

Using the ePortfolio to Complement Standardized Testing in a Healthcare Professional Program: Better Education or More Busy Work?

Clarence Chan

LaGuardia Community College

This article evaluates the full-scale integration of the ePortfolio into a healthcare professional program in an open admissions community college in the United States. The Physical Therapist Assistant program in question struggles to balance the dynamic tension between preparing students for a summative multiple-choice licensing examination and the continuous development of professional core values such as altruism and integrity—qualities that cannot be measured by any standardized test. To address this conflict, the program has piloted the ePortfolio as a pedagogical tool that enables students to reflect on their development of professionalism and to make connections between academics, clinical practice, and personal developments. From the program's perspective, the integration of the ePortfolio has been somewhat successful. The ePortfolio has allowed faculty to go beyond the otherwise "test prep" curriculum and creatively design assignments to help students understand and cultivate professional values. Yet, in an open admissions institution where students come with an elevated level of unpreparedness, the ePortfolio is not a panacea for a professional program with highly stringent graduation and licensing requirements. After the implementation of the ePortfolio, faculty and students continue to confront the dilemma of test preparation and the development of professional qualities—albeit with new dynamics. Our experience in balancing the needs to "teach to the test" and to develop a well-rounded student body has relevance to the ongoing national debates on ePortfolio and standardized testing as pedagogical and assessment tools in higher education.

One of the greatest challenges that a healthcare professional program faces is the dual goal of preparing students to pass the licensing examination and educating them to be clinically competent practitioners. These two goals are not necessarily compatible. Students who understand and retain academic knowledge may pass the multiple-choice board examination at the end point of their education and be awarded a professional license. However, contrary to what standardization advocates might want the public to believe, passing the standardized licensure examination alone does not guarantee professional competencies such as those required for physical therapists: accountability, altruism, compassion/caring, excellence, integrity, professional duty and social responsibility (American Physical Therapy Association, 2003). In fact, as the ecology and the practice of the healthcare system in this country have become increasingly corporate, educators of healthcare and medical programs are called to focus more attention to professionalism and ethics as related to service delivery (Davis, 2009; Fard, Asghari, & Mirzazadeh, 2010; Geddes, Salvatori, & Eva, 2009; Hayward & Blackmer, 2010; Relman, 1998). Therefore, in order to be accredited by their respective professional organizations, healthcare professional programs cannot merely focus on test preparation. They must instead develop and sustain an integrated curriculum that not only imparts textbook knowledge but also fosters essential professional qualities. They are also required to maintain a mechanism to document and evaluate many aspects of student learning that cannot be captured by the standardized licensure examination.

But it is not easy to balance test preparation and the development of intangible professionalism as healthcare programs embrace non-traditional students who come with high levels of unpreparedness. The Physical Therapist Assistant (PTA) program at LaGuardia Community College, City University of New York, for instance, almost lost its accreditation because of low pass rates of the recently required National Physical Therapy Examination (NPTE). Yet, in its struggle to help disadvantaged students pass the standardized test, the program became overly "test-prep" and needed to balance the curriculum and re-orient itself to developing students' other professional competencies. To balance the curriculum, the faculty has explored and integrated the ePortfolio into the entire program as a major pedagogical intervention. In addition to preparing for the NPTE, students need to develop their ePortfolio, based on the program's template, to reflect on how they attain key PTA competencies throughout their tenure in the program. The program has five years of experience in piloting the ePortfolio.

The purpose of this article is to evaluate the ePortfolio as a pedagogical tool in helping a healthcare professional program implement a balanced curriculum that develops professional competencies in students while preparing them for the licensing examination. I begin the essay by discussing the test-prep orientation the PTA program adopted to prepare students for the newly introduced licensing examination and the challenges and dilemmas such an orientation had brought about. I then discuss how the program readjusted its curricular approach by exploring and piloting the ePortfolio in two introductory clinical courses for the purpose of counter-balancing the "test-prep" approach. From this pilot, I found that without

a clear programmatic structure students could not fully benefit from the ePortfolio. Next, I describe the development of a program-wide template to integrate the ePortfolio in all aspects of student learning. This template guides students to construct an ePortfolio that makes connections between academic, clinical, and personal developments. Finally, I conclude the essay with a reflection on the ePortfolio as a pedagogical tool in balancing the NPTE preparation and the continuous development of professional qualities, focusing on our continuous challenges. This reflection has relevance to the ongoing national debates about the tension between standardized testing and ePortfolios as pedagogical and assessment tools.

Surviving the NPTE

The PTA program is part of LaGuardia Community College located in western Queens of New York City, one of the most demographically diverse counties in the US. As an open admissions institution, LaGuardia Community College does not select its students based on their demonstrated potential to graduate. Instead, it embraces a student body who is “by any statistical category such as race, ethnicity, lack of academic preparedness, poverty, [family obligations], or immigration status . . . not only the hardest-to-serve, but the least likely to succeed” (Mellow, 2008, p. 8). Since the PTA program, like the college’s other healthcare professional programs, does not participate in the student selection process but admits students based on a fairly low GPA requirements of four core courses, most incoming students are faced with multiple challenges in meeting the rigorous graduation requirements and developing the necessary clinical and professional competencies. Some students, for example, must translate over 80% of the words in the textbook into their native language to study for a test. Many juggle several low-paying jobs, family commitments, and a full-time curriculum while trying to avoid dropping out of the program (for a more detailed student profile, see LaGuardia Community College, 2011). Prior to 2003, when the NPTE was not a requirement for PTA graduates to obtain a license in New York State, our faculty had already exhausted their resources and time to help these students graduate and enter the profession. The inception of the NPTE in New York State in 2003 presented a monumental challenge to the program, threatening not only the faculty’s ability to prepare students to become effective PTAs but also the very survival of the program itself. In addition to the immediate pressure of having to ensure students pass the high-stakes examination, the Commission on Accreditation of Physical Therapy Education (2011) also stipulated a requirement of an averaged three-year NPTE pass rate of at least 80% for all PTA programs (p. A33). Failure to comply means that a program may face a suspension on student admission and

even the threat of losing its accreditation. LaGuardia Community College’s PTA program was unprepared to face such a challenge; its first three-year NPTE pass rates were well below 80%.

