

Hawaii International Conference on Education

University of Hawaii
January 7-10, 2003
Waikiki, Honolulu Hawaii, USA

From the Ground Up: Building A High-Tech Culture that Includes Minorities in Professional Development

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Topic: Educational Technology

Two or three keywords that describe the submission: Educational equity, education, minority leadership, teacher licensing

A \$2.7M U.S. Department of Education Preparing Tomorrow's Teachers Project

Digital Equity Series: Professional Development for Teachers from Minority Groups

Abstract¹

This paper is a reflective analysis of a revolving five-year conversation about how to expand leadership in the minority educator community and schools to close the education divides. This new leadership may help to bridge the widening gap between teachers from minority groups and White teachers in distressed schools who lack professional development in new technologies and telecommunications as an educational tool. The findings from an Educational Testing Service Study, *The Academic Quality of Prospective Teachers: The Impact of Admissions and Licensure Testing* revealed that minorities score disproportionately low in comparison with White teachers. Black Americans score lower than any other group including Native Americans and Hispanic Americans (ETS (1999)). It further revealed the potential of adverse effects of the PRAXIS™ teacher education, licensing, and certification testing series on the Black teachers making it through the pipeline to teaching. Other findings from a Digital Divide Study, *Community Access to Technology in Cincinnati*, Ohio's urban community and schools found that teachers in the city's urban public schools were not prepared to use or integrate new technologies or the Internet to achieve the full benefits of the powerful resources. In the same study, parents and students perceptions were that access to new technologies and the Internet are critical to their educational growth and participation in 21st Century society.

Introduction

"You know sometimes I just want to teach--other times I just want to get as far away from this technology as possible, but you know, I just can't say that. (silence) It will be interesting to see what happens in the future. There was a time when experience was the thing, now it is the technology. On the other hand, teaching is all I know and love. I only stay because of the kids, but I no longer look forward to it [teaching] like I once did (Beatrice, an 18-year minority educator, 1998)".

Researchers are finding that poor access to new technology training and inadequate professional development are barriers to teachers' technology integration in classrooms (Coley, Cradler, & Engel, 2000; Fulton, 1995; Office of Technology Assessment, 1995). In the discussion about technology training for teachers, the NCATE/ISTE standards emerged as an articulate vision for teacher preparation in new technologies. As a result, states are using the standards as a foundation to develop technology proficiencies for teachers and educators in proficiency testing, licensing and certification programs (National Educational Technology Standards Project-NETS, 1998, 2000, 2001).

ISTE technology foundation standards are guiding standards for professional development and conditions for implementation. Their effort is helping leaders establish decision-making model that empower teachers and administrators to increase technology training to improve technology integration in schools and classrooms. More importantly, educational equity experts argue that for student and teachers performance to improve, all teachers and educators must have the same opportunity to benefit from investments in technology and professional development.

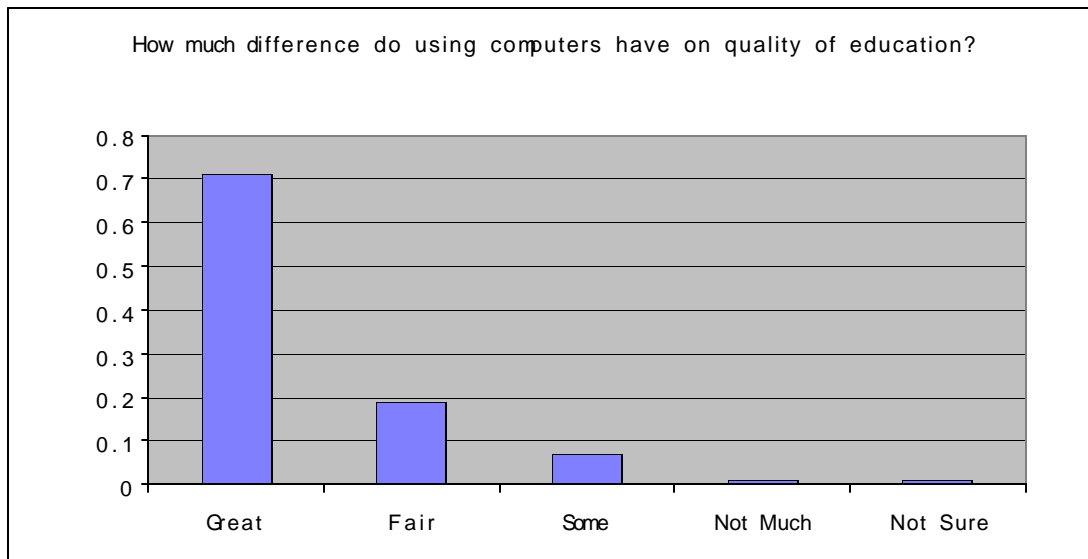
For change, resources must be available not only in urban schools but accessible in homes and community to ensure teachers' and learners' needs are realized (Solomon, Allen, & Resta, 2002; Handler, 1997). Teachers must be prepared through professional development and ongoing practice to use tech tools in place where they work. Urban schools and communities provide the least opportunity for this type of support to occur for urban teachers (Pittman, 2003).

