

# ONLINE LEARNING: A POLICY PERSPECTIVE

Will Online Learning  
be a Key Solution  
in Maintaining America's  
Global Competitiveness?



PEIRCE  
COLLEGE

Since 1865

*ON CAMPUS:* Center City Philadelphia  
(Business District)

*ON SITE:* Peirce Corporate College  
(employer locations across the region)

*ONLINE:* Peirce Online  
(43 of the 50 states, U.S. Virgin  
Islands, Canada, Guatemala,  
Japan, Great Britain, and Kuwait)

## MISSION STATEMENT

*Founded in 1865, Peirce College is a private, four-year,  
specialized institution providing practical, leading-edge  
curricula to primarily **working adult learners**.*



PEIRCE  
COLLEGE

Since 1865

[www.peirce.edu](http://www.peirce.edu)



# ASYNCHRONOUS ONLINE LEARNING GENERATES MYRIAD POLICY QUESTIONS

A Policy Paper

At

The Oxford Round Table  
Oxford University  
Oxford, England  
July 8, 2004

By

**Arthur J. Lendo, Ph.D.**  
President & CEO  
Peirce College  
Philadelphia, PA





# CONTENTS

Foreword .....	i
I. Introduction .....	1
II. The Internet and World Wide Web .....	2
III. Internet Mediated Distance Learning .....	4
IV. Student Access, Workforce Development, and The Demographic Landscape .....	5
V. Higher Education and Workforce Development .....	7
VI. The Impact of the Military on Higher Education .....	8
VII. The Reauthorization of The Higher Education Act .....	9
VIII. Quality Assurance .....	12
IX. Important Institutional Considerations .....	14
X. Evolving Overall Issues for Higher Education .....	17
XI. Conclusion .....	19
XII. Acknowledgements .....	21
Bibliography .....	22
A View of Peirce College .....	23
Author's Background .....	24





## FOREWORD

The Oxford Round Table is a unique forum where college and university presidents convene annually to discuss important policy questions. Our president, Arthur J. Lendo, presented a policy paper, entitled *Asynchronous Online Learning Generates Myriad Policy Questions*, on Thursday, July 8, 2004. The paper focuses on higher education in the United States. However, the issues and questions it raises are very relevant for the global community.

Our Board of Trustees, faculty, staff and students are pleased to provide you with a copy of this timely treatise on internet mediated distance learning (IMDL). The U.S. Congress is presently reconsidering many issues and policies, including online learning, as it proceeds with the Reauthorization of The Higher Education Act.

This powerful, new delivery system is generating unprecedented opportunities and systemic challenges for higher education. The roles of online learning in support of student access, 21st century workforce development, and global competitiveness are especially vital considerations.

A handwritten signature in blue ink, appearing to read "James J. Mergiotti".

James J. Mergiotti  
Senior Vice President & Chief Operating Officer







## I. INTRODUCTION

The United States (U.S.) undergraduate system of higher education was born with the founding of Harvard College in 1636 and traces its origins to European medieval universities. For centuries the great majority of students served have tended to be younger, traditional aged (18 to 22 years old) learners assembling in a residential environment for full-time study. At many institutions of higher learning, the undergraduate experience has been relatively untouched since inception. Today, asynchronous, online instruction presents a different model where learning may take place any time, anywhere, and any place utilizing the Internet platform supported by boundless, direct access to information and viewpoints. This extraordinary technological advancement, coupled with student demographical changes and new Information Age workforce needs, is now causing more educators and policymakers to revisit undergraduate policies, procedures, and practices.





## II. THE INTERNET AND WORLD WIDE WEB

Universities, the military, and government agencies have played major roles in the development of the Internet and World Wide Web. The origins of the Internet have often been dated back to a series of memorandums authored by J.C.R. Licklider of the Massachusetts Institute of Technology (MIT) in 1962 on his “Galactic Network” concept for globally connecting computers. Leonard Kleinrock, Lawrence G. Roberts, and their colleagues at MIT conducted pioneering work in the 1960s (Leiner et al, 2002).

