Adapting to the Pedagogy of Technology in Educational Administration

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Abstract

The field of educational administration is in a pedagogical transition. Though empirical evidence may be lacking about the efficacy of online teaching and learning, programs in educational administration are part of the greater movement to Internet delivery by virtue of market forces and advances in software and hardware tools for teaching in a virtual environment. Faculty members in educational administration are at the cusp of change that requires an understanding of electronic teaching and learning. Electronic portfolios as a way to measure and capture student progress are an opportunity to learn about the more robust capabilities of the electronic medium for teaching because of their mainstream use by all faculty. The electronic portfolio is the first widely adopted, and widely used, platform for introducing faculty in educational administration to an Internet-based technology for teaching. The adoption of electronic portfolios by educational administration programs requires faculty to use and explore the potential of the pedagogy of technology in their own teaching.

Although many in the field of educational administration legitimately question the value of digital teaching and learning, the rapid rate of technological innovation and assimilation is nonetheless redefining the way students obtain the knowledge and skill required to be effective educational leaders. Virtual teaching and learning represents a major pedagogical shift for most university professors. The movement toward digital learning is a legitimate venue for the dissemination of knowledge that faculty will be expected to embrace

in the future. The use of electronic portfolios to meet NCATE accountability requirements will likely serve as the short-term lever for acquiring the basic skill and ability faculty need to teach content knowledge in educational administration by digital means. The use of software to generate electronic content is an emerging realm of teaching that turns professors of educational administration into users of digital tools.

Technology is redefining the teaching of educational administration. Faculty members who teach courses in School Law, Finance, Organization, Supervision, Leadership, Personnel, and other content areas are facing, or soon will be facing, the pedagogy of technology as they prepare for classes and transmit what they know to their students. The pedagogy of teaching as an art and science of skills and abilities that require mastery of technique and a range of ability and understanding about how students learn is being revised and extended to include technology, software, hardware, and a complementary increase in multimedia and authoring tools that expand the traditional classroom into the virtual classroom. Faculty in educational administration are being drawn into the use of portfolios by the accountability movement, but captured by the use, utility, and growing ubiquity of portfolios as an extension of teaching and learning.

Many question the value of digital teaching and learning and believe online teaching and online learning will fade once more people discover (come to their senses) about its shortcomings when compared to face-to-face classroom instruction. The problem with this thinking is that online learning has leapt beyond the question of its efficacy. The debate about online versus face-to-face learning has become moot. Today, online learning has become an accepted mainstream learning environment with its own technological frustrations that will one day seem as quaint as splicing 16mm film to finish an in-class movie. Evidence to support mainstream acceptance is reflected in the growth of the virtual environment. Those who expect virtual teaching and learning to fade when its shortcomings are revealed confront a paradigm shift that has ramifications for teaching and learning across the globe, not just in the state-located university classroom. Faculty in educational administration cannot dismiss or ignore this pedagogical shift because it is the field's responsibility to prepare those who will lead educational organizations in the increasingly digital educational system. The efficacy question has been answered by the many faculty who embraced online delivery and the students who took courses in the electronic format as equivalent to face-to-face instruction.

As in the past, when any technology was superior or more effective, evidence mounted, or events made clear, that a historical change had taken place. The use of electronic portfolios is just such a transition, or portal, into an evolving pedagogy that has an immediate effect on faculty who teach courses in educational administration.

The Emerging Digital Classroom

Pedagogy, the study of teaching and its theories as a way to enhance learning, now includes the online digital environment as an accepted venue for the dissemination of knowledge. With the advent of online teaching the virtual, multimedia enriched, and electronically connected classroom has carved out a niche that is becoming a dominant component of teaching in American higher education. The classroom as a physical place in which students and a teacher interact in real time is being overtaken by a kind of pedagogy and place that allows the student and teacher to learn and teach in a virtual environment at the same, or different, time. The place-bound and face-to-face moment-to-learn control of education isn't going away as a learning option, but it is being enhanced by virtual possibilities that expand the definitions of place, time, and instructor contact.

The university image of teaching as a lecture within a classroom or large auditorium is being displaced by technology that blends content with multimedia presentations and delivery of digital knowledge. Universities are being pulled by technology into a virtual world that many fear complicates administrator preparation. The virtual faculty member and the virtual classroom are, some believe, shallow facsimiles and overly hyped versions of traditional teaching and learning. Some would say that technology has been allowed to run amok in a market-driven educational system. Others believe the present state of technology, and online learning, are merely a prelude and window into the future of education: Are the virtual classroom and the virtual educational organization replacements for the brick and mortar university?

