Accreditation and Student Assessment in Distance Education: Why We All Need to Pay Attention

Lisa C. Kaczmarczyk
University of Texas at Austin
Austin, Texas 78712
USA
lisak@acm.org

ABSTRACT

Distance Education (D.E.) is changing fundamental debates about academic integrity and rigor. The role of teaching and learning is being discussed with respect to both accreditation and student assessment. Evidence suggests that popular methods of student assessment in D.E. differ little from traditional methods. Studies of cheating in D.E. show that perceptions do not match reality. Accrediting agencies are grappling with an inherent educational paradigm shift. Beliefs about professional autonomy and academic freedom may be affected. Computer Scientists are in a unique position to understand the implications of this technology-driven debate. We need to educate ourselves about these issues and make our voices heard.

1. INTRODUCTION

Why should a Computer Scientist take a particular interest in Distance Education? Historically, this author hasn't been particularly interested ... truth be told, I still prefer to meet students in the flesh as opposed to over the ether. However, I now realize that ignoring this medium is ill-advised. Distance Education is on a meteoric rise – the US Department of Education put the growth of Distance Education in institutions of higher education at well over 70% between 1997 and 1998 [17]. These statistics also indicated that departments of Computer Science have not been on the forefront of this movement. Only 26% of 2-year and 4-year institutions offering Distance Education courses for credit included Computer Science in these offerings [17]. Perhaps some of us have ignored Distance Education because we viewed it as revolving around "technology" as opposed to "computer science". Perhaps because our field changes so much faster than others we have been reluctant to let go of our "content" long enough to fully grapple with this new creature. Perhaps we have been resistant to change (yes, it could be true). Whatever the reason, Distance Education is altering the ground rules as to what entails a quality education. Standards-forming committees within and without the federal government have begun to take these changes into account [12,21]. Effects on Computer

Science are inevitable and we educators should not be caught off guard.

2. QUALITY

The fundamental issue of concern is quality. While quality is subjective and a definition elusive (as is true for other terms in the Distance Education debate), the standards frequently used to assess educational quality include *accreditation* and *student assessment*. These comprise top down and bottom up views respectively of the quality of teaching and learning.

What exactly is accreditation? To those who have never come in direct contact with the process, it may be at best a vaguely understood notion revolving around the idea that "quality" schools must be accredited. Accreditation tends to take a programmatic or institutional view and usually occurs at a regional level. For example: a university in the American Pacific Northwest would probably be accredited by The Northwest Association of Schools and Colleges. In a loose sense, accreditation can be construed as constituting a minimal standard for institutional academic acceptance.

In contrast, student assessment examines issues at the level of a class or individual. A common theme ties it to accreditation: what constitutes academic integrity and rigor? How do we develop standards and assess performance? How is Distance Education challenging fundamental assumptions about teaching and learning and what does it mean for the future of higher education? We start our discussion at the so-called "bottom", with the student. After all, student learning is the reason for education.

3. BOTTOM UP: IS STUDENT ASSESSMENT ALL THAT DIFFERENT?

Oddly enough, the question of assessment has not provoked the volume of rigorous studies that other aspects of Distance Education have. While anecdotes flourish in the form of editorials and informal conversations we will leave anecdote aside and examine those rigorous studies that do exist. To place the discussion in its proper context the following enumerates assessment methods typically employed in Distance Education today.

A comprehensive search of the *Chronicle of Higher Education*, a weekly journal with a circulation of 400,000 faculty and administrators, revealed a consistent pattern of activities. Some Distance Education (henceforth referred to as D.E.) classes required students to appear physically at a predetermined location for exams. While this is a less than ideal solution for

the virtual student, it was not uncommon. In many cases students were simply trusted to do their own work. Email was often used for submission of materials [15]. In one unusual case, Western Governors University (WGU), the assessment required students to pass third-party standardized tests. An accumulation of 30-40 standardized tests and a portfolio were required for a student to obtain a typical WGU Baccalaureate [27].

It is worth noting that most of these assessment methods differed little from those utilized in traditional delivery. (One caveat: the definition of "traditional delivery" is open to debate – for a discussion see [11].) Additional evidence however shows that in some cases technology is being harnessed in ways complementary to the D.E. approach to teaching. Recent studies have looked at the utility and integrity of on-line examination programs [1,14]. One study showed that on-line tests helped elevate students' achievement standards and reduced the incidence of cheating [18]. While these studies were not specifically designed for D.E. their assessment was conducted remotely via technology. Thus the results may apply to D.E., reducing the need to reinvent the wheel.

