



### **Chapter III**

# **Web-Based Teaching: Infrastructure Issues in the Third World**

Dushyanthi Hoole, Open University of Sri Lanka  
S. Ratnajeevan H. Hoole, University of Peradeniya, Sri Lanka

## **INTRODUCTION/BACKGROUND**

The use of educational technologies is widely recognised as beneficial (IEEE, 1998; Hoole, 1988). However, cogent arguments have been made by those who have invested much time in the development of courseware for teaching (Hoberg, 1993; Vanderplaats, 1993) that the use of the technology dominates the class so much that the subject being taught tends to get lost.

In this milieu, the appearance of the Internet and the Web, and following that, Web-based teaching, offers new opportunities with caution as a caveat. Unlike courseware where an individual instructor sits down and writes programs for his class, the difference with the Web is that demands in terms of infrastructure are heavy. Not only that, while in the West, things such as a networked campus, Internet connections, etc. are taken for granted, in the Third World (defined for the purposes of this article as those countries that are not a part of North America, Europe, Australia and the newly industrialised countries of Asia such as Singapore, Japan, Korea, and Taiwan), these facilities are rare. Simply asking for all the relevant infrastructure one needs for teaching will often not produce the funds. As a result, Third World instructors wishing to embark on Web-based teaching must create a wide demand based on needs that go beyond simply teaching for these facilities and, thereby try to get what they want. They must also improvise and produce new ways of teaching with the Web.

This chapter spells out the attempts by the authors, still experimental, in producing new ways of teaching with the Web and the attempts by which an infrastructure for Web-based teaching was created at the Open University of Sri Lanka.

## THE OPEN UNIVERSITY OF SRI LANKA

Distance teaching is increasingly found to be the way to go. It stresses the fact that education does not end after four years and one knows all that is there to know, but rather is a life-long process. It democratises education by giving late-comers, the marginalised such as women and minorities, villagers and others left out of conventional education, a new opportunity. The Open University of Sri Lanka is a state university founded by an Act of Parliament and caters to some 18,000 students while the Sri Lankan conventional universities together have a total student enrollment of approximately 32,000, showing the demand for distance education. Indeed, the fact that the vast majority of science students at OUSL are women, shows the service provided to women and underscores the success of the university in meeting its goals and thereby fulfilling its mission.

Demographic patterns also give pause to planners. The heavy success of the Sri Lankan state in its family planning overtures to society, say policy-planners (Rajapakse et al., 1997), means that the labour force will trail off in the year 2011 AD. This would put Sri Lanka in the place where countries like Singapore and Hong Kong now are, looking for and hiring labour from neighbours. But in 2011 AD, would there be countries for Sri Lanka to hire such labour from, competing with more advanced countries which also would be even more labour-short than they now are and competing for the same labour with better remuneration? It is now therefore increasingly agreed that while the Sri Lankan economy needs more graduates to shift to less labour-intensive work, the conventional universities cannot meet this demand because of lack of teaching staff and cash-limits on infrastructure expansion. The experience in Sri Lanka is that as new universities are opened in a country with a fixed number of qualified staff, poaching occurs – especially by attracting junior staff from the established universities to senior positions in the new universities. As a result, country-wide the staff quality goes down. However, since in open education, a teacher mainly prepares lessons and needs little else in terms of heavy infrastructure, it is now recognised that open education must be relied upon more and more to meet the anticipated shortage of graduates.

Presently, OUSL teaches through the printed medium where the material can be rather drab and the students do not have peer interaction to gauge for themselves how effectively they are studying. It was decided at the Senate of the OUSL therefore to try out two experimental courses on the Web as an alternative (or even a supplement) to the print medium. This chapter is a result of that effort.

## BENEFITS OF THE WEB

Before proceeding, it is useful to describe the benefits of Web-based teaching based on a campus-wide network to keep in context the comments being made here. The described benefits are also based on the authors' experience in teaching in California. These are:

- Ideal to link/integrate a university community.
- In a linked community, the main disadvantage of open, distance education – learning in isolation and the attendant boredom and the inability to gauge the adequacy of ones level of work input that results in a high failure rate – is ameliorated.
- Lesson materials can use colour, sound and animation and can include the instructor's voice as in the lessons the authors have developed. It is noted that the incorporation of colour in print is relatively very expensive.

7 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/web-based-teaching/31377](http://www.igi-global.com/chapter/web-based-teaching/31377)

## Related Content

---

### Finding Determinants Affecting Distance Education Effectiveness in Terms of Learner Satisfaction and Application Achievement

Jeong-Wook Kim, Kyung Hoon Yang, Kichan Namand Sung Tae Kim (2010). *International Journal of Web-Based Learning and Teaching Technologies* (pp. 18-36). [www.irma-international.org/article/finding-determinants-affecting-distance-education/44690](http://www.irma-international.org/article/finding-determinants-affecting-distance-education/44690)

### Use of Humanoid Robots for Students With Intellectual Disabilities

Aye Tunaand Emine Ahmetolu (2019). *Educational Technology and the New World of Persistent Learning* (pp. 208-228). [www.irma-international.org/chapter/use-of-humanoid-robots-for-students-with-intellectual-disabilities/220186](http://www.irma-international.org/chapter/use-of-humanoid-robots-for-students-with-intellectual-disabilities/220186)

### Students' Perceptions of Flipped Classrooms, Gender, and Country Difference

Emad Ahmed Abu-Shanab (2020). *International Journal of Web-Based Learning and Teaching Technologies* (pp. 36-56). [www.irma-international.org/article/students-perceptions-of-flipped-classrooms-gender-and-country-difference/261584](http://www.irma-international.org/article/students-perceptions-of-flipped-classrooms-gender-and-country-difference/261584)

### Successful Implementation of Technology to Teach Science: Research Implications

David A. Slykhuisand Rebecca McNall Krall (2012). *Educational Technology, Teacher Knowledge, and Classroom Impact: A Research Handbook on Frameworks and Approaches* (pp. 271-294). [www.irma-international.org/chapter/successful-implementation-technology-teach-science/55367](http://www.irma-international.org/chapter/successful-implementation-technology-teach-science/55367)

### MOOCs Learners: Self-Motivation and Success in Online Learning

Tabassum Amina (2020). *Handbook of Research on Digital Learning* (pp. 190-210). [www.irma-international.org/chapter/moocs-learners/238719](http://www.irma-international.org/chapter/moocs-learners/238719)