The U.S. Defense Advanced Research Projects Agency (DARPA) established a program in 1973 to further explore technologies for interlinking networked computers. The system of networks which evolved became known as the Internet. Subsequently, the U.S. National Science Foundation (NSF), U.S. National Aeronautical and Space Administration (NASA), and the U.S. Department of Energy made major contributions in the 1980s to the further development of the Internet. Although the U.S. Government funded much of the initial development activities, the system today encompasses not only government and military agencies but a vast array of private sector networking facilities from business, education, and research entities (Leiner et al, 2002). Tim Berners-Lee, building on the earlier visions of Vannevar Bush, Ted Nelson, and Stanford researcher Doug Englebart, has been widely credited with the creation of the World Wide Web. Berners-Lee, a British native with a physics degree from Oxford University, worked at the CERN physics laboratory, Geneva, Switzerland. He developed the software in the late 1980s which substantially advanced the Internet to the level of a global mass communications medium (Biagi, 2003; Griffin, 2004; and Hanson, 2005).



The U.S. Congress passed the historic Telecommunications Act of 1996 which revised and updated the Communications Act of 1934. The 1996 Act greatly advanced the codification and commercial viability of the Internet. The Act stated, “The term Internet means the international network of both Federal and non-Federal interoperable packet switched data networks.” A major finding of the Act was the Internet represented “... an extraordinary advance in the availability of educational and informational resources to citizens.” Thus, it became official U.S. policy to promote the continued development of the Internet.



### III. INTERNET MEDIATED DISTANCE LEARNING

The Internet has allowed for the emergence of a new educational model, Internet mediated distance learning (IMDL). It is known as online education or online learning. A small number of online degrees were offered up through the early 1990s. Notable expansion occurred between 1996-2000. IMDL has created the opportunity for powerful changes, and new challenges, surrounding teaching and learning at the undergraduate level. IMDL is the most recent subset of distance education providing institutions with the potential to electronically and asynchronously offer students many of the same accredited, complete degrees as provided by face-to-face instruction utilizing the same course syllabi from the same professors. In other words, many on-campus courses and work-related degrees are entirely convertible to an internet platform. IMDL is not seen as replacing more traditional modes of instruction and/or other forms of distance education, but it has generated the capacity to offer high quality education to large, new audiences for a sustained period of time. The power to reach additional constituencies through the online learning environment has been fueling policy debates. Broad public policy and specific institutional policy applications are being confronted by a growing set of questions associated with the capability to provide robust instruction (synchronously and/or asynchronously) over the Internet.



## IV. STUDENT ACCESS, WORKFORCE DEVELOPMENT, AND THE DEMOGRAPHIC LANDSCAPE

Powerful demographic trends and technological advancements are now converging on the U.S. higher learning landscape. These developments are fostering wide ranging discussions which challenge the existing U.S. higher education system. Asynchronous online learning has become a lightning rod issue in a transforming, dynamic educational environment.

Although estimates vary, new student demographics have been evolving in the U.S. higher education market that counts upwards of 15.7 million learners as of 2000, according to the National Center for Educational Statistics (2002). The traditional aged student cohort has been estimated to be between three to four million learners. The non-traditional population, usually an older, working, part-time learner, has become the new majority numbering between 11-12 million students. Furthermore, there is significant future growth potential for the non-traditional student cohort partially as a result of access through IMDL. Only 24.4 percent of U.S. adults possessed a bachelor's degree through 2000 based on a report by The National Center for Higher Education Management Systems (2002), yet the newer, better paying jobs in the U.S. economy of the 21st century increasingly require a bachelor's degree.



Many programs and services offered by more traditional, residential campuses, while perfectly well-suited for traditionally-aged student constituents, are often an inconvenient, logistical mismatch for the learning related needs of non-traditional students with jobs and/or families. In contrast, the asynchronous online learning environment, characterized by “24-7-365 (24 hours per day, seven days per week, and 365 days per year)” accessibility, often better suits the needs of non-traditional students, especially military personnel. The Sloan Consortium, a broad based group of colleges, universities, and consortia, has published a comprehensive, landmark report entitled, *Sizing The Opportunity: The Quality and Extent of Online Education in the United States* (2003). It has indicated that over 1.6 million students took online courses during fall, 2002. This represents a very significant market penetration for online learning in just a few years. Additionally, the report, funded by The Sloan Foundation, projected an online registration increase of nearly 20 percent from fall, 2002 to fall, 2003.