3.1 Cheating

A common informal topic in discussions of D.E., alluded to above, is cheating. A creative study by Kennedy et al [13] examined the issues of academic rigor and integrity by comparing perceptions and realities of cheating. They found that students and faculty who had never been personally involved with a D.E. course overwhelmingly believed that it was easier to cheat in such a course than in a traditional course. Once either group became involved with (taken or taught) a D.E. class, they were roughly equally divided on the issue. This attitudinal shift is a compelling argument that reluctant faculty and students should test the waters of D.E. before drawing conclusions about its effectiveness.

The same study investigated specific ways in which people believe cheating can and does occur. The cheating methods proposed by respondents were the same as those suggested for traditional classes: having someone else complete assignments, purchasing/downloading assignments from the Internet, or simply "same methods as in regular classes"[13]. Likewise, solutions proposed by faculty differed little from those undertaken by a conscientious traditional teacher: supervised exams, altering assignments/exams term to term, personalized assignments, verification software, open book or practical application exams. Only one method relied on a feature inherent to distance technology: requiring interaction with the instructor via email and group forums.

Another study compared incidences of cheating in an equivalent D.E. and traditional course. Results showed no evidence of increased academic cheating in D.E. It was found however that on-line course grades were lower than traditional course grades [25]. The authors suggested that this data could be used to contradict the notion that D.E. courses are less rigorous than traditional courses.

One implication of both studies is that the concerns with and solutions for academic rigor and integrity are no worse in D.E. courses than in traditional settings. Another implication is that

the burden of transforming a traditional course into a D.E. format may be somewhat lessened by the creative transfer of existing assessment methods. A tentative conclusion is that the technology has not produced a wave of "innovative" integrity problems. This may change in the future as technologies such as wireless networks allow the increasingly savvy to snoop on-line sessions from a distance [20]. On the other hand, perhaps the message is a simple one, implied by Kennedy et al [13], that fears concerning academic standards need not be greater for D.E. than elsewhere.

4. THE DILEMMA OF ACCREDITATION

For faculty, accreditation may raise the specter of bureaucratic practices, a once-a-decade imposition of papers to be completed and meetings to be attended that take away from teaching and research activities. The process includes document gathering and preparation and hosting of visitors. In the United States at least, accreditation is a normal process with well understood procedures. The long-term impact on individual teaching is often minimal to nonexistent. But Distance Education may soon change all that.

Recently, accreditation procedures have become more of an issue both in academic journals and the media. For those not familiar with the history and traditions of accreditation in the United States, this passage provides a brief introduction:

" In order to insure a basic level of quality, the practice of accreditation arose in the United States as a means of conducting non-governmental, peer evaluation of educational institutions and programs. Private educational associations of regional or national scope have adopted criteria reflecting the qualities of a sound educational program" [10].

Key ideas in accreditation are "standards" and "criteria". These are established by the accrediting associations which are overseen by a non-governmental coordinating agency called the Council for Higher Education Accreditation (CHEA, www.chea.org). Neither CHEA nor any other organization mandates unity of standards.

CHEA was created by national referendum of American institutions of higher education in 1996 and describes itself as "a non-profit organization of colleges and universities serving as the national advocate for voluntary self-regulation through accreditation". Their mandate is "to chart new ways and means for their institutions to deal with increasingly problematic accreditation issues" and they are accountable back to their member institutions [7].

The "problematic" issues referred to above almost all revolve around the impact of Distance Education. D.E. is more than a change of delivery mode - it involves an educational paradigm shift. The philosophical and pedagogical dilemmas are evidenced by the variety of articles that have appeared in the *Chronicle of Higher Education*. How do we apply traditional accreditation standards when educational institutions team up with companies and other institutions [4]? How do we evaluate the plethora of experimentation that the new technology engenders [5]? What about previously non-accredited institutions [26]? What happens when highly respected institutions like New York University and Cornell form for-

profit branches to create and market D.E. courses? In general, what happens to academic rigor when profit becomes an issue [6]? Some institutions cross state (and regulatory) lines [23] and others have no physical home at all (e.g. www.azdistancelearning.com and www.wgu.edu) - how does an accrediting agency perform a "site visit"? Sometimes there is an amusing twist: one group formed its own virtual football teams to enhance school spirit [22]. Do standards for intercollegiate athletics and academic performance apply?

