Making Learning Visible with ePortfolios: Coupling the Right Pedagogy with the Right Technology

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This essay captures one instructor's experience implementing, revising and re-implementing ePortfolio practices over several years at LaGuardia Community College, CUNY. It outlines and analyzes the strategies that have worked best in rendering more visible the learning process to students generally inexperienced in academic pursuits, namely (1) determining "learning" as the primary purpose of student ePortfolios, (2) helping students discover the language to talk about the learning process, (3) providing continual guidance to enforce critical and academic analysis, and (4) celebrating technological advances that have enhanced pedagogical changes. This process of experiment, failure, reflection, and success should be of interest to teachers and scholars concerned with using technology to empower learning among nontraditional students new to the college environment.

In 2003, at the first college-wide meeting I attended when I joined the faculty at LaGuardia Community College, part of the City University of New York, the college president shared sample ePortfolios that moved and inspired me. The year before, LaGuardia had started "a year-long process of development and classroom testing of ePortfolio processes" (Milestones, 2012), and the visual documentation of a student's progress through the college was enlightening: it made me excited to be in a place where very deserving students were valued and given the support necessary to achieve their goals. What I could not articulate then, but have since understood, was my excitement at seeing learning made visible. More than just watching a student's writing improve essay by essay, as I had in the past as an English professor, here was evidence of a more holistic form of learning: work from academic classes was linked to a personal narrative, which was in turn linked to reflections about progress. Here was a tool that seemed to have the potential to show students and other stake-holders—such as future educators, potential employers and supportive family members living near and far—not only what students had accomplished but also how they had reached their milestones and goals. What follows is an account of my efforts over the last seven years to help students demonstrate—to themselves and others—their learning holistically and effectively in ePortfolios. While the pedagogical changes I have made on my own and with colleagues over the years have unquestionably improved the final product, my experience highlights the essential role technology plays in accurately representing student learning through ePortfolios.

Overview of LaGuardia and ePortfolios

LaGuardia is a large, urban campus where students come from 160 countries, speaking 127 languages. Students are often the first in their family to attend college, and more than half of them need some form of remediation when they enter. For the underrepresented students who make up a majority of the community college populations like LaGuardia's, ePortfolios can provide a valuable narrative space, notes LaGuardia President Gail Mellow (Mellow & Heelan, 2008); ePortfolios allow "first generation and immigrant students to open up the academic process to family and friends, creating digital resumes to send to employers and transfer institutions, and connecting education goals with personal experience" (p. 113). Because administrators at the college understood that our students benefit from having a more complete assessment that ePortfolios could provide, they invested in faculty training seminars, designated computer labs, and support staff (Mellow & Heelan, 2008).

In keeping with advancing technology, in 2010 LaGuardia moved from the Blackboard 6 platform to a new platform system, Digication, which is creatively intuitive, socially interactive, and easily integrative with other media (Milestones, 2012). This was a needed change: the old platform required students to spend excessive time to create fully developed ePortfolios. My students were regularly overwhelmed by the Blackboard interface; they did not have the technological skills necessary to create the simplest electronic repository. Because of the difficulty of mastering the technology, most students were unable to engage in meaningful reflection of their work. Moreover, the categories established with the old system were difficult, if not impossible to change, which left the students with little control over how they represented themselves and often meant the work produced varied little from student to student.

Technical Difficulties Highlighted in a Learning Community

The technological difficulties I experienced with individual classes were multiplied when I connected

with two other instructors in a learning community, called a Liberal Arts Cluster. I suggested we use ePortfolios as a shared space between the three coordinated classes—in this case, First-Year Composition/Research Paper, Introduction to Philosophy, and Persuasion and Debate. The research on ePortfolios indicated a strong rationale for using them for this learning community; Weis, Benmayor, O'Leary, and Eynon (2002) suggest the "digital format transforms students' capacity to synthesize, interpret, theorize, and create new cultural and historical knowledge. In this way, digital formats potentially democratize learning and produce critical subjects and authors" (p. 153). Moreover, as Mellow and Heelan (2008) report, ePortfolios allow students to "do the critical thinking necessary to make intellectual connections across the disciplines and assignments, to publish authentic student work for review by peers and employers, and to conduct the critical reflection that changes information into knowledge" (p. 122). I recommended ePortfolios in the learning community to tap into all these possibilities.

