

Five Smooth Stones

Fighting for the Survival of Higher Education

Steve Wheeler

This paper argues that the influence of the traditional university is declining due to its inability to adapt quickly enough to the trenchant demands of the information society. Simultaneously, “new concept” universities are flourishing because they can offer flexible, “any time, any place” learning opportunities in a global economy. Distributed approaches to learning, particularly distance education, workplace training, technology-supported learning, and on-campus flexible open learning are in the ascendancy. These methods are set to gain prominence in this new millennium because they are best placed to meet the needs of both students and employers. This paper proposes a strategy for adopting flexible, technology-supported learning approaches, underlining the need for collaboration, diversification, investment in technology and staff skills development in new educational practices, and gives warning of some of the barriers that exist. The paper offers five key strategies that will help higher education to come of age in this information-hungry, technocratic society.



Steve Wheeler, Senior Lecturer, Faculty of Education, University of Plymouth, Drake Circus, Plymouth PL4 8AA, U.K.
Telephone: +44 1752 232332.
E-mail: swheeler@plymouth.ac.uk.
Web: <http://www2.plymouth.ac.uk/distancelearning/>

FIVE SMOOTH STONES

Then he chose five smooth stones out of the brook and [...] his sling was in his hand and he drew near the Philistine. David [...] took a stone and slung it, and it struck the Philistine, sinking into his forehead, and he fell on his face to the earth. (*1 Samuel 17: 40 & 49*, Amplified Bible)

Surrounded on all sides by a powerful enemy, the small nation of Israel was in imminent danger of annihilation. When the young shepherd boy David walked out to confront the giant warrior Philistine Goliath, he took just one primitive weapon with him. The weapon was a sling; the ammunition—five smooth stones taken from a nearby stream. Few expected

the diminutive David to win against the huge and powerful Goliath, but prevail he did, winning a famous battle that sealed the destiny of two entire nations. The names David and Goliath have since been synonymous with unexpected victory and the struggle against all odds. In many ways, traditional universities face similar problems to the biblical nation of Israel. They are now under threat from a looming giant of obsolescence. They are stagnating in their ivory towers whilst the world around them is moving forwards. Unless the giant of obsolescence is challenged and defeated, this author believes that the traditional university will simply not survive. This paper offers a strategy of five key points—the five smooth stones—with which to defeat the threat of

obsolescence, enabling universities to change to meet the challenge and demands of the information society.

A CLIMATE OF CHANGE

We live in an age of change unparalleled in history. Technological, economic, and social upheavals have impacted upon us with regularity and increasing ferocity, radically changing the way we live, work, and learn. These changes have been all-pervasive in education, plunging the traditional university system into crisis (Daniel, 1996; Taylor, 1998). Increasing numbers of academics suspect that traditional approaches are no longer adequate and new approaches to pedagogy must be found and practiced. Laurillard highlights this concern:

The academic system must change. It works to some extent but not well enough. Teachers need to know more than just their subject. They need to know the ways it can come to be understood, the ways it can be misunderstood, what counts as understanding; they need to know how individuals experience the subject. But they are neither required nor able to do these things. Moreover, our system of mass lectures and examination ensures that they will never find them out. (Laurillard, 1993, p. 3)

Clearly, the traditional university cannot continue in its present format, because global trends demand alternative methods. One key trend, technological advance, is already contributing to the demise of on-campus university education. Smith & Webster (1997) suggest that new technologies may contribute to decreased demands for residential education.

There is also growing opinion that the very fabric of traditional education must change, purely because it is a system originally set

up to meet the needs of the industrial revolution, and is now hopelessly outmoded. Sociologist Alvin Toffler (1980), for example, argued that our current education system was established as a means to prepare children for work in factories. The industrial revolution demanded synchronization of human behavior with machinery, and mass education was instrumental in preparing generations of regimented workers. New and diverse modes of working require new types of learning in which active learners initiate, control, and apply learning for themselves (Knowles, 1975). More than 20 years ago, Botkin, et al. highlighted the outmoded nature of education provision in a searing attack on the traditional system of education:

Learning processes are lagging appallingly behind and are leaving both individuals and societies unprepared to meet the challenges posed by global issues. This failure of learning means that human preparedness remains underdeveloped on a global scale. Learning is in this sense far more than just another global problem: its failure represents, in a fundamental way, the issue of issues. (Botkin, et al., 1979, p. 9)

There are seven fundamental factors contributing to the decline of traditional university provision:

- technological innovation
- adverse economic climate
- mounting commercial competition
- demands for greater flexibility
- subject proliferation
- erosion of academic staff base
- globalization

TECHNOLOGICAL INNOVATION

There can be no doubt that information and communication technologies (ICT) have already made a

significant impact on higher education. Personal computers, for example, have changed the nature of the teaching process and provided a new focus for curriculum development. Current debate now rightly focuses on the extent of this impact (Watson & Downes, 2000, p. 4).