In a related matter, serious concerns are now being raised in the U.S. regarding the lack of academic preparedness for recent high school graduates. For example, the Manhattan Institute for Policy Research has reported that only 32 percent of U.S. high school graduates in 2001 were ready to undertake college level work (2003).

The new student profile, academic preparedness issues, workforce requirements, and the Internet are blending to forge a new paradigm for undergraduate teaching and learning. At the national level, debate has begun to crystallize as the U.S. Congress undertakes the latest reauthorization of the Higher Education Act.



## V. HIGHER EDUCATION AND WORKFORCE DEVELOPMENT

Vast sums of money have been expended each year in the U.S. for education by federal, state, and local governments. The federal government has been a major source of funding for colleges and universities, especially to undergraduate students through financial aid programs. However, the federal budget deficit has reached historic levels and is projected to continue. This financial condition, in conjunction with global economic and political uncertainty plus the migration of American Society from the Industrial Era to the Information Age, has placed U.S. higher education at a crossroads. Public scrutiny of both public and private higher education in the U.S. has been mounting with calls for greater disclosure and accountability. U.S. policymakers have been asking the question: how should public funds for higher education be allocated in the technology-driven 21st century?

Other critical, related issues for U.S. higher education have also emerged. The undergraduate education system has been steeped in a campus centered tradition around many aging buildings and grounds which are very costly to maintain. Along with expensive facilities, additional financial pressures have arisen. For example, some colleges and universities are now being viewed more as economic engines with major responsibilities to fulfill regarding workforce and community development. IMDL has emerged at this critical juncture as a very viable, new option to provide instruction and address work force preparation. Because IMDL is technologically based, and not geographically bound, it has the ability to simultaneously and efficiently reach large numbers of students and workers both nationally and even internationally with far less dependency on fixed facilities.





## VI. THE IMPACT OF THE MILITARY ON HIGHER EDUCATION

The establishment of eArmyU has been a special, significant example of IMDL's wide ranging acceptance. Military considerations have historically played an enormous role in the expansion of the U.S. higher education system. The Morrill Act and the U.S. Civil War; the GI Bill and World War II; and the establishment of the prestigious U.S. military academies are three prime examples. The military role continues today with the creation of eArmyU whereby the U.S. Army contracts with colleges and universities to educate military personnel via IMDL.

Military affairs, partially driven by the global objectives of international terrorism, will likely play an increasingly influential role in IMDL's future development. The "24-7-365" feature of IMDL is highly compatible with the educational needs of reserve and active military personnel, even front-line troops.



## VII. THE REAUTHORIZATION OF THE HIGHER EDUCATION ACT

The U.S. Congress is currently considering numerous policy questions as it debates the reauthorization of public funds for higher education. How should public funds for undergraduate education be spent? How much should be expended to support existing, traditional campuses rooted in the residential learning experience and related extracurricular activities, such as intercollegiate athletics? How much should be distributed to support innovative, leading edge technology based learning environments? How much should be earmarked to support local, regional, and/or national workforce and economic development? How should public monies, particularly student financial aid budgets, be used in response to the demographic realities of the total U.S. student population? How much should be set aside to educate a 21st century military force facing new, global, and heretofore unthinkable threats? New competition for valuable, limited resources has sparked compelled public debate, including these policy questions. Accredited, for-profit post-secondary institutions and providers of accredited, online degrees are primary among the new, major competitors for public dollars. In a separate, but related matter, some U.S. lawmakers have even called for new legislation requiring institutions of higher learning to justify annual tuition increases.

Concurrent with the 2004 reauthorization process, a subcommittee of the U.S. House of Representatives has been studying the competitive position of the U.S. in a global, 21st century economy. An initiative, headed by Rep. Howard "Buck" McKeon (R-CA) and the late Rep. Patsy T. Mink (D-HI), emerged. It was labeled, FED.UP. One of its purposes was to identify and reduce or change some of the burdensome, costly, and obsolete regulations that have plagued U.S. colleges and universities. IMDL has been at the core of much FED.UP and



reauthorization discussion partially because of institutional and student financial aid limitations under the regulations emanating from the 1992 and 1998 reauthorization acts.

