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## Preparing School Administrators to be Technology Leaders: *Standards and Strategies*

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### Abstract

*This paper describes a course designed to prepare school administrators to understand the impact of systemic technology on teaching, learning, and leadership. To be effective in the digital age, future school leaders must have a comprehension of the National Educational Technology Standards for Administrators (NETS-A) (International Society for Technology in Education [ISTE], 2002). Using the ISTE NETS-A to guide school-based research and online activities, Masters of School Administration students learn the importance of technology within schools. Innovative instruction has the potential to enhance school administration programs and provide timely and relevant knowledge, skills and dispositions for future school leaders.*

**E**ffectively using technology within a school system encourages significant school reform (ISTE, 2000). If school administrators are to be prepared for the challenges of schools in the digital age, school administration programs must develop and deliver curriculum which is grounded in theory and enriched with guided practice. Blending school-based experience with online coursework creates contemporary and relevant learning opportunities for future school leaders.

Technology leadership spans a spectrum of interrelated sub-topics in the part of the daily roles of school administrators. According to Picciano (1998), when appropriately integrated into an educator's vision, technology can be an effective tool in achieving positive outcomes in many areas of school leadership. From tackling large socio-economic concepts such as digital equity and access, to technology purchasing and planning, technology is vital to the duties of today's school administrators.

Few of today's school leaders are educated or prepared to meet the new demands and chal-



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allenges of modern school environments (National Center for Education Statistics, 2005). The Education Schools Project (Levine, 2005) suggests that many school administrators are educated for jobs that no longer exist. In addition, this report reveals that a large percentage of school administration programs pay insufficient attention to clinical education and the technology skills which are appropriate for today's schools (p. 23). There is an apparent disconnect between many school administration programs and the skills educational leaders need to effectively lead and manage modern public schools. Responding to legislative and regulatory demands, graduate schools of education typically offer a menu of courses that may or may not be relevant to the day-to-day realities of school leadership (Broad Foundation, 2003).

Understanding information and integration literacy skills in technology is critical for school administrators to effectively support instructional practices which promote high student achievement. Information literacy includes knowing how to find, analyze and use information, while integration literacy encompasses the ability to use computers and other technologies combined with a variety of instructional strategies to enhance student and teacher achievement (Shelly, Cashman, & Gunter, 2006). School administrators who are competent in information and integration literacy have the abilities and the skills to transform schools and facilitate academic success.

The International Society for Technology in Education (ISTE) has developed the National Educational Technology Standards (NETS) for students, teachers and administrators (NETS – S, T, & A). The NETS-A standards are designed to guide educational leaders in addressing the essential conditions for the effective use of technology in K-12 education. These standards support the argument for the integration of technology into school administration programs. In addition, the Technology Standards for School Administrators Collaborative (TSSA, 2001) is leading an initiative to develop a national consensus on technology standards for future school leaders. The TSSA Collaborative is committed to producing a set of standards necessary for school administrators to ensure effective use of technology in schools (TSSA, 2001). Together, the ISTE NETS-A and the TSSA Collaborative provides support for integrating technology. These organizations specifically outline the need for school administrators to assume technology leadership roles in public schools. These standards are valuable in helping school administrators develop a vision, conduct evaluations, assist teachers, and guide student learning.

## *A Blended Approach: ISTE Standards, Online Activities, and Face-to-Face Discussions*

In 2006, The University of North Carolina Wilmington (UNCW) School of Education developed and implemented a course titled "Technology for School Leaders." This course provides Master of School Administration (MSA) students with the knowledge, skills and dispositions needed to effectively lead schools in the digital age through the integration of the ISTE NETS-A standards. "Technology for School Leaders" is designed to facilitate MSA students' internalization of the NETS-A standards through contextualized site-based experiences. Students receive approximately 75% of course instruction online as they complete assignments and projects in a school. Many students are practicing teachers and use their own schools as the setting. Students who are not practicing teachers can seek site-based placements on their own, team with a classmate or seek placement assis-



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tance from their instructor.

The six NETS-A standards are the basis for six units of instruction and all assignments. Each unit is organized around a standard and includes a school-based research project. For each standard, students complete an activity (or series of activities) from a NETS-A workbook titled *Self-Assessment Activities for School Administrators: A Companion to Making Technology Standards Work for You* (Brooks-Young, 2004). The activities require analytic and evaluative skills as students gather and review information, reflect on practice, and gain insight on implications for school leaders. For each standard, students answer the following questions:

1. Is the (NETS-A) standard in question being met?
2. What school-based evidences suggest your position of the standard being met?
3. What methods were used to research information concerning the standard?
4. Based on the findings and the current conditions within the school, what suggestions should be made in order to improve or maintain the meeting of the standard?