Generally, ICT is already irrevocably changing the face of education provision. This process has been slow but relentless, with technology-supported distance education and open learning now seen as effective alternatives. Academic journals are replete with references to the impact ICT is exerting on higher education, in terms of educational change: "The introduction of Information and Communication Technology into the educational system has been hailed as a major catalyst of the long dreamed-about educational revolution" (Katz, 2000). As Wisher and Priest (1998) noted, "The widespread availability of satellite and terrestrial networks, as well as the increased use of personal computers and the Internet has catapulted distance learning into the forefront of educational change."

From the perspective of educational trends and innovation, Wolcott (1997) noted that "in this new era university teaching increasingly requires reaching across time and distance through on-line courses and 'virtual universities.'"

And also regarding the foreseeable future of higher education, Dede (1996) wrote that "in a few years, high performance computing and communications will make knowledge utilities, virtual communities, shared synthetic environments, and sensory immersion as routine a part of everyday existence as the telephone, television, radio and newspaper are today."

A growing number of graduates, including this author, can claim to have earned their first degree by studying completely at a distance. Most distance learners will confirm

this is not an easy route to a degree, requiring great commitment, self-discipline and motivation. Nevertheless, distance education may be poised to supplant much of the traditional “set time, set place” education provision. At the very least, if the higher education system does not change, it will be “partially bypassed” in favor of other more flexible methods (Jarvis, 2000), because it cannot respond quickly enough to the rapacious demands of the information society.

AN ADVERSE ECONOMIC CLIMATE

For some time there has been an unfavorable global economic climate. Education has been particularly badly hit. The centralized funding universities once took for granted has been gradually dissipating. Generally, as governments withdraw grant arrangements, prospective students are forced to borrow substantial amounts of money, and this creates a culture of reluctance for many. This is reflected in recent UK trends, with applications for undergraduate places at universities down for the third consecutive year (BBC Radio 4, April 15, 2000).

This presents many traditional universities with an intractable problem: reduced student numbers means reduced government funding. Furthermore, universities now receive the income they “deserve,” rather than the income they need. Whereas before, income was “collected” by universities, now it must be “earned” (King, 1995). At the same time, universities must attempt to increase class sizes to compensate for the general shortfall in income. A vicious cycle ensues, as fewer students are willing to attend residential universities. There does not appear to be a light at the end of the tunnel of this present economic stringency, and the sustained assault

on the fabric of traditional universities shows no signs of abating.

Universities are thus forced to seek other means of regular, guaranteed income. For some, this will mean incorporating distance education approaches and technology-supported learning in order to increase numbers. For those universities that will not or cannot adapt to global trends and widespread implementation of new technologies, the future looks decidedly bleak.

COMMERCIAL COMPETITION

For the first time in the history of education, universities can enroll students anywhere on the globe, regardless of the geographical location or time zone. Monash University in Melbourne, Southern Australia, may be one of the first truly global distributed campus-based universities. Already boasting four campuses across the continent of Australasia, and partnership campuses in Malaysia, Monash has now established another major campus in Johannesburg, South Africa. Similarly, by 1996, half of all Australian universities had established twinning arrangements with private colleges in Malaysia. The situation is similar in Singapore, where several UK universities are represented (THES, March 31, 2000).

The mega-universities also have great impact. Mega-universities, as identified by Daniel (1996), are institutes with more than 100,000 students simultaneously enrolled in higher education courses. One of the better known mega-universities, the UK Open University (UKOU), has been a pioneer of modern distance education, revolutionizing higher education provision for learners. The UKOU enjoys an annual intake of more than 30,000 foundation-level undergraduates. It has achieved this impressive logistical feat by utilizing over 7000 part-time

academics and 250 local study centers in the UK alone (Rickwood & Goodwin, 2000). Ten other nations, including Spain (UNED), France (CNED) and Germany (FernUniversität), have established similar mega-university systems operating on open distance education models. In much the same way as the corner shop met its demise with the advent of the supermarket, small campus-based universities are in danger of being squeezed by the global non campus-based mega-universities.

