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Modelling the impact of university ICT strategies on learning

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Modelling the Impact of University ICT Strategies on Learning

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This research explores the potential of certain Future Studies techniques (Barbieri Masini, 1994) to provide insight into the question of how developing countries might best exploit Information and Communication Technology (ICT) for higher education.

Three case studies:

- African Virtual University (AVU)
- Arab Open University (AOU)
- Syrian Virtual University (SVU)

Key variables modelled:

- Globalisation
- ICT Strategy (Table 1)
- Student Learning (Box 1)

These models were coordinated to generate possible scenarios for how ICT Strategy might influence Student Learning, making assumptions about "typical" usage. The aim was to explore limitations of broad-brush models - to see how they could be improved - rather than to make unchallengeable claims

Box 1: ICT Strategy, based on generations of distance education (Taylor, 2001, and others)

Generation	Characteristic technologies
1. correspondence	print, post
2. multimedia	TV, radio, audiotape, videotape, CDs, DVDs
	simulation software, virtual laboratories, virtual fieldtrips
3. telelearning	audio/video conferencing systems
4. e-learning	webpage-based courses, document databases, wikis, blogs, e-portfolios
	asynchronous text-based conferencing, email, internet chat
5. online multimedia	online multimedia learning object repositories
	online audio-conferencing, online video-conferencing
	online interactive software, online gameworlds, remote & virtual labs
	online administration, automated response systems, agent technologies, distributed course development, standardised course representations
6. mobile multimedia	mobile access to online multimedia

Box 2: Dimensions of student learning (based on Conole et al, 2004)

Individual versus Social: the extent to which the individual is the focus of learning, or to which learning is explained through interaction with other people and the wider social context.

Reflection versus non-Reflection: the extent to which learning arises through conscious reflection or through conditioning and memorisation.

Information versus Experience: the extent to which the basis of learning is text, artefacts and bodies of knowledge on the one hand, or direct experience, activity and practical application on the other.

Autonomy: the extent to which the learner is self-directed.

Figure 1: ICT with respect to the Globalisation and Individual-Social dimensions

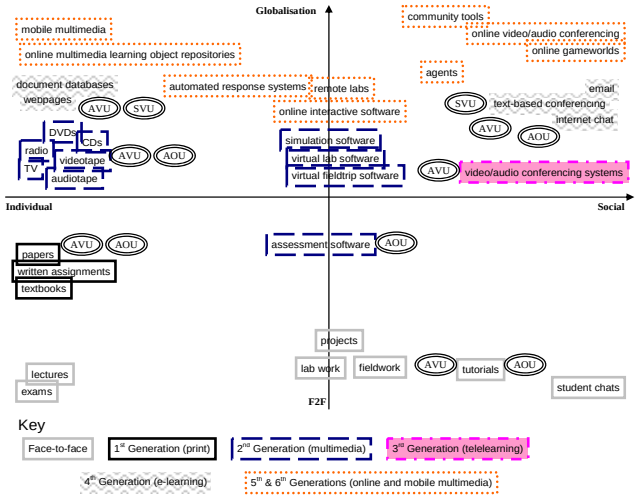
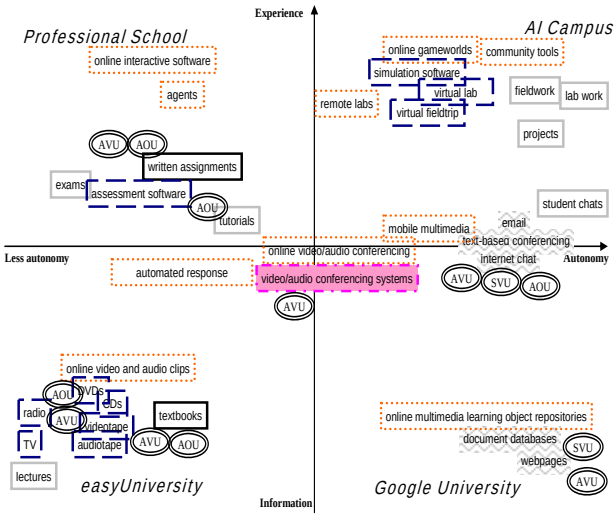


Figure 2: ICT with respect to Information-Experience and Autonomy



Further research

- a richer selection of variables
- more sophisticated models
- more detailed institutional data

References

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