To meet the NPTE requirements, the PTA program had no choice but to drastically increase the weight of examinations, rendered in the NPTE multiple-choice style, as the ultimate graduation requirement. Faculty and student attention shifted from the development of clinical and professional competencies to NPTE contents and test-taking strategies. This curricular change brought about mixed results. On the one hand, the PTA program improved the NPTE pass rates within a few years, thus satisfying the CAPTE requirement. Yet, on the other hand, the program became like a cutthroat “cram school” in which students viewed the NPTE as their sole educational goal and found little interest in developing professional core values. They complained that any assignment or activity cultivating such values other than “test-prep” was “busy work,” unnecessary “add-ons” that further stretched their already limited time and energy for academic studies. The PTA program was thus confronted with the dilemma of preparing students for the licensing examination and educating them to be clinically and ethically competent practitioners. The program realized that further intervention was necessary. The intractable reality of standardized testing and the elevated levels of unpreparedness among LaGuardia students challenged the PTA program to overhaul its pedagogy and curriculum.

The ePortfolio as a Pedagogical Intervention

To counter-balance its test-prep pedagogy, the PTA program explored and piloted the ePortfolio in 2007. This pilot was developed in tandem with LaGuardia Community College’s experiments in using the ePortfolio to enhance student engagement and learning (Arcario, Eynon, & Clark, 2005; Ramirez, 2011). LaGuardia has pioneered the ePortfolio as an intellectual process and scaffolding that promotes “integration of student learning over multiple classes within an electronic framework” (Mellow & Heelan, 2008, p. 112). “The best ePortfolio programs,” according to LaGuardia’s president, “offer students a way to collect and showcase accomplishments, and then require students to make personal intellectual connections through a reflective process” (Mellow & Heelan, 2008, p. 113).

First ePortfolio Pilot

To launch the pilot, the PTA program used the common ePortfolio template developed by LaGuardia Community College based on the Concord platform (Figure 1). Based on the template, students were asked to develop their PTA professional ePortfolio when they

Figure 1
LaGuardia Community College's Early ePortfolio Template



took the introductory clinical courses. On the most basic level, students were expected to present their ePortfolio with four sets of information. “About Me” was students’ self-introduction, while their mission or vision of becoming a healthcare professional should be articulated through the “Educational Goals” section. Every ePortfolio must also present a list of classes and projects as evidence of student learning. Lastly, students had to include a resume as a connecting point toward graduation. In the span of three semesters between Fall 2007 and Fall 2008, three different classes of PTA students took part in the ePortfolio project.

The educational goal behind this first ePortfolio pilot was to cultivate and develop professional competencies such as critical thinking, oral communication, technological literacy, and professional core values—competencies and values that cannot be measured by the multiple-choice questions of the NPTE. We hoped that the logical and flexible template of the ePortfolio would enable students to make meaning and connections out of the mire of general education and clinical courses that are otherwise fragmented, to think critically about their physical therapy practices when the healthcare field is rapidly morphing into a corporate business, to

communicate their goals and professional work clearly and effectively to the general public, and to nurture their ethical selves by connecting their academic learning, clinical experience, and personal aspirations.

Although the PTA program did help students develop ePortfolios, we found the quality of ePortfolios disappointing after 18 months of piloting. Simply based on the level of completion, most of the submitted ePortfolios were deemed “unsatisfactory.” Based on a grading rubric in a ten-point scale that evaluates the four sets of information presented in the ePortfolio at the time of graduation, a large number of these ePortfolios scored well below the passing grade of seven (see Figure 2, First Pilot Period). In fact the combined average of all the ePortfolios collected were 4.9 with only a little over 30% of the students who scored a seven or higher (see Figure 3, First Pilot Period).

Issues of early ePortfolios. Three key issues were identified to explain the poor quality of the ePortfolios collected during the first pilot. First, because the ePortfolio template allowed a high degree of flexibility in design, without a specific format or direction as to where and what to put into the portfolio, students were at liberty in deciding on the content and in designing the look and feel of their ePortfolio. The type and

Figure 2
Average ePortfolio Score in a Ten-Point Scale During the First Pilot (Fall 2007-Fall 2008) and the Second Pilot (Fall 2010-Fall 2011)

