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Sustainable Development in Academics by Incorporating it as Professional Practice

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ABSTRACT

Many organizations are working towards sustainable environment practices in their professional and personal livelihood for making country the best. Efforts are put to facilitate these prevailing conditions by balancing moral, social, economic and environmental challenges. People are facing many challenges in their daily routine to habituate themselves towards unhealthy practices in every aspect of living. Certainly, it is essential for educating young minds by broadening the awareness on sustainability. By implementing sustainable development into the graduate curriculum across universities addresses problems of various disciplines such as political science, sociology, geography, economics, ecology and environment sciences. This article proposes to introduce sustainable development as a core course curriculum. Various areas of study are given as elective papers with multiple themes and students need to implement these practices as a capstone project by the end of the term.

Keywords: Sustainable, learning, curriculum, development, academics, professional

Sustainable development undertakes parallel exertions to handle global challenges such as poverty, hunger, global warming, inequalities, education, peace, sustainable communities and cities and justice to name a few. Many of these challenges need to be tackled before 2030 by incorporating sustainable practices in our daily routine for the prosperity of future

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generations. The concerned interest could be sustainable production and consumption system, industrial development, equitable, technological prosperity and maintaining ecological balances. Sustainable development plays a more significant role in policy making for better future endeavors. Practical implementation of theoretical knowledge assists in understanding the challenges and execute policy process for strategic decision making. Organizations are adapting sustainable practices to address the challenges of balancing economic, environmental, political and social welfare aspects.

To mobilize these practices as a mandatory system inclusion of sustainable development in the curriculum develops growth and prosperity of future generations. The course on sustainable development need to be approved across universities by imparting into academics, profession, social and moral communities by training the future generations. The course can be associated in bachelor's degree and master's degree programs. In this article a curriculum model is built for both the degree program and also can be included electives or certification courses. The course is designed based on (1) curriculum structure depend on proportions of core and electives, (2) depth of core subjects under various domains, (3) specialization disciplines. The offering course on sustainable development examine consistency and diversity of each field and compares the decision making in the real-life scenarios [1].

These courses have a diverse approach towards inter-disciplinary, multi-disciplinary, cross domains, trans-disciplinary and problem based on current trends. Academic institutions tend to support individuals in various disciplines by embedding the sustainable development programs in to the degree programs [2]. These models definitely show a better path leading considerable variations in the structure of course curriculum, content, design and final capstone projects.

The theme sustainability in degree programs should focus on practical change in tackling ecological imbalances, political, social, economic and environmental challenges. This requires a novel thought process and extensive literature study as a central element to develop suitability. This method involves substantial change in teaching aspects and research carried at higher education institutions.

This article is organized into 3 sub sections. In section 2 a jest of literature is discussed on introducing sustainable development in curriculum. A proposed model on sustainable development for degree programs is delivered in section 3 and section 4 describes the pros of the model. Section 5 explains the course outcomes and later paper concludes.

Related Work

Table 1: List of Authors suggesting the Sustainability curriculum in Higher Education [1][2]

Year	Author	Discussions
2001	Elkington	Economic, Environment and social are three pillars intersected to each other
	Yuan	Universities and Higher education institutions are promoting the necessity of quality life in the society
	Kates	Sustainable program should bridge natural sciences and social
2003	Clark and Dickson	Understanding complex interactions between environmental sciences and human
2006	Sherren	Introduced Australian environmental based sustainable programs for nine-degree courses
	Komiyama and Takeuchi	Sustainability aims in integrating social and economic dimensions
2007	Clark	Sustainability deals across natural and social sciences and the art and humanities in various academic divisions
	Domask	Sustainability need focuses on creating new job roles and future managers to integrate environmental and social dimensions
2008	Lewis	Environmental education is considered to be a rapid research area in contributing towards development of systemic thinking
	Segalas	Presence of sustainable aspects within special disciplines under various geographical areas
2010	Martens	Learning approaches are employed to study inter- or trans-disciplines
	Chusid	Education for sustainability in graduate and under graduate programs
2012	Yarime	New academic program has rapidly emerged in research on sustainability
	Iyer-Raniga and Andamon	Asia-Pacific International curriculum on sustainability having design, content and structure are deployed in higher education
	Vincent	Recent expansion on sustainable development explicitly in higher education
	Brundiers and Wiek	Study on inter- and trans- disciplinary approaches in sustainable development
2013	Littledyke	Sustainable education emphasizes on clear vision of leadership and support based on practices
	Wals	Impact of approaches like sustainable oriented activities such as working community
	Savagaeu	Changing of individual behaviors by means of extrinsic policies
	Lopez	Comparing the change of values, attitudes, behaviors and preferences prior and after experience