IMDL courses, delivered by electronic transmissions, have been viewed until recently by many U.S. educators and policymakers as similar to correspondence courses, offered by traditional mail, which have been often seen as sub-standard and troubled by misuse of funds. IMDL has now largely separated itself from any low-quality stigma through rapid improvements, wider usage, and greater public knowledge-ability and acceptance (the matter of quality assurance is reviewed in greater detail in the next section). The philosophical framework of equating IMDL and correspondences courses has helped to create institutional eligibility restrictions and limited the ability of online students to receive federal student financial aid, especially Title IV funds found in The Higher Education Act.

The U.S. Congress established the Distance Education Demonstration Program (DEDP) in 1998 so that the U.S. Department of Education could further study online learning. It allowed the U.S. Secretary of Education to set aside some regulations for a select group of colleges, universities, and/or consortia. The number of participating institutions currently stands at 29. Unfortunately, a two-tiered system has now been created where a very limited number of institutions have a major competitive advantage over the majority of colleges and universities because of unrestricted access to federal student financial aid for their respective online students. How long will this artificial market condition be allowed to exist?

Proponents for changing restrictive regulations have argued that online education represents a viable, practical system to expand access to higher learning. They have further contended that (1) excellent, newer safeguards are already in place and functioning well regarding misuse of funds and (2) existing



regional accrediting bodies are equipped to review online education. Supporters of online learning have stated that unnecessary, arbitrary barriers are in place and should be abolished. If colleges and universities, including their online offerings, are reviewed and deemed creditable, then online learners should be treated in the same manner as students in traditional instructional settings.

The policy debate has led back to concerns about funding levels and the question of how best to allocate monies through the Higher Education Act. If even larger numbers of online learners become eligible for federal financial aid, then would fewer dollars be available for traditional campus-based students? Will the forthcoming, new federal guidelines help or hinder the growth of IMDL? Will the overall regulatory environment improve? Student access, federal student financial aid, workforce development, and innovative technologies are key issues as the present reauthorization process unfolds.



## VIII. QUALITY ASSURANCE

The aforementioned 2003 Sloan Consortium study, *Sizing The Opportunity*, has presented a dramatic, new view of IMDL. It has offered the following among its major findings:

- “A majority of academic leaders already believe that the learning outcomes for online education are equal to or superior to those of face-to-face instruction.”
- “Even more compelling, nearly one-third of these same academic leaders expect that learning outcomes for online education will be superior to face-to-face instruction in three years, ...”
- “Perhaps most telling, when asked about the role of online education for the future of their institution, 67 percent answered that it is a critical, long term strategy...”

Findings such as the above and extensive review by government policymakers have clarified that online education is not a noble experiment on the periphery of learning, but an accepted educational tool (Salomon, 2004).

The direct experiences of the faculty and administration of Peirce College have been consistent with the Sloan Consortium findings. Peirce Online, the IMDL program, was reviewed by a Middle States Association Visiting Team as part of a periodic institutional review. The Team concluded the following in April, 2001:

- The learning experiences and outcomes of IMDL students did not vary materially from those of learners in face-to-face instructional settings.
- The quality control of IMDL was excellent.



The institutional experience of Peirce College has been, and continues to be, replicated throughout many institutions of higher learning nationwide. The students tend to be older, working adults seeking education directly tied to their work.

Many, if not most, of the quality assurance issues for IMDL have been laid to rest. IMDL has become a key component of a sound 21st century educational policy. However, many institutional policy issues remain for individual campuses and/or systems.

What educational policies will best serve non-traditional, undergraduate students and workforce development, especially for the sizeable older, working adult learner cohort? What funding allocations should be made for the non-campus-based experience and advancing technology-based learning? What are the primary IMDL considerations facing many, more traditional colleges, universities, and consortia?



