

## ePortfolio@LaGuardia: A Learning Project

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LaGuardia students are boundary crossers. More than half of our students are immigrants, seventy percent are female, and the vast majority are low-income and first generation college-goers. Our students are constantly navigating intersecting boundaries of nationality, race, gender roles and expectations, language, religion, economic class, and educational background.

To effectively serve our students, LaGuardia faculty know that we cannot stay in neat boxes, labeled by department and course code, where one box has nothing to do with the others. Nor can we afford to focus narrowly on course content and ignore issues of pedagogy. As educators, LaGuardia faculty have always sought to find ways to help students make connections – between courses and disciplines, between academic content and lived experience, between the worlds they come from and the worlds they are about to enter and help build.

Our college has long been known as a seedbed for educational innovation, developing pedagogies and programs – from learning communities to experiential education – that help students (and faculty) make such connections. One of our newest innovations is the electronic student portfolio or ePortfolio, which has grown from serving just 1,000 students in 2003–4 to nearly 5,000 students in 2005–6. Ambitious, even audacious, the LaGuardia ePortfolio Project has begun to serve as a multifaceted tool for integrative education, helping students to make connections across the curriculum, between the classroom and their complex lived experiences.<sup>1</sup>

At one level, the ePortfolio serves as a digital filing cabinet, providing storage and accessibility for student work. Now used by hundreds of colleges and universities nationwide, the ePortfolio also offers students the opportunity to create a personal website that reflects their

changing identities and showcases their best work for others: faculty, other students, family, transfer schools, and employers. When the ePortfolio project began, we used the national ePortfolio mantra – “Collect, Select, and Reflect” – to describe its educational potential. Soon we added a fourth component: “Connect,” because we found that ePortfolio fosters engagement with course content and with the community of learners. It prompts students to see linkages from one class to another and to connect classroom learning with their non-academic lives, consciously redefining their identities as students, emerging professionals, and global citizens. Unexpectedly ePortfolio revealed itself as a vehicle for students to share their learning around the world. “My family never knew what I was doing in school,” said one student from Pakistan. “Now I can show them.”<sup>2</sup>

Kyoung Kang’s ePortfolio demonstrates some of these integrative dimensions. Born in Korea and educated there as a medical professional, Kyoung changed careers when she came to New York. At LaGuardia, she used her ePortfolio to integrate her artistic talent with her interest in art as a tool for healing. Her ePortfolio, which she has presented and released for public discussion, includes papers based on research in the Museum of Modern Art, essays on art history, discussions of Korean language and her family history in Korea, and a thoughtful reflection on art therapy careers. Her ePortfolio also displays her own original artwork, giving depth and visual power to her story.<sup>3</sup>

Reflection is a crucial element in the process of integrative learning, and the LaGuardia ePortfolio encourages student reflection. Kyoung has incorporated reflection throughout her ePortfolio. When she showcased her artwork, she wrote short and thoughtful reflective essays, explaining what she was seeking to demonstrate

in each piece. She also created an interactive résumé that provides the websites of clinics where she did her Cooperative Education internships, and reflections on what she learned from each experience. When faculty examined these pieces, they saw ways that Kyoung had developed a more sophisticated ability to discuss her work and to understand its place in a larger academic and professional context.

ePortfolios created by other LaGuardia students (and available on the ePortfolio web site) also incorporate reflection. Fine Arts students Charles Mak and Juan Perez attached reflections to specific pieces of art they created and posted on their ePortfolios. Accounting students Sannita Lam and Ruth Marta, both from Indonesia, deposited work from classes ranging from English 101 to Introduction to Marketing, and in each case added reflections that articulated the meaning of the work in their eyes. Aaron Hudson is only in his second semester as a Networks Administration student, but his ePortfolio has more than 20 pieces of classwork, each with an attached reflection. Hudson began his ePortfolio in the First Year Academy and continued his work in Fundamentals of Professional Advancement and the ePortfolio Scholars Project. Hudson also incorporates reflection in his “About Me” section – a part of every ePortfolio – writing about his experiences as a Marine and as a parent, and the ways these experiences shape his activity as a student.

