Deep-Dive Case Study

We present a deep-dive case study on the topic of institutional capacity building for learning analytics. The case is built from the interviews from NYU and Pontificia Universidad Católica de Chile (PUC). These interviews were conducted and edited exclusively for the SoLAR institutional members and we want to express our gratitude to the generosity of the interviewees. This is the first deep-dive case based on interviews from the field, and we hope you enjoy their value and authenticity.

LA Capacity Building: North America

We gleaned institutional insights on capacity building from the interviews with NYU’s Chief Instructional Technologist, Dr. Ben Maddox and NYU LEARN Director, Dr. Alyssa Wise.

Ben, can you tell about the very early days of LA at NYU?

The most important question in the beginning was how the different analytics associated with teaching and learning could mesh with the culture and operations of NYU. Four years ago the teaching and learning governance committee sponsored a provostial postdoc for a year who hosted and facilitated monthly meetings with a learning analytics working group to just help everyone understand what LA was about, what other institutions were doing, and what were some of the policy and practice frameworks.

That working group produced a report for our teaching and learning committee that recommended that we go further and explore what a LA service would really look like. Based on this I put together a project proposal and a business case to create a LA beta-test. Once this was approved, we started to develop the analytics, eventually we held a pilot, and now we are moving towards creating a university-wide service.

What were some of the principles and strategies you used to develop this learning analytics service?

At each stage we had key faculty collaborators and we had the NYU-LEARN team researching how instructors worked with the LA tools so we could improve the service. Partnership was the cornerstone in taking this from idea to operation. The instructor of record is always at the heart of service for us. Learning analytics at scale focuses on providing individual faculty information about their course [as a unit of analysis] to make instructional improvement and enhancements to their course. In the same way that a faculty member could invite me as a guest into their classroom physically, I view a faculty member as holding the key to access data inside a course, including interactions with their students. We have had situations where 3 faculty members wanted to get together and learn from the data in each other courses and think about cross-curricular or cross-course collaborations. Each of the faculty members had to approve that other faculty members could see their data before we were ready to proceed.
Really important and a topic of significant discussion was use-cases. After the working group report, we got funding for one full-time staff member to figure out how to get this off the ground. I wanted use-cases representative of different types of instructors at NYU. We wrote a set of user-journeys: one for an in-person large course with undergraduates, one for a fully online course at the graduate level, one for a blended course with in-person and online components, and one for a small humanities-like seminar. For example: ‘Jane Doe is an instructor in the Department of History at a large private university. Jane has 42 students in her course. Jane provides videos through the LMS. Jane has a question: What do I know about the students who watch these videos and how they are doing in the class?’ I wanted any faculty member at NYU to be able to see themselves or their colleagues in these use cases. Alyssa [LEARN Director] helped refine the instructor questions so we were sure we were getting at something valid. It was just wonderful to have that level of expertise.

Once you developed the use cases, what came next?

The next step was to use our relationships across the university to fit the cases. We needed five faculty to embrace the idea of LA and do a beta test for one semester. We did not set out to create a dashboard, but to help faculty interrogate questions they had by surfacing the data. We assumed that it would be through some sort of data visualization. The real story was how do we engage faculty in questions they want to ask in order for them to know more about student learning experiences in their courses, and potentially enhance that experience. We followed them closely over the course of the semester, and they participated in a series of case studies that LEARN conducted (as described here).

Alyssa, can you tell a few words about the LEARN network?

NYU-LEARN brings together LA research and practice in a pioneering university-wide effort with collaborators across NYU’s diverse schools and central IT. From the very beginning we wanted to make sure that LEARN both supported teaching and learning at NYU and contributed to the learning analytics knowledge base. It was also key that everything we did was building towards sustainable practice that could continue moving forwards.

What was your strategy for such a project when you just started?

I wouldn’t characterize LEARN as a project with an endpoint, but rather as a long-term capacity-building effort based in the development of relationships and systems. LEARN has LA researchers and developers which complement the LA practitioners in IT. We’ve engaged in multiple collaborative projects and through these we’ve gone through the stages of developing a really good working relationship. Opening lines
of communication across places where they don’t typically exist is important. For example, we’re part of conversations with NYU’s chief information architect who is building a new data infrastructure for NYU. As they create data structures for the university, they’re already thinking about LA.

**How did you start building relationships with those at the front line of teaching and learning?**

When I came to NYU, I built on the yearlong efforts of the provostial postdoc in LA, Dr. Charles Lang, who had started to lay the groundwork. So when I said, ‘I wish I could meet with the people around the university who are thinking about LA’, the postdoc could open those doors. The seeds of our current community had already been planted before I arrived.

Besides individual instructors, this also meant that our IT team was on board with the idea of LA and interested to connect about how to put that idea into operation. The university already had existing relationships and lines of communication open.

In particular, a few years ago, the university moved most of the teaching and learning technology support staff out to the individual schools (like dentistry, engineering etc.). The instructional technologists in the schools became familiar with the domain and developed relationships with the instructors. So, you already had faculty innovating with technology, flipping the classroom or trying different cool things with their students. That was a good place to look for people who were open to innovate with analytics.

We also gave talks in the different schools to help people become aware of analytics and the possibilities they offer. From this, we had additional faculty reach out to us with interest. So, we pulled together all these different people who were interested in LA and started a series of university-wide events to go deeper into the possibilities.

