Evolving Role of Value- Based Higher Education in India

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ABSTRACT

The evolving role of Higher Education refers to a level of education that is provided by Universities, Vocational University, Community Colleges, Liberal Arts College, Institute of Technologies and other Technical Institutions such as Vocational Schools, Trade Schools and Career Colleges; those are awarding the academic degrees or professional certificates.

The current system of Higher Education in India is inadequate, inefficient and is in inequitable conditions. The situation of Higher Education is a global problem. India is also facing the challenges of democratic pressures for improving the quality of Higher Education by expanding with provisions of private sector. But, such expansion of Higher Education in a well - regulated framework is not for profit earning to private sectors. The government needs to limit subsidies and target needy students, while universities are applying for fixation of tuition fees that are close to actual costs. In such cases, implementation of cost sharing by students with loan programme may be a good alternatives.

Many Higher Educational Institutes are working as profit centres and such institutions are now offering on-line classes. In contrast to this, about half of private institutions are working as non-profit schools. As per loan report which is based on a poll of academic leaders, says that students generally appear satisfied with their on-line classes as compared to the traditional ones. Private institutions may become more involved with on-line presentations as the institutional cost of such system decreases by involving trained staff on hiring to carry out on-line programme. These staff members need to understand the content area, and also be highly trained in using computer and internet. Thus keeping in view of above merits, online education is rapidly increasing and even doctoral programs have also been developed at leading research universities.

Keywords- Technical education, Higher education, E- learning

1. INTRODUCTION

By 2006, nearly 3.5 million students were participating in on-line learning at institutions of Higher Education in the United States. According to the Sloan Foundation reports there has been an increase of around 12-14 per cent per year on average in enrollments for fully online learning over the five years 2004-2009 in the US post-secondary system, compared with an average of

approximately 2 per cent increase per year in enrollments overall. Allen and Seamen (2009) claim that almost a quarter of all students in post-secondary education were taking fully online courses in 2008, and a report by Ambient Insight Research suggests that in 2009, 44 per cent of post-secondary students in the USA were taking some or all of their courses online, and projected that this figure would rise to 81 per cent by 2014. Thus it can be seen that e-learning is moving rapidly from the margins to being a predominant form of post-secondary education, at least in the USA. Many higher educations are working as profit institutions, now offer on-line classes. By contrast, only about half of private, non-profit schools offer them. The Sloan report, based on a poll of academic leaders, says that students generally appear to be at least as satisfied with their on-line classes as they are with traditional ones. Private institutions may become more involved with on-line presentations as the cost of instituting such a system decreases. Properly trained staff must also be hired to work with students on-line. They also need to be highly trained in the use of the computer and internet so that they can understand the content area and give their proper on-line delivery. It is observed that online education is rapidly being accepted even online doctoral programs are also being developed at leading research universities.

2. LITERATURE REVIEW

2.1 Spirituality and Pedagogy

In recent years, there has been increasing interest in issues of meaning, purpose, authenticity, and spirituality in higher education. There are numerous definitions of spirituality, but the key terms and elements from those who have written extensively about spirituality include aspects such as:

i). seeking personal authenticity, genuineness, and wholeness,
ii). transcending one's locus of centricity; developing a greater sense of connectedness to self and others through relationships and community,
iii). deriving meaning, purpose, and direction in life,
iv). being open to exploring a relationship with a higher power that transcends human existence and human knowing, and
v). valuing the sacred,

as indicated by Love and Talbot, 1999; Hill, Pargament, Hood, McCullough, Swyers, Larson, and Zinnbauer, 2000; Zinnbauer, Pargament, and Scott, 1999. While religious values may be connected to these key facets, spirituality may well exist apart from religion altogether in that religion is seen as organized, social, and traditional, whereas spirituality is conceived as personal, transcendent, and characterized by qualities of relatedness (Zinnbauer, Pargament, and Scott, 1999, p. 901). As one examines these various definitions of spirituality, certain terms surface regularly: transcendence, interconnectedness, authenticity, self-awareness, and wholeness. Irrespective of the presence or absence of clearly defined linkages between religion and spirituality, to ignore the role of spirituality in personal development and professional behavior is to overlook a potentially powerful avenue through which people construct meaning and knowledge (Tisdell, 2001). Indeed, it is the spiritual component of human beings that gives rise to questions about why we do what we do, pushes us to seek fundamentally better ways of doing it, and propels us to make a difference in the world (Zohar and Marshall, 2004). People's abilities to access, nurture, and give expression to the spiritual dimension of their lives have also

