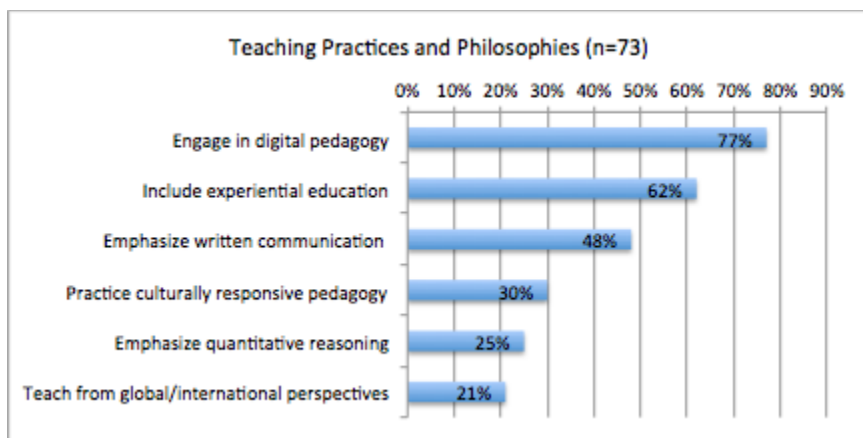


INFORMATION SHEET #2

LEHMAN AS INCUBATOR OF INNOVATIVE, HIGH-IMPACT TEACHING AND LEARNING PRACTICES

QUESTIONS CONSIDERED: What teaching practices are effective with Lehman students? How do programs support the learning of students in majors and general education courses? What new strategies are possible going forward? What concerns persist?

Although Prioritization did not directly address teaching practices, information about programs' approaches to curriculum development and pedagogy was available throughout the reports. Of the 80 programs reviewed, 73 cited teaching practices and philosophies, grouped as follows:



These emphases appear through the rest of this discussion, illustrated by specific examples.

PROMISING STRATEGIES (ongoing):

Culturally responsive teaching. Programs highlight how they incorporate student identities as resources for learning in active classrooms where “students can grapple with creating intellectual frameworks to understand themselves, their communities, the political/cultural/social structures that influence every aspect of their lives” (survey response).

- *LALPRS* courses include a focus on developing cultural competence to work with Latino populations in the US and abroad; *Nursing* likewise emphasizes cultural competence across its courses.
- *Science Education* hosted a forum advocating for culturally responsive pedagogy in teacher education and in the science courses of Bronx schools.
- *Speech-Language-Hearing Sciences* “conducted a Cultural Relevance Teaching Survey to ascertain the degree to which faculty are sensitive to cultural differences among our students, with the objective of teaching our students most effectively.”
- *African & African American Studies* provides “opportunities for students of color to gain greater academic confidence while interacting with professors of color.”

Digital and media work. In addition to basic uses of Blackboard throughout the College, programs engage

students in:

- **Training with professional and discipline-related software and hardware.** In *Dietetics, Food, & Nutrition*, faculty “incorporate into our curriculum state-of-the-art educational, laboratory, and food preparation equipment and technology.” In *Speech-Language-Hearing Sciences*, students gain experience with “sophisticated acoustic and physiologic instrumentation arrays.”
- **Multimedia projects, student-directed short films and documentaries, websites, and wikis.** Students use various platforms (such as Prezi, VoiceThread, blogging platforms) to represent and share their thinking, and comment on each other’s work. The *English* department advocates online writing “in all major courses” and, along with other programs (*History, Theater*, various *Education* programs, among others), encourages exit e-portfolios, “which provide students with experience and material to show potential employers.” In *Music*, a “partnership with the Library's iPad initiative has made quality music apps available to help students with musicianship and music theory.” Through the *Bronx Journal*, JCT continues to support students in web journalism.
- **Audience response technology** (clickers) to gauge student understanding, though some programs, like *Biology*, argue for “Learning Catalytics rather than clickers to monitor individual responses and group students based on need.”
- **Information literacy instruction** via the *Library's* Mobile Information Literacy and other digital strategies.
- **Accessing cutting-edge discussions in the discipline** via web-based contemporary research materials, research groups, and research communities (*Anthropology*).

Experiential education. The reports indicate robust uses of experiential approaches such as internships and service learning, project-based learning, participation in off-campus events, and research.

