Chapter 17

Strengthening Internationalisation of the Curriculum in Higher Education: A Case Study

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ABSTRACT

Internationalisation has become a buzzword in institutions of higher learning today. Universities are challenged to find ways of making their curriculum have international dimensions. This chapter presents a case study on how to enhance internationalisation in an engineering programme piloted at a university of technology in South Africa. Daniel Stufflebeam’s Context, Input, Process and Product evaluations model was used as a theoretical framework. Data was collected using semi-structured interviews with the Dean of the faculty, Head of department and a programme coordinator. The findings suggest that a mobile profession like engineering requires purposeful integration of internationalisation in order to increase graduates’ chances of being active participants in a global economy.

INTRODUCTION AND BACKGROUND

Some lecturers in South African universities held a strong belief that engineering programmes naturally incorporate aspects of internationalisation. They clinched onto that belief because of two fundamental arguments: first, engineering content knowledge is similar across different countries. For example, a topic on renewable energy is similar all over the world. This argument, according to de Wit (2011) is a myth and misconception of internationalisation which is tantamount to claiming that university education is international by its very nature.

Second, all engineering programmes in South Africa are internationalised by virtue of the professional body, Engineering Council of South Africa (ECSA) being affiliated to international accords. ECSA accredits engineering programmes in South Africa. It is a signatory to the Washington, Dublin and Sydney.
accords, all being members of the International Engineering Alliance [IEA] (ECSA, 2015). In view of the mobility of engineers, trans-border services and common minimum standards, the Washington, Sydney and Dublin accords banded together developed and developing countries to ease the recognition of standards and qualifications (ECSA, 2015). In order for ECSA to accredit a programme, they check whether it meets global standards which is a prerequisite of the three accords it is signatory to. The fact that ECSA works closely with international accords makes lecturers conclude that internationalisation occurs naturally in engineering programmes.

The second argument that all engineering programmes in South Africa are internationalised because of a professional body is counteracted by acknowledgement made by ECSA: ‘While local contexts and detailed knowledge required may differ from country to country, engineering competencies are increasingly being recognised as having a common baseline’ (ECSA, 2015, p. 1). A view that engineering professions are mobile and contexts and detailed knowledge required may differ from country to country, factors in the deliberate integration of internationalisation (Knight, 2011). Students need to be purposefully engaged in order to develop their international and intercultural perspectives (Leask, 2015). This enables them to be competent employees in various contexts.

Internationalisation does not occur naturally, it needs to be introduced so that students may acquire the concept and its fundamental aspects (Victoria & Diana, 2017; Yemini, 2014). This concurs with Knight’s (2003, p.2) widely used definition of internationalisation: ‘the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education’. The definition states that internationalisation is the process of integrating. This refutes a natural occurrence of internationalisation, but, view it as a concept that is deliberately incorporated into one’s learning. Leask (2015) and Yemini’s (2015) proposed new definitions of internationalisation points to the aspect of deliberately integrating international, multicultural and global dimensions into the teaching and learning process. All programmes in a curriculum which students study needs to have a combination of both local and international information so that they graduate with skills which enables them to work in any context around the globe. The engineering curriculum is not an exception in this regard (Meda and Monnapula-Mapesela, 2016).

**Internationalisation of Engineering Curriculum**

The way in which internationalisation is dealt with today is different from the way it was dealt with in the past. In the past, internationalisation of curriculum was optional, but, due to strong effects of globalisation, it is a necessity in every university curricula today (Harris, 2008). Yemini (2014) postulates that the push towards internationalisation in a 21st century university is inevitable and uncontainable in the context of pervasive globalisation. Curriculum internationalisation is a strategy adopted by many universities as they prepare their graduates for employment in a global economy (Knight, 2011).

A discipline like engineering happens to be one of the mobile professions because of its global outlook. Ginsztler (2001) maintains that engineering profession has a high degree of mobility from one country to another. It is independent of national boundaries, unlike professions like law, medicine and literary arts (Badoux, 2001). Engineering profession has a clear global context in the sense that its key skills and knowledge bases are relevant throughout the world (Blum & Bourn, 2013). This undoubtedly calls upon internationalisation of engineering education in order to prepare students to be active participants in a global economy.
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