Privately funded universities such as the University of Phoenix are big players in the huge part-time mature education market. Phoenix enjoys a quarterly profit averaging 12.8 million US dollars, earned exclusively from distance education activities. It enrolls only fully-employed part-time mature students. The industrial sector has also been quick to capitalise on the huge demand for flexible open learning. Cisco Systems, for example, operating a network of bought-in locally-based tutors and classroom resources, awards accelerated diplomas in network engineering, software design, and computer science. IBM has recently approached the New Zealand government for permission to deliver degree level courses, again in direct competition to the established university system on the islands. Here are just a few other examples of recent commercial interest in higher education in the run-up to the new millennium:

- 1997—UK Company Nord Anglia acquires Christchurch Art and Design College, New Zealand.
- 1999—Sylvan Learning Systems purchases a 54 percent holding in a private Spanish University.
- 1999—Commercial company DeVry takes over Denver Technical College and other higher education institutes in the United States.

- 1999—University of Phoenix (USA) opens a campus in Rotterdam, Holland. The university is planning to expand farther into Germany, Spain, and Ireland. (THES, March 31, 2000)

These trends reflect the realization by commercial companies that higher education is a lucrative and expanding global market. Several media companies, for example, have recently invested large sums in the development of online learning. These include News International's WorldWide Learning Ltd., Pearson Group's FT Knowledge, and Addison Wesley Longman Group (THES, March 31, 2000).

DEMANDS FOR GREATER FLEXIBILITY

This sharing out of the global education cake reflects growing demands for greater flexibility from both students and employers. Students who have previously been disenfranchised due to remote geographical location, lack of disposable resources, family commitments, or work schedules, are recognizing that opportunities now exist for part-time study. Employers are demanding highly skilled, flexible, and responsive work forces. They are beginning to recognize the benefits of "just-in-time" training, and are rejecting the "just in case" model. They are discovering that flexible, part-time opportunities for staff training are not as onerous as sending them to universities to receive professional updates and training. Costs are cut because employees can learn at home or in the workplace, using ICT and high-quality distributed learning materials. Smart universities are developing differentiated learning curricula to respond to these "just-in-time" demands, and are reformulating courses into modular, flexible pathways.

SUBJECT PROLIFERATION

The demand for more knowledge has resulted in a major upturn in university applications. Although university applications will have risen by 50% in 10 years, a high proportion of these are from part-time mature students, representing a down turn of full-time enrollments in real terms (CBI, 1994).

Comparison between a current prospectus and a 1990 version from the same university will reveal that there are big increases in the number of courses offered, indicating the diversity in range of subject matter created to meet demands.

Diversification, however, may create problems. Universities may discover there are either not enough specialized lecturers, or student/teacher ratios become too high to be economically viable. Furthermore, subjects may become so specialized, with limited appeal, that the economy of scale disappears.

Universities must either focus on what they do best, delivering courses that are economically viable and high in quality, or they must diversify using a strategy based on distributed learning. It is a well known economic feature of online courses, for instance, that many more students can be tutored individually than in conventional face-to-face environments (Bunker, 1998). The caveat to this strategy, however, is that online course development can be protracted.

EROSION OF FACULTY BASE

Universities are comprised not of buildings, or resources, but of people. The collective knowledge base of specialists and experts is the most valuable asset of any institute. Yet the practice of casualization by many universities means that academic staff are increasingly being employed on fixed-term contracts, usually three years or less. In the US,

tenured faculty are sparse, whilst in the UK, permanent contracts for junior academics are rare. There is uncertainty for the future of conventional university education, because many academics are uncertain of their own career futures.

Universities are also losing a great deal of talented academics to commerce and industry (Shattock, 2001). Academics are being lured away from university life into research, development, and consultancy, because these areas not only promise more lucrative remuneration, in many cases they also offer more permanency and therefore greater security.

For universities to survive, talented and innovative staff must be retained, and this may only be achieved by the offer of more security, higher rewards, and greater job satisfaction. It is ironic that the most valuable resource a university possesses is also often the one that is treated most disdainfully.