¹ **Play Video Clip: Mr. Secretary**

Background

A Community-School Access to Technology Study in Cincinnati revealed that less than 15% of teachers in urban schools reported using technology, telecommunications, or higher order thinking instructional strategies in practice (Pittman, 2000) Other studies show that this trend is not unique to Cincinnati public schools but exist throughout urban and rural schools. In addition, what is more concerning is that teachers reported not being included in planning professional development in new technologies.

Chart 1: Attitudes and Perceptions About Quality Education and Access to Computers



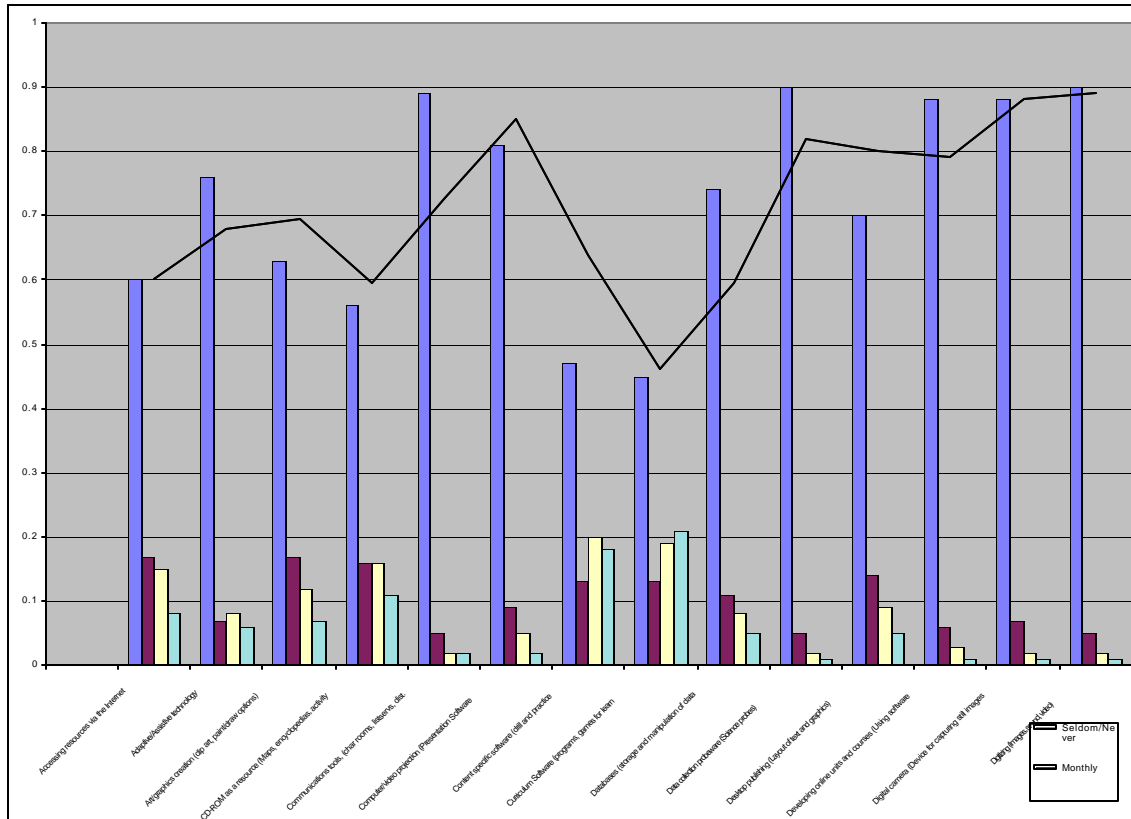
N= 149 Urban Parents

Since 1999, the efforts of national education organizations have focused on technology in education. These efforts have made a difference toward increasing minority educator membership and participation in professional development in new technologies. Despite these efforts, the growing diversity in our urban schools require that more is done. Without more urban schools investing in professional development and continuing education for teachers in these schools, the growing need to prepare teachers to meet the complex learning needs of diverse learners in these schools will not come about (McLaughlin, 2002).

Perspectives

For Black Americans, young and old, teaching has always been an honorable and valued profession. Today the number of Black teachers are diminishing rapidly. This is not happening due to large numbers leaving, but due largely due to many who are lost in the pipeline. To improve the quality of teaching and learning in schools, attract Black talented youth, Black teachers must receive training and development in telecommunications, virtual learning, and new multimedia technologies.

Chart 2: Skills and Applications Being Taught in CPS Technology Access Programs in Classrooms and Laboratories



N=503 CPS Students - Grades 5-10

Without preparing minority leaders in education to address these problem, the unique cultural learning needs of Black Americans, Native Americans, and Hispanic Americans, and other urban teachers and students may be thwarted. As a result, many diverse learners and teachers from minority groups will not be able to participate in 21st Century education.

The need for attention to professional development for urban teachers, especially Black teachers, has reached the point of desperation. The need for our youth to get high quality learning opportunities has gone beyond that point. Assuming this continues to happen, the future workforce in America will rely on talents from other nations to fuel education, economy and military forces—and thus foster unhealthy attitudes toward and respect for the American educational system.

