees all central computing (research, academic and administrative) as well as networking and telecommunications systems on the West Lafayette campus.

Joseph Moreau, Vice Chancellor of Technology and CTO, Foothills DeAnza Community College

Joseph has been working with technology and media for over 30 years. He began a career in higher education in 1990 and in 2012 was appointed Vice Chancellor of Technology and CTO for the Foothill-De Anza Community College District. Overseeing technology for two of nation's premier community colleges, he leads initiatives in desktop and application virtualization and mobile computing. In 2013, he also assumed the role of executive sponsor for the California Community College Online Education Initiative, a project to overhaul the online instruction and support service infrastructure for California's 112 community colleges.

Throughout his career as an administrator he has taught in the fields of computer information systems, education, and multimedia production. He completed the certificate program in Motion Picture Arts and Sciences at the University of California, Los Angeles, and earned a BA in Media Production/Visual Arts at the University of California, San Diego, and an MA in Education/Instructional Technology at the California State University, Los Angeles.

Peter O'Rourke, Director of IT, University Campus Suffolk

Peter is Director of IT at the University Campus Suffolk. With over 30 years' experience in the IT industry, Peter's experience spans mainframe to cloud, private and public sectors, financial services, civil engineering, the automotive industry, local and central government, and the education sector, from primary through to higher education. Peter has extensive commercial experience, having managed high-value complex contracts across both public and private sectors, and has delivered a broad range of IT consultancy engagements. Prior to his consultancy career, Peter operated in IT management, delivering high-profile systems in challenging, regulatory environments, and he has a diverse background in working with cross-functional support teams, including marketing, operations, and facilities.

Robert Stockton, Head of Learning Resources and Information Technology Services, Glyndwr University

Rob started out in IT as a teenager writing and publishing computer games for home computers in the 1980s and grew a hobby into a career. He first began as a freelance programmer before moving into technical support and solution provision. Now, with over 30 years' experience in IT, he has extensive experience providing a range of enterprise solutions across health care and higher education. Rob has worked on many organisational and national projects, including in metropolitan networks, learning environments, and information systems. He is currently Head of Learning Resources and IT Services at Glyndwr University and chair of the Higher Education Wales IT Directors Group (HEWIT).

Suzanne Traxler, CIO, University of Wisconsin–Platteville

Sue is assistant vice chancellor for Information Technology/CIO at the University of Wisconsin–Platteville and has worked in higher education information technology support for 25 years. She is responsible for leading a customer-focused IT organization that delivers innovative, efficient, and effective technology systems and services to advance the teaching, research, and service mission of UW–Platteville. Sue guides the overall direction for technology through strategic planning, evaluation, budgeting, and management of all areas of technology and also chairs the Platteville Community Area Network (PCAN) organization. Prior to UW–Platteville, Sue was the associate Director of Information Technology Services at Carleton College, where she had served for 20 years. She holds a BS from the University of Minnesota and an MBA in Information Technology Management from Capella University.

Darren Tysoe, CIO, Regents University London

Darren leads Information and Learning Technology Services at Regents University, London. He is responsible for the development of a whole-college digital strategy in all IT systems, including human resources, finance, information systems, learning management systems, and IT infrastructure. Darren is the college lead for STEM. As a member of the Senior Leadership Team, Darren is focused on the application of IT to achieve whole-college improvements and strategic advantage.

Darren's previous roles include director of IT at Havering College of Further and Higher Education in East London, director of ILT at Kensington and Chelsea College and West Thames College. His leadership roles included IT Teams, eLearning, Learning Resources, Information Systems, Admissions, Student Records, and Exams. Darren's qualifications include an MA in Education Management from the Open University and a BSc in Business Studies from Bradford University; he is also a Member of the British Computer Society.

Melissa Woo, CIO and Vice Provost for Information Services, University of Oregon

Melissa serves as the vice provost for Information Services and Chief Information Officer at the University of Oregon. She previously worked for the central IT organizations at the University of Wisconsin–Milwaukee (UWM) providing general leadership and oversight for the central IT department responsible for campus enterprise and infrastructure services. Prior to UWM, she worked for the central IT organization at the University of Illinois at Urbana-Champaign, overseeing systems and operations. Prior to working in the IT realm, Melissa worked in the field of health physics. She completed her PhD in Biophysics at the University of Illinois at Urbana-Champaign and her Bachelor's degree in Biophysics at the University of California, Berkeley.

Biographies: The project team

Karen A. Wetzel, Program Manager, EDUCAUSE

Karen has worked in higher education for nearly 20 years. She joined EDUCAUSE in 2011 and is responsible for day-to-day oversight and leadership of the EDUCAUSE Center for Analysis and Research (ECAR) Working Groups. ECAR working groups bring together CIOs, CTOs, and other technology leaders from colleges and universities in the United States and beyond to collaborate on specific challenges. Immediately prior to EDUCAUSE, Karen served as Standards Program Manager for the National Information Standards Organization (NISO). Karen holds a BA from the University of California, Los Angeles, an MA from Boston College, and an MLS from the Catholic University of America.

Louisa Dale, director, Jisc Group Sector Intelligence, Jisc

Louisa helps Jisc develop a deep and sustained understanding of customer need. Her portfolio includes customer advocacy, customer research, and strategic relations. Working in a variety of communications and relationship management roles for Jisc since 2003, Louisa has worked closely with Jisc's leadership team to develop highly successful collaborations.

Richard French, international coordinator, Jisc

Richard joined Jisc as international coordinator in April 2014. He is responsible for managing the developing network of international relationships across Jisc and acting as an organisational focus to bring together those activities taking place on an international level. Prior to Jisc, Richard worked for the BBC on a variety of radio productions, where he planned and arranged logistics on live broadcasts, undertook research activities, and helped manage delivery of programmes. Previously, he managed and coordinated large-scale education projects and events for the British Council and taught English at a university in Beijing, China.

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