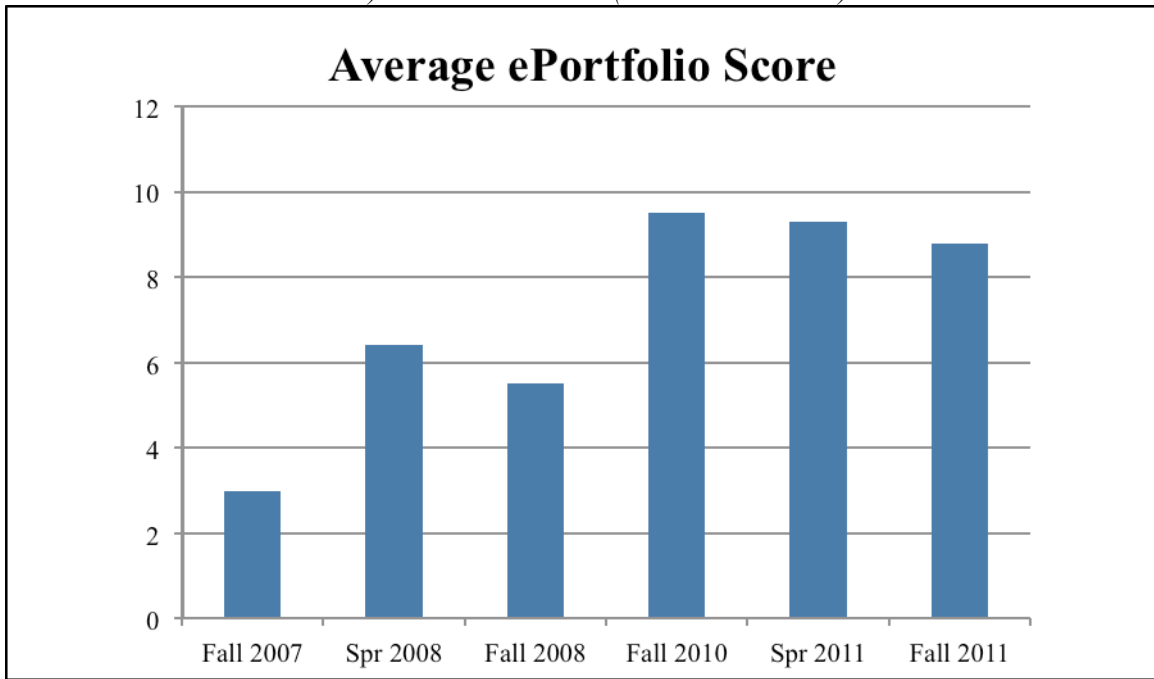
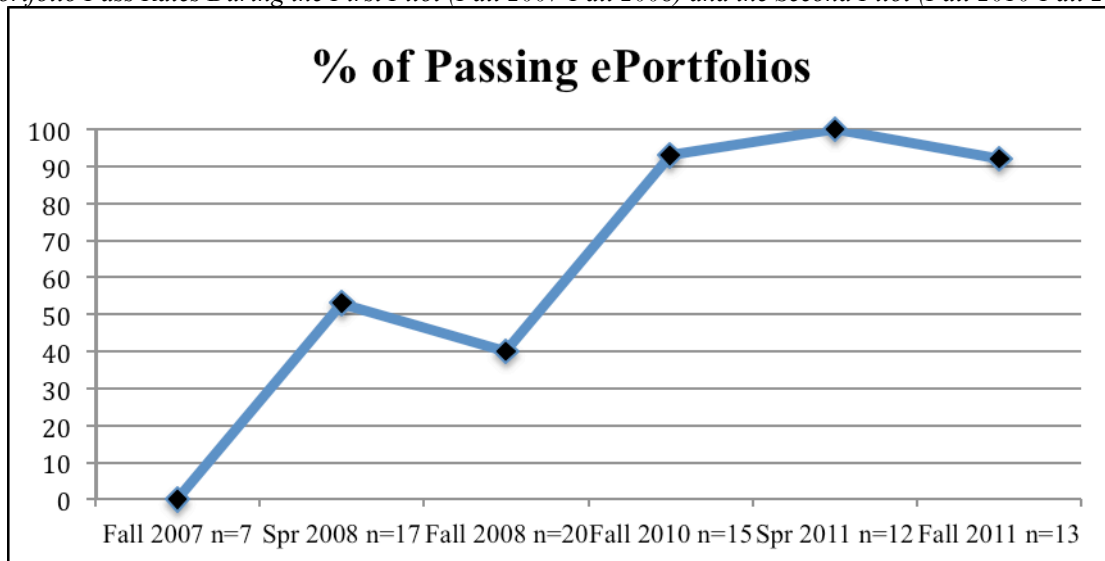


Figure 3
ePortfolio Pass Rates During the First Pilot (Fall 2007-Fall 2008) and the Second Pilot (Fall 2010-Fall 2011)



quantity of materials found in their ePortfolios were highly irregular and the quality of the ePortfolios also varied significantly. Many of the ePortfolios contained a superficial assortment of content and information about the authors. Some students revealed very little of their experiences, while others were less mindful about the appropriateness of their content, which might be in conflict

with the physical therapy core values. For example, it would be highly undesirable for a PTA student to present photographs featuring casual or social context in the professional ePortfolio (e.g., photographs taken at a bachelor party in Las Vegas).

Second, despite the intention to provide an intellectual platform and process in which students

could integrate their learning over multiple classes, most of the PTA students were simply presenting a list of courses taken. Some of them did not even provide an adequate number of assignments or activities as evidence of professional growth. An ePortfolio with merely a list of courses and a handful of assignment artifacts can hardly be considered an effective learning tool; nor can it satisfy the PTA program's goal. The ePortfolio of the student E.A. is a case in point (Figure 4). It was nothing more than a repository of class assignments and projects. No evidence of connections could be found in her ePortfolio.

Third, these early student ePortfolios demonstrated a lack of connection to their own personal, social, and professional developments. The students failed to make the connection between the information presented in "About Me," "Education Goals," and the list of classes and projects. They did not show how their personal attributes were further developed through the clinical classes and projects that led them to achieve the competencies expected of a clinician. Nor did they make connections between their lived experiences and their academic learning to document their professional development in a holistic way. The ePortfolio of the student C.H. from the class of 2008 was one of the best among the early ePortfolios, but she could hardly capture the meaning and intent of an integrative learning ePortfolio (Figure 5). Her ePortfolio simply presented a longer and more comprehensive list of class projects with little reflection on her educational process.

