Implementing Adaptive Learning at Scale: Insights From National Louis University

By Stephanie Poczos, EdS – Assistant Professor, Director of New Undergraduate Initiatives & Director of Harrison Professional Pathways Program National Louis University

Idea in brief

In its first year of operation, National Louis University's Harrison Pathways Program (HP3) has addressed retention problems among struggling first-time college students in the Chicago area. Going into its second year, HP3 is bolstering non-cognitive skills in learners, building in additional supports for students and teachers, and doubling its enrollment numbers.

According to the Pell Institute, only 11 percent of low-income first-generation college students earn a four-year degree within six years. One promising approach to improve on that statistic is adaptive learning, but to implement it, a program must be agile.

That is one of the lessons we learned at National Louis University (NLU), a private university with six campuses in the Chicago and Tampa areas, after a year of running the Harrison Pathways Program. HP3, as it is known, is a two-year, blended adaptive learning program intended to provide struggling first-time college students with a pathway to a four-year degree.

We launched the program in 2015 with a simple goal: increase completion rates among students who do not traditionally do well in college. HP3's students are majority low-income, predominantly African-American or Hispanic, in the 2.0-3.0 GPA range, and below college-ready based on ACT scores.

As a previous case study at the time of HP3's launch described in detail, HP3 uses a flipped classroom model: students complete the bulk of their coursework online, using Acrobatiq's adaptive platform, and they meet in class twice a week. Each student is paired with a success coach who meets with students before and during the term and meets with staff and instructional leaders weekly to discuss that student's progress.

The first cohort of 78 HP3 students started in the fall of 2015, with seven more students joining in the winter term. Now as the program starts a second year, we believe the effect on students' progress of this collaborative, adaptive approach has been noticeable. Based on 2015-16 (Year 1) results, the NLU Pathways program shows great promise as a scalable higher education model for closing the achievement gap in bachelor's degree attainment. For example, in the first year:

- In the fall, 55 percent of students were on track with their coursework, headed for a 2.33 GPA or higher.
- During the winter term, that percentage rose to 62.
- By spring, 14 of the students were getting straight As.
- The program met its completion goals with a completion rate between 85 and 90 percent.
- The retention rate of the first class from Year 1 to Year 2 was 76%, compared to the Chicago Public School's average of 55% for this student academic profile.
- Students achieved tremendous growth in graduation on-track rates from beginning of year to end of year. The number of on-track students grew by 262%, from 16 to 42 students.

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Collaboration is the key to retention

In a typical college program, instructors don't talk to each other about students' progress in their courses, at least not in an organized way. Instructor collaboration is built into HP3. Once a week, all the instructors, student success coaches, and academic leaders, including myself, have what we call Student Success Collaboration (SSC) meetings.

During these meetings, the HP3 instructional team goes through the entire student body's data. We review each student's progress on Acrobatiq's courseware: engagement, time spent learning, and progress in courses. The team also discusses in-class behavior, interaction with coursework, and relationships with instructors. The meeting examines students holistically, taking into account financial issues, family situation, jobs, and any other stressors the students might be experiencing.

The SSC meetings are time-intensive, but that collaboration has helped students through difficult situations, academically and personally. One student, for example, confided in an instructor shortly after the start of the fall term that she had become homeless, and the instructor shared this information with the rest of the team.

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While it was several months before that student stabilized her housing, in the meantime the team made several interventions that helped her stay in school. We matched the student with strong peers, and instructors changed how they responded to the student, giving more time to complete and submit work and being as flexible as possible about scheduling meetings.

Lessons learned and expanding access

This academic year, the program admitted 330 students and expanded to NLU's suburban campus in Wheeling, Illinois.

New Enrollment	2015-16 (Actual)	2015-16 (Goal)	2015-16 (Current Actual)
Wheeling	N/A	30	33
Chicago	85	300	295
TOTAL NEW	85	330	328

Those students — and returning sophomores — will benefit from the lessons NLU has taken away from the first year of HP3, including the need to provide solid grounding for students in non-cognitive skills, the inclusion of a ramp-up week for new students, and the understanding that for all students to succeed, instructors must work together. Despite the successes detailed above, the team working on HP3 realized that, to prepare students for the rigors of a bachelor's degree, we would have to provide more supports than we had originally planned.