Online Learning Has Become Mainstream on Campus

There is concern that electronic teaching and learning lack a value added component that clearly improves student outcomes and dispositions over the conventional pedagogy of face-to-face teaching. The reality of this issue is that research has yet to determine electronic learning's clear and definitive value within the virtual pedagogy versus on-the-ground learning debate. Anecdotal evidence may indicate its efficacy, but a clear online learning advantage is not, at this time, evident. However, the higher education market for knowledge and learning via the Internet has been very responsive to consumers by offering courses and programs. The debate about pedagogy has been minimized by consumer (student) demand. The convenience and perceived efficacy of online learning is driving universities to respond to students as consumers. In the effort to balance the university budget administrators are responding to a market that continues to grow even though aspects of teaching and the appropriateness of online delivery are only now being investigated in relation to more traditional approaches to classroom learning.

The report *Growing by Degrees Online Education in the United States* (2005), reported that online education in the United States had entered the mainstream. It offered the following evidence:

- Sixty-five percent of schools offering graduate face-to-face courses also offer graduate courses online.
- Sixty-three percent of schools offering undergraduate face-to-face courses also offer undergraduate courses online.
- Among all schools offering face-to-face Master's degree programs, 44% also offer Master's programs online.
- Among all schools offering face-to-face Business degree programs, 43% also offer online Business programs. (Growing by Degrees, 2005, p. 1)

Virtual learning has moved at the speed of demand because of forces that are clearly understood: time and money. Leadership at all levels in education is in a catch-up mode to find the right mix of digital teaching and learning to satisfy demand. Students have gravitated to online courses and programs because they like the asynchronous aspect of learning. The asynchronous component that allows a student to read content material, respond to questions, and move through course material at any time of the day or night is appealing as a form of individualized learning. The cost of driving to campus and spending money on gasoline and parking is not only saved in a more economical form of delivery, but enhanced by the family and personal choice dividend that appeals to the student consumer. The real cost of learning goes down and the personal benefit goes up. One doesn't need to be an economist to calculate the cost benefit analysis of online learning to a certain segment of students, and to the university.

Value Added Technology for Educational Administration Students

The field of educational administration has to become familiar with the use of technology to prepare future educational leaders the rudiments of a virtual learning environment. To this end, students in educational administration need to be prepared for the administration of the virtual as well as the brick and mortar K–12 and higher education organization. It is incumbent upon programs in educational administration to not only prepare the future leaders of educational organizations, but also the future digital educational organizations. These leaders must be able to use, assess, and critique electronic pedagogy for its value added utility for how teachers teach and administrators administer educational organizations.

> Cyberinfrastructure for Education and Learning for the Future (CELF) will change the way learning takes place both inside and outside the classroom, blurring the distinction between the two. Technology-mediated learning

> will take place in the context of computationally augmented real-world environments, online communities of practice, interactive virtual environments, games, simulations, models, and audio video/IM/SMS communications—not just classrooms. (Cyberinfrastructure, 2005, p. 15)

Virtual education is transforming the classroom by establishing flexibility in time and place-of-learning. Scholarship, technology, and pedagogy are merging together as an aspect of faculty knowledge that extends teaching skill and ability through digital books, online journals, course material, video/audio podcasts, gaming, spreadsheets, simulations and software that aggregates multimedia, helps create it, and then disseminates the creation across the globe. Future administrators will need to understand and make decisions about the teachers who use, and use well, the pedagogy of technology.

Higher Education Accountability

In developing and devising methods to capture student learning educational administration programs need to consider the dynamism and potential of the electronic medium. The pressure to capture data and compile evidence in an era of accountability is a pedagogical reason for using digital tools to improve learning.

Programs in educational administration have been pushed to explore the pedagogical application behind the use of the Internet based upon student demand, perceived effectiveness, and the utility of digital and multimedia tools to improve learning. The single greatest push behind the movement toward electronic learning was the assessment and accountability provision for educator preparation programs established by The National Council for the Accreditation of Teacher Education (NCATE). As programs in educational administration respond to the requirement for assessment of student progress the tracking of students, student work, and student evaluation make the electronic portfolio a tool that can integrate teaching, learning, and administrative needs within a system that captures student work, assesses student progress based upon nationally recognized standards, and provides feedback for student and program improvement.