- **Active learning/projects in courses and labs** include lab activities In *Exercise Science*, which involve “fitness assessments, instruction in performance of exercises and drills important to physical performance and rehabilitation.” The *Theater* program has added “a multimedia component to our production season to give students the opportunity to perform in new media platforms. These virtual productions, including short films, webisodes and e-Portfolios can also be used to promote the programs.” In a collaboration between the Lincoln Center Institute and the *Freshman Year Initiative*, works of art are used as “sources of knowledge and understanding in college courses, emphasizing e-participation, perception, response, reflection and inquiry.”
- **Teamwork and collaboration in labs and classrooms.** *Physics* has introduced new activities “to promote cooperation and a higher level of discussion and planning.” *Biology* has integrated more active learning in large lectures (e.g., “think-pair-share”). In one *Computer Science* section, a “keyboard/mouse pad floats around the classroom so that students are in charge of/responsible for writing code that appears on the classroom screen projected from the faculty laptop.”
- **Special on- and off-campus learning events.** Multiple programs host field trips to museums, lectures, walking tours, and conference presentations. As noted in the report from *Spanish BA*, these activities promote “intellectual and cultural development” and create a “dynamic learning community.”

International/distance learning.

- **Global perspectives** are evident across all schools. Visiting professorships put students in contact

with international scholars through the *Jaime Lucero Mexican Studies Institute*.

- Fewer reports indicate that majors have had an opportunity to **study abroad** or travel as part of their program. Grant funding or income from clinical practice has allowed some students to present at international meetings alongside faculty. *Anthropology* seeks funding “for student participation in summer fieldwork and field schools so that they can access the full range of anthropology experiences even if they do not have the financial ability to do so.”
- *Exercise Science* employs **distance learning** in its internship class, using Skype for guest lectures from leaders in the field. Students “ask questions of these leaders and get insights into career paths and strategies for self-improvement.”

Attention to student-success obstacles. Of 73 reports that addressed teaching and learning, 43 (59%) discussed students’ obstacles to academic success. Many of these detailed the steps they have taken to address specific obstacles; others expressed concern but did not describe particular efforts. The range and number of these approaches suggests the level of concern among faculty regarding students’ academic progress.

- **Workshops and institutes on “the art of being students”** (survey response) focused on topics such as time management, note-taking, and managing anxiety (*SYI, SEEK*).
- **Immersion and catch-up programs:** The *Public Health* orientation includes “a boot camp introducing biostatistics and critical reading/writing.” *Mathematics* offers a summer Calculus Camp. *College Now* involves faculty in teaching Summer Academies to prepare high school students for college work, stating that it is in our “mutual interest to break down silos and work together for the benefit of current and potential Lehman students.” *FYI* designated learning communities focusing on STEM careers. Students entering these learning communities are provided with extensive preparation and support in the summer to increase their readiness for the challenges awaiting them in the first year.
- **Tutoring:** Programs offer special workshops to support courses with high failure rates. Some employ course-embedded and program-based tutors. The Academic Center for Excellence and the Mathematics & Computer Science Learning Center (both in *ISSP*) provide tutoring through generalist and specialist tutors (mentioned in *Computer Science, Music, Psych, and GISc*). Students also receive tutoring online and access review software.
- **Academic support provided through new courses or course revisions.**
 - Course revisions: *Public Health* faculty implemented “a scaffolding technique across several introductory courses and assignments to gradually build students’ skill set” in scientific writing. Multiple programs now have a common syllabus and/or common homework for introductory courses to reduce variability in student achievement among sections. *Physics* has separated algebra-based and calculus-based introductory physics courses to address disparities in mathematics preparation.
 - New courses: STEM programs have collaborated to offer Mathematics for the Sciences, a new course to be required in the sophomore year. *Sociology*’s new 300-level foundational course addresses “the wide variance in student preparedness and the needs of Education and Social Work students (learning to evaluate literature reviews, quantitative and qualitative data analyses, and theoretical texts).”
- **Formal and informal faculty development:** Faculty meet together to reflect on teaching and

address “gaps in students’ knowledge and academic skills.” Programs describe faculty participation in Writing Across the Curriculum, Quantitative Reasoning, and Online Education, as well as collaborations with the Library.

- **Hiring new faculty with special skills.** In hiring new faculty, *Chemistry* looks for candidates “with experience in chemistry education and collaborative work, so new models of STEM instruction can be implemented and studied.” The *Library* hired an instructional technologies librarian to create online instructional tools to support “a variety of learning styles.”
- **Informal academic support oases,** (including departmental convening spaces, open offices, informal availability of computer labs), for peer learning, homework help and relationship-building with faculty. Notably, a new initiative involving “the NSS Dean’s office, Physics, Chemistry, Mathematics and Computer Science is setting aside space in Gillet Hall for students in the STEM disciplines to work, relax, and interact comfortably with other STEM majors. This should be a valuable space for our commuter students.”