## IX. IMPORTANT INSTITUTIONAL CONSIDERATIONS

At many institutions, IMDL has been a catalyst for healthy internal discussions about the value of and delivery of postsecondary education. The current environment has featured difficult economic conditions, very limited budgets, increased public scrutiny and accountability, and the rise of new, powerful for-profit competitors, such as The University of Phoenix and University of Phoenix Online. These factors have begun to require policymakers and campus leaders to fundamentally reconsider institutional policies.

The Gartner Group has spearheaded the emergence of a new view of value creation. Gartner Research has suggested that enterprises which evaluate new ventures solely on a quantifiable return on investment (ROI) approach are missing the increased value from so-called softer initiatives. Gartner has stated that the fundamental view of value creation should be altered to incorporate the Internet and other collaborative e-commerce activities. The new model has been labeled Value on Investment (VOI). Gartner has defined VOI as "... the total measurement of benefits derived from so-called soft initiatives ... which create intangible assets such as knowledge, information, and networks." IMDL has become a cornerstone for this new framework. The intangible value creation generated from IMDL has been significant, but difficult to quantify. Quantifiable outcomes measurement has become one of the most challenging tasks now facing colleges and universities as each respective institution determines what is best for itself regarding IMDL.



The best practices of successful IMDL programs have been evolving during the initial stages of applying the technology. The 1992 reauthorization of the Higher Education Act was one of the first comprehensive efforts to examine the nature and scope, including standards, of online learning. Thus, even the most advanced IMDL programming has been generally in existence for 15 years or less. However, many institutional lessons and effective practices have been learned to date. Peirce College has determined that it can offer entire work-related undergraduate degrees completely online in an effective, efficient, and high quality manner. At Peirce, IMDL and traditional face-to-face campus instruction have utilized the same curriculum, course syllabi and instructors with similar learning outcomes.

The Peirce community has reflected on the nearly four years of operation for Peirce Online. Five key strategic questions have surfaced. They are:

- Is IMDL consistent with the institutional mission/purpose? If no, then further, serious deliberation is needed before proceeding.
- What is the institutional risk tolerance level? The direct start-up costs in 1999-2000 for placing the complete Bachelor of Science in Business Administration with just three concentrations on the online platform was \$468,000. Technological advancement is expensive business with associated risks.
- What is the institutional approach to operations management? The effectiveness and efficiency of the business model you choose to operate IMDL is critical. A number of prestigious institutions have not fully understood this matter and their respective online learning initiatives have suffered and/or failed.



- What is the institutional capacity to fund new ventures, especially technology-based initiatives? As current technologies upgrade and newer, better, more expensive ones emerge, a venture capital fund should be nurtured and expanded.
- What is the level of institutional expertise and experience for determining strategic partnerships? Technology is complex, costly, and uncertain. Only the wealthiest institutions can do it alone. Longer term strategic technology partners should be chosen very prudently.

The answers to these five questions should serve as a valuable guide for institutional review and reconsideration of operational (educational and financial) policies in response to the technology-driven 21st century learning environment.



## X. EVOLVING OVERALL ISSUES FOR HIGHER EDUCATION

Government policymakers have been expressing interest in and awareness of emerging issues regarding older, working adult learners and technology-based education for sometime. For example, The Education Commission of the States surveyed the 50 U.S. state governors in 1998. Two areas judged most important were lifelong learning as well as technology and distance learning (Greenwald, 2002). As government officials gain a better understanding of IMDL's potential as an economic engine, particularly for workforce and community development, their greater involvement in educational policymaking should be anticipated.

Will demographic shifts, economic realities, and policy changes allow the traditional, non-profit sector of U.S. higher education to be a growth industry? The non-traditional, for-profit component with its considerable IMDL base has certainly been a growing segment. The University of Phoenix has become the largest private university in the United States. *The Chronicle of Higher Education* has regularly published the impressive financial performance of for-profit universities. The rise of powerful for-profit universities cannot and should not be ignored. Their best practices should be studied carefully and, where appropriate, embraced.