Educational administration, like all other academic disciplines, approached online teaching and Internet supported learning as an extension of standard instructional pedagogy. Teaching content via the Internet through computer-enhanced instruction is undergoing a period of trial and error as an extension of classroom directed teaching. Faculty members, in trying to understand the digital environment, have been compelled to seek out improved methods of instruction to impart educational administration content. Electronic tools and web-based platforms to support Internet classrooms and digital teaching are evolving into wholly self-supporting digital learning environments. Software suitable for supporting and delivering content, when coordinated and

aggregated together, creates many ways to transmit content knowledge, capture student work, communicate with students, and serve as a connection to the individual learner. The four walls, lecture, place, and moment of learning are being challenged by virtual, asynchronous, and individualized moments of learning. If accountability is the reason for adoption of an electronic portfolio its potential will be realized when it is more fully integrated into a full range of use related to content delivery.

For those who challenge the value of electronic pedagogy there is the divide between acceptance of the tools that became available and the desire to use those tools. What is evident from all quarters is the growing use and acceptance of digital teaching as a stand-alone instructional approach to instruction with its own specialized teaching methodology. This methodology is defined by the instructional use of software and hardware tools that have been adapted to online teaching and learning. The challenge will be to improve learning by utilizing the emerging tools and software that were developed and then adapted to teaching and learning. In this regard faculty in educational administration will be expected to master a set of skills through participation in a slow evolution of technology, and the fast moving development of software tools to deliver content, as viable alternatives, and in some cases successors, to traditional approaches to teaching and learning. These tools won't displace the face-to-face classroom, but they do introduce another venue that will challenge the learning importance of face-to-face and real-time learning.

A Faculty Transition to the Pedagogy of Technology

Within the next 5–10 years the adoption and use of electronic portfolios, with an assist from NCATE, will become a primary lever for extending the skill and ability of faculty to teach educational administration by digital means. It is a window of transition that will separate generations. Those comfortable with the adoption and use of technology tools will enter a virtual classroom with a different set of skills for teaching their students.

The online electronic portfolio is the first widely disseminated and mainstreamed electronic software tool that was adapted for pedagogical use in educational administration programs across the United States. This does not diminish the platforms many professors of educational administration have used in teaching courses in educational administration via hybrid or fully online courses. However, these professors are a relatively small group of early adopters who were interested and motivated to learn and use technology. The electronic portfolio, when adopted by an educational administration program, involves *all of the faculty* in teaching to the requirements of national accreditation bodies to track student progress, capture appropriate performance skills, provide systematic feedback, and assess curricular effectiveness in the K–12 program of preparation.

What is a general trend to adopt administrative and management software as an electronic portfolio will soon become an accepted extension of educational administration programming across the country. What was once a one-dimensional depository of student work in a three-ring binder is being adapted into a more robust electronic teaching and learning tool. The portfolio of the past as "a reflective collection of work that is designed to fulfill a specific purpose and presented for feedback" is evolving into something with a more robust electronic presence (Kimball, 2003, p. 5).

Barrett (2002b) compiled a list of criteria and the kind of skill development or training required of students in a teacher preparation program to determine competence for pre-service teachers. She described the benefits and capabilities of the electronic portfolio as a digital repository that coherently captured artifacts that had the potential of enhancing learning as part of a pre-service experience for teachers. However, the development of the electronic portfolio was grounded in two fundamental structural elements: multimedia development and portfolio development. Multimedia development was described as "decide, design, develop, and evaluate" the elements of a portfolio's multimedia presence (Ivers & Barron, 1998, as cited in Barrett, 2002b). The portfolio development was described as a "collection, selection, reflection, and projection" of what the students compiled within the portfolio and how it was then presented to the instructor (Danielson & Abrutyn, 1997, as cited in Barrett, 2002b). The foundation of electronic portfolios as holders of multimedia and other digital work served as the jumping off point for capturing podcasts, videos, student performances, papers, and an endless list of student generated work migrating to the departmentally supported portfolio.

Incorporating digital portfolios into an educational administration program's approach to collecting program artifacts goes well beyond the three-ring binder as a repository for what a student should know and do as a prospective school administrator. Barrett (2002a) further explained that at minimum a digital portfolio is:

- **Storage Space**
  Portfolios need to have storage room for uploading digital artifacts. Within the design of the portfolio students need to be able to do journal and self-reflection; accept and store feedback from the instructor; store assignments and the rubrics for grading those assignments.

- **Security**
  There should be restrictions on access to artifacts, assessments, and reflective feedback.

- **Linking and Grouping**
  Electronic portfolios need to be organized with learning as the focus. Standards, learning outcomes, courses, and student work are organized as elements that orient the portfolio for ease of use.

- **Reflection**
  The structure of the portfolio ensures that students respond to assignments that have required learning outcomes.

- **Publishing**
  Portfolios are adaptable as learning repositories; assessment summaries; employment displays; showcase for artifacts highlighting achievement.