Nevertheless, after a few semesters, my colleague in Persuasion and Debate and I (the third class was taught by several different teachers over the next few years) were still dissatisfied with the ePortfolios students created. The majority built ePortfolios that failed to show any connection between the courses, they were no more dynamic than a paper selection of the best work, and, in general, they lacked unity and a critically reflective voice. Additionally, I was frustrated with how passive students were in their own educational experiences; I wanted them to participate more fully and take ownership of their experiences by making connections with their lives outside of class and by recognizing their progress, the progress I clearly saw but they rarely acknowledged. I nonetheless remained convinced that ePortfolios would be an ideal tool to accomplish all of these goals.

The purpose of this article is to outline and analyze the strategies, pedagogical and technological, that have worked best in rendering more visible the learning process to our students generally inexperienced in academic pursuits. Through trial and error, my colleague and I have been largely successful at helping students make their learning more visible through the use of ePortfolios. Many of the conclusions we come to are similar to those described in "folio thinking" (Chen, 2004). First, we identify a clear goal or purpose for student ePortfolios, namely student recognition of their own learning, and we help students see from the beginning the connection between learning in and out of the classroom. From there, we help students discover the language and skills necessary to talk about the purpose and the process they will go through to demonstrate learning. Next, recognizing we must take a

coaching role for students to effectively internalize what they've learned, we provide the guidance necessary to enforce critical and academic analysis, especially as students try to represent learning in the multimedia genre that is ePortfolios. Finally, and perhaps most persuasively, this article argues the importance of using the appropriate ePortfolio platform to facilitate the students' efforts to represent their learning. This process of experiment, failure, reflection, and success should be of interest to teachers and scholars interested in using technology to empower learning among nontraditional students new to the college environment.

Blackboard 6 and First Tries

Incomplete ePortfolios

Through Blackboard 6, LaGuardia provided a seven-category template that encouraged multiple purposes. The categories—Welcome, About Me, Classes and Projects, Education Goals, Resume, Links and Contact (see Figures 1-3)—could be used to create ePortfolios for assessment, career/transfer, or learning. In this way, LaGuardia allowed for an "integrative ePortfolio" (Eynon, 2012, para. 6), or one that combined the above purposes. When I first used ePortfolios in the class, I knew they should document student learning, but beyond that, I didn't want to dictate a specific purpose for my students. Instead, I envisioned an organic process where students would figure out how they wanted to use an ePortfolio to best meet their needs, and I would guide them through the process. My intention to let students determine the focus of ePortfolio—and, therefore, their learning—was meant to empower them. However, this left first-semester college students unmoored in a sea too vast for them to navigate. Had there been enough time and guidance, my students might have eventually figured out for themselves how they wanted to use this educational internet space superficially similar to and yet quite different in intent and style from individual websites or the burgeoning social media sites, MySpace and Facebook, with which they were familiar. I soon realized that I could not cover the content of my class and provide students with enough time to explore possible purposes for themselves. In fact, there wasn't enough time in class for students to create complete ePortfolios, with appropriate work created for each category, let alone determine the overall intention of all the categories together as one unified ePortfolio.

The first screen shot (Figure 1) gives a typical example drawn from one of my students' ePortfolios. The "Resume" page in Blackboard 6 is incomplete, as are all but the first three categories. And in Classes and Projects, my students deposited only work from our one

Figure 1
A Blank "Resume" Page from the Blackboard 6 Platform

class. Even when I encouraged them, they did not deposit work from other classes they were taking at the same time. I had to change my expectations and re-think my pedagogy for ePortfolios. I narrowed the focus to be more like a traditional writing portfolio, where students selected their best writing from that first semester, reflected on their work, and, in general, set the stage of what would eventually become a bigger, more inclusive production that they would complete as they neared graduation. While this was not what I had in mind when I began working with ePortfolios, it was more realistic, and I was content knowing I was doing my part to create a whole. I did not understand how ineffective my strategy was until I saw the ePortfolios showcased by the college each semester; rarely did students include the writing they did in their first-semester writing class. Because career and transfer were the primary purpose of students at the end of their time at LaGuardia, they only wanted to include later, better work.

