ICT as a Teaching and Learning Tool in Legal Education

PROBLEMS AND PERSPECTIVES
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Obstacles to Using ICT Effectively

The use of ICT as an effective tool for student learning inspired a growing debate among educators and policy makers.

Teachers, students, parents and many others with an interest in technology integration frequently are overwhelmed by providing and assessing quality technological instruction.

Although this outcry created many obstacles to the effective integration of technology into educational programs, there are two major culprits:

1. Implementation failure
2. Lack of teacher support

Implementation Failure: Absence of a Shared Vision

Often, the impetus for a technology initiative stems from the educational policy makers.

If this vision is not adequately communicated to the teacher, the success of this technological initiative will be in jeopardy.

Implementation of technology into educational programs fail when the initiatives do not originate or are not shared with the teachers.

Implementation Barriers:
Variances in Objectives

"… technology is integrated when it is used in a seamless manner to support and extend curriculum objectives and to engage students in meaningful learning. It is not something one does separately; it is part of the daily activities taking place in the classroom."
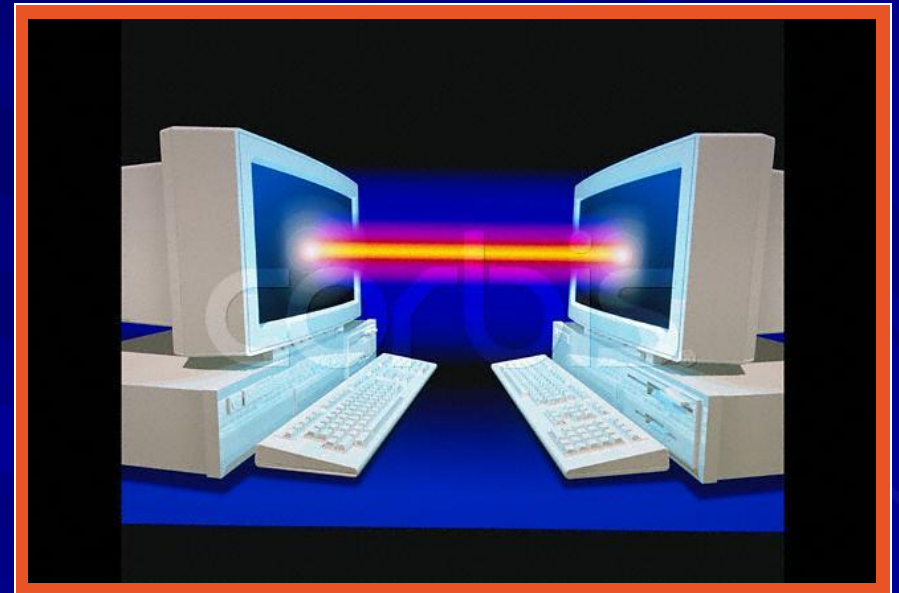
Implementation Failure: Variances in Objectives

The initiative to incorporate technology effectively into classroom instruction must begin with the curriculum objectives. This ensures a consistent goal. A mismatch between values of the teacher and the technology initiative will cause an incorporation failure.

Infusing technology initiatives into curricular standards allows teachers to readily create meaningful learning experiences for students and increase technological literacy.

Implementation Failure: Planning and Leadership

School divisions require tech planning and leadership in order to ensure the success of integrating technological initiatives. This involves the provision of clear goals and a collaborative effort between the policy makers and all educational stakeholders

⊕ Failure to provide sufficient inservicing or modeling of effective technology usage will lead to unsuccessful implementation.

Integrating technology into the curriculum requires:

1. numerous professional development opportunities,
2. a shared vision, and
3. time for professional interaction and planning.

Implementation Failure:
Lack of Access and Resources

Successful tech programs and initiatives hinge on:

1. a clear vision and
2. the availability of the required technology.

Immense frustration and eventual abandonment of initiatives occur if teacher are unable to access adequate technology.

This resource-intensive endeavor is a continual process as technology continues to evolve. Technology must be continually upgraded, support is readily available, and there is a low student/computer ratio.

Implementation Failure: Remedies

1. As teachers, administrators, and policy makers develop a unifying set of goals that links technology initiatives to curricular goals, teachers are provided the sufficient time, resources and opportunities to implement the use of technology in the classroom.

2. During teachers' investigation of their values and instructional practices in regards to technology integration, support is readily available. This includes professional development opportunities and provision for professional discourse.

3. Fostering a positive climate allows teachers to engage in risk-taking and modify their beliefs of how students learn in a technology advanced environment.

Lack of Teacher Support

Computer access and to other forms of technology have dramatically increased.

However, the level of classroom utilization does not correlate with this significant rise.
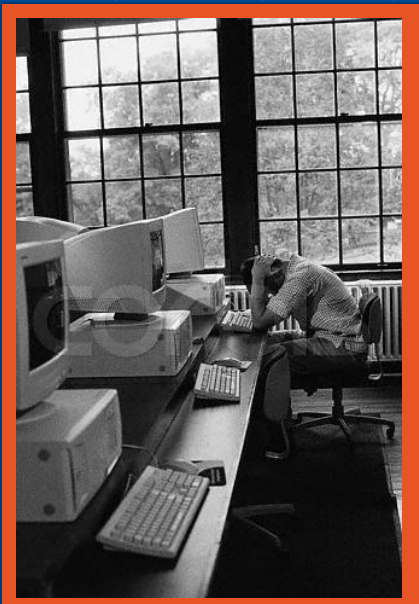
Despite improved access, several factors prevent the effective integration of technology into instruction. These barriers stem from a lack of teacher support.

