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A Study On Relevance Of Student's Attitude, Implementing An Interdisciplinary Approach In a Post Graduate Program.

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ABSTRACT

In today's scenario most of the programs are interdisciplinary in nature. A very few 'curriculum models' are in place in the bibliography record to study the impact and implementation style. One such curriculum model SRU-2011 was implemented in the center identified and the output was reviewed. The usual problems related to Inter - Disciplinary Programs are unrelated subjects, growth of new fields of study, selection of different subjects, different impacting methods, student's impact and attitude issues. Of the above mentioned issues we found that a correlation exists between attitude related issues and student placement results. The outcome of these results and other related issues have been discussed.

KEYWORDS

Bioinformatics, Interdisciplinary, Curriculum Design, Attitude, Placements.

1.0 HIGHLIGHTS

Over a period of time several academic disciplines have become more interdisciplinary rather than stagnate as unidisciplinary ones. Bioinformatics is emerging and practised as, one such 'typical interdisciplinary academic discipline'. The interdisciplinary program chosen for this study is the PG program - M.Sc. (Bioinformatics) in the Department of Bioinformatics at Sri Ramachandra University, Chennai, Tamilnadu, India. We have implemented, the SRU model (Published curriculum model) for the curriculum development, the purpose of this model is of the interactions of various Academic-components in a system, the experimental techniques that most suit systems biology approach are those that are system - wide. The admission details (their undergraduate field of study/entry level skills) and the results of their placement had been studied for the students of the M.Sc. (Bioinformatics) course for 5 consecutive batches have been studied in the Department of Bioinformatics at Sri Ramachandra University, Chennai, Tamilnadu, India for the time period between 2004 -2008. Research shows that the Study centre where SRU Model has been implemented is stable with reference to

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producing an interdisciplinary science for a 5 year period as it is found to be very flexible. The choice of the career of students which is an exhibition of their attitude towards placement could be a result of the consequential reasoning. At this juncture, we were able to identify the individual components (Attitude related issues like Subjects, teacher's influence, Peer influence, Opportunity Trend influence, Attitude, Student's influence).

1.1 Science: In the pursuit of knowledge, academic institutions classified sciences as physics, chemistry, mathematics and computer science and so on, called by the generic name of pure sciences. In course of time, it was realised that such compartmentalisation was found to be meaningless and interdependence was not only desirable, but unavoidable. In other words, study of pure academic disciplines has been replaced by study of interdisciplinary disciplines. Academic Disciplines can be broadly classified into two major groups - Pure Sciences and Interdisciplinary branches, on the basis of their scope of delivery / practised in Colleges, and Universities.

1.2 Pure sciences: They are also be called 'Uni-disciplines'. Over a period of time, several academic disciplines have become more interdisciplinary rather than stagnate as unidisciplinary ones. Bioinformatics is an emerging and practised as, one such 'typical interdisciplinary academic discipline'.

1.3 Uni-disciplinary Science:

The 'uni-disciplinary' science approach is applied to wildlife can have minimal impact on conservation. This is because conservation can be likened to a complex jigsaw puzzle, where the puzzle pieces are issues, stakeholders or scientific disciplines themselves. It is unlikely that any single discipline (reproductive biology, genetics, nutrition) could be the sole key to solve a particular conservation jigsaw puzzle.[1] Subjects like Mathematics, Physics, Chemistry, and Biology, are considered as unidisciplinary in nature. Hence, these are also called as pure sciences. The advantages of unidisciplinary sciences are as follows.

(a) Focus and undivided attention is possible. (b) Research and Development in the chosen field is faster. (c) New discoveries or patents are possible.

However, in spite of the advantages, there are some disadvantages too. They are as follows. (a)Research in related subjects becomes difficult.(b) As these subjects have evolved over a period of time and newer fields of study emerge, the scope for research in these uni- disciplinary subjects have got diluted.(c)In addition to this, Research and Development in unidisciplinary subjects become difficult as over a period of time, its growth becomes stunted and future discoveries and innovations get diluted.

1.4 Interdisciplinary Sciences: As specialisation became necessary newer subjects like Integral mathematics, Computer Science, Biotechnology and Bioinformatics which are truly interdisciplinary came into existence. According to a definition created by the National Institutes of Health (http://www.nih.gov/), Bioinformatics is research, development, or/and application of computational tools and approaches for expanding the use of biological,