With the Liberal Arts Cluster, I had greater hopes that students would be able to create ePortfolios that, while integrating the work of all three courses, were whole or complete. As part of the organization of this particular learning community, students meet for an hour each week in what the school calls an "Integrating Seminar" in addition to meeting with each of the three clustered courses separately, and I hoped this would allow students sufficient time to complete an ePortfolio by depositing some work in each of the prescribed categories along with some kind of reflection, or at least introduction to the material. However, my colleague and I soon found that even with the extra hour, few students could complete an ePortfolio.

This is not to say that no learning occurred or even that the incomplete ePortfolios showed no evidence of the learning; there were signs of progress in many areas. But we were dissatisfied with what we were seeing. Despite extra time in class for students to create complete ePortfolios, most students in our learning community submitted ePortfolios with work in only a few categories instead of being able to create an ePortfolio that showed what they did accomplish in a semester. We started thinking about the categories themselves, whether they really represented our goals for the students. Even with the extra time the Liberal Arts Cluster allowed, students were rarely able to create purposeful ePortfolios that reflected their learning in a semester. We realized there had to be a substantial shift in the pedagogy—a clear goal, realistic tasks, supporting assignments, sufficient time and more guidance.

Difficult Technology

Additionally, one of the greatest obstacles was out of our control: the technology. One problem, as noted

above, was the rigidity of the categories: we could not easily change them to suit a specific goal. Because the technology for the old platform, Blackboard 6, was so difficult to master, we often spent a lot of time in class with results that were not as strong as we hoped. The "intermediate" ePortfolios my colleague and I asked students to create in the Liberal Arts Cluster meant more time had to be spent in class helping students try to use Netscape Composer or Dreamweaver, and few, if any, had ever used something that advanced before. It also meant that students were unlikely to work on their ePortfolios outside of class because it required expertise they did not have. LaGuardia provides labs where students can work on ePortfolios on their own time with the help of lab assistants, and students who took advantage of the labs had ePortfolios that were fuller and richer. But most students did or could not spare that time, and the resulting work reflected that.

Figure 2 shows the spreadsheet that was typically used in the category Classes and Projects. The design was meant to make the links between classes easy to see and to navigate. It was also set up to encompass multiple semesters, so there was potential for a more expansive view of a student's educational career. However, as was typical, this student never returned to the ePortfolio, so the work that was done looks incomplete in that big spreadsheet. Again, in the old system, it was very difficult for students to change this spreadsheet to only include the work for some courses. The spreadsheet holds the promise of a more comprehensive assessment of a student education, but in this presentation, the promise is broken. The one-size-fits-all model of the Blackboard 6 platform failed to let students accurately represent their learning in specific contexts.

In Figure 2 only one of the courses in the learning community is listed, the Integrating Seminar, which is typical. Most students in the cluster list all three courses, but even with a completed list, few had links with material in the Assignments section. Figure 3 is from the same student and is representative of the page the students created for the LIB110 course over the next few semesters. The writing on the page comes entirely from the college catalog descriptions of two of the three courses taken in the cluster. The links listed do work: the student provides one assignment per class. This typical ePortfolio, however, provides no context for the assignments beyond the fact they were assigned for the class. So the essay deposited for my class, for example, describes how the author sees herself, using definitions and self-analysis as evidence as one would expect in an essay called "My Identity." This three-page writing sample leaves the audience to divine why it is included here, how the essay connects to the course description from this page and how the integration promised by the page and course title are achieved.

The assignment deposited for Argumentation and Debate (later renamed Persuasion and Debate) is similarly void of context: after the title "Legalization Gay Marriage" [*sic*] is a 400-word essay that argues as the title suggests. Nowhere does the student explain her choices or attempt to make any connections between the essay and what viewers see in the ePortfolio while reading the essay. With the section titles across the page, an audience might reasonably wonder about other implied connections to those seven categories, and this was not addressed. Even when we, as instructors, asked students to write a reflection about each piece of work deposited, the Classes and Projects template itself discouraged anything reflective about the work because there is already so much information on the page. This static platform was limiting the way students represented themselves and the progress they were making. For years, as my colleague and I watched our students struggle with the technology, we knew we wanted more from the old platform, but we did not realize how much the right ePortfolio platform could help students make more visible their progress until we began working with the new system.