Lack of Teacher Support:
Teaching Conditions

- Technology initiatives can only be successful if they are compatible with the conditions of teaching.

- If inadequate computer access or if there is a high pupil/computer ratio, teachers will be reluctant to employ technology as an instructional tool.

- The technology that is available must be reliable. Computers that are outdated or frequently requiring repair will cause frustration rather than a strong commitment to change.

- The training of a teacher as a technical specialist is instrumental to successful integration. As the specialist provides suggestions for integration technology into the curriculum and instructional activities, teachers understand how technology can be used as an instructional tool across all disciplines.

Lack of Teacher Support: Technological Skill of Teachers

- Teachers require <u>continuous support and training</u> to effectively integrate technology initiatives.

- Successful technology integration involves the <u>allocation of time</u> for teachers to experiment with new technologies, <u>collaborate with peers</u>, and the provision of professional development opportunities.

- As teachers collaborate and plan lessons that integrate technology, they <u>reframe their perceptions</u> towards innovative technology implementation and, ultimately, student achievement.

Lack of Teacher Support:
Accountability

- If teachers are held <u>immediately</u> responsible for changes that take time to show results, the process will undoubtedly fail.

  - Significant changes to perspective and pedagogy <u>require time and support</u>.

- Exemplary technology use requires more than access and training; it also involves the <u>support and mentorship</u> to make the vision clear and attainable.

Changes in Teaching and Learning as a Result of ICT

It appears that major changes in the ways in which teachers and learners view and practice teaching and learning may result from the shift to using ICT.

Comments from a principal of a school in New Zealand that is "part of the government's ICT contract which provides professional development over three years to a cluster of schools in our city."

"What has pleasantly surprised us is that the focus of this contract has been on learning and teaching. … We have focused on thinking and how ICT can help us to think…. Now that information and data is so easily attainable, children are being taught to use it to solve a problem, complete a task or apply to existing knowledge in a new way…. They can co-operatively work on a project with children in another country who sleep while they are awake!"

(Ballantyne, H. message posted to Change Agency electronic mailing list, May 23, 2003)

Changes in Teaching and Learning as a Result of ICT (con't)

From ICT in the schools - <u>Government of the UK</u>

- ICT is used as a tool for <u>whole-school improvement</u>;
- A hugely <u>powerful medium</u> for transforming teaching and learning

About the <u>Mayo Demonstration School of Science and Technology</u>, USA

- "What is critical about the success of Mayo is not the use of technology but the <u>expectations of children and educators to work collaboratively.</u>"

About the <u>Apple Classrooms of Tomorrow</u> project

- … broader implications for schooling became apparent. Meaningful use of technology in schools, we realized, goes far beyond just dropping technology into classrooms. By the time our sites were reporting new kinds of outcomes for students, we had witnessed what amounted to a transformation of their learning cultures. For example, teachers' instructional beliefs and practices underwent an evolution and we believed the improvement in students' competencies to be a result of teachers' personal appropriation of the technology.

(Dwyer, 1994)

It would seem that the shift is not just about technology. It's about <u>learning to work collaboratively to construct meaning</u>.

- It's a shift from a philosophy which supports a transmission model of instruction
  - ➢ one which embraces constructivism, in which learners construct their own knowledge out of their experiences.

Henry J. Becker (2000), used the 1998 national survey of teachers, Teaching Learning and Computing, to examine Larry Cuban's earlier assertion that computers are incompatible with the requirements of teaching. He wondering if developments in technology might have made it possible to use computers more effectively in the classroom. His findings stated:

- that academic subject matter teachers who use computers most productively with adequate resources tend to embrace a constructivist philosophy

- that those who used computer regularly over a three-year period were twice as likely to have made constructivist-oriented changes in their teaching practices and to be more skilled at conducting parallel activities in the classroom.

He concluded that teachers are "<u>creating classrooms where both they and their students are engaged in authentic efforts at increased academic understanding</u>."

Dias and Atkinson (2001) describe the progress teachers experience as they move through the stages of learning to use technology finishing with reexamining beliefs about education, their subject matter and themselves. They refer to the Apple Classrooms of Tomorrow experiment in which teachers at the final stage of integration of technology into curriculum moved into "interdisciplinary project-based instruction, team teaching and individually paced instruction (p. 4).

The Relationship of ICT and Education

Many futurists view technology and education as a symbiotic relationship.

Scott Reid (2002), Graham White (2003), Kathie Felix (2003), Leila Henderson (2002), James Grylls (2001) are just a few authors who envision an evolution in the parasitic partnership between technology and education today, to promise of a synergistic bond between ICT and curriculum in the future.

What Do Teachers Believe to be Their Role in the Future?