Reflection on the First Pilot

Although the PTA program was successful in facilitating the construction of student ePortfolios, the pilot demonstrated that it could not achieve the PTA program's goal in promoting key professional competencies and core values among students to counter-balance its recent "cram-school" teaching approach. This pilot yielded two important observations. Although a generic, flexible ePortfolio platform may facilitate individual creativity, it lacks the structural guidance that is necessary for capturing professional growth. More importantly, even though students used the ePortfolio to collect and present their work, they were not able to make and deepen connections between the courses they took and between academic work and life experience. The pilot suggested the need to have an ePortfolio system that can provoke a more integrative, thoughtful, and intentional learning process to nurture their ethical selves, as students are tempted to narrow their focus on textbook knowledge and test-taking skills. The best ePortfolio must be able to help PTA students relate core professional values to clinical knowledge and personal experience. But how?

Program-Wide Integration of the ePortfolio

To answer this question, the PTA program decided to move the ePortfolio from a course-based use to a program-wide integration. The benefit of using the ePortfolio with a programmatic integrative approach can best be understood through the concept of "folio thinking" (Chen, 2009). It surpasses the concept of simply using a portfolio to document and present one's accomplishments. According to Brown, Peterson, Wilson, and Ptaszynski (2008),

folio thinking is a pedagogical approach that reaches beyond the technology to support reflective and transformational uses of e-portfolios. In this approach, the e-portfolio becomes a space to reflect on learning and demonstrate growth . . . the folio thinking portfolio documents process as much as product. This tendency reflects folio thinking's emphasis on metacognition and documentation of learning growth over time, processes rarely captured in conventional approaches.

Program-Specific ePortfolio Template

Perhaps one of the most significant steps towards the PTA program's complete integration of the ePortfolio was the development of its program-specific template that replaced the previous generic college-wide template. This template was developed when LaGuardia was adopting a new ePortfolio platform called Digication. With the help of the college's ePortfolio technology team, the PTA program revised the original template to link its entire curriculum to both the college's general education core competencies (Critical Literacy, Quantitative Reasoning, Oral Communication, Research and Information Literacy, and Technological Literacy) and the American Physical Therapy Association's professional core values (accountability, altruism, compassion/caring, excellence, integrity, professional duty, and social responsibility). The new template contained several key components that helped students demonstrate and connect the above competencies and core values (Figure 6):

- Home (or Introduction: About Me)
- Mission Statement/Personal Goal
- Classes and Projects
- Professionalism and Ethics (or Professional and Community Activities)
- Resume
- Links
- Contact

While the "Home" page offered gleams of students' background and history of their academic experiences,