As instructors, we made changes in class, like allowing more time for students to do their work, adjusting the focus of the ePortfolio, and providing continued guidance throughout the process. This process is discussed in the next section. Nevertheless, our pedagogical changes would not have been sufficient had LaGuardia's new platform system not made the technological process of creating and depositing work easy. The new platform better allows students to represent work they have done instead of always looking to a future ePortfolio they might create by the end of their time at LaGuardia. With the new system, students can also include multiple media in their presentations of their work, nimbly navigating between, around and through material as they grappled with their own learning and created new knowledge in the process.

Learning Made More Visible via a New Platform

The Learning Portfolio

As I researched ways to improve my approach to ePortfolios, specifically in the learning community, I came across Zubizarreta's (2004) "The Learning Portfolio: Reflective Practice for Improving Student Learning." Central to Zubizarreta's (2004) argument is that by making "learning" the central theme of any class, instructors can persuade students come to appreciate and understand their own learning processes and experiences more completely. Making learning visible is one of the key reasons I was drawn to ePortfolios in the first place. ePortfolios can demonstrate what students have learned because, at

Figure 2
The Design in ePortfolio Blackboard 6 to List Multiple Classes and Projects

Course ID	Course Title	Semester	Professor	Assignments
LIB 110	Integrating Seminar: Liberal Arts Cluster	Spring 2008	Prof. Johnsen/Sokolski	Click to view
				Click to view
				Click to view
				Click to view
				Click to view
				Click to view
				Click to view
				Click to view
				Click to view
				Click to view

Note. Most of my students turned in incomplete lists using this system.

Figure 3
A Typical Page Linked from the Classes and Projects Screen

LIB 110 - Integrating Seminar: Liberal Arts Cluster

This one-hour integrating seminar will be used to tie together the content material of the Liberal Arts Cluster. Class time will be spent exploring connections and thematic links introduced in the cluster classes. Instructional methods may include small group work, discussion, media presentations, field trips, and guest speakers. Information regarding the introductory clusters may be found in the Liberal Arts Advisement Handbook. (Note: Not required for students who have passed ENG101)

ENG 101 - Composition I: An Introduction to Expository Writing	HUC 109 - Argumentation and Debate
In this course, students focus on the process of writing clear, correct and effective expository essays in response to materials drawn from culturally diverse sources. Emphasis is placed on using various methods of organization appropriate to the writer's purpose and audience. Students are introduced to argumentation, fundamental research methods and documentation procedures. Students write frequently both in and out of class. Admission to this course is based on college placement test scores. To view my assignment, click here.	This course builds on the basic oral skills developed in Oral Communication (HUC101) and is designed to provide the student with the rhetorical and analytical skills necessary for persuasive debate. The student will be introduced to different styles of debating, including the cross-examination debate. The student will also learn to prepare a debate brief and to use flow sheets to structure refutation and rebuttal. In addition, the role of argumentation and debate in a democratic society will be discussed. To view my assignment, click here.

Note. Everything on this page comes from the college catalog.

their best, ePortfolios make visible the production of knowledge. I hoped an ePortfolio dedicated to learning would encourage students to understand the work they do in class in terms of new knowledge created and internalized. By applying Zubizarreta's (2004) key idea and creating a modified version of his suggested categories for collecting material—philosophy of learning, relevance of learning, assessment of learning, and learning goals—my colleague and I in the learning community hoped to foster an atmosphere where students felt comfortable using a meta-language for talking about learning, and thus would become more aware of it as it happened.

Essentially, the ePortfolio would show the student and outside readers the progress she/he had made in one semester through arguing that the student had experienced real learning according to the student's own definition. The evidence would be the ePortfolio itself, using Zubizaretta's (2004) categories as an organizational device and providing unity through reflective context. More than this, we would aid students in producing new knowledge as they contemplated how their identity is shaped by their learning, something similar to what Batson (2011) calls "transformational learning" (p. 110). By providing students with the "background and methods necessary to get students started on their own work in that field" (Batson, 2011, p. 112)—in this case the field of learning—we meant to provide opportunities for a real transformation to occur.