Is the campus-based, undergraduate system now a mature industry encompassed by the characteristics generally associated with such a condition? Two of the more notable U.S. experiences in the latter half of the 20th century with mature industries have been steel production and the railroads. Not surprisingly, railroads thought they were in the railroad business. They were actually in the transportation business and almost put out of operation by airplanes, trucks, cargo ships, and other vehicles (Levine, 1999). The inability to effectively and efficiently apply new technologies has previously placed other mature industries in peril. The lessons they learned were valuable, but painful and expensive. How do they apply to higher learning?

Should U.S. colleges and universities be even more focused on older working adult learners, specific workforce development needs, and state of the art technologies? Is U.S. higher education in danger or on the verge of a 21st century renaissance powered by the Internet?



## XI. CONCLUSION

Technology has set colleges and universities free in unimagined ways that are just beginning to be understood and explored (Olien, 2002). The Internet has simultaneously generated increased institutional risk and uncertainty as well as greater opportunity and flexibility. Technology and the Internet have complemented two evolutionary paradigm shifts: (1) from focus on teaching to broader emphasis on the relationship between teaching and learning; and (2) from processing students through courses to measuring student achievement through outcomes assessment. These transitions have been mandated by many accrediting bodies. How should colleges and universities set policies to better balance current, existing approaches rooted in the past with new models based on the present and future? Some institutions will have the ability to do both. Other colleges and universities, especially smaller, more tuition dependent public and private institutions, may eventually not enjoy such a luxury.

Higher education should perpetuate many of its time-honored, valued traditions. However, in order to guarantee future relevance in the new millennium, some type of reappraisal is essential for many institutions.

The higher education community, lead by the Sloan Consortium and other emerging groups, has begun to rationally review and implement newer, technology driven pedagogies such as IMDL. Supported by accurate data, informed views, and innovative delivery mechanisms, the community has begun to take a major step toward reaffirming its vital role in a global society and economy. But myriad policy questions, some of which have been listed in this treatise, remain for higher education.



The advancement of technology, particularly the Internet, has created a new paradigm with three primary structural options for the U.S. higher education community: the traditional land-based campus, the online or “virtual” learning environment, and some combination of the first two. This has been described as “bricks”, “clicks”, and “bricks and clicks” (Levine, 2000). Post-secondary institutions must address the policy questions regarding these three directions for themselves and society at large.

Fundamental structure adjustments have begun in the global economy of the new Information Age. The U.S. has been experiencing considerable outsourcing of U.S. jobs to other countries. This matter has stimulated much policy debate. Millions of older, working, adult students have discovered that they need new skills and better credentials to participate in a global workplace undergoing evolutionary and revolutionary alterations. Policymakers face complex issues regarding world-wide economic competitiveness and 21st century workforce requirements.

What purposes should U.S. colleges and universities emphasize? They have started to reassess and redefine their roles regarding workforce and economic development in a rapid, radically changing era dominated by more and better technological advancements. Due to these massive, structural shifts, for-profit interests, government agencies, and the military are poised to play greater roles in 21st century higher educational policy.



Online learning has already demonstrated great promise in delivering quality instruction; providing greater access for older, working adult learners; and addressing the educational requirements of the workplace. As a policy matter, online learning has earned the opportunity to be treated the same as other educational delivery systems.

## XII. ACKNOWLEDGEMENTS

*The author extends thanks to John Carfora, Anthony DiGiorgio, Edward Gould, Edison Jackson, Michael Mallowe and James Mergiotti for their editorial comments as well as Amy Caliendo, Sean Gallagher, Kendrick McLish, Janet Moore, and Melody Thompson for their research assistance.*