Proposed Model

This article aims investigating the effect of introducing the sustainable program in graduate courses. To interpret the list of courses basic nomenclature of sustainability is not deviated. Aspects of social, environmental, moral and economic disciplines are deeply concentrated. For example, corporate social behavior, moral responsibilities, social management, sustainable strategic business decisions, environmental management, social management, political management are some of the topics as a part of management analysis. This model is prepared on basic three categories program selection, program analysis and disciplinary categories.

Program selection

The selection of programs depends on the course taken by the student. Program description gives the student about the course that can be opted and gives the structure, subject, credits and content for the course. Assignments, tests and project completion are the basic criteria to wrap up the course. Data collection and analysis are a part of undergraduate programs. Model building and Recommendation are associated with post graduate programs. Some specific courses are given as certification programs that includes a real time capstone project. A hierarchical structure for UG program, courses are based on poverty, environment and Health are major disciplines whereas PG programs Education, politics, cosmopolitan cities and life are major disciplines in Fig. 1.

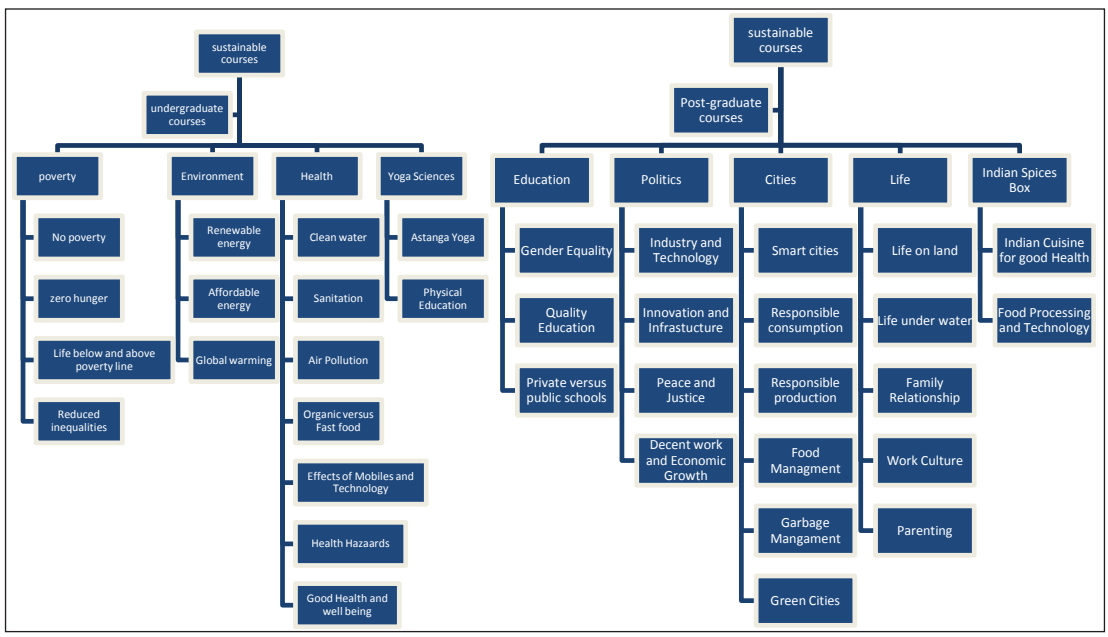

Fig. 1: Courses offered in Under graduate and Post Graduate courses

Program Analysis

Categorizing the course taken by the student depends on their degree requiredness and that constitute towards the foundation of the program. Certification courses are wide in range but related to a specified domain and are classified as free or restricted. The assessment varies on program structure, university and regions. Focus was only for core courses as they play a vital role in understanding the foundation of sustainability in the course. Iteratively course curriculum can be refined for more clarity and certainty focusing on real life challenges. The study classifies sustainable programs in higher education depends on course subject and category.