Step-by-Step Reflection

However, we ran into problems pretty early for reasons that echo what Batson (2011) describes when discussing current learning theories: "Current theories, in most cases, envision a shift in agency from the teacher to the students. This vision is very hard to actualize if students have no tools to assume agency or to conform to institutional demands for assessment" (p. 111). If we wanted students to engage in or analyze their own learning, we needed to provide guidance to discuss learning in very explicit terms, to consider multiple definitions and to write about their learning often. We started small: I added to the frequent freewriting I ask students to do as part of a composition pedagogy by asking students to do a focused freewrite at the end of every week, reporting on what they had learned in their classes. This reflective exercise was intended to tap into the benefits of reflection, such as: thinking critically about successes and failures in learning and using that information at a future time (Hopkins, 1997), creating metacognition about learning (Saito & Miwa, 2005) and demonstrating deeper learning (Boyle, Duffy, & Dunleavy, 2003). However, these freewrites began as lists for most students, lists of

the topics that had been covered by their professors. So we, their professors, had to encourage students to define learning for themselves, specifically to determine if covering a topic in class meant learning it. We allowed students the room—time and space—to examine their own life experiences to construct their answers. We offered more support in the form of an hour-long class discussion about defining learning, where students read a dozen or so definitions given by others, famous and not, and then were asked to come up with a working definition. This definition would be the frame for the learning ePortfolio we were asking them to construct. Many students had a definition similar to this one:

> I know that I learned something when i can recalled the discussion and i am able to make the information work best for me, and I can put the information to use, also when it has affected/changed my view point on a subject. [*sic*] (see Figure 4)

Though this student struggles with spelling, punctuation, and capitalization, among other non-standard language uses, her content clearly demonstrates the principle that as students reflectively use the tools given them, a shift occurs from a list of topics covered, to the necessity of real-life application.

I use the above student definition to illustrate the benefit of instructional support as a way to foster academic rigor. However, without careful support, and sometimes even with it, students do not always make new or productive connections that lead to knowledge. Simply depositing artifacts in a space does not represent learning. This has been an important point to make with students at all stages of creating the ePortfolio. Figure 4 is a screen shot of the page where the above definition came from. At the left-hand side are the weekly reflections in the order the student wrote them. Most students posted their weekly learning reflections—in the form of barely revised freewrites—in the Evidence of Learning category of their ePortfolio, as this student did. And the information found in the six or seven reflections are what led the student to come to her own, refined definition of learning, but nowhere does she explain that. In fact, there is nothing to indicate what "week 1 (3/23)" and the rest of the list means, or that, in the center of the page under "3/17/11," is perhaps the first reflection she wrote. Including every focused freewrite in answer to the prompt "what did you learn this week?" is not necessarily a bad choice. Research by Dalal, Hakel, Sliter, and Kirkendall (2012) indicates ePortfolios are a "good medium to collect reflections" because they provide students "the ability to critically evaluate the learned information and assist students in actively learning the information rather than relying on rote memorization" (p. 80). This example does not

Figure 4

Evidence of Learning (one category) in the Learning ePortfolio Students Create in a New Platform, Digication
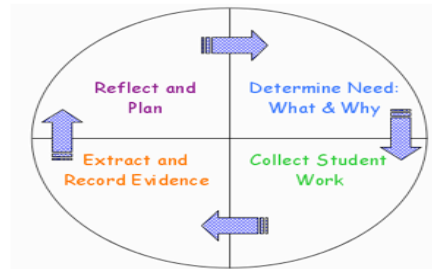

indicate the student has been able to "critically evaluate" the information yet. Rather, Figure 4 shows it is not enough to simply deposit information. There may be any number of sound rhetorical reasons to include every general learning reflection written during a semester, but without some guidance from the author, a reader of this text is left to construct her/his own meaning. I would argue that the very design of the ePortfolio does some of the work for students in making the connections here between the Evidence of Learning category and what is written under the dates listed, but this great benefit can feel like a liability as it may prevent students from seeing the missed links in their own argument. Perhaps students are so satisfied with their mastery of the technology and the beauty of the presentation that they forget they have to make an argument or "do the work" of an author, as I phrase it, of making connections explicit.