Most of these questions can as easily be asked of Computer Science departments. We already collaborate with industrial partners, acquire and experiment with state of the art equipment, and debate the merits of program level accreditation. Arguably, we engage in these activities at a far greater level than many other departments. As D.E. increasingly becomes a part of curricula, new questions will be asked about how we fulfill our educational mission. Creative perspectives and solutions for assessment will be required.

Many organizations are rising to the challenge of quality evaluation in Distance Education, including some discussed in earlier references. (See for example: http://cnets/iste.org/teachstand.html, http://www.ihep.com/quality.pdf and [12]) To begin to address these difficult issues, CHEA commissioned The Institute for Higher Education Policy (IHEP) in 1998 to investigate the issue of quality in D.E.

The IHEP findings provide evidence as to why faculty in every discipline, including Computer Science, need to pay attention. The message in the full report comes across clearly: D.E. is fundamentally altering the dialog on standards and assessment. Some particularly pertinent findings from the study [24]:

- "The conventional academic culture relies heavily on process, is substantially consultative, and is consensus-driven. The delivery of distance education programs tends to abandon, at least partially, these traditional quality assurance activities, and appears to be more assessment-driven."
- "The tendency to develop or use pre-packaged courses and the preponderance of part-time faculty are characteristics of many distance learning programs."
- "The student is regarded first as a client of the organization, and the educational activities that the client desires predominate in the design and implementation of programs."

Each of these findings has the potential for having a direct effect on our lives as Computer Science faculty. Any lingering doubts about this are eliminated when the study addresses the impact on faculty explicitly: "These questions concern the role of faculty and the degree of professional autonomy and academic freedom they have within the institution." In fact, studies are already underway to develop rigorous frameworks for evaluating faculty effectiveness in D.E. courses [8,19].

5. CONCLUSION – WE ARE NOT ALONE
Although this article has focused on the situation in the United States, questions of accreditation and student assessment are global. Distance Education by its nature knows no national boundaries and other countries are grappling with similar issues [3,2,9]. The number and content of these articles shows

the universality of the questions. Even so, there are examples of longitudinal success. A notable example is the Open University (http://www.openuniversity.edu), based in the UK. The OU, which has been accepting students since 1971, currently serves over 200,000 part-time and distance education learners across the world.

Distance Education is going to affect all of us. What is our role to be as Computer Science Educators? We must not default the decision making to others. As budgets tighten and demands for D.E. grow, external directives will come into contact with departmental and individual policies. Now is the time to formulate educated opinions and influence the discussion. A recent commentator in the *Chronicle of Higher Education* expressed the following concern: "My fear is that America's colleges will ignore them [forces buffeting higher education] and the important questions that they demand we confront – or that, simply through complacency or the glacial speed of our decision-making processes, we will fail to respond in time to help shape tomorrow" [16].

We in Computer Science are in a unique position to contribute to this discussion; we can apply a perspective that many others are lacking. We have a deeper understanding of the possibilities of the technology and the ramifications of our choices. Whether we like, dislike or just haven't considered the notion of utilizing Distance Education ourselves, each of us needs to acquire informed opinions and prepare to make decisions before they are made for us.

6. ACKNOWLEDGEMENTS

7. REFERENCES
[1] Arnow, D. & Barshay, O. On-Line Programming Examinations Using WebToTeach. Proceedings of ITiCSE '99 Krakow, Poland. (1999) 21-24.

[2] Balbin, I. Is Your Degree Quality Endorsed? Proceedings of ITiCSE '99 Krakow, Poland. (1999) 60-63.

[3] Blumenstyk, G. & McMurtrie, B. Educators Lament a Corporate Takeover of International Accreditor. The Chronicle of Higher Education. (2000, Oct. 17) A55.

[4] Carnevale, D. Accrediting Bodies Consider New Standards for Distance-Education Programs. The Chronicle of Higher Education. (2000, Sept. 8) A58.

[5] Carnevale, D. A Key Senator Dismisses Need for Legislation to Assure the Quality of Distance Education. The Chronicle of Higher Education. (2000, Feb. 18) A56.

[6] Carr, S. Faculty Members Are Wary of Distance-Education Ventures. The Chronicle of Higher Education. (2000, June 9) A41.

