SUPPORTING NYU'S WORLDWIDE USERS: ACADEMIC TECHNOLOGY SERVICES FOR THE GLOBAL NETWORK UNIVERSITY

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ABSTRACT

The globalization of higher education has been growing rapidly in recent years. As New York University (NYU) develops its Global Network University, opening degree-granting portal campuses and expanding academic centers worldwide, the need for integrated support at these sites is growing. With this international growth comes the challenge of supporting students, faculty, and staff that are thousands of miles away from the central academic technology support system in New York that provides training, troubleshooting and service management. To ensure that the NYUAD campus could effectively support academic technologies, a new staff position was created in New York within the Digital Studio at Bobst Library and a new support model was developed. Based upon our experiences, we've outlined the challenges encountered, successful strategies and proposed best practices that can be used to improve this new international support model for NYUAD, our Global Network University and other higher education institutions with portal campuses around the world.

Keywords: international university, global, higher education, new york university, new york university abu dhabi, support, academic technology

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The globalization of higher education has been growing rapidly in recent years. According to a report by the Observatory on Borderless Higher Education, "Since 2006, the number of international branch campuses in the world have increased by 43 percent" (Becker, 2010). As New York University (NYU) develops its Global Network University, opening degreegranting portal campuses and expanding academic centers worldwide, the need for integrated support at these sites is growing. NYU's portal campuses are more than study abroad sites; they are distinct, fully developed campuses that comprehensively support their students, faculty and staff. Portal campuses are degree granting institutions, and it's possible for students to spend their entire university career at one of these locations. The study away sites complement these portals by allowing students to travel beyond the main university centers in order to fully develop as global citizens. This networked system of study away sites and portal campuses allows students to move seamlessly between locations

NYU Abu Dhabi (NYUAD), the University's second portal campus after New York, opened its doors in 2010. Beginning with a class of approximately 150 students from around the world, the campus is expected to grow to over 2000 graduate and undergraduate students. In fall 2012, academic centers opened in Sydney, Australia and Washington, DC, and will be followed by another portal campus in Shanghai, China in 2013, for a total of fourteen global locations. With this international growth comes the university's challenge of supporting students,

faculty and staff that are thousands of miles away from the central academic technology support system in New York that provides training, troubleshooting and service management.

To ensure that the NYUAD campus could effectively support library and academic technologies, a new staff position was created in New York within the Digital Studio at Bobst Library and a new support model was developed. The Digital Studio is a collaboration between NYU Libraries and Information Technology Services (ITS), and supports digital scholarship, research and teaching by providing consultation, training and tools. ITS staff and librarians provide user support to faculty, staff and students for the academic technology services offered by NYU. These services include: learning management systems (LMS), video streaming, file management systems and digital publishing platforms. The new position, Digital Studio Technology Specialist, serves as a liaison between the Digital Studio in New York and the Library at NYUAD, collaborating with the Digital Technologies and E-Learning Librarian and academic technology staff in Abu Dhabi to support Abu Dhabi-based users.

At NYUAD, the decision to integrate library and academic technology was a natural fit, drawing inspiration from the established Digital Studio/Library relationship at Bobst. The NYUAD academic technology office is housed in the library and academic technologists and librarians work together on a daily basis. The Digital Technologies and E-Learning Librarian is indicative of this relationship. This role partly serves as a "typical" librarian, conducting information literacy sessions, doing collection development in liaison areas and working at the Library Information Desk. Conversely, this role also supports academic technology initiatives, including oversight of the university's learning management system, support for the university's streaming media service and maintenance of the library's web presence and catalog interface decisions. The

Digital Technologies and E-Learning Librarian reports to the Assistant Director for Library and Academic Technology, instead of to the Library Director as the other librarians do. While it's by no means unheard of for libraries and academic technology departments to operate as one unit, this organizational structure is not as widespread as one might think. According to a summary of the 2008 *Core Data Service* report by EDUCAUSE, only 14 percent of libraries in two-year institutions and 18 percent of libraries in four-year institutions follow the converged information technology/library model (Massis, 2011).