Figure 4
ePortfolio of the Student E.A., First Pilot Period

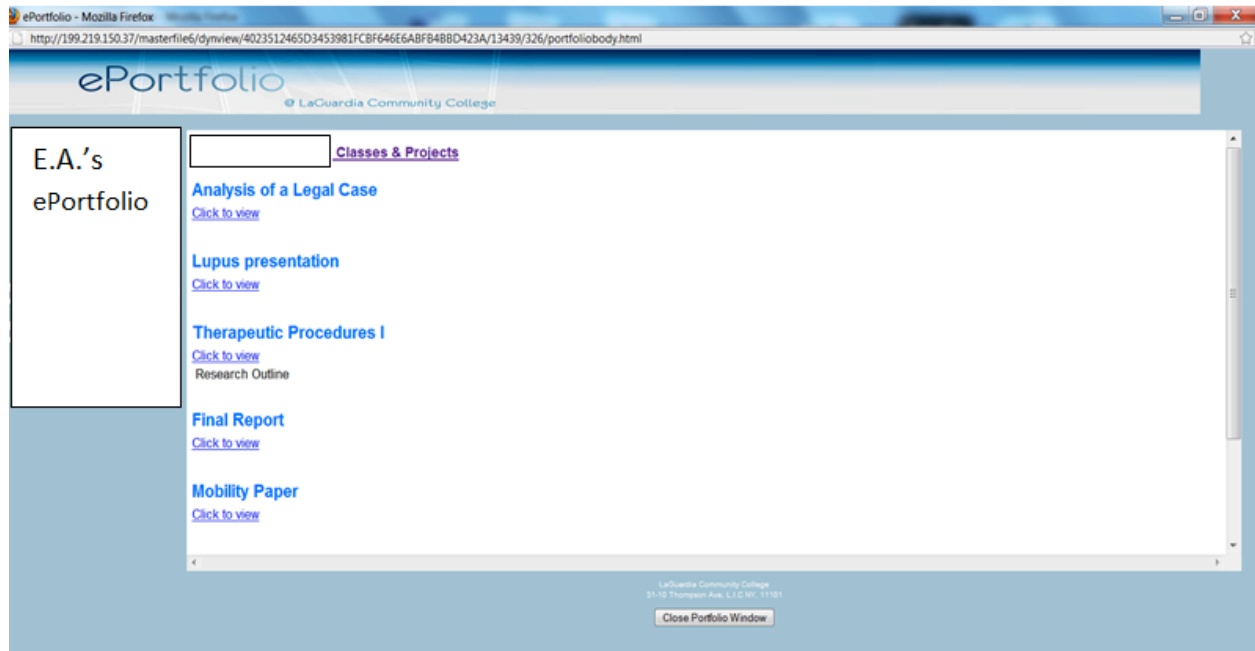


Figure 5
ePortfolio of the student C.H., First Pilot Period

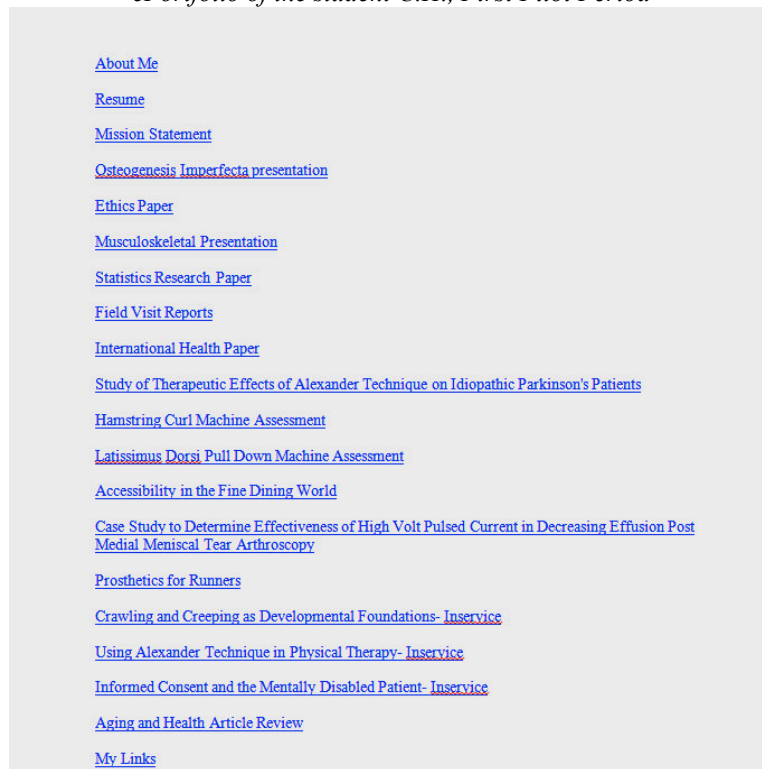


Figure 6

The Revised ePortfolio Template of the Physical Therapist Assistant Program of LaGuardia Community College


Physical Therapist Assistant Program

@ LaGuardia Community College

[Home](#) | [Mission Statement](#) | [Classes and Projects](#) | [Professionalism and Ethics](#) | [Resume](#) | [Links](#) | [Contact](#)

Professionalism and Ethics

- Altruism
- Compassion/Caring
- Continuing Competence
- Duty
- Integrity
- PT/PTA Collaboration
- Responsibility
- Social Responsibility
- student



Professional and Community Activities

8 Core Values were identified by the **American Physical Therapy Association** as critical elements that define professionalism for physical therapist assistant. These Core Values are essential competencies that are reflective of my accomplishments through my educational journey at the PTA program.

The eight Core Values are:

- Altruism*
- Compassion/Caring*
- Continuing Competence*
- Duty*
- Integrity*
- PT/PTA Collaboration*
- Responsibility*
- Social Responsibility*

the “Mission Statement/Personal Goal” page allowed students to articulate their goals and vision on how they could become the healthcare professional that they aspired to be. Students’ academic and professional engagement could be found in the “Classes and Projects” and the “Professionalism and Ethics” or “Professional and Community Activities” pages. These two pages contained artifacts and evidence of students’ academic, clinical, and other professional experiences.

To facilitate their reflection on these learning experiences, students were expected to write a short narrative to describe and connect how the selected artifact reflected the attainment of the chosen competency. A similar approach was used for the “Professionalism and Ethics” page. Students presented evidence that demonstrated how their personal and professional experiences reflected or supported those same competencies. A key feature of this program-

specific template was the development of the competency grid (Figure 7). In order to help students make meaning out of their learning activities and make better connections between the course assignments and the education and professional competencies, an assignment grid was designed to allow students to select their own assignments or projects from any courses that could best demonstrate each of those competencies. The grid not only functioned as a guide to help students organize their academic and clinical course work in a single page, it also enabled them to show and track their achievements throughout their tenure at the college. In addition, this grid served as an on-going reminder of the importance of these competencies and their relevance to personal and professional growth as physical therapist assistant.

This template structure enabled students to keep track of their academic progress through the span of

Figure 7
The Competency Grid of the Physical Therapist Assistant Program



multiple semesters and be reminded of the academic mission and the personal goal. Its folio thinking approach encouraged students not only to develop an end product that showcased their achievement but also to reflect on the process of learning. Students were asked to present an artifact from a given course, describe the nature of the course, and articulate its relevance to the educational and professional core values. This was achieved via the course reflection link to each of the artifacts presented.

Second ePortfolio Pilot

It took nearly a year for the PTA program to develop the new template. The use of this program-specific template marked the beginning of the second ePortfolio pilot from Fall 2010 to Fall 2011. Another three cohorts of PTA students participated in building their ePortfolio based on this programmatic platform. With the increased demand of the ePortfolio development, the PTA program realized that a more substantial and sustainable support system must be in place to assist both students and faculty. In order to enhance student participation and buy-in, the PTA program used another major college-wide pedagogical movement, the Capstone initiative.

Capstone initiative. The Capstone course was the ideal point for this ePortfolio engagement. As the last clinical course before internship, students had the opportunity to integrate and reflect on all of their learning experiences. This course had a weekly ePortfolio “Studio Hour,” funded by the college. During this hour, an “ePortfolio Consultant,” a trained fellow student or recent graduate with advanced knowledge of web page construction, helped PTA students with their ePortfolio. A LaGuardia study shows that the Studio Hour, “where students have most intensive and sustained exposure to ePortfolio consultants,” enhances the learning outcomes of the ePortfolio (Acario, Eynon, & Lucca, 2011, p. 211).

Lastly, to take advantage of the ePortfolio’s richness of information and its flexibility in presentation, the PTA program encouraged students to use the ePortfolio to make connections with their life outside of academia and to take pride in showcasing their unique personal and professional growth to a wide audience. In order to facilitate this goal more explicitly, an End-of-Program ePortfolio Showcase was instituted as a graduation requirement. Scheduled at the end of the last semester prior to graduation, all PTA graduates presented their ePortfolio to their peers and faculty as a

vehicle to share their reflection on how their life experience led them to a career in health care and how this PTA educational journey helped them realize this goal. At the onset of their clinical studies, all PTA students were made aware of this graduation requirement and were routinely reminded of this learning process in the Capstone course and internship. To ensure the quality of these presentations, both faculty and peers used an oral communication assessment rubric (Figure 8) and a PTA program-specific ePortfolio assessment rubric (Figure 9) to evaluate the showcase presentations and the ePortfolios.

