

AN APPROACH TO UPGRADE ENVIRONMENTAL MANAGEMENT CURRICULUM IN UNIVERSITIES

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Introduction

Remarkable attention on the quality of environmental management teaching has been paid recently in developed countries. However, this is a new experience for the countries in the developing world. It is imperative to learn lessons from well established study programs in the world in order to establish high quality, standard higher education programs for the benefit of proper management of the environment in any country. Remarkable role is to play by education for sustainable growth with equity and peace (Little, 2009).

Quality and relevance are the major issues faced by many of the study programs in universities. In one hand, high standard programs are to be conducted to improve international acceptance of the programs and in the other hand, the programs to be relevant to 21st century requirements of the society. Various approaches are been tested in achieving above goals leading to a range of curriculum revisions. *Student centered learning* approach is highly recommended by higher education management in Sri Lanka. *Market orientation* of degree programs is also immersed in the recent higher education discussions

which conflicts with *knowledge oriented* academic traditions.

Environmental management study programs are interdisciplinary in nature and they require pragmatic and professional approach. Environmentally responsible behaviour is dependent upon connectedness to nature (Frantz, 2013). Therefore, applying relevant model is crucial as it pays the way to future of the emerging and developing discipline of environmental management. It is needed to conduct comparative study on these issues to produce a proper vision for implementation of 'project based curriculum revisions' in the relevant field.

Objectives

Primary objective of this study was to construct a model for defining appropriate approach in upgrading curriculum on environmental management teaching in universities. In fulfilling this objective it was suggested to study various approaches applied in the field in developed countries. Further, it was expected to study such a program in a developed country by participating the teaching program and closely examine the process and practices.

Methods and materials

This study applies a pragmatic approach to the study and case comparison for analysis. Researcher's experience in teaching the same discipline, interviews of other teachers of the same discipline from Rajarata University of Sri Lanka (RUSL) and Central Lancashire University (Uclan) in UK were the basic method of primary data collection. The researcher was involved in the teaching program in Uclan by teaching, offering guest lectures and participating in lectures conducted by other staff. Structured interview were conducted with lecturers teaching B Sc (Hons) in Environmental Management. Further, *thematic coding* and *content comparison* was conducted. Differences and similarities of the programs of both universities were extracted and compared with secondary sources related to teaching programs of other countries. Finally, searching advantages of both programs essential aspects were combined to form the expected model.

Results

Present scope of the discipline, boundaries of environmental management can be defined by its rooting, stemming and branching disciplines. Taking the main route from Geography, it is having roots from Sociology, Natural Sciences and

Management and branching applications (Fig. 1).

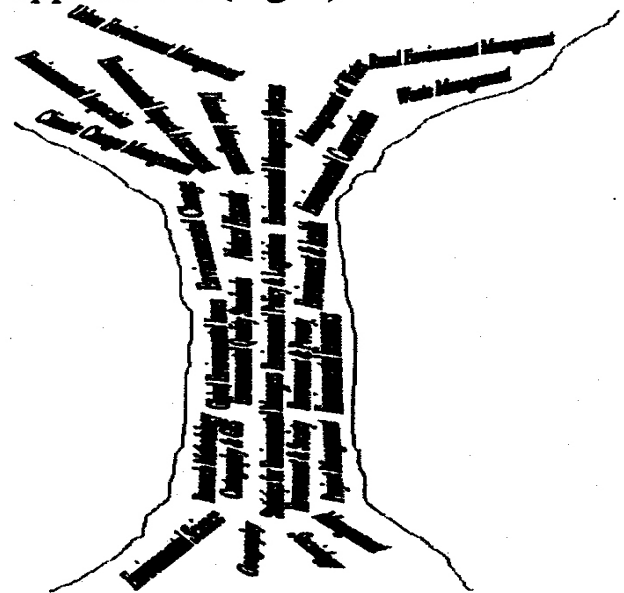


Figure 1. Environmental Management tree

Above three approaches are seemingly polarizing in three directions. Different academics have different places in the three opposing categories. The academics arguing on *deep scientific knowledge* cannot agree with the *student centeredness* and the *professionalism*. Student centeredness does not agree with professionalism and deep scientific knowledge. And those who believe thoroughly on professionalism cannot agree with deep scientific knowledge and student centeredness. We are dealing with a dilemma which needs pragmatic solution. This nature is shown in the figure 2.