As part of this collaborative global support model, the Digital Studio Technology Specialist provides training for faculty before they travel to Abu Dhabi, represents NYUAD on New York-based service teams, and communicates important NYUAD service updates and changes to the library administration. The NYUAD Library's Digital Studio models its services and tools after the Digital Studio in New York in an effort to provide a similar work environment. Abu Dhabi staff provide support from the NYUAD Digital Studio to faculty by both familiarizing those who are new to the NYU system with the tools and services available to them and supporting NYUAD faculty as they travel globally for research and teaching.

Providing global support poses many challenges, including: training remotely, appropriate network speed limitations, time zone differences, effective communication of service changes, and communication tools for videoconferencing and remote training. Now three years into the partnership, we have discovered through flexibility, close consultation and creativity that there are many effective strategies for global support. Through our partnership, we are able to offer high-touch service to our users and provide one-on-one training prior to the start of each semester. Conversely, some tactics have been less successful, and we have learned from those. Based upon our experiences, we have outlined the challenges encountered, successful strategies and proposed best practices that can be used to improve this new international support model for NYUAD, our Global Network University and other higher education institutions with portal campuses around the world.

Challenges in Supporting our Global Users

Global support by definition comes with its own set of scenarios, and one of the most challenging aspects of providing assistance is trying to meet the needs of our students and faculty as they move across locations. Faculty and students are continually traveling between campuses, often thousands of miles away from the central support center in New York City or the portal campus in Abu Dhabi. Additionally, students and faculty routinely travel for research to locations without an NYU site that can provide at least some level of basic support. Some continue their studies while at home over the summer, returning to locations that may lack a suitable network infrastructure or computing environment. There are numerous obstacles, some of which we anticipated and others that evolved over time. The Digital Studio Technology Specialist position was created to address these needs. While this role has proven to be an essential component to providing seamless global support, broader issues have arisen that even this position could not mitigate. Network limitations and efficient equipment procurement are just a few examples of these larger obstacles.

An example of this emerged during a summer language learning program. Students, away from Abu Dhabi for the summer, were asked to complete an online course that helped them develop their English language skills. The course was run through Blackboard, the university's learning management system at the time. Part of the curriculum required students to record practice sessions using Audacity, a free audio editing and recording program, and then upload the files to the course site. Some of the students were in areas without a reliable network connection, and encountered roadblocks. Additionally, some had technical problems using the Audacity application and could not visit a NYU support center in person. Remote troubleshooting helped in some situations but wasn't entirely effective. One lesson learned was that the Digital Studio in Abu Dhabi should offer in-person workshops and hands-on training or an online video tutorial before the summer break, so that all students and faculty are familiar with the technology while they still have access to face-to-face help. However, the connectivity issues are outside the scope of our support capabilities. Can we ensure that all faculty and students have the required support, equipment, software and infrastructure they need in order to carry out their research or continue their studies? If not, do we instead modify requirements and expectations to accommodate the various scenarios? These are only a few of the broader questions that a global university must consider and serve to illustrate scenarios for which we have not yet found resolutions.

One of biggest obstacles in creating a seamless global experience for our users is the variances in network speed between locations. The use of some tools and applications, such as video streaming and Learning Management Systems, are dependent on a certain level of infrastructure and connectivity. In locations where infrastructure has not yet matured, tools and applications, such as video streaming technology, that work seamlessly in the United States will not operate as well. This may result in users gaining access to new technologies at different rates, while networking and other deployment issues are addressed at each location. If each location is not using the same technology, it could create disparities in the seamless global experience. Along with this challenge comes the issue of managing expectations. If faculty and students find that certain applications that they have been using in New York are lacking in Abu Dhabi, how do we meet their needs? We've found that an effective response involves a high-touch environment supported by staff, which in turn creates other challenges around workflow, staff availability and scalability.