- **Portability**
  Students are able to store and archive work by downloading to CDs, DVDs and other forms of electronic storage. The portfolio itself is accessible via the Internet and portable at any point in time and from any location.

The electronic portfolio is limited only because the digital medium is so new and educators have yet to integrate the requisite skills and abilities for basic use, much less extend the capability of software for teaching and learning.

Electronic Portfolios: An Entry Point for Mainstream Technology Use

As important as the previously-mentioned qualities are in developing a program's capacity for collecting data, storing work, and communicating with students, the measure of any portfolio will be taken as a tool to improve learning. Its value will be incorporated into the entire learning experience of students as they matriculate through a program of study. Thus, a portfolio should, in the future, take into consideration the previously-mentioned elements and the more important aspect of teaching and learning. A portfolio is a software tool that over time will become integrated into a faculty member's own source of knowledge about how to approach the task of teaching utilizing the multimedia and portfolio development tools. Thus, a portfolio will change and adapt into a:

- repository of student learning;
- communication network between students and faculty and between other students;
- source of relevant works that illuminate the profession of educational administration;
- clearly articulated and transparent feedback system for students to measure their success as they move through a program of study;
- delivery system of content that faculty design and deliver as part of the educational administration curriculum; and
- digital platform that brings the portfolio into the educational administration program as a multimedia tool that can engage students in the delivery of content knowledge.

The portfolio will merge with the web-based course platforms and become a pedagogical extension of the digital learning environment. It will merge into a design and delivery system that will complement the digital classroom. The portfolio will be utilized in a far more meaningful way than as a repository of student work.

Summary

Portfolios have in recent history been considered a culminating activity that were presented as proof that certain performance skills or behaviors were taught and learned while taking courses in the educational administration curriculum. Students collected papers, projects, tests, and relevant assignments that were compiled as artifacts within the course of study. These artifacts were typically compiled into a portfolio that represented the student's work over the time he/she matriculated through the program. Although the digital portfolio was embraced as a more robust extension of the three-ring binder in its storage and retrieval capabilities, it became increasingly evident that capturing and holding artifacts in a virtual folder was only part of the benefit to the use of electronic portfolios.

What faculty members know about electronic portfolios as an instructional tool is compromised by experience with them as one-dimensional assessments bound in loose-leaf binders full of paper. What can a portfolio be? Batson (2002) made the point that "ePortfolio developers are making sure that their platforms can accept the full range of file types and content: text, graphics, video, audio, photos, and animation. The manner in which student work is turned in, commented on, turned back to students, reviewed in the aggregate over a semester, and certified can be—and is being—deeply altered and unimaginably extended" (p. 1).

McLuhan (1964) described the effect of a new medium (such as the electronic portfolio) as a modified extension of how it was previously used (three-ring binder). However, significantly, the new medium, he indicated, may very well extinguish the older use for which the technology supports and will soon overtake. In the case of the digital portfolio its use as a replacement for a collection of artifacts will supersede hard paper copies of essays, reflections, and projects handed in and graded with a pen and delivered to the student, by hand, at the next class. The work completed for classes in educational administration is being reshaped by a new medium that will replace the old.

The advent of the digital portfolio is also a window into the future of teaching and learning. Asynchronous learning, or learning that can be controlled by the learner at his or her pace, lessens the requirement of mass learning at the same place and same time that has been the essence of 20th century education. There is recognition that the classroom lecture has a place when a great deal of information needs to be disseminated in a short amount of time to a large number of people. However, programs in educational administration now have electronic

tools that can be commanded by the faculty member to deliver instruction for more individualized learning rather than mass dissemination. In this way learning, and the acquisition of knowledge, become more timely and meaningful for the learner.

The electronic portfolio is an educational tool that carries over into every aspect of teaching. The digital portfolio in educational administration has been mostly limited to use as a repository for student work. However, it has a far more important role to play as an entry point for disseminating content. Although the electronic portfolio has been used successfully for collecting student work and storing student artifacts, it is a far more powerful and important learning tool as an extension of a media rich program in educational administration when every faculty member is introduced to its capabilities and possibilities.

The Internet accesses a full array of electronic tools within a virtual environment that expands the pedagogy of teaching and learning into a new realm. Marshall McLuhan (1964) was prescient in recognizing that "the medium was the message." Although electronic portfolios may only open a door into an expanding pedagogical environment it holds promise as a new medium that will challenge what educators believe about the art and science of teaching and learning. The digital medium has already gained acceptance within education. The medium will extend teaching pedagogy as we presently know it.

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