This lack of involvement by minorities is evident in the scanty representation of Black American and Hispanic groups' presence and participation in local, state, and national technology planning and policymaking environments. The national education reform agenda has called attention to teachers from minority groups as deserving of access to professional development and training in new technologies. These new skills will prepare them for the new high-quality teaching standards underway for 21st Century schools.

However, without adequate representation in decision-making at the grassroots levels, the needs of teachers from minority groups will not be realized in schools with large populations of Black American, Native American, and Hispanic American students. A recent study, *The Academic Quality of Prospective Teachers: The Impact of Admissions and Licensure Testing*, contributes profound implications for teachers from minority groups in a high-tech culture (Gitomer, Latham, & Ziomek, 1999). The implications are that unless teachers from minority groups are embraced in the “knowledge-based age”, teachers from minority groups may become extinct in 21st Century schools. They will become extinct because they will not be ready to meet the new standards for high quality teaching in the new learning environments in a global world.

Purpose

This paper provides a reflective analysis of an ongoing five-year conversation and research efforts about how to expand new leadership in the minority educator community to lead teachers from minority groups into the 21st Century schools. This new leadership may help to bridge the widening education gap of between teachers from minority groups and White teachers in distressed schools. The analyses of findings emerge from an examination of existing teacher education, licensing, and certification standards and professional practices from an Educational Testing Service Study, *The Academic Quality of Prospective Teachers: The Impact of Admissions and Licensure Testing* (1999).

Since the beginning of this research five years ago, the ETS report remains timely for several reasons:

1. Educational Testing Service studies highlight teachers’ performance on licensing, certification testing, and assessment indicate that teachers from minority groups are at-risk and could be disproportionately excluded from the teaching profession (Gitomer, Latham, & Ziomek, 1999).
2. Capacity of current teaching standards to guide professional development and training in new technologies are being consistently questioned by policymakers (Paige, 2002).
3. National studies on high quality teaching and teacher preparation in new technologies consistently report teachers’ comfort levels with technology use and integration is significantly low (CAT, 2001).
4. Literature and research show that as new technology standards are linked to existing licensing, certification standards, the impact on current efforts to recruit, prepare, and sustain a qualified teacher workforce becomes an even greater challenge (ETS, 1999; Pittman, 1998; 1999; 2000; 2001; 2002).