Disciplinary categories

In Fig. 2 defines the course disciplines process flow for under graduate and post graduate programs. Reading the course keywords and description is the first step for choosing the appropriate discipline. Assessing and dominant focus categorizes the core area. Finally, student need to submit a classroom based and research-based project as a part of assessment. In UG programs poverty, environment and health are the three core disciplines. Basing on the UG program student can select the sustainable course. For example, a B. Com student can choose any of the courses on poverty. A B.Sc. student can opt for health courses and B.A grad can select for environment courses. If any student is interested in any of the other courses other than their discipline, they can do by enrolling under certification program. The same system is applicable for post graduate courses even. The core disciplines in post graduate programs are education, politics, cities and life. These specific courses require decision making and policy designing hence forth such courses are classified under PG programs.

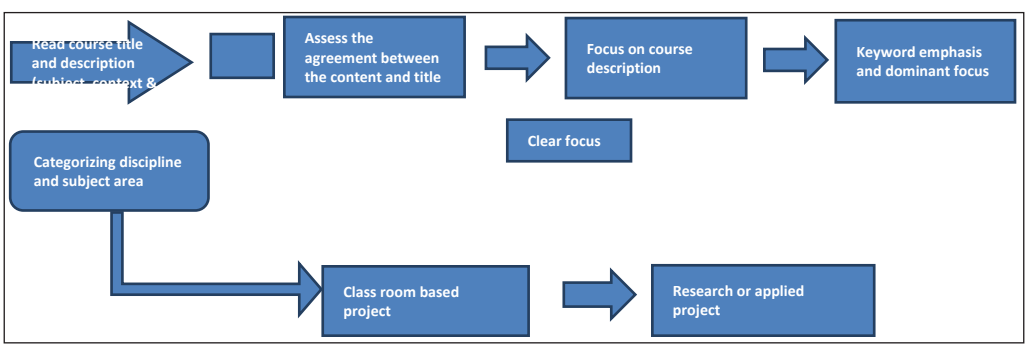

Fig. 2: Process flow of course assignment based on the program

Significance of the model

As the study goes on the conducted survey contemplate on few characteristics from the

students view such as student's interest, credit score, societal contribution, learning a new course or dependencies for taking a course. Student's prospective can be any one of the characteristics. The model constitutes on major target issues prevailing in the society. To address all these issues some of these courses inculcate the habit of adapting these practices in day to day operations in their practical life. Theory in classes can be implemented in real life circumstances. The key feature is to regain the sustainable existence in future for the upcoming generations.

RESULTS

To initiate this program 100 students from various colleges and multiple disciplines are picked. 63% of the students are willing to take such courses and 27% of the students are not interested as shown in figure 3. 20 faculties are been enquired about these courses on sustainability. 17 expressed a positive view remaining complained about the student's willingness for attending such classes.

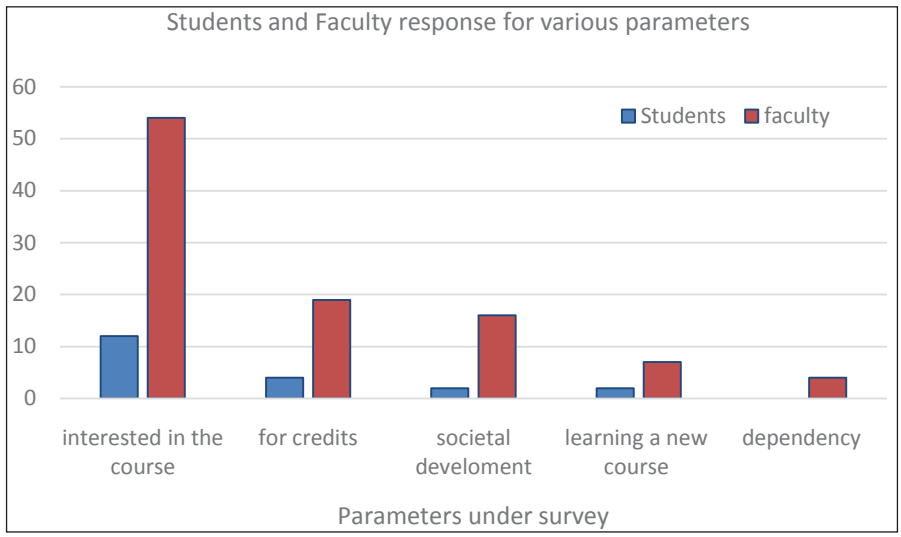

Fig. 3: Students and Faculty response for various parameters

CONCLUSION

Launch of novel program on sustainable development in academic field have emerged rapidly and continue to proliferate. These programs need to be recognized as a scientific program across universities. Higher education program consistently should support these programs in fundamental disciplines and also in interdisciplinary principles. This would help in educating new generations in tackling challenges for a better survival.

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