These included talks by people already doing cool things with data at NYU and people we brought in. In addition, last year NYU held a university technology summit, with over 1000 people in attendance: administrators, faculty, staff, students. We had a LEARN Lounge with LA demos and workshops and we engaged the community in discussing big questions about what we want LA at NYU to look like in 2025. If you can imagine, we had a faculty member, a student, an IT staff person, and an associate Dean talking about this together. In a University as big as NYU, this kind of cross-cutting engagement is rare, and I think that is part of where the energy comes from. As things have grown, our mailing list now has over 750 people from every school across the university, and at all levels—from faculty to IT staff to Deans to students--basically everybody. Throughout this all, we’ve maintained a focus on people, rather than just data and technology. Thinking about analytics as part of an ecosystem opens people’s minds to it as an extension of how they’re thinking about teaching as opposed to something new and alien that’s coming from outer space.

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Was there senior-level sponsorship from the university for people to get involved with LA?

What has gone really well is having partners at senior levels in IT, like Ben [NYU’s Chief Instructional Technology Officer], and in the Provost’s Office. You would think this is important because if people know they’re behind us they might be motivated to participate, but actually the power really came from the high-level view these individuals have across the university and the connections they are able to make because of that. We have regular informal conversations about things we are working on and they’ll say something like ‘that idea around writing analytics ties with the way they’re thinking about revising writing instruction over in that school and you should talk to this person’. Being able to join conversations about pedagogical change early on brings you into a planning process as opposed to showing up late in the game and when you can only tack stuff on. The commitment of the vice provost and the chief instructional technology officer and their willingness to talk regularly really helped us see the ways that we could fit in.

How do you help your instructors understand analytics, and bridge a competence gap, if it exists?

Everything is about building partnerships and figuring out what the needs are and how to meet them. For example, for the instructional dashboard, we worked in coordination with central IT who had involved instructors early on in creating use-cases and then developed an analytic dashboard to meet these needs. Then, when the dashboard was being piloted, we carefully studied how faculty interacted with it and incorporated into their teaching practices. From this, we were able to produce a conceptual model for thinking about how instructors teach with analytics, and then extract the implications of this for designing analytics that can more readily fit into teaching practices. That led to concrete changes in the instructional dashboard. It also led to a new position for someone from our team working closely with IT in creating support for instructors in using these tools. Our ‘LA coach’ runs workshops, does one-on-one tutorials, and created a set of support videos. This actually led to the creation of a shell for accessing the dashboard where instructors can identify the question they want to answer (e.g. “How can I identify struggling students?”) and then get directed to the appropriate dashboard view with guidance on how to work with the information to answer the question.

Are there differences in how different stakeholders drive LA deployment now at NYU than from the earlier days?

This is hard to say. The first two years were about building up relationships to develop the network. Now with the funding to support the network, our focus is more on projects with these partners to develop analytics in various contexts. But overall things are still in the early to middle stages; more people are aware of LA, so we have more people
coming to us with ideas for projects. But the principles of contributing to both research and practice and creating projects that are sustainable still guide our decision-making.

In the coming year the instructional dashboard is going out to a much larger group of instructors, so this will be a time to speak to the change because suddenly LA at scale will be available to many instructors, across almost all of NYU.

**Any tips on good practices for scaling-up?**

As you develop tools to change practice, think about policy and data infrastructure as early as you can. You don’t want to move one piece ahead faster than the others. You can think of it as a three-legged table, where tools, policy and infrastructure are the legs and data-informed teaching and learning is the table-top. You want to bring the table up (increase and improve data-informed teaching and learning practices), but you don’t want a lopsided table. So, you need to build up all the sides. This may mean moving slowly at times, but this isn’t necessarily a bad thing, especially at a large university where you want to make sure you get buy-in across the board.

**You’re talking about the change of practice through a tool, that’s very concrete. What if the university doesn’t want to roll out a dashboard but is thinking about innovation as a whole?**

Thinking about innovation on the whole is a great way to start. Because then you are developing tools in the service of a change to practice. One way to stimulate innovation is through something like seed grants, but, honestly, it’s as much about creating a culture where people feel that it’s safe to try things out and that it is valued to do so. People don’t innovate for the sake of innovating, but because there’s a challenge or a problem or an opportunity they see in their classroom. It’s much more powerful to start by thinking “okay what’s going on in my class, what’s not going the way I want, what’s something I would want to do better?” I think this is what is particularly powerful about how the IT team here went about building the instructional dashboard – they started with use-cases of what faculty teaching different kinds of classes would want to know and then looked at what data was available to speak to those questions.

**What do you think needs to happen to move NYU to a higher maturity of LA deployment?**

I think the next step for us is coming to some consensus and codifying how we want LA to be used here. Getting clear on the purposes of analytics that we feel are appropriate and developing principles to guide how these purposes should be fulfilled – for example at the moment we are very much focused on analytics to improve instruction rather than as a tool for assessment. There is also a push now to develop analytics that allow students to learn from their own data. So while there may not be a single data owner or steward in every situation, we need to start to figure out who has the right to access certain kinds of data for certain purposes and who has the right to grant that access. The desire to work with data to inform teaching and learning continues to grow and we want to be able to move forward in ways that are both responsible and consistent.