

## INTRIGUING FACETS OF INSTITUTION RESEARCH

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### INTRODUCTION

The higher education landscape, all over the world, is in constant flux. A changing external and internal environment is not a new phenomenon in higher education but is an inherent characteristic of the higher education system over centuries.

The Association for Institutional Research (AIR) was established in the United States of America in 1959. The relevant burning issues confronting higher education institutions in the USA at that point in time, and which gave rise to the need for the establishment of such an association, fell under the following main categories which were included in the program of the very first AIR-Forum.

- Enrolment management and student affairs.
- Institutional effectiveness, student learning and outcomes assessment.
- Academic programmes and faculty issues.
- Resource management and quality improvement.
- Policy analysis, planning and governance.
- Theory, practice and ethics of institutional research.
- Technology and tools for institutional research.

Forty years later the agenda for the 42<sup>nd</sup> Annual AIR Forum, in Toronto, Canada, still contains the same seven main categories. An analysis of the presentations in the different categories, however, shows that while similar issues as those in the early nineteen sixties are addressed, the strategies and solutions to the problems differ substantially from those of the past, mainly due to the advancement of technology.

### WHAT IS INSTITUTIONAL RESEARCH?

An exact definition of institutional research is just as difficult to come by as a definition for the present-day notions of distance and contact education. Terenzini's (1993) definition is perhaps the most comprehensive description of what institutional research encompasses:

INSTITUTIONAL RESEARCH = ORGANISATIONAL INTELLIGENCE

where organisational intelligence has three different but equally important and interdependent components

- Technical/analytical intelligence
- Issues intelligence
- Contextual intelligence

In this paper an attempt will be made to show the intriguing and interdependent issues, pertaining to institutional research at institutions of higher education.

### INTERRELATED ISSUES

Issues concerning *technical/analytical intelligence* are multifaceted. Student enrolment management, for example, can be a complex and highly technical modelling exercise, especially when the school delivery system is unstable and unpredictable. Forecasting student enrolments in an environment where different admission requirements apply at institutions that offer a large variety of qualifications in diverse faculties is, to say the least, a very challenging exercise.

Mathematical modelling can assist decision making by evaluating different scenarios that take into account external and internal environmental influencing factors. Dropout and graduation

rates also play an important role in any modelling exercise, which attempts to determine the current or future state of an institution.

Closely connected to technical/analytical intelligence is the *intelligence associated with specific issues*, e.g., pricing and resource allocation. A broad approach to the issue of academic staff allocation and its link to financial viability of academic offerings in a department or faculty is another facet of specific issues that have to be taken into account by institutional researchers.

*Contextual intelligence* encompasses the understanding of the culture of both higher education in general (nationally), and of a specific institution. The historical and cultural evolution of a country with regard to its socio-economic and political systems, plays a crucial role in the development of the higher education policy of the country and, therefore, implicitly and unequivocally on individual institutions of higher education. The customs, governance and decision-making processes in an institution have to adapt, sometimes very rapidly, to such changes. The impact of these contextual issues on an institution is of crucial importance to the strategic planning process at institutions.

## CHALLENGES FOR INSTITUTIONAL RESEARCHERS

The dynamics of the current political, economic, education, social, judicial and technological environment, both nationally and internationally, create new challenges for the higher education sector in South Africa. All these environments are intricately interconnected and are subjected to positive and negative feedbacks, which will impact on the future trajectory of higher education. The present socio-economic divide that still exists in South Africa places extreme pressure on the Treasury to eliminate social inequalities, which may result in diminishing funds for the higher education sector.

The capacity of the school system to deliver the quantity and quality of students for higher education is severely under stress. This capacity is further jeopardized by the HIV/AIDS pandemic which may have a devastating impact on school learners, students at higher education institutions and on the academic staff at all levels of the education systems. Funding and managing an education system which is exposed to these forces of such magnitude is and will remain a formidable challenge to Government and institutions of higher learning.