GLOBALIZATION

The trend towards homogeneity of commercial products is a familiar phenomenon for regular international travelers. Hotel chains, national airlines and hire car companies, the ubiquitous fast food outlets, soft drink and convenience products, and a multitude of other globally recognized commodities are encountered everywhere one goes. With the all-pervasive nature and rapid development of the Internet, educational products could also begin to trade as global commodities. The "massification" of education provision will follow the same route taken by the global information and media companies, with institutions aggressively tapping the market for new student populations, opportunities for investment, and expansion. Borderless education will become a widespread reality and an international phenomenon, where

even the term “institution” may no longer be an appropriate description (Scott, 1998).

Universities that do not participate in this global market will be in danger of missing out on a huge population of students and employers demanding flexible “just-in-time” learning.

STRATEGIES FOR SURVIVAL

Although the evidence for the threat to traditional education may prove disturbing reading, there are survival strategies. However, they inevitably involve radical change. An examination of current trends and the market place suggests five key areas in which survival of the modern university lies. Unlike David, who only used one stone to kill Goliath, it will be a mixture of these five key approaches that will enable universities to survive and thrive:

- Collaboration
- Investing in new technology
- Investing in people
- Widening access
- Specialization

COLLABORATION

Collaboration has been a common feature of university life for a long time. Now, however, universities are collaborating in a distributed manner, networking to share resources and expertise, to exploit the growing part-time flexible learning market. The University of Wisconsin was one of the first American universities to exploit the potential of distance learning, offering online courses tutored by academics hired from other universities. Students enroll online from home, and are assigned a tutor and a “group” with whom they correspond in electronic format. Similarly, the lecturer “teaches” online from his base university. Collaboration of this nature overcomes many logistical problems.

INVESTING IN NEW TECHNOLOGY

Technology on its own is not the solution to the problems of higher education (Ramsden, 1992) but it can make a positive contribution. Furthermore, distance education should never be seen as a means of cutting operational costs in learning delivery, although inevitably, this will happen. Rather, it should be viewed as a means by which learning opportunities can be enhanced and access widened. Investment in new educational technologies must be undertaken with these factors in mind. Wheeler & Vranich (2000) offer comprehensive guidelines for benefits analysis of technology-supported learning and strategies for the deployment of telematics in distance education.

Some commentators are predicting that distance education and, in particular, technology-supported learning, will revolutionize the traditional university. Peters suggests that communications technologies, coupled with the demands for lifelong learning, will cause “transformation of the traditional university into an institution of self-study and distance teaching” (Peters, 2000).

University Websites are now becoming popular first ports of call for many enquirers, and act as “shop windows” for higher education providers. Inevitably, new services will be offered by universities through the Internet, including:

- virtual campus tours
- online enrolment and admission
- specialist keynote lectures via Webcasting
- individualized course delivery
- live links to special events

The above list is by no means exhaustive.

INVESTING IN PEOPLE

Developing the skills and experi-

ence of academics should be a priority for any higher education institute. Without staff development, lecturers may be isolated in their work, and unaware of new methods, technologies, and applications. Some lecturers are particularly concerned about the challenges of new technologies on the traditional paradigm. The changes affect the very essence of the teaching process, from course conceptualization through to its delivery and evaluation. Teaching online, for example, requires the teacher to relinquish the role of “lecturer” and take the role of mentor or guide (Forsyth, 1996). Technology influences the way teachers create and develop courses, how they deliver, assess and evaluate, and most fundamentally, how they think about these processes.

All change brings uncertainty and anxiety, and the management of this change must be sensitive. Without these changes, education may be in danger of stagnation, but with them practitioners and learners will be expected to adapt quickly to new knowledge, skills, and modes of working. Understandably, these changes bring with them a culture of uncertainty in which practitioners constantly struggle to keep pace with the seemingly break-neck speed of change. Staff developers have a key role to play in assuaging these fears by providing timely and relevant information on new developments and innovations, and how these will impact on teaching and learning.

WIDENING ACCESS

Instead of students going to university, the successful university of the future will go to the students. The mega-universities have already achieved considerable success in offering cost-effective access to all comers (Daniel, 1996). Many traditional universities have also started this process, investing in computer

networks, developing human infrastructures to support the process, and creating new materials in preparation.

There are several existing guidelines on how to set up virtual and distributed learning environments. See, for example, Katholieke Universiteit Leuven's Blueprint for the Interactive Classroom (BIC) Project (Vanbuel, 1998).

