

Information Science in Tertiary Institutions: Excerpts from a Teaching Career

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Geographic Information Systems (GIS) technology is inherently a multidisciplinary science. Sustainable viability of this discipline depends on a number of

allied disciplines. A generic context of GIS technology is presented below (Fig. 1).

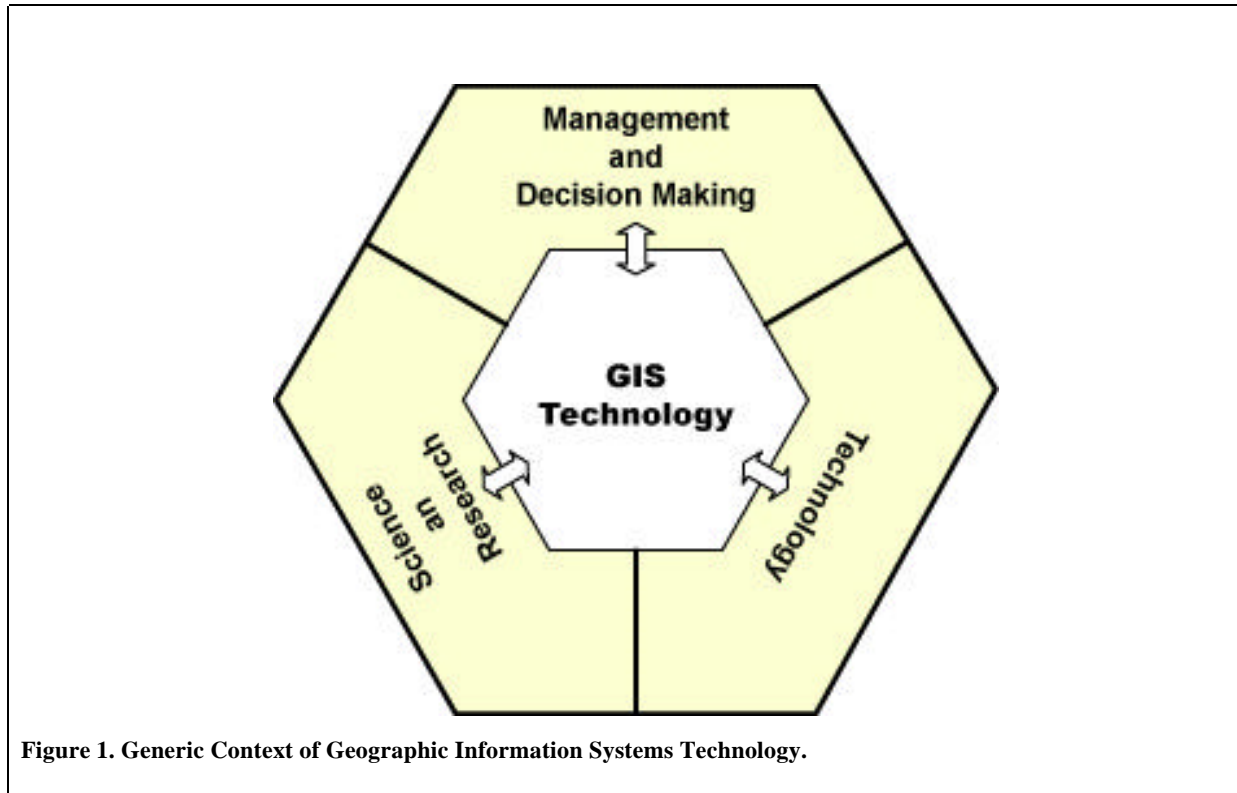


Figure 1. Generic Context of Geographic Information Systems Technology.

An important aspect of sustainability for GIS teaching is the goodwill of governments and decision-makers supporting research in application of spatial information technology and its integration in society. Consequently, strategic keys to the future sustainability of geospatial information science education hinge on the benevolence of software developers and vendors. The need for this support is twofold: 1) availing educational institutions adequate access to technology by providing software and hardware at concessionary prices; and 2) provision of lifelong partnerships between educational institutions and technology providers.

Bridging Chasms

There are a number of hindrances to sustainable advancement of GIS perhaps most particularly within African tertiary institutions:

- Ⓒ In most tertiary institutions, GIS curriculum planning is fragmented, deficient, and often fails to address the inherent multidisciplinary nature of the science. As long as these trends persist the teaching of GIS in tertiary institutions will remain uneven and its quality compromised;
- Ⓒ Lack of national or regional curricula development initiatives and standards for regulatory bodies;
- Ⓒ Rapid upgrades of hardware and software far outstrips the replacement capacities of most tertiary institutions;
- Ⓒ There is no projected strategic vision for re-training of trainers.

Keys to a Sustainable Future in Geospatial Information Science

For the African continent to build GIS education there is a need to implement the following:

- C Countries or regions such as the Southern African Development Community (SADC) should identify institutions that have the potential capacity to offer GIS education on a sustainable scale;
- C Institutions with reasonable capacity should be directed to stipulate curriculum standards as well as benchmarks in the use and application of GIS technology.

These steps will ensure the efficient use of both financial and human resources and provide a meaningful proposition for institutions so dependent on central government treasuries:

- Integration by linking efforts of GIS industry and educational institutions and involving both in formulating curricula appropriate to the region is essential. A holistic approach that views the needs of all stakeholders is indispensable.

Conclusion

The sustainable course to a sustainable future in geospatial information science and education lies in well-designed national or regional spatial data infrastructures and well-developed curriculum standards that recognize the true needs of society and

rapid changes in technology. A global view of these issues is necessary in order to facilitate learning from other countries and from experts that have dealt with similar issues.

Notes

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