Another complication is the time zone and workweek differences among global sites. For example, the common workweek in the Middle East is Sunday through Thursday. American holidays are not observed, so classes are sometimes in session while U.S.-based classes are not and vice versa. Our Abu Dhabi campus is eight or nine hours ahead of Eastern Standard Time, depending on daylight savings time. Because of these differences, the two portal campuses only share three working days. When work weeks and hours aren't aligned, it can be complicated to connect with support teams at other global locations. While the support team at a given location does its best to help resolve any issues, it's likely that some issues will have to be escalated to the main support center in New York. When that center is closed, users can be left in the lurch. If critical issues aren't addressed by staff outside of their normal work hours in one location, it's easy for an issue to drag out over several days of communication as each party keeps missing the other. As NYU continues to develop its 24/7 support model, these challenges will lessen over time. The addition of more support staff in the overnight hours in New York, a new online ticketing system, and a new online knowledgebase are recent changes to ensure that the non-New York locations have the same resources to provide support as the faculty, staff and students located in New York.

Communication can often be a struggle within institutions, or even departments, that have only one physical location. Ensuring that information is disseminated to all of the right

parties at a global campus can be even more challenging. The office conversations that keep everyone apprised of new developments or sudden discoveries don't always make their way into an email or videoconference agenda. Likewise, it's easy to mistakenly assume that some information is widely known among all staff regardless of location and thus doesn't need to be shared. This can leave some staff unintentionally uninformed and may create confusion when the lack of shared information becomes apparent. Making sure that everyone on the team has the same knowledge and understanding takes persistence and time, and can easily be overlooked. One solution that we have found helpful is to ensure that Abu Dhabi staff are subscribed to any communication channels that New York-based staff routinely use, including listservs, Google Groups or email aliases. Additionally, Abu Dhabi staff are members of New York-based committees, participating in those meetings via Skype. This requires that the meetings be scheduled in the early morning hours in New York and after normal work hours in Abu Dhabi. These non-traditional work hours, though not ideal, help keep everyone apprised of developments and initiatives in those specific areas. These are just a few examples of the communication initiatives that need to be developed early on in order to ensure a successful support model

Along with global growth comes the new identity and awareness of an international campus that has moved beyond the traditional boundaries of a single location. For those who have worked at an institution whose mission has been to provide support to students, faculty and staff at a single location, the switch to considering other global locations in the decision making process can take some getting used to. Shutting down an application, such as the library catalog, to update or reconfigure the system can no longer be scheduled overnight, because that may be in the middle of a workday at another location. Creating and fostering that global awareness takes time, patience and persistence. The advantage of this global awareness among service teams for tools that are used internationally is a benefit to the entire user community. For example, time zone sensitivity in a learning management system will help ensure that students and faculty are working with a system that is aligned with their workday. Creating sitespecific resources in our LMS and other academic technology systems also ensures that everyone's support needs are considered regardless of location. We modified our LMS sites to include course-specific research guides that reflect the specific class curriculum instead of the more generalized research guide geared toward New York-based students. This allows for focused research content to be available at the point of need, along with the tutorials and assistance required to use it. Additionally, the library offers a suite of language learning software, including Mango Languages and Rosetta Stone, to help our students' linguistic skills as they move across global locations

Providing a seamless experience for our users becomes difficult when the global site has its own systems and practices. The start-up campus has the unique opportunity to form its own policies and procedures as it determines the best ways to serve their students, faculty and staff. Sometimes, these policies may not be in line with the established campus because there are specific circumstances that are unique to that particular location that dictate a change in the way things are done when compared to other portal campuses. Building an institutional relationship with the service teams at the home institution provides challenges when the service model developed for the larger institution does not fit the culture at the portal institution. Service models built to provide support for tens of thousands of users at the home institution do not take into account the reality of the other, smaller global locations serving dozens or hundreds of users. Conversely, with their smaller size and fewer faculty, the portal campuses

are able to provide high-touch service, classified by a high level of personal interaction with the user, that is not scalable for the home institution. As the portal campuses at NYU evolve, they develop their own identities and models that work for their institutional culture, while also staying aligned with the mission of the home institution.