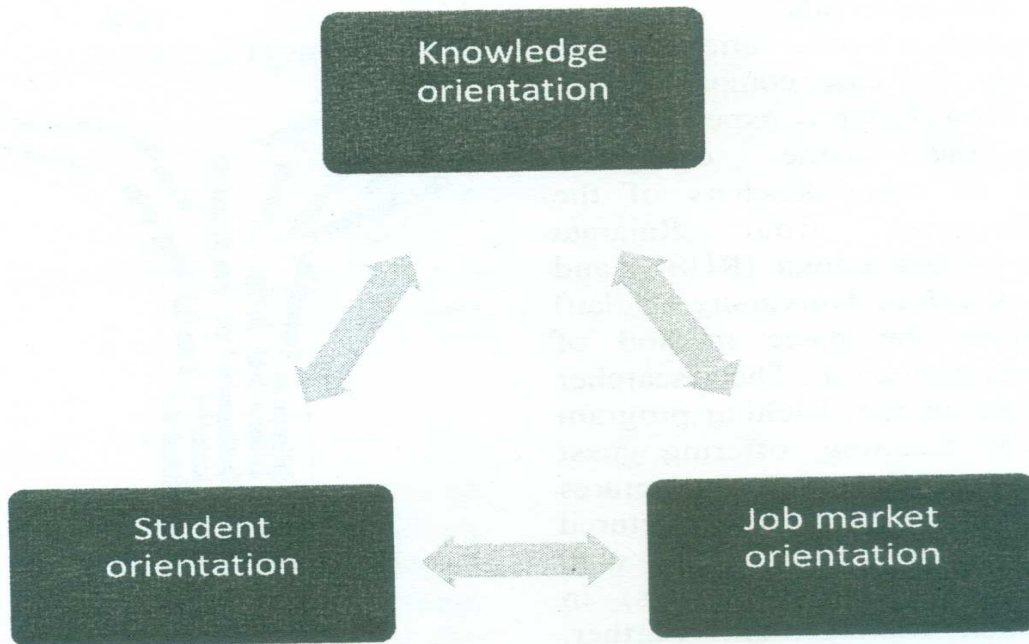


Fig 2. Polarizing nature of approaches.

The Approach of *scientific knowledge* is supported by many conventional academics looking at their scientific career oriented to postgraduate and further studies. *Professionalism* is supported by professionals and *student centeredness* is supported by pedagogical streams. Environmental management teaching should be

arranged to meet all three requirements. The graduates should have opportunity to enter in to the world of sciences, world of work and they should realize their potential through the program. Proposed nature of mixing of categories is presented in the figure 3.

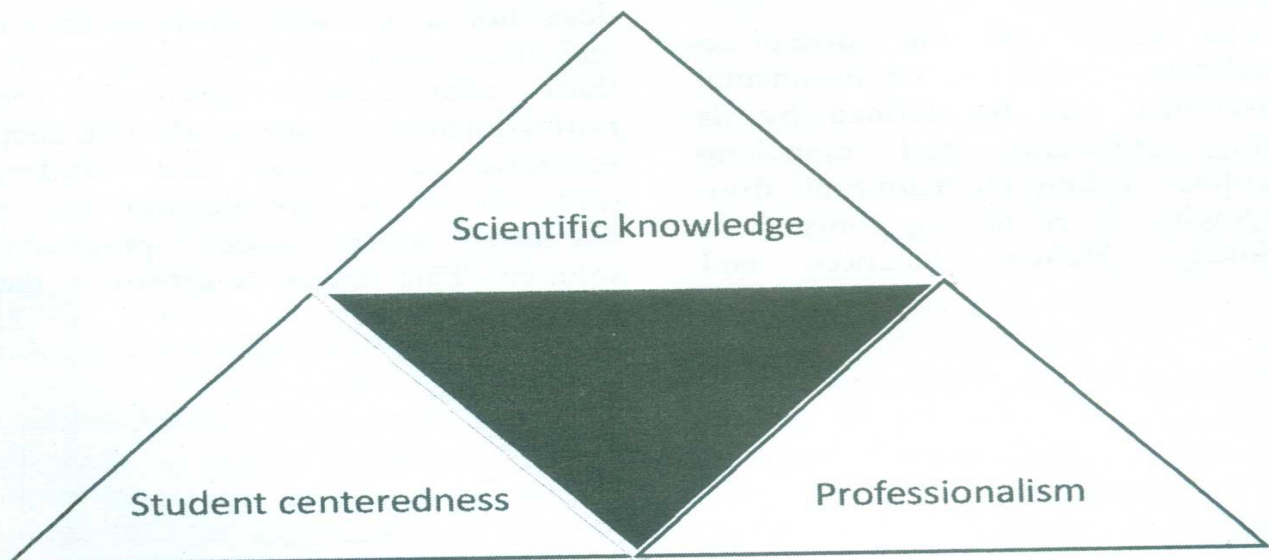


Figure 3. Proposed mix of approaches

If we are supposed to introduce several degree programs, all programs should meet all three requirements. However, job market requirement may separate degree programs. For example, the degree programs oriented to produce graduates to teach Geography in school

will be different from programs oriented on producing environmental managers. Consequently, the degree programs are separated by their job orientation keeping same scientific knowledge and student orientation (Figure 4).