SPECIALIZATION

Institutional specialization will emerge as a prime survival technique. Finding a market niche will offer universities a more sustainable profile in the general mélange of higher education.

In 1999, for example, the University of Plymouth launched a new Bachelor of Science (Honours) degree in Surf Science and Technology. The world-wide surfing industry is, of course, a multi-billion dollar concern, and workers within it are in need of training. To meet these needs, the course consists of an eclectic mix of manufacturing technology (materials, design, and fabrication), ocean science (coastal zone management, marine pollution), biological science (human biology, sports performance), business management (event management, administration, and marketing) and studies in "surf culture." Due to its novelty value, the course attracted high media exposure. Subsequently, worldwide applications were received, and it is now a successful program, attracting substantial funding for the university.

To survive in the increasingly cut-throat business of higher education, smaller universities must aim to work to their strengths, unique characteristics and local cultures, and "in-house" expertise. By gathering intelligence on market trends and demand, and then offering appropriate programs with unique selling points, universities may be able to

provide themselves with a better chance of survival in a volatile and highly competitive market place.

CONCLUSION

The survival of higher education into this next century is not in dispute. What is less clear is the format in which it will survive, and exactly who will be the winners and losers in the global classroom. Radical changes in practice, management, and research will drive universities in this new century. New ways of teaching and learning must be developed and nurtured to meet the demands of a society that is in a constant state of change and upheaval. Universities will need to diversify, innovate, collaborate, and invest in human capital in order to survive. Scenario planning, careful economic management, risk and benefits analysis, and quality assurance evaluation will become essential activities. Doing nothing, however, will no longer be an option.

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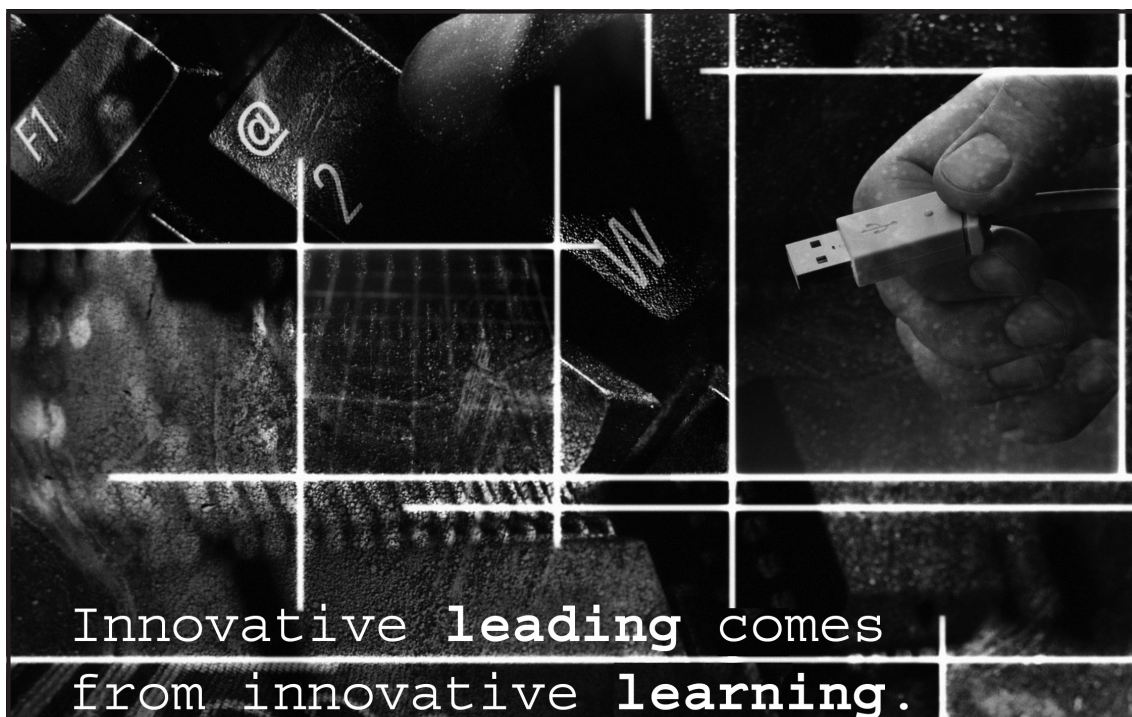
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