Institutions often create their own information-sharing strategies as a result of their specific environment and user needs. As a result, information is not disseminated in the same way at the various portal sites. The New York campus has a large number of people working on each academic technology service, such as Google Apps for Education, the learning management system, and the video streaming service. We have found in New York that relying on "informal" communication tools, such as email and chat, among different departments, let alone different locations, means that a lot of requests get lost. Without the tracking features that an online ticketing system provides, we cannot ensure a request is answered. Therefore, communication and documentation amongst the teams and across ITS and the Library as a whole is largely distributed through the institutional wiki in order to provide a central location for support resources. For the New York staff using the wiki daily, it is second nature to look there for information. The staff in Abu Dhabi and at other global locations is, by comparison, much smaller and thus communicates via informal conversations and other methods as they interact throughout the day. Using the wiki is not intuitive as it is rather formal and impersonal in their context. Therefore, staff in Abu Dhabi may miss this wiki-based information and updates about the various services and can feel that they do not have all of the knowledge they need. Getting into the habit of checking the more formal information resources will provide staff at global locations with the documentation they need to support their users.

The workflow for resolving client issues follows a similar pattern. In New York, interaction with clients is done most frequently via an online ticketing system, to effectively track the numerous daily support requests and responses to them among the various team members. In Abu Dhabi, clients visit their Digital Studio in person to ask for assistance or send an email to the staff directly. Transferring the requests that require a higher level of support to New York via the online ticketing system does not come naturally; one's instinct is to forward the email to the service team, or email the service team members directly. If requests are not recorded in the formal tracking system, they can get lost or overlooked in the volume of email received every day.

Lastly, in creating all of these shared services for faculty and students as they teach and learn at the various sites, we assume they have basic technology skills. However, depending on the users' background, this may not be the case. Through the working partnership with the Digital Technologies and E-Learning Librarian and the Digital Studio Technology Specialist we are able to schedule one-on-one consultations with the faculty in New York and Abu Dhabi, attending to their individual needs, although this model will not be scalable as the campus expands. Other sites may not have staff available to provide such consultations, and faculty and students may travel to areas without an academic support center. We will need to develop new methods for ensuring competency in the academic technologies used at the University, regardless of the user's location. One option is to insert ourselves into any type of campus orientation session and provide an academic technology overview. Another option would be to create an online course that familiarizes students and faculty with the resources and support teams available to them. Additionally, we should continue to develop and promote our online tutorials and the opportunities available to them for in-person, one-onone assistance.

Successful Strategies

While providing global support to our users certainly presents many challenges, we have discovered several approaches that succeed quite well. One of the most helpful initiatives was creating the Digital Studio Support Specialist position, a role that serves as a direct line of support in New York for academic technology related matters in Abu Dhabi. Having one person that can field questions, represent global needs and interests and keep an ear to the ground for important information has proved essential. Creating the partnership between the Digital Studio Support Specialist in New York and the Digital Technologies and E-Learning Librarian in Abu Dhabi has ensured a safety net of support.

When developing a service model from the ground up, and in an environment that is still in flux, there are personal traits that have proven beneficial. Having a certain comfort level with ambiguity and a willingness to adapt to an ever-changing environment has helped, as has possessing the initiative to identify issues as they arise and come up with solutions. Some of the support issues that we encounter have never surfaced before, so an ability to think creatively and consider many different approaches is important. Having a broad knowledge of various technology tools and the willingness to experiment with new technologies can help to solve many issues that arise. Being able to work independently, yet knowing when to include others from the global team is also essential.

Though not always feasible, another way to ensure a successful support model is to immerse decision-making employees into the alternate location's work environment as much as possible. It's easy to work within the silo of your own location and to lose sight of the larger organization's structure and workflow. We have found that the best way to assimilate global teams is to have staff occasionally visit and work in each other's locations. This gives the employees a better sense of how the organization is structured and how this affects work in their location. They have a chance to experience the routines and work patterns of their sister organization, elements that may directly affect how objectives are ultimately achieved. Additionally, such visits create stronger collegial bonds and foster a greater shared sense of purpose. Ultimately, it's these things that enable staff to provide the greatest level of support to users. When travel between locations is not possible, scheduling regular meetings via videoconference can fill in the gaps and continue to promote teamwork.