For example, Acrobatiq wasn't an immediate hit with students in HP3. At the beginning, students reported being unaccustomed to completing coursework online. Some actively resisted using the courseware, telling instructors the courseware was too difficult and that they didn't want to use it. The instructors worked together to create a series of supports and interventions for those students, such as using class time to build their confidence with the online portions of the program.

We also tailored instruction to include reviews of Acrobatiq in class and implemented positive behavior reinforcement in the classroom, such as using student progress with Acrobatiq to model assignments. The more that class time was used to support students, the more engaged with Acrobatiq they became. According to focus groups and surveys at the end of each term, all the students warmed to the platform. Acrobatiq's immediate feedback on student work was a big reason for the attitude shift.

HP3's learners don't have the luxury of being able to study whenever they want. Work and family obligations require the students to set aside one large block of time for studying and school work. Acrobatiq proved ideal for these students because they could sit down for two hours, complete as much coursework as possible online, and get immediate feedback on the work as they completed it — rather than wait for class time or for an assignment to be graded.

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That feedback on their progress increasingly motivated learners to stay engaged with their coursework. Students also liked the fact that the platform functioned as a textbook, meaning they had no textbooks to buy, carry around, or worry about losing.

Non-cognitive skills are as vital to success as academic skills

Over the course of the first year of the HP3 program, faculty and staff found the students targeted by the HP3 program often lack the non-cognitive skills they need to be successful in college. We were influenced by a 1993 study, in which William Sedlacek identified eight non-cognitive predictors of academic success in non-traditional, non-white students:

- Positive self concept or confidence
- Realistic self-appraisal, especially academic
- Understands and deals with racism
- Prefers long-range goals to short-term or immediate needs
- Availability of strong support person
- Successful leadership experience
- Demonstrated community service
- Knowledge acquired in a field

HP3 staff found that not all learners were entering the program with the necessary skills intact. Many of the students are extremely busy in their everyday lives and came into the program with unrealistic expectations of what they could accomplish academically while tending to all their other responsibilities. Many students also lacked time management skills to manage school, work and other responsibilities.

To combat this, HP3 developed a non-cognitive skills development strategy adapted from Camille Farrington's 2012 work on the academic mindset. This included assessment of non-cognitive abilities such as perseverance and academic behaviors, followed by targeted coaching support and intentional curriculum and instructional design to build those skills.

Adaptive programs need to be flexible

In the first year, we also learned our new program had to be adaptive in all senses of the word. Our NLU instructional team constantly recalculated the approach to instruction, making adjustments to help students be more successful and assessing the program to make sure it was working well. The result has been a nimble and personalized learning experience with the goal of adapting quickly to help students.

During the first year, we worked together to change various instructional elements:

- **Station rotation.** Pathways classrooms are block scheduled. Throughout the three hour blocks when students were in class, they moved through stations where they worked directly with the instructor, as groups and independently.
- **Workload.** When learners appeared to be overwhelmed by coursework, the instructional team modified the workload using various strategies, chunking content in courses, for example, or standardizing due dates across the program so that students would not have to turn in several assignments in the same week.
- **Access to instructors.** HP3 created an "instructor bullpen," an open, relaxed period once a week for students to mingle with professors on campus and ask for help with work, and also to allow adjuncts access to senior instructors.
- **Improved professional development for instructors.** Instructors struggled with the complexities of many new elements, including instruction-flipped learning, the courseware, and data-driven instruction. In response, HP3 developed a series of new trainings. Along with Luma Learning, we developed "e-nuggets," just-in-time training intended to bring instructors up to speed quickly and give them resources to revisit anytime, anywhere.

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Start strong, end strong

The instructional team knew there is a correlation between students' fall and spring grades: learners' GPAs in the fall were predictive of their success during the winter and spring terms. Last year, to ensure that all students began with strong grades, the instructional leaders at HP3 built additional remediation (called "acceleration" by HP3) and instruction into each term during their lab time. Acceleration is co-requisite, and the model was developed after a team of faculty, librarians and specialists worked to determine the best way to establish a foundation for success.

