Running Head: SELF-EVALUATION OF ADHERENCE

# Self-Evaluation of Adherence to National Educational Technology Standards

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"The primary goal of the ISTE (International Society for Technology in Education) NETS (National Educational Technology Standards) Project is to enable stakeholders in PreK-12 education to develop national standards for educational uses of technology that facilitate school improvement in the United States. The NETS Project will work to define standards for students, integrating curriculum technology, technology support, and standards for student assessment and evaluation of technology use." Thus reads the introductory statement on the NETS (2005) homepage.

As technology becomes more evident as an educational resource in and out of the classroom, its legitimacy, effectiveness, and appropriateness need to be recognized. Serious educators have formed groups, such as the ISTE, to accomplish that end. Someone once said, "Knowledge is power." How we learn to harness that power determines its strength and relative worth. The computer opens world classrooms up to an entirely new universe of learning unrecognized a few short years ago. As Dr. Thornburg points out, "Through the Web virtually any subject can be explored through the perspective of educators who truly understand and treasure their topics (p. 147)." Leu, Leu, and Coiro (2004) share this view when they relate that "(t)eaching and learning are being redefined by the communication technologies that are quickly becoming a part of the information age in which we live (p. 30)." Like any other practice in civilized society, technology standards are important for developing guidelines within which to practice the craft of teaching and for measuring the relevance and appropriateness of its employment as an educational tool.

Thus far in the Pathways for the Advancement of Virtual Education (PAVE II) program we have addressed most, if not all, the ISTE standards in varying depths. For the purpose of this particular reflective exercise only four of the six standards will be reviewed:

II. Planning and Designing Learning Environments and Experiences (II-PDLEE).

III. Teaching, Learning, and the Curriculum (III-TLC).

IV. Assessment and Evaluation (IV-AE).

VI. Social, Ethical, Legal, and Human Issues (VI-SELHI).

As a result of the PAVE II program, I feel considerably more confident about attempting to use more and more complex technology packages. Yet due, in part, to lack of frequent hands on practice, I still have a lot of growth potential in both hardware and software use.

In planning and designing learning environments and experiences, I have had limited experience as an Inclusion teacher. I have developed WebQuests, and provided assistance to colleagues who attempted WebQuest projects with their students. I intend to create more of these project-based learning adventures to build a virtual library of review material, and hope to implement them through classrooms I visit on a regular basis. I am aware of the power technology offers especially for providing students with special needs means for accessing all manner of information. Since I generally get opportunities to provide direct instruction in either introductory or review portions of the curricula, building project-based learning lessons around cumulative information lends itself to the WebQuest format. Several courses have promoted such practice. Making my WebQuests available for colleagues for TIPPA (Technology Integration Project Planning and Assessment) project use and providing assistance in computer labs could facilitate both motivation for students to learn and reinforce prior learning as well as provide incentive for other teachers to create projects of their own.

With all the media hype surrounding recently released movies, *The Da Vinci Code* and *National Treasure*, it is relatively easy to formulate information searches with various twists and pitfalls that capture student interests. Such projects would promote on-task behavior, motivate students to remain engaged, create enthusiasm to learn effective search methods and strategies, and reinforce cooperation and collaborative learning skills. As students become more adept at negotiating WebQuest or other project-based tasks and processes, they could be encouraged to create their own as collaborative action projects and then challenge other classes. Eventually, an ultimate goal would be to generate student-developed projects that could be posted on the campus website as challenges to other sixth grade students with access to the Internet.

Technology becomes more prevalent with each passing year. As today's students become more technology-oriented, former methods become less relevant to their contemporary mindset. What may have been deemed faddish or even far-fetched a few years ago has become common place and accepted practice. Cell phones have essentially replaced the need for "home phones." Computers have become portable work desks; and with wireless technology, have become even more mobile than imagined at the turn of the new century. In my lifetime, computers have gone from poorly functioning monstrosities to palm-sized multi-tasking devices.

I am quite comfortable developing and putting into practice lessons that associate content standards to technological practices. As I learn more about technology, through PAVE class work and on-the-job staff development programs, I foresee technology integration growing in importance. As an Inclusion teacher, I constantly share my ideas about using computer labs more with my teaching colleagues. Some are amenable, others are still quite resistant. Recently, I attended a staff development session with sixth grade mathematics teachers from around the district. As we discussed results from last year's state assessments, I mentioned how various

computer applications could be used to enhance student learning. Unfortunately, an overwhelming response to some of my suggestions was, “We don’t have time to teach that way.” Pressing the issue, I encouraged a few to consider before school computer tutorials and project-based learning activities.