Sandra Rios is one of a small but growing number of students who have built several different ePortfolios over a period of semesters. Ultimately, many more students will create such longitudinal collections. Recently graduating from LaGuardia and preparing to attend Hunter College, Sandra began her ePortfolio in her first semester, in an ESL class. Over time, Sandra has created three versions of her ePortfolio. As she completed her coursework in her major, New Media Technology, Sandra learned how to create sophisticated websites and video productions. But the changes in her ePortfolio are more than technical in nature. Sandra’s first ePortfolio focused on her memories of her girlhood in Colombia. Her second ePortfolio shifted dra-

matically in tone; now the focus was on Sandra’s personal thoughts and feelings as a student, exploring student life and culture. In her last ePortfolio, Sandra integrated more coursework, finding ways to connect her learning and her achievement as a part of her story. Clean and effective web design supported a growing feeling of maturity, as Sandra explicitly linked her personal background and her academic preparation to her developing professional role. “The different sections of my ePortfolio,” explains Sandra, “helped me realize important things about myself how I saw myself now, and who I am now and in my future.”

The size and depth of our ePortfolio project reflects the efforts of scores of LaGuardia faculty. Faculty work has been supported by a major grant from the Title V program of the U.S. Department of Education, developed by Dean Paul Arcario and the Center for Teaching and Learning in collaboration with New York City College of Technology. More than 100 LaGuardia faculty have experimented with ways to build ePortfolio into a wide range of classes, working with the Center to develop strategies for using ePortfolio to deepen student learning. Faculty help students understand the purpose of ePortfolio and ask them to deposit classwork, and reflections. Faculty who have played leading roles in this effort include Avis Anderson in CIS, Max Rodriguez in Urban Studies and LIB 200, Marisa Klages in English, Jim Giordano in AMS, Maureen Doyle in Human Services, Louis Lucca in Oral Communication, Carolyn Sterling Deer in ELA, Philip Gimber in Nursing, Gary Richmond in Critical Thinking, and Marie Sacino in Cooperative Education.

Faculty teaching in the First Year Academies have advanced the use of ePortfolio for making connections. Supported by “ePortfolio Consultants” – students and former students trained to help students and faculty in the ePortfolio Studio – Academy faculty have created learning communities that integrate ePortfolio. The Academy curriculum enhances students’ ability to embed their personal, academic and professional growth and development into a digital biography that becomes part of the ePort-

folio. Teaching in the Academy for several semesters, historian Christina Stern has worked with English faculty Lenore Beaky, Heidi Johnsen and Beth Cullinane. Stern and Beaky titled their course “Freedom on My Mind” and prompted students to think about history visually and personally. Students wrote immigration narratives from a historical perspective and embedded imagistic evidence to support their stories. The emerging ePortfolios were visually evocative and powerfully written, a fusion made possible by the History, English, and ePortfolio Studio connection. “It was very rewarding,” says Stern, “The students were very positive about their ePortfolios. Most of my assignments asked students to reflect on themselves and their lives in connection with U.S. history and culture. Many of them chose to post their research essay on immigration.”<sup>4</sup>

While the First Year Academy works with entry-level students, the college’s Fine Arts faculty is seeing how the ePortfolio can be used with more advanced students, as a dynamic space for students to display creative works and voice their identifies as evolving artists. Fine Arts professor Michael Rodriguez values the reflective quality of the ePortfolio because it provides a new view into the emerging artist’s inner world. Rodriguez gains insight into students’ growth as artists through their ePortfolios in part because he asks them to write about their technique and how they work. He says students themselves see their artistic voices emerging, and that the language of art is integral to the artist’s creativity. “The ePortfolio encourages my students to move forward in expressing their creativity through language,” he explains. And this cognitive process leads to discovery. Convinced of the value of ePortfolio, Rodriguez is working with Bruce Brooks to incorporate ePortfolio as a capstone experience for Fine Arts majors.