Improvements of the Second Pilot

The data collected in this second pilot demonstrated key improvements over the first pilot. The use of the same grading rubric in a ten-point scale to evaluate the second pilot ePortfolios yielded the following results: the combined average ePortfolio scores went from 4.9 to over nine; the percentages of passing ePortfolios also improved significantly from 30% to over 90% (compare the first and second pilots in Figures 2 and 3). The improvements of the second pilot were due to the clarity and uniformity of the program-specific ePortfolio template, which made it easier for students to follow and keep track of their learning progress. Furthermore, the second pilot took advantage of the ePortfolio Consultant who mentored and supported students during their ePortfolio construction.

More reflective ePortfolios. Compared with those of the first pilot, the ePortfolios of the second pilot showed some improvements in helping students become more reflective of their learning process. Among the exemplars was the ePortfolio of the student D.T., whose final reflection articulated her experience in building her ePortfolio:

Looking back at my work on my ePortfolio, I realized that my commitment and devotion to my study has paid off in the form of ePortfolio. Every single assignment I completed in my major as a PTA student has been downloaded in my ePortfolio. By creating a cumulative showcase of my growth and development, I am able to learn about my own strength and weakness. When explaining my own growth as a PTA student, I will encourage people to see my struggle as a foreign student with English as my second language. I have always struggled my whole student life trying to understand and follow the American educational system. As a student, I was able to learn new technology like using the ePortfolio to save and share my work with others. As a professional, I was able to make a PTA ePortfolio which I will be using for my career development. I really enjoyed

creating “classes and projects” because this is where you download all your hard work, i.e., papers. The most challenging tasks were downloading pictures and giving credit to websites. It was a bit time-consuming. The professors, student technology mentors, or other kinds of resources were very helpful in supporting my ePortfolio work. My classmates were very much impressed with my work. We all were very cooperative in helping one another to solve problems related to the ePortfolio. I feel that I am able to think and write more clearly as a result of my ePortfolio work. Creating the ePortfolio has helped me to improve my critical thinking, writing and communication skills. Practically, learning to use digital tools helped me to become a better student. It is very important for students to catch up with new technology. It is good to be a learner!

This student was able to reflect on how her struggle with English and the American culture as well as her academic challenges eventually contributed to the making of an ethical and competent healthcare provider. To demonstrate her fulfillment of the professional competencies, she described her internship experience at a nursing home where she was involved in the care of an injured elderly patient who had suffered from a fall. She drew connections between this experience with the clinical skills she had learned from one of her previous assignments and realized the positive impact of compassion during the patient’s most vulnerable time. The ePortfolio in turn offered the student a means to collect her experiences, to make sense of the assignments and projects, and to connect her personal, academic and professional experiences.

Less weight to examination. Another major benefit resulting from the programmatic integration of the ePortfolio was the opportunity to offer faculty a means to adjust the relative weight of examination grades within each course. Before that, most clinical courses devoted 90-95% of the overall grade to multiple-choice and oral-practical examinations. With the newly developed program-specific template, the ePortfolio allowed faculty greater flexibility to reduce the heavy grading percentage of examinations and to pursue a more holistic way of assessing student learning. It also encouraged faculty to further refine their pedagogy to emphasize professional competency development in areas such as communication skills, research and technological literacy, and peer collaboration. In selected clinical courses, as much as 20% of the overall grade could be assigned to various assignments related to ePortfolio development.

Cross-disciplinary dialogues. As an example, a new assignment from the Therapeutic Procedures course was created in conjunction with the nursing

Figure 8
LaGuardia Community College's Speech Communication Assessment Rubric

Assessing Speech Performance Skills		Assessing Content and Structure of Oral Performance	Assessing Language Use
Vocal Delivery (Weight = 25%)	Visual Cues (Weight = 25%)	Logic and Organization (Weight = 25%)	Language Choice and Pragmatics (Weight = 25%)
<ul style="list-style-type: none"> •Competencies: •Appropriate fluency •Accurate pronunciation •With minimal use of verbal fillers • Effective vocal variation to convey meaning and emphasis •Appropriate rate and volume 	<ul style="list-style-type: none"> Competencies: •Consistent eye contact •Appropriate posture, gestures and facial expression •Appropriate attire 	<ul style="list-style-type: none"> Competencies: • Interesting, relevant topic •Clear, logical development of the main idea or thesis, inquiry or position •Consistent and adequate use of material, with citation when appropriate •Clear delineation of fact and/or opinion •In formal presentations, clear introduction, body and conclusion •Effective use of visual aids or technology when appropriate 	<ul style="list-style-type: none"> Competencies: •Consistent use of Standard American English grammar •Appropriate level of formality •Use of vocabulary appropriate to the topic, audience and/or context •In prepared activities, use of creative expression and effective phrasing •In interactive events, clear evidence of effective listening and relevant responses •Responsiveness to audience and situation

program where groups of PTA and nursing students reviewed each other's ePortfolios and learned about each other's disciplines. In this activity, the ePortfolio functioned like a virtual contact zone between two professional teams who needed to understand each other's roles in the healthcare system. Through the study of artifacts found in each other's ePortfolios, both groups of students came to appreciate the subtle differences, as well as the many professional qualities shared by the two professions. It also encouraged them to describe how this knowledge enhanced their understanding of their own profession and promote collaborative relationships with other healthcare team members.

To illustrate this point, a level II PTA student J.L. from the class of 2012 wrote:

I've learned from this experience networking between physical therapist assistants and nurses is essential for the healthcare team to provide the best care possible for patients . . . this interaction will increase the efficiency of caring and rehabilitating patients, which is the most important aspect in both careers.