Trends

Trends from an ongoing five-year study of professional development and training efforts indicate a significant connection between the existing standards and teachers’ preparedness to meet high quality standards to support high quality learning and teaching in urban schools. Special attention was given to teachers in urban schools as one of the most at-risk group of teachers in relation to new standards and access to training in new technologies.

Current professional development efforts in higher education, *Preparing Tomorrow’s Teachers* (PT3), represent the single largest group to focus attention to increasing the use of technology as a part of preparing teachers for new challenges posited by the national testing and standards movements. The discussion about the problem of leadership, professional development and teacher quality in urban schools, and technology integration will draw on information from the following initiatives:

- Community Access to Technology Study: Greater Cincinnati Homes, Schools and Communities (2001).
- Ohio SchoolNet Annual Educational Technology Survey (2001).
- Preparing Tomorrow's Teachers' in Technology –Comprehensive Educational Restructuring Initiative (CERTI) at the University of Cincinnati (2000-2002)
- National Digital Equity Task Force (2000-2002).
- International Society for Technology in Education (ISTE) Minority Leadership Symposium (1999-2002).

Limitations

Data collected in this study is consistently undergoing analyses that are more extensive as technology changes so rapidly. The sampling was purposeful versus statistical. The core sample for examining practices was based on rich samples of professional development models, small, and large-scale studies. The samples included technology plans from school districts, digital divide studies, and PT3 project evaluations that were shared voluntarily by community leaders, policymakers, and teachers.

Therefore, based on the integrative design of the study (quantitative and qualitative), the results can not be generalized to all states or school districts at this time but are comprehensive and representative of the problem. The results provide grounds to support the development of more extensive research to study the questions and problems described in this paper.

In addition, it is recognized that current teaching licensing and certification standards in most schools and institutions are focused on:

- Accreditation of teacher education programs
- Teacher qualifications to teach their subject matter and
- Classroom management.

The Evolution of Minority Leadership to Build a High -Tech Culture in Urban Schools and Communities

In 1999, the ISTE group emerged as responsible for training standards in new technologies for inservice teachers, and especially within minority-educator communities by supporting the establishment of the Minority Leadership Symposium (MLS). This group consists of a group of concerned educators and policymakers from many different arenas (ISTE, 1999). The groups have grown exponentially since 1999. The vision of MLS is to increase Digital Literacy Skills in Communities of Color through Strong Leadership.

A 2002 Minority Leadership conference focused on the tremendous challenges that Communities of color face when it comes to accessing information technologies, ensuring that **all** students and teachers have digital literacy skills, and implementing effective technology programs in urban schools, communities and in the home. A major emphasis was placed on the lack of strategies to build capacity to sustain technology efforts, developing leaders who actively participate in the decision-making process, and increasing participation at the national, state, and district levels as the greatest challenges facing all educators (Minority Leadership Symposium, 2002). Available at: <http://www.iste.org/profdev/symposia/index.html#MINORITY>

To address the problems, minorities are needed to fill positions in education as leaders and particularly administrators, library media specialists, technology coordinators, teachers, parents and community members who will establish proactive partnerships to ensure that **all** students have digital literacy skills, particularly information literacy and technology skills in urban schools. The objectives of this paper mirror those of the symposium. After reading, this paper you will understand:

- Issues involved in building capacity and leadership in communities of color to increase digital literacy skills
- Digital divide issues as it relates to high quality learning and teaching and other technology access issues that impact minority communities
- Urban school administrators, teachers, and educators need for strategies and promising approaches to implemented that will address these issues
- Characteristics of promising partnerships and opportunities for increasing digital literacy skills to close the divides in education in urban schools

Findings

The findings about professional development and teacher performance in integrating new technologies resulted from examining technology-training practices observed in the field, Community Access to Technology studies, Internet projects, technology proposals and professional development plans for practicing teachers. The review of training practices unveiled that priorities are not focused on technology professional development needs of all teachers and educators in urban areas. The same five critical components that emerged in 1999 continue to emerge as important guidelines to consider when planning new technologies training and integration in schools, especially in low and high poverty schools:

1. Equity and access in schools serving large populations of Black American and Hispanic students
2. Infrastructure for inservice minority teacher training.
3. Support framework for technology training in central city schools.
4. Research-based practices to improve training.
5. Accountability system to collect evidence that measures effectiveness and the impact of technology training on teacher practice.