While deepening student learning and encouraging integration are crucial and substantial goals for the LaGuardia ePortfolio, there are others as well. One of the faculty’s long-term goals for ePortfolio is to use it to gain a more finely grained understanding of the dynamics of student learning. Currently, the

college’s performance record is judged by graduation rates, retention rates, grade distribution, and student performance on high stakes examinations. This approach often fails to document the more subtle dynamics of change. Gail Green-Anderson of the English Department says, “The ePortfolio gives students hope that they will have a future at LaGuardia. Because basic writing courses are currently test driven, it is important for students to have opportunities to imagine an academic future beyond the ACT and the exit exam. The ePortfolio suggests that future. Students start to construct that future by depositing work into their collection area.” The ePortfolio provides a more nuanced record of student growth and development and faculty will soon be able to integrate this authentic, classroom-based work into the college’s program assessment process.

Designed by Cecilia Macheski and her faculty team, the Senate Subcommittee on Assessment, the college-wide program assessment process has been moving forward in parallel with ePortfolio. Prompted by our recent Middle States accreditation review, the Subcommittee identified seven core competencies for undergraduate learning: reading, writing, critical thinking, quantitative reasoning, information literacy, technological literacy, and oral communication. Faculty committees have completed the rubrics for four of these categories, and as the Subcommittee completes this work, faculty will begin to use student work collected through the ePortfolio system as part of their program assessment process.

Longitudinal bodies of student work collected through ePortfolio are only now starting to become available, and the college-wide program review process has not to date integrated such work. But some departments and programs are moving ahead, exploring ways to use work collected through ePortfolio to better understand how students learn. The Education and Language Acquisition Department is piloting an effort to introduce all incoming ESL students to ePortfolio and using it for their internal assessment process. The Human Services program has adopted ePortfolio as a require-

ment, and Fine Arts is building ePortfolio into its new capstone course. The First Year Academies and the QuikStart program both introduce hundreds of students to ePortfolio every semester. Cooperative Education has built ePortfolio into the new Fundamentals of Professional Advancement course being piloted this spring that will soon become a required course for many academic majors. Allied Health programs, some of which are seeing their national professional organizations moving towards portfolio certification, are now starting to take steps to use ePortfolio in this way. And a group of Accounting and Managerial Studies faculty led by James Giordano are working with the Subcommittee on Assessment to gather the college's largest body of longitudinal work and test out a holistic assessment process.

Giordano has been experimenting with ePortfolio through the First Year Academies for several years, and has now expanded that work to other classes as well. While interested in the holistic assessment made possible through the collection of students' work, he is most impressed by the ways that students' public ePortfolios energize and transform the learning process. "Once students know that they can display their work on an ePortfolio, and that they will have an audience of their peers and beyond, they seem to become more invested in their work," he explains. "They take greater pride in creating the best work that they're capable of producing."

The public quality of the ePortfolio is significant in many different ways. Students have the ability to decide whether to make their ePortfolios available to others beyond their teachers and members of their classes. If they do choose to go public, they can publish it on the World Wide Web. Or they can create password protected sites and give out the password to selected individuals. Some students have already begun using their ePortfolios to apply for jobs. The Cooperative Education Department has explicitly begun to help students consider the possibilities of using ePortfolio as a tool for career building and for displaying the work they do on their internships. Coop pro-

fessor Marie Sacino says this facet of ePortfolio seems to have a broad effect on student work in her Coop classes. "Working on a shared project for the ePortfolio creates an environment of camaraderie," she notes. And because they can use the work for career development, she suggests, "students are more thoughtful, reflective and more concerned about creating good work to put in their ePortfolio."

### **Assessing ePortfolio**

While the ePortfolio project is still in its early phases, we are paying serious attention to the process of documenting and evaluating the ePortfolio's educational impact. With help from faculty, students, and the LaGuardia Office of Institutional Research, we are documenting this process from four different angles.