Finally, *Social Work* notes that in keeping with their mission, they have a responsibility to reinforce students’ self-efficacy and resilience: "...since most of our students are/were residents of the communities that they will soon serve, there often is a great deal of self doubt.... Part of our job is to raise self-esteem within our students; to have them fully believe in themselves and their abilities."

PROMISING NEW STRATEGIES:

Student-centered and culturally responsive:

- Create courses and programs that “reflect current and prevalent issues” that address student concerns and contribute to their career-readiness. One example proposed is an interdisciplinary master’s program in *LALPRS* “featuring our unique curricular component in Mexican and Mexican-American Studies, which corresponds to our borough’s expected demographic shift toward a majority Mexican-descended population.”

International/distance learning:

- Increase the use of distance-learning technology to allow “students to ‘meet’ cutting edge researchers in the classroom and hold real-time discussions with them, or, specifically, to assemble “a team of Mexico- and U.S.-based scholars to teach online and hybrid Mexican Studies courses” (*Jaime Lucero Mexican Studies Institute*). *African and African American Studies* seeks to bolster study abroad by “providing a program for students across campus to gain knowledge of African heritage. This can be via a program in the Caribbean, African, Latin American, or European regions.”
- Develop stronger relationships with other countries to enhance student learning or encourage more international students to study at Lehman (*Accounting, Earth Science, Music*).

Digital/media:

- Create technologically innovative large lecture spaces enabling various media to run simultaneously, thus promoting more student-centered, small group, peer-led activities. *Biology* and *Chemistry* imagine a design that “will allow us to have a traditional power point presentation

on one screen and TED talks or YouTube videos or an activity running in relation to the lecture on the other.”

- Adopt methodologies of digital humanities and create courses that contribute to an interdisciplinary digital humanities program. (6 programs)

Experiential:

- Develop more working relationships between *History* and New York-based institutions for student research and the development of curated student-focused events.
- Build new labs: Twenty-five programs (34%) propose new labs. As one example, *Recreation Education* and *Therapeutic Recreation* propose a state-of-the-art lab “with appropriate supplies and equipment for more experiential learning” that would strengthen “students’ activity skills and ability to develop instructional and therapeutic materials.”

Student Support:

- Initiate a course-embedded tutoring program in *ISSP*, and add a focus on digital composing: as more faculty require students to write online, tutoring should address those unique challenges.
- Create a writing center in the School of Education to assist bilingual and monolingual students with professional education writing for certification exams (*Literacy Studies*).
- In *Counselor Education*, develop a college counseling course “to provide best practices in college counseling for first generation college students. We can explore how students could work with current Lehman undergrads to support success to graduation.”

DILEMMAS:

Moving beyond the basics in online teaching and learning. Programs have planned and implemented new online courses or fully online certificate and degree programs; the majority of programs reviewed (81%) note that they want to do more work with digital education, and six programs specifically seek to initiate or connect with work in digital humanities. But what constitutes a rich online experience? What resources do programs have or need in order to develop quality online programs that employ the affordances of the digital space? As a survey response noted, “How can faculty use technology to engage student interest, foster motivation, improve learning retention and ultimately create a cycle of student success?”

Addressing the range in student preparedness. Although a number of programs mention taking action steps to address disparities in student preparedness, concerns persist across all schools as the following comments indicate: “Teaching to students with a wide range of skills remains a constant challenge for the faculty.” Classes that include honors students alongside “typical” undergraduates and transfer students demonstrate a “bimodal distribution of student abilities.” “The degree to which problem solving, critical thinking, and intuition come into play and the mechanisms through which they must be expressed are totally foreign to any but the initiated. This can catch students off guard as they enter this world previously unknown to them.”

Programs have created more prerequisites, instituted special courses, employed tutors, differentiated

assignments, and/or are poised to “rethink the curriculum” to meet the career needs of all students, including those who are struggling to get by. The report for Computer Science proposes that “a more gradual or self-paced and fun introduction to programming could benefit some, but this would delay graduation even further.” Do enough students have the time and funding to take a longer, but more enriched path?

To address students’ academic issues, 14 programs (19%) indicated that they either provide tutoring themselves or link students with campus tutoring services. There are various approaches: which approaches have the best opportunity to make a difference? Under what conditions?

Chemistry faculty are initiating “new teaching strategies that emphasize active learning in the lecture hall.... These strategies will be subjected to considerable qualitative and quantitative assessment.” This effort is related to the department’s goal “to develop outstanding strategies that will meet the needs of most students.” With the Chemistry experiment in mind, what other actions and assessments, focused specifically on innovative teaching strategies within a course or across a program, might shed light on new ways to improve student outcomes?