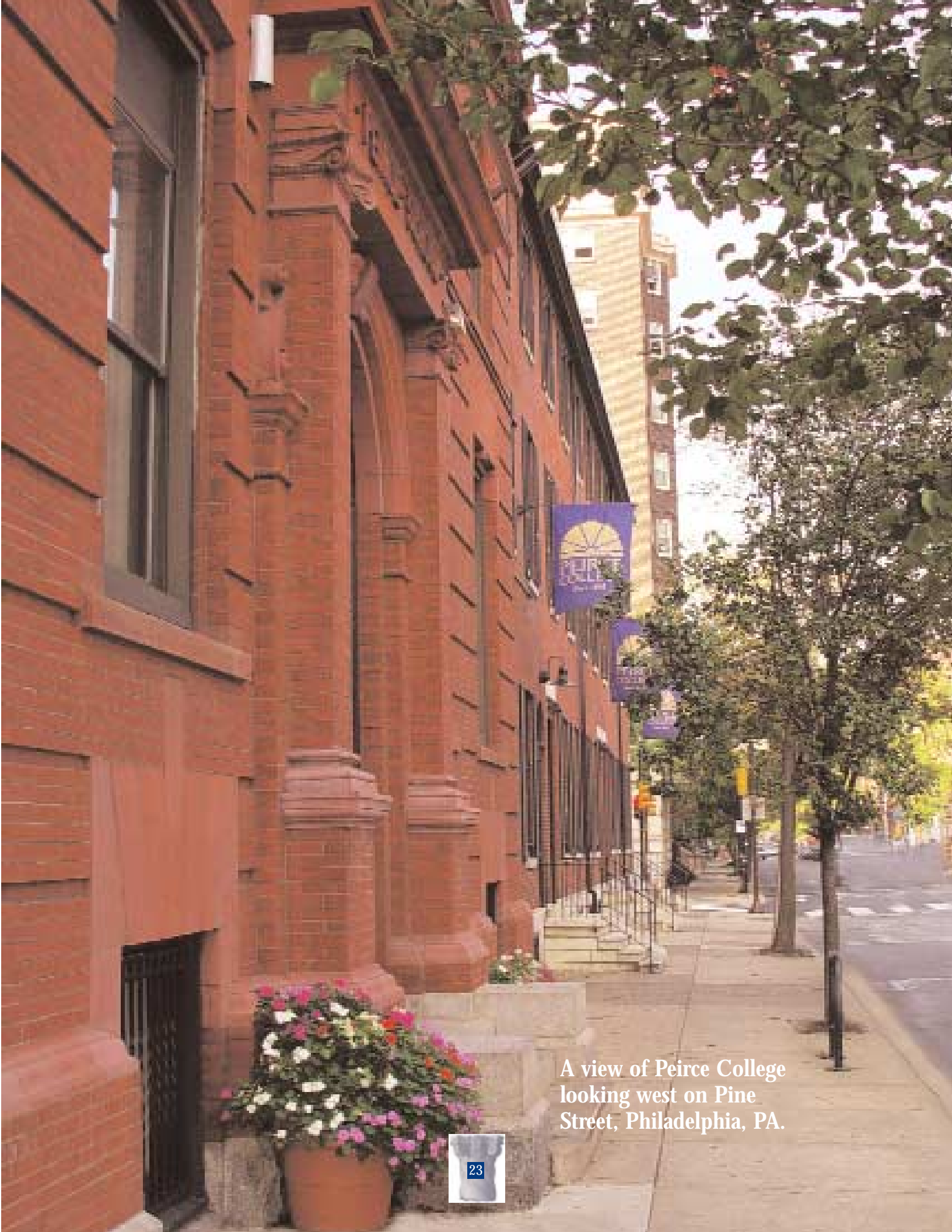


## BIBLIOGRAPHY

1. Biagi, S. *Media Impact*. Belmont, CA: Thomson Wadsworth, 2003.
2. Eaton, J.S. *Maintaining the Delicate Balance: Distance Learning, Higher Education Accreditation, and the Politics of Self-regulation. Distributed Education Series: No. 2*. Washington, DC: American Council on Education and EDUCAUSE, 2002.
3. Greenwald, S.R. "The Challenge to the Traditional College by the For-Profit College." *In The University: International Expectations*. Eds. F. King Alexander and Kern Alexander. McGill-Queen's University Press, London, 2002.
4. Griffin, S. "Internet Pioneers: Tim Berners-Lee," <http://www.ibiblio.org/pioneers/lee.html> (13 April 2004).
5. Hanson, R. *Mass Communication: Living in a Media World*. Boston: McGraw Hill, 2005.
6. Katz, R.N. and others. *Partnerships in Distributed Education. Distributed Education Series: No. 5*. Washington, DC: American Council on Education and EDUCAUSE, 2002.
7. Lendo, A.J. "Going the Distance," *Business Officer* (August 2003): 21-25.
8. Leiner, B.M. et al. "A Brief History of the Internet," 2002. <http://www.isoc.org/internet/history/brieg.html> (10 March 2004).
9. Levine, A. The Coming Revolution in American Higher Education. Keynote Speech at the Annual Meeting of the Middle States Commission on Higher Education. Philadelphia, PA. 28 January 1999.
10. Levine, A. "The Soul of a New University." *New York Times*, 13 March 2000.
11. Levine, A. and Sun, J. *Barriers to Distance Education. Distributed Education Series: No. 6*. Washington, DC: American Council on Education and EDUCAUSE, 2002.
12. Oblinger, D., Barone, C.A., & Hawkins, B.L. *Distributed Education and its Challenges: An Overview. Distributed Education Series: No. 1*. Washington, DC: American Council on Education and EDUCAUSE, 2002.
13. Olien, D.W. "Back to Earth: Expectations for Using Technology to Improve the University Experience," *In The University: International Expectations*. Eds. F. King Alexander and Kern Alexander. McGill-Queen's University Press, London, 2002.
14. Sack, B. "The Changing Face of Higher Education." *The Lawlor Review* (Winter 2004): 3-9.
15. Saloman, K. "Distance Education: The Return of the DEDP." *University Business* (February 2004): 24-25.
16. *Telecommunications Act of 1996*, 140th Cong., 2nd sess., S. Rpt. 230.