The ISTE foundation standards in new technologies were examined to explore criteria for technology training guidelines to ensure access to high-quality professional development for teachers from minority groups. By ensuring that teachers from minority groups have access to high quality training based on recognized standards, the potential for a mismatch between teachers in minority communities may be reduced.

It is certain that new standards for high-quality teaching will emerge in 21st Century schools. Therefore, it may help to begin identifying needs of teachers from minority groups and whether they are different from European teachers.

Implications

An extensive analysis of research resulted in findings implicating the “optimal balance among teacher academic ability, supply, and diversity” may prove disruptive for teachers from minority groups. The new licensing and certification standards for teachers carry the potential

to render many teachers from minority groups incompetent in their professions. The exclusion from the teaching profession may result from the introduction of competencies in new technologies into teacher testing reforms within the states (ETS, 1999). This decline of teachers from minority groups could have a profound effect on education of Black American and Hispanic students in central city schools.

Consequently, it is critical for collaboration to proceed between policymakers, teachers from minority groups, and Black leaders in the community. The collaboration establishes leadership and enacts an agenda to explore training standards for all teachers, but especially Black Americans and Hispanics. There seems to be a need to increase the knowledge, awareness, and use of technologies within the minority educator community. This is a necessary action if teachers from minority groups are to be included in 21st Century schools, improve practice, and meet new standards for high quality teaching in the states.

For this action to result in a positive impact on minority educator leadership in technology planning and education reform, social problems involving human agency, technology training, and standards for teachers from minority groups must be addressed in to build a high-tech culture to attract and sustain minorities in education.

Discussion

The literature shows that stakeholders do know that technology integration and professional development in new technologies are discrepant in schools. However, there is a lack of knowledge about why some teachers use technology and others. This gap in knowledge may imply a profound message about issues to explore in relation to existing standards, new technologies and professional development practices for teachers.

Clearly, the research presented in this paper indicates that both poor access to new technology training and inadequate professional development standards are barriers to teachers' technology integration in classrooms (Pittman, 2001; Cuban, 1998). When we investigate the spiraling issues and questions raised in preparing teachers to use technologies, it appears practical to begin the literature review on training standards and practices. In doing so, the idea was to frame the extent of existing efforts that take up the named issues--training practices and standards for teachers from minority groups to feel comfortable enough to use new technologies in the classroom.

In the research, another question emerged about whether there are hidden implications for minorities in educational reform and the technology inequities that exist in homes, schools and communities (Apple, 1998). Could some of the problems that teachers from minority groups face that systematically limit access to appropriate training and new technologies? Apple posits that public education's hidden agenda in the curriculum may support the social, economic, and political goals of a democratic and industrial society. Consequently, the implications of educational reform and technology integration for minorities emerge as an area of significant concern in the policy arena.

Despite the federal government's investment in technology, reform, and professional development of teachers in inner-city regions, for some unknown reason, the impact of teacher training on technology integration has not been expeditiously embraced by urban teachers. This advent seems more prevalent in public education in schools with high percentages of Black American and Hispanic students. In other words, it appears technology integration into curriculum has not arrived with any significant force in the central city school community.

An important question that evolved was whether there is an association between minority teacher participation in teacher training organizations, political decision-making structures and other local, state, and national affiliations that guide teaching quality and preparation in new technologies, and teacher education standards?

In the next section, urban teachers and schools share results from a study of the Digital Divide in the Greater Cincinnati area as a Case Study to further examine the characteristics of technology access and use.

This session will be followed by implications, conclusions, and recommendations in the paper, which is in preparation for publication.

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