Figure 4 is another example of this: the graphic is a drawing of a circular process, and it includes words the students in our learning community certainly heard from us, the instructors: "reflect and plan," "collect student work," "determine need," and "extract and record evidence." It is not completely clear from studying the graphic the kind of process it is meant to illustrate, nor is it clear how the student thinks the graphic connects to either the term "evidence of learning" or the freewrites she has listed. I have no doubt my student thought the connections here were clear, which is why feedback from a more experienced teacher is so important. As this student's instructors, my colleague and I spoke numerous times about the importance of including graphics in the visual media of ePortfolios, as well as the greater importance of explaining precisely how a graphic fits in the overall presentation of the page. We also explicitly stated that if students were to use their weekly reflections as evidence of learning, they would have to clearly show the reader how the evidence proved the claim, as with any persuasive piece. And yet many students struggled to do this effectively. We learned that more support and time are required (e.g., more examples, pointed discussions, individual consults) something we hope to provide the next time we work with students to construct a learning ePortfolio.

Student Choices vs. Responsible Interventions

Much of what I describe above happens because students are less experienced readers of texts; they have not read as often or as critically as English professors have. Students accept this as fact when considering written texts. An additional challenge in working with ePortfolios is that this generation of students feels very comfortable with social media, a great benefit in the technological design of an ePortfolio, but that same comfort can often hinder students from examining other identities they may have—specifically the academic self that asks them to move beyond short, personal posts or responses (even more common as Twitter dominates communication), to integrate new information in a critical or thoughtful way. For example, the common and necessary discussion about appropriate photos in an ePortfolio illustrates this very well. From the onset, students understand that the ePortfolio required for the academic class, cluster or program will necessarily look different than their Facebook page because the audience and purpose of each is different. Yet, instructors must continually guide students in thinking about how they represent themselves, especially with personal photographs. Without including any visual examples that might violate student privacy, I can speak of countless experiences counseling students to remove photos taken at a party with a beverage in a plastic cup, photos where more skin than clothing shows, photos with a provocative facial expression, or some combination of the three.

While we may value trusting our students, as Batson (2011) argues above, as inexperienced readers, students often require instruction about intention versus reception from us. It is a difficult balance to strike between encouraging student choices (and their developing identities) and responsible intervention, and miscalculations will occur. The discussion itself between students and teachers about how to represent personal connections with learning can be highly productive in that it forces students to defend, and therefore better understand, the choices they make. The reflective practice encouraged in portfolios supports this. The danger remains that students will not integrate new information sufficiently to create new knowledge but will get stuck making surface-level observations that do not engage larger academic conversations.

Though instructors may never be able to give students all the guidance and time they (i.e., both instructor and student) would like, through focusing on learning in the ePortfolio and providing students sufficient time and help, we have seen some good results in our learning community. Let me offer now some examples of students who found, through reflection, connections between their learning inside the classroom and what was happening in their lives. I see in these examples new knowledge being produced, new voices developing, and specific connections to larger academic conversations about the learning process. One student writes:

> This semester I have learned that topics I fully remember are ones I've had personal experiences with. I remember more about theories and philosophies [because of] my reflections I've had to write and form an opinion on, than remembering the MLA style of an essay.

Her experience supports the notion that facts must be made personal, or at least connected to the personal, to be remembered or learned. The student clearly notes the limits of rote memorization to effective learning when she cites the MLA rules of documentation. (This example also provides me, the teacher of the MLA style, feedback about how to teach this subject in the future.)