### Recommended Reading

1. Grulke, W. *10 Lessons From the Future*. London: Pearson Education, 2001.



A view of Peirce College looking west on Pine Street, Philadelphia, PA.



## AUTHOR'S BACKGROUND

**Arthur J. Lendo, Ph.D. has been president, chief executive officer and professor of management, Peirce College, Philadelphia, PA since 1991. He has created the successful Peirce Corporate College and Peirce Online. The College is now an international institution with degree-seeking students enrolled from 43 states, U.S. Virgin Islands, Canada, Guatemala, Japan, Great Britain, and Kuwait.**

President Lendo has received numerous awards during his 35-year career. Dr. Lendo holds a B.B.A. from the University of Notre Dame, M.Ed. from The American University and Ph.D. from Boston College. He received certificates of advanced graduate study from Harvard University and The Aspen Institute.

His professional background includes administrative and faculty positions at The American University (DC), Boston College (MA), Northeastern University (MA), and Saint Joseph's University (PA) plus Fortune 500 technology experience with Sperry UNIVAC.

# BOARD OF TRUSTEES

## PEIRCE COLLEGE

Thomas J. Foga, C.P.A. '52, *Chair*  
Managing Director  
Advisory Board Associates  
COO & CFO  
Allan Collaunt Associates

Mr. Lynmar Brock, Jr.  
President & CEO  
Brock & Company, Inc.

Lorraine H. Brown, Ph.D.  
President & CEO  
The Temple Group, Inc.

Mr. Brian D. Gallagher  
Vice President  
National City Bank

Ms. Linda S. Gloss '69, *Co-vice Chair*  
President  
Carelift International

Richard C. Kelleher, C.P.A.  
Associate Controller  
Princeton University

Edward J. Mansfield, PE  
Senior RF Engineer  
Securinex LLC

Mr. Martin S. Mirman  
President  
American Computer Educators, Inc.

Magdalena Padilla, Esq.  
President  
Insurance Council of New Jersey

Mr. Frederick M. Price '64  
President  
RAMTECH Incorporated

Mr. Brian K. Stahre  
President  
i-acumen, Inc.

Ms. Katy K. Theroux  
Vice President  
First Data

Gregory J. West, SIOR, *Co-vice Chair*  
Executive Vice President  
Colliers L&A

Caesar D. Williams, CLU, ChFC  
President  
Williams & West Financial Group, Inc.

**A 21st Century Institution of Higher Learning**

**A National Scope and International Reach!**



[www.peirce.edu](http://www.peirce.edu)