Another aspect that has helped strengthen a solid global support environment is the creation of a high-touch environment via our support teams in both Abu Dhabi and New York. New York-based faculty that will be working in Abu Dhabi, or Abu Dhabi faculty traveling back to New York for a semester can receive hands-on assistance at each location before they travel. This may include support with setting up course websites in the learning management system, an overview of the tools available at each location or consultations to help determine which tools meet their academic technology needs. The goal is to create a system where faculty receive help regardless of their location via a seamless process. The initial support contact briefs the destination staff on the faculty needs, assess which needs have already been met, and what further assistance may be required, as faculty are guided from one support team to the next. One of the challenges with this framework is how to extend this hightouch environment as our developing portal campuses grow. It's easy to offer highly personalized service to a small community, but scaling this to meet the needs of thousands (as opposed to hundreds) of future users is something we are continuing to develop as an organization.

Best Practices

Based upon our experiences in providing seamless global support across sites that we have outlined here, we have come up with a set of best practices that work for our institution. We believe that we can extend these best practices to our other portal campuses as service support continues to expand to these locations.

- Pilot services with faculty and students in Abu Dhabi and the other global sites. This allows the service teams to discover any performance or implementation issues early in the project cycle. The needs of the users at each site can be voiced and recorded by the service team during the assessment phase of the project. Realizing each location's distinct requirements early on allows service modifications and developments based upon those needs to be made, and ensures the seamless global experience that NYU strives to provide.
- Continue developing online tutorials and remote training opportunities. These will be helpful not only for our portal sites, but for all our users. As everyone may not be able to attend in-person workshops, online tutorials will allow people to learn at their own pace or to focus on learning more about a particular aspect of the technology at a granular level. This will help solve the challenge of ensuring a comfort level with technology, as well. Additionally, synchronous training webcasts across locations or live streaming of technology tool workshops will help reach our global users.
- Develop strong communications methods. Establish and use those methods even if they are not part of the daily culture at a particular location (Niederman & Tan, 2011). By establishing strong methods and practices of communication early on, we can work to

make them part of the overall organizational culture and ensure that there is a common understanding among staff at all locations. In addition, we must work to find ways to share knowledge that may be anecdotal and specific to one site. This information can have a large impact on a project, but it may not be easy for the project team to discover. By incorporating this information into our internal knowledge repositories, we can ensure all of the information necessary for successful service implementation and support is available to all service providers, wherever they work.

- Develop good partnerships to assist with support issues. To resolve service and support issues that cannot be handled at the local level, we need a clear path for escalating problems to the various service teams. By developing relationships among these individuals and groups, more staff will be aware of each portal site's idiosyncrasies and therefore be able to resolve the issues more quickly. Good working relationships among global colleagues have proven critical to creating a strong support model.
- The immersion experience. We have found that our immersion travel experiences have been invaluable. The chance to spend time at each other's campus allows us to learn about day-to-day issues that we would not otherwise know about, to develop the partnerships that are valuable in providing support, to participate in indepth training and to learn the methods each site uses to support their users. These experiences foster teamwork and collaboration between in-person visits (Nunamaker Jr., Reinig, & Briggs, 2009) and lead to the success of the global support model. For us, two-week periods seem to be ideal. This allows enough time to schedule necessary meetings and trainings and participate in daily life at the other location without becoming overloaded with information.

New academic technologies are continually introduced at NYU. The experiences and challenges we have outlined here help those implementing and supporting these services keep global needs in mind. As new modes of communication and remote training methods are developed, we can use them to further strengthen the global support model.

NYU continues to expand its Global Network University, and the number of users at the portal campuses continues to grow. We will no doubt face additional challenges and difficulties as this occurs. By implementing a strong global support model that allows for flexibility and scalability, and by continuing to adopt and develop best practices, we will be prepared to face these challenges. The collaboration between the Digital Studio Support Specialist in New York and the Digital Technologies and E-Learning Librarian in Abu Dhabi has proved extremely beneficial for the global support model. Faculty members profit from personalized service regardless of location, and a sense of community is fostered among the international support teams. While this relationship is still evolving, it's a critical component of the support model that is worth considering for any institutions with worldwide users.

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