Another practice I have adopted, other than simply provide instructional support within content classrooms, is to visit computer labs to view various projects being implemented and to get an overall sense of how students respond to these activities. Taking note of what goes over well and what gets met with resistance, I unabashedly incorporate the better parts of various projects into my planning for future project-based learning activities. Meeting the diverse needs of students with learning deficits and emotional issues is always foremost in my plans. I am constantly looking for ideas to thoroughly engage students in learning the concepts needed to successfully navigate the sixth grade and better prepare them for future learning challenges. Whenever possible, I encourage students to make use of an open lab before or after school. By working directly with a student, or having an instructional assistant do so, it is amazing to see how quickly they take to tutorial programs, on-line assessments, or project-based activities. Sometimes locating content-related programs is a problem. I need to learn to locate readily available material better. More importantly, I need to impart how to find information on the Web to my students. It is increasingly critical that students independently locate relevant data on-line, determine its appropriateness to a given task, and be able to use the information to complete learning tasks. Likewise, if a technological tool is not provided on a given computer, it is also important for students to learn whether such programs are available on-line. As I become more adept at learning these things, I need to be sure to share that information with my students and colleagues.

In the area of assessment and evaluation, I am fairly well briefed. As a certified Educational Diagnostician, I have had considerable training in assessment from early childhood through young adult. Even though I choose to teach rather than assess, each summer for the past five years I have scored portfolio assessments for the National Board for Professional Teaching Standards (NBPTS). Additionally, in preparing for certification as an administrator, I became quite familiar with the Professional Development and Appraisal System (PDAS). As a teacher of students with special needs, I continuously seek out on-line tutorial programs and have become quite adept at the Texas Mathematics and Science Diagnostic System (TMDS) in addition to released Texas Academic Knowledge and Skills (TAKS) and State Developed Alternative Assessment (SDAA) online resources. In addition to these, a simple "Google.com" will yield over 13-million opportunities for middle school math alone. Furthermore, numerous resources are available for building rubrics with which to assess student achievement against specific project-based tasks, or to encourage students to use as a self-assessment.

Besides evaluating curricula content, teachers need to be good judges of whether students are using available technology packages appropriately. In order to do this effectively, educators need to stay abreast of current research and be aware of what is considered to be acceptable "best practices." Having students assist in developing rubric guidelines helps keep them aware of what is and what is not appropriate for learning, communicating, or developing a product with the use of technology.

As technology becomes the standard medium for almost every aspect of current and future living, an associated evolution takes place in terms of social, ethical, legal, and human issues. District personnel are frequently reminded of acceptable use policies and copyright concerns, fair use practices and appropriate utilization of technology resources. Remaining

abreast of current laws is difficult in such a rapidly changing technological arena. Attempting to do so is increasingly more important the more sophisticated technology becomes and the more efficient students get in its everyday use. One of the best ways to instruct students is to model technology use consistently and appropriately. Students need to become independent practitioners of correct, responsible use of technology. With consistent monitoring by staff and peers at school, and assessment as self-evaluators of acceptable practice, students may, hopefully, generalize these ethical behaviors to home and other off-campus settings. Another way to help students become responsible technology users is to keep their parents informed about what is and is not accepted when using district resources. This can be accomplished in a number of ways. Classroom newsletters, letters home with progress reports and report cards, posted messages on the campus Web pages, and, word of mouth during parent conferences.

Keeping students actively involved in the planning, designing, and production stages of any project or assignment helps foster what Costa and Kallick (2000) refer to as *habits of mind* as well as promote thorough engagement in project-based learning activities promoted by Simkins (2004). Silver, Strong, and Perini (2000) point out that “classroom teachers have to address differences in ways that are feasible, practical, and easy to implement (p. 41).” Technology offers unlimited opportunities for teachers to prepare students for future workforce requirements as well as for students to become comfortable with the rapid changes taking place in both the hardware and software helping them meet those demands. By striving to reach and maintain high levels of proficiency in regard to ISTE and NBPTS standards, teachers remain an important part of preparing today’s youth for tomorrow’s high tech lifestyle.

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