This year, the first freshman semester is 12 weeks long instead of 10. The first of the additional two weeks was added to the beginning of the school year. "Ramp week," so called because it allows freshmen to ramp up into the school year, protects instruction time later in the semester by covering what is essentially college orientation material. During ramp week, students attend a regular class schedule. Instructors cover topics that will help students be successful in the HP3 program: sleeping, nutritional habits, how to access their success coaches, the program's competencies, and how to use Acrobatiq's courseware and other technologies.

The second addition is "action week" in the seventh week of the semester, during which no new work is due. Instead, students use that week to catch up so that they can spend the last part of the semester preparing for finals. By building these opportunities for success into the early part of the program, NLU hopes to improve how students are set up to succeed in later terms.

Next steps

At the end of the 2015-16 school year, our five retention strategies were:

1. Team approach, driven by student data
2. Positive, strengths-based encouragement
3. Personalized, flexible engagement
4. Active, relevant classrooms
5. Take care of Maslow's so you can get to Bloom's

We will rely on those strategies in the next year, because HP3 plans to more than double enrollment again, taking on more than 1,000 students by the fall of 2017. While the size of the student body will grow, so will its scope, as the program's designers plan to

infuse more non-cognitive skills into the curriculum. This means that students who depart the program after two years can enter a major and earn a four-year degree.

In summary, our first year of implementation has convinced us that we can expand access to higher education when we have flexible faculty and administrators, intensive, team-driven student support, and constant feedback loops in the curriculum, in the classroom, and within the team.

We are particularly excited about how we see the role of non-cognitive skills in individual student success in HP3. For example, one student entered the program with a 2.0 GPA in 2015 and didn't have many of the predictors discussed above. He was quiet in class, didn't interact with peers much, and barely participated. By spring, however, he'd been nominated as Student Leader of the Year. His communication fluency improved, his grades rose, and with them his confidence and belief in his own academic ability.

"I've never been so hopeful about my future as I am now," he said, while filming a video for incoming students. "In the 18 years I've been alive, it wasn't until I got to the Pathways program that anyone identified me as a potential leader. I believe I can be that leader now."

Takeaways

- Be clear about the problem you are trying to solve.
- Find research to support the first step toward achieving your new goal.
- Find all of the stakeholders and get them on board.
- Create a protected space where your team can think outside of traditional approaches.
- Support from the top down means the difference between swimming or sinking.
- You need enthusiastic people who can handle ambiguity, risk, failure, and iteration.
- Communicate your progress consistently, even if no one seems to be listening.
- When things get tough, remind yourself of the students you are doing this for.

About us

Backed by Carnegie Mellon University (CMU), Acrobatiq is a learning optimization company building on CMU's strengths in cognitive and learning science, and applied research in technology-enabled learning from CMU's pioneering Open Learning Initiative.

Our enterprise platform, fast-start content library and services enable institutions to rapidly author, deliver, evaluate and continuously improve outcomes-based learning experiences that adapt to the needs of each learner. Insights generated from student learning data provide educators and student support teams with detailed information about which learners need help and with what, leading to improved student engagement and academic achievement.

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Stephanie Poczos is Director of New Undergraduate Initiatives at National Louis University and one of the principal designers of Harrison Professional Pathways Program. She designed and implemented the B.A. in Applied Communications at NLU, launched in 2013. She has taught in NLU's Applied Behavioral Sciences, Secondary Education, and Applied Communications programs. Prior to NLU, Stephanie taught English and Senior Studies at the high school level and served as the Director of Online Learning in District 204, often serving populations of high-need and minority students. She has taught and developed courses at a variety of universities, including Charter Oak State College, which was one of the first colleges to utilize a competency-based learning model. Before teaching, Stephanie was a Senior Broadcast Producer at Ogilvy and Mather. Stephanie holds an Ed.S. in Educational Leadership and a Master of Arts in Teaching from National Louis University and a Bachelor of Arts in Communications from the University of Iowa.

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