[7] CHEA - The Council of Higher Education Accreditation What is Accreditation? (2000, Sept. 11) Retrieved

November 5, 2000 from the World Wide Web:
www.chea.org/About/index.html#accreditation

[8] Cheung, D. Developing a student evaluation instrument for distance teaching. Distance Education – An International Journal. (1998) Vol. 19, Number 1. www.usq.edu.au/dec/decjourn/demain.htm

[9] Culwin, F. Web Hosted Assessment – Possibilities and Policy. Proceedings of ITiCSE '98 Dublin, Ireland. (1998) 55-58.

[10] Distance-Educator.com Inc. Accreditation in the United States. (1995-2000) Retrieved November 5, 2000 from the World Wide Web: www.distance-educator.com/knb/acrededitation1.html

[11] Ehrmann, S. C. Asking the Right Question What Does Research Tell Us About Technology and Higher Learning? (1997) Retrieved November 5, 2000 from the World Wide Web: www.learner.org/edtech/rscheval/rightquestion.html

[12] Hebel, S. Movement to Create Charter Colleges Gathers Supporters-and Critics. The Chronicle of Higher Education. (2000, Nov. 3) A31.

[13] Kennedy, K. & Nowak, S. & Raghoraman, R. & Thomas, J., Davis, S. F. Academic Dishonesty and Distance Learning: Student and Faculty Views. College Student Journal. (2000) Vol. 34, June. 309-314.

[14] Kumar, A. On Changing from Written to On-Line Tests in Computer Science I: An Assessment. Proceedings of ITiCSE '99 Krakow, Poland. (1999) 25-28.

[15] Leibowitz, W. R. Technology Transforms Writing and the Teaching of Writing. The Chronicle of Higher Education. (1999, Nov. 26) A67.

[16] Levine, A. E. The Future of Colleges: 9 Inevitable Changes. The Chronicle of Higher Education. (2000, Oct. 27) B10.

[17] Lewis & Snow & Farris. Distance Education at Post Secondary Education Institutions: 1997-1998. National Center for Education Statistics: Statistical Analysis Report. Washington, DC. (1999, December). Retrieved November 5, 2000 from the World Wide Web: http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=200001 3

[18] Mason, D. V. & Woit, D. M. Integrating Technology into Computer Science Examinations. Proceedings of the Twenty-Ninth SIGCSE Technical Symposium on Computer Science Education. Atlanta, Georgia. (1998) 140-144.

[19] Nielsen, H. D. Quality assessment and quality assurance in distance teacher education. Distance Education – An International Journal. (1997) Vol. 18, Number 2.

[20] Olsen, F. The Wireless Revolution. The Chronicle of Higher Education. (2000, Oct. 13) A59.

[21] Office of Post Secondary Education, The Department of Education Distance Education Demonstration Program [Announcement posted on the World Wide Web]. Washington, DC. (2000, October 3). Retrieved November 5, 2000 from the World Wide Web. www.ed.gov/offices/OPE/PPI/DistEd/

[22] Online. New Football League for Virtual Universities Opens Season. The Chronicle of Higher Education. .(2000, Oct. 6) Retrieved November 5, 2000 from the World Wide Web: www.chronicle.com/weekly/v47/i07/07a05902.htm

[23] Online. Oregon and Idaho Seek Way to Regulate Virtual College Outside Their Authority. The Chronicle of Higher Education. (2000, Oct. 13) Retrieved November 5, 2000 from the World Wide Web: www.chronicle.com/weekly/v47/i07/07a05902.htm

[24] Phipps, R. A. & Wellman J.V & Merisotis, J.P. Assuring Quality in Distance Learning A Preliminary Review. A report prepared for the Council for Higher Education Accreditation by The Institute for Higher Education Policy, Washington, DC. (1998, April) Retrieved November 5, 2000 from the World Wide Web: www.chea.org/Events/QualityAssurance/98May.html

[25] Ridley, D. R. & Husband, J. E. Online Education: A Study of Academic Rigor and Integrity. Journal of Instructional Psychology. (1998) 184-188.

[26] Snell, J. C. &Allen, L. & Mekies, S. Distance Learning, Web Sites and Accreditation. College Student Journal. Vol. 33, June 1999 Number 2. (1999) 318-320.

[27] Young, J. R. A Virtual Student Teaches Himself Working for a degree, he takes tests to prove his 'competency' to Western Governors U. The Chronicle of Higher Education. (1999, May 7) A31.