Learning Inside and Outside the Classroom

The other examples also emphasize connections between the classroom and elsewhere. My colleague and I fostered this connection throughout the semester by asking students to think about what they were learning outside of the classroom. Around week three when students were writing their weekly "learning reflection," we added to the questions "What did you learn this week?" and "Where did you learn it?" We urged students to think about the things that were happening outside of the college campus and to consider if those experiences translated to learning, and, if so, how learning outside of class connected to learning in the class. Below are one student's thoughts:

> What I learned this week was that I really need to step up my game, and stop coming into class so late, meaning my English class. I need to turn in all of my late assignments and stop putting things off to the last minute. If I continue this type of behavior then I'm going to fail my classes and then lose my financial aid which is not good because I won't be able to pay for school considering my situation. . . . Then I'm going to start getting ready at night for school, so I can get to class on time. That way there won't be any more trouble.

Two weeks later the same student wrote, "What I learned this week was how to get to school on time I finally figured out a system that works best for me." None of the three clustered courses that semester had time management or homework strategies as its topic, but the national focus on student retention has

highlighted the essential role these kinds of issues play in the success of college students. In a classroom, my colleagues and I may bring this up over the course of the semester, but it was in thinking about what she was learning in her life that this student realized the clear connection between the two. By choosing to include this in her ePortfolio, the student is not only giving an illustration of the acquisition of new knowledge, she is also giving her audience a glimpse of her as a whole person, not just as a student—a view that does not exist in traditional modes of learning and assessment.

Though there is much evidence in my students' ePortfolios of personal growth, critical thinking and reflective learning, this example shows a student who began to see himself differently outside of the class because of what had happened in the class. He writes:

> I was kind of shy and didn't want to talk the first day of class, because I was afraid that I would say something wrong or I may not have made sense. The weeks went by and things started to change. On the 11th week, I was more brave and asking a lot of questions. I am more active in conversations now and I am not afraid to be wrong among my companions and family when I give an answer. . . . My wife told me and other family member that my college studies have really changed me.

Like this student, many offer evidence from outside of the classroom of their learning during our semester together. Many examine their lives through the lens of learning theories and rhetorical discussions of voice and find the best evidence they have of their learning may not be found in an essay written or assignment turned in. The ePortfolio gives students the space to include all of these things as evidence of learning. One student, writing about the connection between her own learning process and ePortfolios, says, "I believe that the e-Portfolio reflects my overall learning process [because] it's my voice on the website, it's not a paper and the whole thing is based on the voice of the student." Here the student claims her own learning process. In the cluster ePortfolio, there are categories to fill (though we try to make clear the categories are flexible, students have never changed them) with assignments from professors, just as any college class, but in the process of choosing which assignments to include and how to present them, the student feels she has enough control over the content to say "the whole thing" is her own. The phrase "it's not a paper" may seem unclear here, but this is a comment about the technology: without the technological possibilities of an ePortfolio, this student suggests, the representations of learning would be more limited or flat, like paper, and not as accurate. Overall, students more consistently demonstrate growth because of and through the use of their learning ePortfolios.

Conclusions

The past seven years working with ePortfolios has shown me the great potential they have to help students internalize and recognize their own learning. ePortfolios provide a larger audience with whom students might share their lives and offers students an important way to be seen and heard. As students create and share their ePortfolios, they make visible their learning, for themselves and others, allowing them to celebrate their life experiences and the new knowledge they have produced. This kind of learning will most likely occur, I have found, if students (1) have a clear purpose for their ePortfolio that students can achieve in one semester, in this case documenting learning so they realize how much they have progressed in just three months; (2) have the language to describe and reflect on learning; (3) can clearly demonstrate in the ePortfolio a holistic view of their learning, meaning the connection between what they learn both in and out of the classroom must be clear to the audience; and (4) have access to technology that allows them to focus on the content of the ePortfolio instead of its construction. When LaGuardia switched to a newer, sleeker platform, more students had the time and ability to effectively make that argument. That has been the most revolutionary change in our student ePortfolios because of the new platform: more than twice the number of students can present a complete or nearly completed ePortfolio at the end of the semester compared to those submitted before the change in the platform. Now most students have the ability to craft a complete argument about their learning, rather than submit ePortfolios with few documents and little reflection or cohesive argument. Because of the changes to the ePortfolio platform, my colleagues and I can now concentrate on the content, on helping students make all the material included in their ePortfolio stronger, clearer and more relevant. With the right technology coupled with the right pedagogy, the learning students can represent in ePortfolios is not only visible: it is dazzling.

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