1. Student and faculty surveys gather formative feedback on the Academies and the ePortfolio, which is analyzed to strengthen the program.
2. Faculty write up new curriculum tools and reflect on their experiences, which enables us to document and analyze changes in faculty practice.
3. Questions drawn from the Community College Survey of Student Engagement (CCSSE) are used to assess key behavioral indicators for student learning, comparing ePortfolio students to comparable students college-wide. Similarly, questions drawn from the ACT Opinion Survey are used to assess the impact of the ePortfolio and the Academies on student satisfaction.
4. LaGuardia's Institutional Research Office is working with us to examine key student outcomes, with possibilities that include: course completion, course pass rates, and retention across semesters.

Since the ePortfolio-building process is longitudinal, reaching its true potential only when students are building ePortfolios across their entire tenure at the College, our data is still incomplete. That said, preliminary reports point towards positive outcomes on several fronts. Feedback from students and faculty has been highly positive. And ePortfolio courses

show positive impact on course pass rates and course completion rates. We have our most extensive data on the First Year Academies, where three semesters of data (Fall 2004, Spring 2005, and Fall 2005) suggests that, on average, students in ePortfolio classes pass their courses at a rate 3.3 percentage points higher than students in control group classes. Meanwhile, as ePortfolio spreads beyond the First Year Academy, the early indications are that it will have an even greater impact in classes later in students' time at the college. In Fall 2005, our first semester with substantial data, the course pass rate in ePortfolio classes taught by trained and experienced ePortfolio faculty was 8.9 percentage points higher than the pass rate in comparable non-ePortfolio classes.

This data correlates well with data from the CCSSE, which reveals that students in ePortfolio courses show significant gains in critical thinking, writing, and engagement with learning, compared to national means and comparison groups of LaGuardia students. At the same time, data from the ACT Opinion Survey shows that ePortfolio classes show gains around key indicators for student satisfaction.

We are particularly intrigued by the results we're seeing on the CCSSE, an instrument that (together with the related National Survey of Student Engagement) has drawn national attention to engagement as "the single best predictor" of student learning and personal development. Identifying benchmarks for specific aspects of student experience – active learning, time on task, critical thinking – these studies use student surveys to analyze engagement. "Research shows," states one CCSSE report, "that the more actively engaged students are – with college faculty and staff, with other students, with the subject matter – the more likely they are to learn and to achieve their academic goals." Seeking appropriate national standards, LaGuardia incorporated a set of questions adapted from the CCSSE into its effort to study the impact of ePortfolio. Comparison with national data, and with the data on LaGuardia as a whole, suggests that the ePortfolio has positive impact around key engagement indicators:

- Students at LaGuardia and community colleges nationwide were asked to use a scale of 1 to 4 (in which 1 was Never, 2 was Sometimes, 3 was Often, and 4 was Very Often) to answer the question, "How often has your classwork emphasized synthesizing and organizing ideas, information, and experiences in new ways?" Nationwide, the mean answer was 2.71, between Sometimes and Often. College-wide LaGuardia students' mean answer was substantially higher, at 2.89. For students in ePortfolio classes, however, the mean was higher still, at 3.04, suggesting that ePortfolio classes involve more higher order thinking processes, a key indicator for engagement.
- Students used the same scale to rate how much their classwork "contributed to your knowledge, skills, and personal development in thinking critically and analytically." The national mean was 2.68. LaGuardia-wide, the mean was 2.87. For students in ePortfolio classes, the mean was 2.98, revealing that ePortfolio classes involve students in activities that demand critical thinking, another key indicator of engagement.
- A third question addressed engagement from a different angle. Students used the same scale to rate the question, "How often have you worked harder than you thought you could to meet an instructor's standards and expectations?" The national mean was 2.55. The LaGuardia mean was 2.69. The ePortfolio mean was 2.90. Challenging course work is not opposed to, but rather linked with the strong sense of participation and connection in the ePortfolio classroom. Responses to other CCSSE questions followed a similar pattern. Students in ePortfolio classes consistently showed gains of over half a point on such key indicators for engagement as synthesizing information, building writing skills, learning to work effectively with others, and analytical thinking. Much work remains to be done in order to build our documentation and analysis of the impact of ePortfolio on students' thinking and learning. Even at this early stage, however, we can see that the ePortfolio process