"Some teachers made the point that they thought that "the main role of the teacher [was] in helping students [to] learn" and that was not going to change, but how that objective is accomplished would change" (Reid, 2001, para. 15).

What Do Teachers Believe to be Their Role in the Future?

Teachers see their role evolving around <u>character building and teaching morals and ethics to students</u> who are spending time in front of a computer. One particular teacher warned educators that schools were going to be the only institution where youths would learn manners, values and ethics (Reid, 2001, para. 17).

The 'tech-generation', who is graduating now, will acquire powerful, decision-making positions in approximately 7 years. Their knowledge and abilities about using technology will influence <u>educational direction and result in major innovations.</u>

# What Do Teachers Believe to be Their Role in the Future?

- The creation of a "virtual school where students would not come to a brick-and-mortar facility but rather log on to connect with teachers and other students" (Reid, 2001, para. 20). Teachers who are experts in certain fields can also offer specific disciplines over the Internet to numerous students in various countries.

What Do Teachers Believe to be Their Role in the Future?

- Some teachers believe that software programs, like PowerPoint and other presentation programs, will have a profound effect on student assignments and homework projects.

- One particular teacher wants students to take on more responsibility concerning learning. Educators would become less like a teacher and more like a facilitator.

- The traditional physical structure of the classroom would be reorganized. The desks and chalkboard at the front of the class be removed; the new classroom would resembles a library where students have the freedom to openly and independently search for knowledge through access to technology.

3 Questions to Ponder & Discuss

1. What have you experienced in your own work with regards to the use of ICT? If you have noted changes in your own philosophy or practice, please describe them with reference to the articles you/we have read.
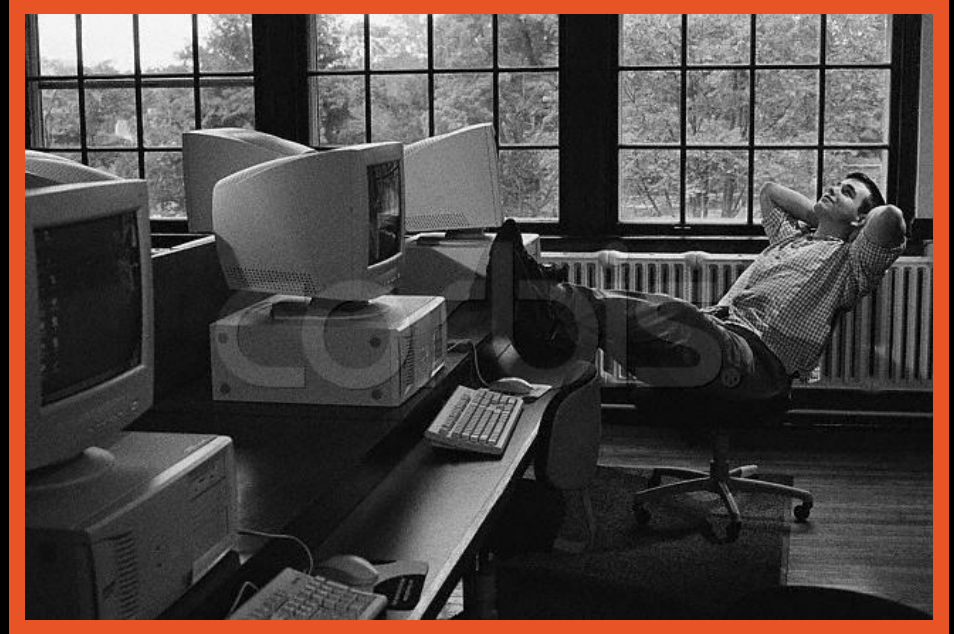
3 Questions to Ponder & Discuss

2. If implementation is successful and there is adequate teacher support, does teacher disposition and style of teaching play a role in the success of ICT initiatives?
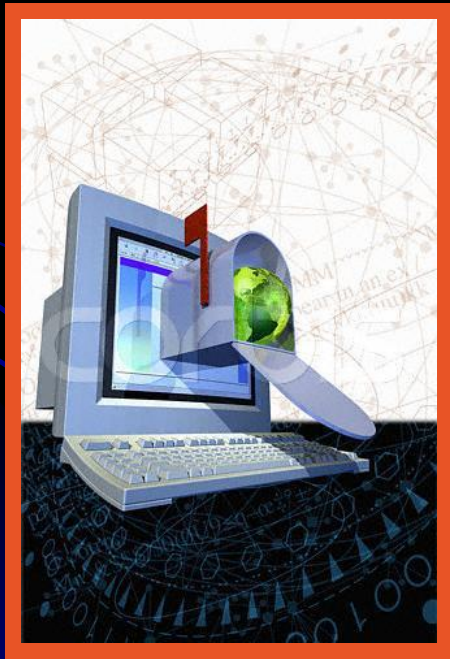
3 Questions to Ponder & Discuss

3. If a true partnership between education and technology is inevitable, how do we, as educational leaders, envision our teaching environment in 5, 10, or 20 years from now?

The End

We would like to encourage you to post your discussion in the appropriate location in WebCT.

Thanks
for your
time.