This process also includes;

- Discussions or interviews with current school administrators
- Discussions or interviews with school/district technology personnel (technicians, etc.)
- Review of school technology plans and documentation
- Discussions or interviews with teachers & students
- Discussions or interviews with media specialists
- Analysis of student achievement data
- Review of technology products and licensing documentation
- Observations of technology enhanced lessons
- Observations and analysis of facilities such as computer labs, office equipment and school networking systems

Using the NETS-A standards as a guide, these authentic investigations are opportunities for students to analyze real school conditions. Data analysis, findings, and conclusions are more meaningful since they are usually drawn from schools where MSA students work. As a result, students become more knowledgeable of the strengths and weaknesses of technology in their schools and they internalize the standards as they conduct their research and complete their activities.

Approximately 75% of course instruction is online. Four face-to-face class meetings are scheduled during the semester. These face-to-face meetings are designed for students to network, debrief, and receive teacher-directed instruction as needed. During these meetings, students share insights, ideas and issues stemming from their research and activities. These meetings also serve



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as opportunities for the skill building on specific software needs and help in the development of electronic portfolios which they use and expand throughout their coursework and internship experiences.

As a part of their online instruction, students participate in online discussions on supplemental readings which focus on current topics and issues in educational technology integration, innovation, and leadership. Weekly online work also includes technology application activities that range from reviewing and creating educational wikis and blogs, to using pivot tables to understand data. Additionally, students and faculty engage in frequent synchronous and asynchronous forms of communication via online course management system tools. These include emails, instant messaging, internet chat, and electronic submission and grading of assignments.

## *Perspectives of Students & Instructors*

Student responses collected from anonymous end of course evaluations have revealed a high level of satisfaction and usefulness with the curriculum. Anecdotal data gathered from follow-up discussions with students after course completion indicated high approval and relevancy of the course content and delivery. Examples of student remarks included;

“I would have never understood these standards on this level without working in the schools.”

“I was surprised at the information I gathered from the school during my research into the standards.”

“As a new assistant principal, my principal asked me to make recommendations concerning future technology budgets and I was able to do this from my knowledge of the standards and school data.”

The format was also a good fit for the personal lives of these students. As graduate students in a school administration program, all of these individuals were adults with personal or family situations outside of the school setting. The online format allowed students to have more flexibility in managing their time and completing their work tasks. The development of the students' technology informational and literacy skills allowed them to work and learn without the rigidity of traditional scheduling or timeframes as they completed their work.

Professors who taught the course considered the new format to be both challenging and rewarding. The development of a new course with online and school-based components requires a significant commitment of time and can be problematic. Site-based assignments can create unexpected issues in delivering courses predicated on contextual engagement. For example, if the assignment required the student to interview a principal and the administrator who was out of town, the student would have to seek an alternative source of input (sometimes less informed) or would need to wait until the following week. Another example of a site-based issue included the need to find documentation such as technology plans and equipment records or software licenses. Students would often have to deal with missing or improperly filed paperwork, causing them to spend more time “looking” and less time analyzing their findings. These are typical imperfections that occur in



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real-world learning experiences. Many of these situations are easily navigated by students and have unique encumbrances which must often be handled carefully and creatively.

## *Impact on School Administration Programs and Future School Leaders*

In the Fall of 2007, program revisions were made based on formal and informal data collected from graduates of this school administration program. Students repeatedly sent the message to faculty that, "This course should be one of our first classes." Students clearly indicated that the course had value and merit for future school leaders and could be helpful as they complete subsequent courses. As a result, "Technology for School Leaders," is now offered during the first semester of the MSA program. By enrolling in the course at the beginning of the school administration program, students benefit from an understanding of the NETS-A standards and technology leadership throughout their coursework, and gain valuable skills in technology applications that will be useful to them in other courses.

"Technology for School Leaders" emphasizes the importance of technological literacy as a school leader. This course also places emphasis in the importance and recognition of the NETS-A standards. Based on the high level of student affirmation and appreciation, additional initiatives have been developed and adopted in the MSA program. These include an increase in online course components in other classes, increased faculty modeling of technology integration, and continued development of an electronic portfolio. As national and state accountability mandates require schools to provide high quality instruction and support services for all students, the integration of technology into school administration programs assists future school leaders in achieving their goals.

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