On the other hand, a nursing student learned from this PTA student's ePortfolio and commented:

PT and nursing go hand in hand. When a patient is receiving physical therapy, what can I do as a nurse to further build on what PT has already done to promote optimal healing? Personally, I am intrigued by the use of ultrasound treatment as described in your assignments. I want to learn more about the interactions between the healing effects of medication, acupuncture, and ultrasound for this type of injury?

These learning experiences generated by this cross-disciplinary ePortfolio assignment were richly interactive. The ePortfolio empowered students to dialogue and share their academic and professional growth in visible and meaningful ways. It was clear that such rich and lively peer exchanges could not be easily surfaced by teaching a curriculum based solely on standardized, high-stakes testing.

Integrative Learning Through the ePortfolio

This second pilot illustrated the flexibility and potential of the ePortfolio in terms of facilitating integration through the curriculum; it also served as a focal point for integrative learning across disciplines and among peers and faculty. Peacock, Murray, Scott,

Figure 9
Physical Therapist Assistant Program ePortfolio Assessment Rubric

PTA Student Professional ePortfolio Assessment Rubric La Guardia Community College					
Student Name: _____		Evaluator: _____		Date: _____	
A Writing Mechanics (10%)	B Design (15%)	C Reflection (15%)	D Professionalism & Ethics (10%)	Content Completion (50%) -2pts. each	
Reflective Writing 2.5% _____	Use of Multimedia 3% _____	Description of achievement in each of the 12 clinical courses 12% _____	(Same grading as My Professional Journey Project) 10% _____	Mission Statement _____	Assign 9 _____
Welcome Page 2.5% _____	Creativity 3% _____	Description of end of the Program reflection 3% _____		Home page _____	Assign 10 _____
Curriculum Vitae 2.5% _____	Visual Appeal 3% _____			Course 1 _____	Assign 11 _____
Professionalism and Ethics 2.5% _____	Organization of Content 3% _____	(Evaluator's Comments)		Course 2 _____	Assign 12 _____
	Appropriate use of Language & Images 3% _____		Course 3 _____	Assign 13 _____	
			Assign 1 _____	Assign 14 _____	
			Assign 2 _____	Assign 15 _____	
			Assign 3 _____	Assign 16 _____	
			Assign 4 _____	Assign 17 _____	
			Assign 5 _____	Assign 18 _____	
			Assign 6 _____	Resume _____	
			Assign 7 _____	Related Links _____	
			Assign 8 _____		
Total _____	Total _____	Total _____	Total _____	Total _____	

For Sections A B C and D the following grading applies

Exemplary Work—	91-100%;
Very Good Work—	81-90%;
Average Work—	71-80%;
Below Average work—	61-70%;
Poor work —	< 60%

ePortfolio
Total
Grade

and Kelly (2011) from the United Kingdom reported similar findings:

[T]he wide range of tools within an ePortfolio provide mechanisms for our learners in creating, capturing, collating, and reflecting on feedback from a variety of learning experiences and a number of sources: peers, clinical educators, tutors, and self (process of learning). All types of feedback (visual, textual, and audio) may be held within the ePortfolio, collated, and then returned to by learners as and when required and used as a basis for reflection on competency and professional

development. The opportunities for sharing could also support on-going dialogue with peers and supervisors (academic and placement) from wherever the learners may be physically located. (p. 35-36)

The program-wide implementation of the new PTA template improved both the quality and quantity of artifacts found in the ePortfolios. The template demonstrated its potential in helping students organize their work and facilitating reflective thinking and integrative learning. Students engaged in building and eventually presenting their ePortfolio had shown an

increased awareness of the connections between their academic, clinical, and personal development. However, despite a vastly improved ePortfolio experience with this second pilot, some issues remained.

The ePortfolio as an On-Going Pedagogical Challenge

Although the second ePortfolio pilot was rewarding for both students and faculty, this experience was not without its challenges. There were problems along the way that the program had to overcome in order to move the project forward. Even though the PTA Program was able to draw on LaGuardia's rich resources and support for ePortfolio development, its gestation period could not be hurried as each component, from the formation of the program-specific template to the alignment of appropriate assignments across the curriculum, placed significant demand on faculty and the college's technology system. Furthermore, faculty and student buy-in and faculty's professional development were elements that continued to challenge the implementation and sustainability of the ePortfolio.

In the case of facilitating faculty buy-in, it was a relatively small challenge to overcome as the PTA program had the distinct advantage of having a very small team of faculty (three full-time instructors and four adjuncts). Faculty members were committed to the adoption of new pedagogical approaches to promote student success. They explored the ePortfolio technology and pedagogy through a series of professional development workshops sponsored by the college. Bringing faculty members together, these workshops heightened their sense of collaboration and provided a collegial space where they could examine the connections between courses and how the courses could be further integrated into a programmatic curriculum that could balance test prep and professional development through the ePortfolio.

Although faculty devoted a significant amount of time to developing the ePortfolio template and integrating it across the curriculum, they could not compromise any individual course's effectiveness in preparing students for the NPTE. As a result, despite the promise of the ePortfolio for cultivating the whole student as a healthcare professional, faculty determined, with deep regret, that the outcome assessment of all clinical courses must remain examination-based. In other words, even after the program-wide integration of the PTA curriculum and the ePortfolio as a major teaching and learning tool, the status of the licensure examination has remained intact; the standardized multiple-choice test continues to be the dominant outcome assessment of both students and the program that teaches them.

For students as much as for faculty, the tension between standardized, high-stakes testing and the holistic development of PTA core competencies is still unresolved. Many students question how building a professional ePortfolio can help them pass a standardized test that determines whether or not they can practice as a PTA. Some argue how having an awareness of professionalism and ethics through an ongoing construction of their ePortfolio can contribute to, let alone guarantee, clinical and professional competencies. As mentioned, the ePortfolio cannot replace, or overshadow, the importance of a strenuous curriculum that gets students prepared for the NPTE and for safe, effective, and ethical practice. In this light, then, is the ePortfolio just another form of busy work, competing for students' limited time for academic study, hands-on practice, and internship?