Another challenge for higher education institutions is the present and future impact that technological influences may have on the educational system. The rapid increase in connectivity and connectability, computing power, virtuality and the timing and volume of investment are crucial to a sustainable and relevant higher education system. The global frenzy of the development of e-environments poses a challenge for the higher education institutions in South Africa to develop e-strategies to face the future with confidence and in this way contribute to the economic development of the country. The challenges arising from the realities that the internal and external environment dictate include the dawning of a new political dispensation which brought with it a new framework for higher education as well as a multitude of new legislation which affect the higher education system as a whole and some individual institutions more than others.

## SUPPORTING DECISIONS THROUGH INSTITUTIONAL RESEARCH

Strategic planning at institutions of higher learning should be a continuous process that will allow an institution to respond quickly and appropriately to internal and external environmental changes. Strategic planning encompasses the formulation of a mission statement, the setting of goals, objectives and action plans, driven by time schedules. It is acknowledged that one of the basic requirements for effective and efficient strategic planning is a reliable and comprehensive management information system (MIS). Management information should be accessible to all managers in a decision-making position in a user-friendly and transparent way. Management information should include information on every aspect of student activities, i.e., applications, admissions, enrolments for study programmes, and course selections, success rates, drop-out and graduation rates. The "quality" and personal motivation of first-time entering students are some of the criteria that have to be taken into account to establish the chance of students to study successfully.

Interlinked with the student information database are the equally important research, finance, personnel, fixed assets and space and facilities information databases. An integrated MIS, which addresses all of the above-mentioned subsystems is crucial for effective strategic planning. An integrated and effective MIS allows for the construction of a large number of performance indicators that could be used to trace the efficiency and effectiveness of an institution over time. Cognisance should however, be taken of the complexity of management information systems in universities (Simon, 1997; Fielden, 1998). The following quotes from these publications highlight the problematique.

“[All the authors contributing to the publication] will admit that the truly successful implementation of an MIS is a rarity” (Simon, 1997, Prefice).

“Finding case studies to present in this publication has proved difficult. Perhaps this is because nobody wants to link their name with failure and successes are so few” (Simon, 1997, p. 25).

“For most developed country universities an MIS has been a goal for a long time but it is also a continually moving target because of changes in the university’s organisation and structure, its information needs and the capabilities of the hardware or software available. As new technology flows into the market, the ideal MIS is always beckoning, just out of reach, 5 to 10 years ahead” (Simon, 1997, p. 1)

On a national level, an integrated and comprehensive management information system, is also seen by Government as a crucial component that will drive the National Plan for Higher Education (NPHE) (2001) that was published by the Minister of Education in February 2001. The Department of Education proposed a set of twelve indicators and benchmarks for the use by a National Working Group, appointed by the Minister, to advise him on certain aspects on the implementation of the NPHE. The indicators and benchmarks that were suggested by the Department of Education can be grouped into a number of categories, i.e.

- Staff and student equity,
- Enrolment stability, size and shape,
- Student to staff ratios and staff qualifications,
- Teaching outputs (both undergraduate and postgraduate),
- Research outputs (both in terms of publications and research student graduates),
- Financial status.

The universities in South Africa responded positively, but cautiously, to these suggested indicators and benchmarks and stressed that the development of indicators/benchmarks require a highly systematic approach and a stable and reliable database in which there are no definitional ambiguities. It is also of great importance that the indicators should be subjected to rigorous testing to ensure that these conditions have been met. For this reason most of the universities expressed doubts about using the indicators before a validation process has been completed. Of particular concern is the fact that the Higher Education Management Information System (HEMIS), which is in the process of replacing the present South African Post Secondary Education (SAPSE) information system, is still new and the data have not yet been refined and verified. As a result, uncertainty exist. In the light of the reservations, the universities felt that any conclusions reached on the basis of the proposed twelve indicators/benchmarks at this stage will have to be treated with caution.

Through the South African Universities’ Vice-Chancellors Association (SAUVCA) the universities have supported this initiative of the Department of Education in principle, although they emphasized that academic institutions should not be seen solely as businesses and that “managerialism” in universities should not be overemphasized. It is generally conceded, however, that careful and effective management in universities is a prerequisite to gain the most benefit from the limited funds available to higher education institutions (SAUVCA, (2001)). The universities agree that the development of performance indicators/benchmarks could assist in achieving this goal.

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