– involving a range of tools and pedagogical approaches – is helping LaGuardia students to move towards a richer engagement with learning.<sup>5</sup>

As a part of our effort to advance our understanding of ePortfolio and its potential, LaGuardia has joined two national research efforts exploring ePortfolios, learning, and assessment. Initially created by the American Association for Higher Education (AAHE), a national research consortium on ePortfolios has linked ePortfolio leaders from 10 other institutions, including Stanford University, Alverno College, Portland State University, and Indiana University/Purdue University at Indianapolis (IUPUI) to develop and share research techniques and findings around ePortfolio. Similarly, the national Integrative Learning Project (ILP) sponsored by Carnegie and the Association of American Colleges and Universities (AAC&U) links LaGuardia's ePortfolio and FYE Academy projects with institutions undertaking general education projects such as Carleton College and Michigan State University. At the first ILP national institute, LaGuardia drew attention for the scope and the sophistication of its project.<sup>6</sup>

## Preliminary Conclusions

Doing ePortfolios in any higher education setting is challenging, and doing so in an urban community college setting only raises the bar. Yet LaGuardia has made a major institutional commitment to this project, and our progress so far is encouraging. While we still have much to learn, we already know that ePortfolio can make a difference for Kyoung Kang, Aaron Hudson, Sandra Rios, Charles Mak, Juan Perez, Sannita Lam, and all of our students. ePortfolios help students create connections between what sometimes seem like disparate sets of knowledge, skills, and experience. The process encourages students to pause in the midst of their hurried lives to consider what they are studying and how that study will help to take them further towards their goals. Linking reflective narratives to collections of work, students begin to actively identify what they have learned and make meaning of classroom experiences in relation to real-world contexts. Building on their coursework and going beyond it, ePortfolios are empowering every LaGuardia student to better understand the boundaries they are crossing and give them powerful tools to link their new lives into a more integrated whole.

## NOTES

1. For additional background information on LaGuardia's ePortfolio project, see the ePortfolio section of the Center for Teaching and Learning website at <http://www.ePortfolio.lagcc.cuny.edu>
2. The literature on the national ePortfolio movement is growing rapidly. See the extensive bibliography compiled by Bradley Peters of Northern Illinois University, available through the About ePortfolio section of the LaGuardia ePortfolio website, <http://www.eportfolio.lagcc.cuny.edu/bibliography.html>
3. Kyoung Kang's ePortfolio was published and showcased on the ePortfolio website from 2004 to early 2006, when it was replaced as a part of the regular rotation to offer additional students the opportunity to be in the spotlight. See [http://www.eportfolio.lagcc.cuny.edu/advanced\\_gallery.html](http://www.eportfolio.lagcc.cuny.edu/advanced_gallery.html) for examples now available, including those created by Sandra Rios and Aaron Hudson. All ePortfolios discussed in this article and available on the site have been released by students.
4. Faculty comments on ePortfolio are drawn from interviews, public presentations, and feedback provided to the Center for Teaching and Learning, with permission granted for quotation.
5. For more on the CCSSE and its relative, the National Survey of Student Engagement (NSSE), including extensive discussion of the psychometric approach, see <http://www.ccsse.org> and <http://nsse.iub.edu/index.cfm>. For a valuable discussion of ePortfolio and engagement, see Helen Barrett's "White Paper: Researching Electronic Portfolios and Learned Engagement," in *The Reflect Initiative*, Dec 28, 2005, available at <http://www.taskstream.com/reflect/whitepaper.pdf>
6. Information on the the National Coalition for ePortfolio Research is available at <http://ncepr.org/ncepr/drupal/about>. Information on the national Integrative Learning Project is available at <http://www.carnegiefoundation.org/programs/index.asp?key=24>