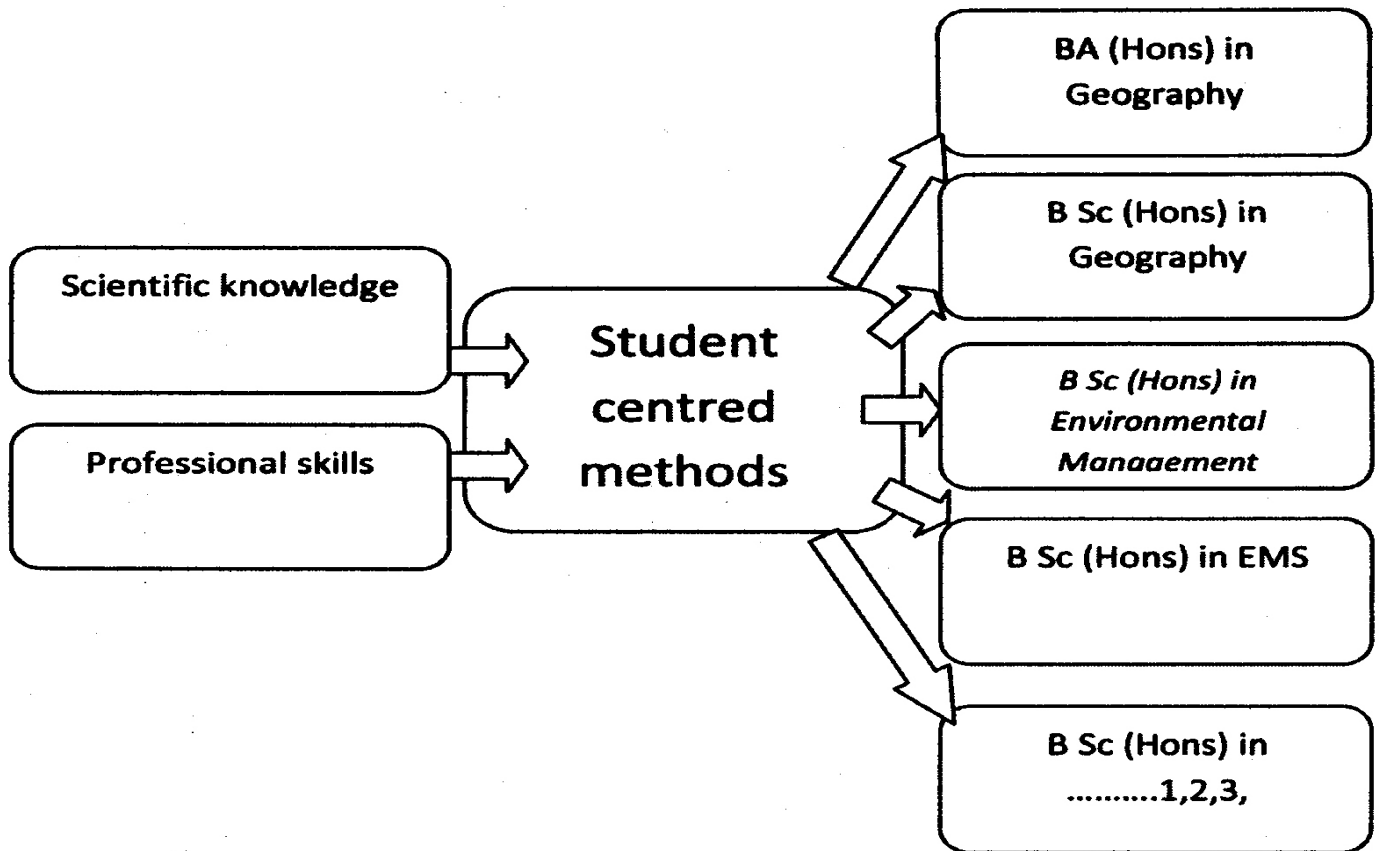


Figure 4 An approach to improve relevance of study programs

Probably BA Geography would be the course oriented to producing GCE (Advanced Level) Geography teachers. Another requirement seems at present is producing Environmental Managers to manage environmental issues suiting with international standards (ISO14001). This would have larger application if we are able to properly identify needs of the institutions.

Discussion

Continuous education with periodical review by interdisciplinary group is an important aspect in keeping the quality and relevance of the study programs (Rodrigues, 2014). This should be enriched with field work, inquiry-based and problem-based learning (Day, 2012). Meanwhile, need for real projects, environmental

education for engineers and improving teacher student relationship are suggested for improving quality and relevance of study programs(Ghaffari, 2013).

Conclusion

From the above discussion it is concluded that it would be possible to introduce several environmental management study programs with similar nature of generic skills, attitudes and knowledge, with similar scientific knowledge and student centeredness and separated each other by the professionalism under the same benchmark statements. There would be slight variation in all components in various study programs. There are various needs of the society expected from a graduate of environmental management and all those expectations could not be considered by a single study program. Meanwhile, all those components are not expected from a single person. This would be justification for offering many environmental management study programs with the same basis.

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