Another concern was related to the competency grid of the PTA program. Even though students by and large completed the course and assignment grid in the clinical phase of their study, they often failed to do the same for the courses taken from the pre-clinical phase. The few artifacts provided by students to demonstrate pre-clinical academic growth bear little connection to their professional work done in the clinical phase. The goal of helping students integrate general education and professional competencies was significantly less apparent. The separation of the grid by the pre-clinical and clinical phases might partly be the blame. But is it fair to ask students to revisit general education courses and link them to their present PTA work retroactively?

For some students, the ePortfolio indeed helps them integrate their otherwise separate personal, academic, and professional lives and capture the meanings of their education. However, it is also true that many students' reflections remained shallow. Some of their reflective writings were descriptive, rather than analytical. These students were comfortable in showing where they originated and what they had done, but their narratives did not delve into the complexities, nuances, and intersections of their experiences and pursuits.

From the two pilots, the PTA faculty found that the ePortfolio could be counterproductive for some students. It can elevate the risk of over-taxing a group of students in an open admissions institution, students who are already severely challenged by their personal, socio-economic, linguistic, and educational disadvantages. For some of these students, simply completing all the course requirements, learning all the crucial clinical knowledge and skills, and ultimately passing the NPTE are their biggest obstacles to becoming a healthcare professional. Taking the extra time and effort to reflect on their educational life through the ePortfolio may very well be a luxury they cannot afford.

Conclusion

According to Shavelson, Klein, and Benjamin (2009), a standardized assessment should satisfy the following criteria:

. . . (a) all students take the same or conceptually and statistically parallel measures; (b) all students take the measures under the same administrative conditions (such as on-site proctors and time limits); (c) the same evaluation methods, graders, and scoring criteria are applied consistently to all of the students' work; and (d) the score assigned to a student most likely reflects the quality of the work done by that student and that student alone (without assistance from others). (para. 5)

Meeting all of the above criteria, the 200 multiple-choice question NPTE is an objective assessment par excellence; it can measure students' academic knowledge at the end of their PTA training. Nevertheless, it does not assess their clinical skills and application of professionalism and code of ethics that are crucial to establishing safety and excellence in the clinic. As a common saying goes, "It is not what we know, but what we do that defines us." A student may, for instance, pick the right answer to a moral question related to a "real-world" case, but this does not necessarily mean that s/he can make sound judgments in resolving ethical dilemmas in a clinical setting. Nor does this demonstrate his/her active engagement in and continuous commitment to professionalism and ethics expected of all healthcare providers.

It is to compensate for such limitations of standardized testing that I hereby argue for using the ePortfolio as a complementary assessment of, and assessment for, learning in a healthcare program. The ePortfolio is actually much more than a means of assessment. It is a pedagogical tool that encourages students to look beyond their education as merely a test-prep workshop or job training. Despite their reluctance in reflecting on their education, the construction of the ePortfolio makes students confront the conflicts between examination preparation and continuous professional development and realize that there are core competencies and values that go beyond finding correct multiple-choice answers but are nonetheless equally important for the "health" of their profession and the health of patients.

My experience in integrating the ePortfolio in the PTA program points to several areas that call for improvement. The evaluative criteria of the ePortfolio, as well as the content and structure of the PTA program template, may be modified, or even simplified. Educational and professional competencies should be connected with course assignments in more explicit ways

so that students can deepen their reflection. Faculty should also provide on-going guidance and feedback throughout students' ePortfolio development, from the pre-clinical through the clinical phases of their training.

Currently, the use of the ePortfolio is a programmatic requirement for all PTA students at LaGuardia Community College. From the experience of building and completing their ePortfolio during their academic journey, PTA students are keeping a chronicle of their learning, sharing their academic and clinical experiences, reflecting on their education, and ultimately making meanings out of their professional training. Prior to graduation, as an evidence of completion of educational training, every PTA student presents their ePortfolio to a panel of faculty and peers. It is this vigorous and enriching ePortfolio experience along with a robust academic preparation for both the NPTE and clinical practice that has given the PTA program an opportunity to balance the summative and the formative assessments of student learning. It is in its struggle to balance both forces that the PTA program has used the ePortfolio as the complement to standardized testing and as part and parcel of a well-rounded healthcare professional program.

The PTA program's ePortfolio experience bears relevance to the national debates between ePortfolio and standardized testing advocates (e.g., Association of American Colleges and Universities, 2009; Schneider, 2009; Shavelson et al., 2009). The rhetoric of some of these debates seems to produce an impression that the ePortfolio and standardized assessment are antithetical. But from the PTA program's perspective, these two should not preclude each other as pedagogical and assessment tools. For in the profession of physical therapy, as in other healthcare professions, standardized assessments are a must: licensed physical therapists, nurses and doctors must meet uniform standards of their fields. Therefore, the PTA program has explored the ePortfolio not as a substitute for but as a complement to standardized testing in order to compensate for its shortcomings in teaching and assessment. The program believes that standardized testing and the ePortfolio can and should be combined strategically to inform a comprehensive professional education that aims to produce a knowledgeable and ethical healthcare workforce. We leave the implications of our findings to educators of other fields, assessment experts, and the higher-education community at large.

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CLARENCE CHAN, PT, DPT is an Associate Professor of Physical Therapy at LaGuardia Community College, City University of New York. Dr. Chan is a faculty leader with the Making Connections National Resources Center at LaGuardia (<http://connections-community.org>). With over 20 years of clinical experience in the field of rehabilitation and wellness, Dr. Chan continues to maintain a practice in Queens, NY.

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