been found to impact how they engage with the world and to foster within them a heightened sense of connectedness that promotes empathy, ethical behavior, civic responsibility, passion, and action for social justice (see e.g., Astin, Lindholm, and Bryant, 2005; DeSouza, 2003; Harris and Moran, 1998). Consequently, some conceive of spirituality as an essential aspect of lifelong learning and believe that it should play a significant role in the teaching/learning process (see e.g., Duff, 2003; Lee, 1999; Lewis, 2000; Tatarkowski, 1997).

Thus, in designing this study, it is expected to identify relationships between faculty's spirituality and aspects of their teaching practice. If spirituality involves self-awareness and interconnectedness with others, it is noted that such personal qualities will play an important role in how spiritual faculty will approach their teaching and their interactions with students. In thinking about how our values, beliefs, and ways of conceptualizing our relationships with others and the world around us affect our behavior, it will be interesting to examining whether faculty who self-report to be spiritual are also more likely to behave in ways that benefit their undergraduate students. For example, if faculty self-identify as spiritual, does it make a difference in how they teach? Are spiritual faculties more other-centered, more caring and, in general, more student-centered? Do their approaches to teaching and working with undergraduate students tend to differ notably from those of their less spiritual colleagues? Using data from a recent national study of college and university faculty, this article examines faculty members' preferred teaching practices as one aspect of their professional behavior that may reflect the spiritual dimension of their own lives. Emphasis is placed on identifying the correlates of student-centered pedagogy, with a specific focus on the mediating role of self-reported spirituality. The information gleaned can be used both to enhance our understanding of pedagogical practice and to address more comprehensively faculty personal and professional development issues in undergraduate teaching and learning.

2.2 Pedagogical Practice, Spirituality, and the Professoriate

So-called active learning encompasses a variety of pedagogical techniques and evaluative methods and refers to a wide range of teaching/learning processes that are geared toward placing students at the center of their learning experience (Warren, 1997). Faculty use of student-centered pedagogy which is designed to promote students' active engagement in the learning process has been associated with higher grade attainment, enhanced intellectual curiosity, and the development of superior creativity, drive, and leadership skills relative to those found in students whose instructors employ more traditional pedagogical methods such as lecturing (Henson, 2003). The extents to which students engage in work that is personally meaningful and are encouraged to take ownership of their actions has been found to impact both depth of understanding and intrinsic motivation (Pederson & Williams, 2004). In an era characterized by increasing diversity among college students with respect to past educational experiences and learning styles, the merits of incorporating learner-centered approaches to teaching may be especially compelling. While data from recent national surveys of college and university faculty show an increase over time in the use of student-centered pedagogy within the overall population of faculty (see Lindholm, Szelényi, Hurtado, and Korn, 2005), there remains much to learn about the extent to which faculty employ such pedagogical techniques, which sub-populations within the professoriate are most inclined to use student-centered teaching methods, and why they elect to use such approaches. Recent work that examined disciplinary differences in normative approaches to teaching and learning showed that women, faculty of color, and younger faculty

are more inclined overall than men, White/Caucasian, and older faculty to employ student-centered approaches to teaching (Lindholm and Szelényi, 2006). Findings from that study also showed that faculty in engineering, the physical sciences, and math/statistics are generally less inclined that their counterparts in softer disciplines such as education, the arts, and business to adopt student-centered pedagogical practices. Just 10% or less of faculty in the former three fields registered as high scorers on Student Centered Pedagogy; in the latter three fields, this figure was 25% or more. Moreover, Lindholm and Szelényi (2006) found that the type of employing institution, in and of itself, has a minimal effect on use of student-centered teaching methods, although faculty at liberal arts colleges are generally more inclined than their colleagues at comprehensive colleges and universities to adopt teaching and evaluative strategies designed to promote active learning. Not unexpectedly, the study also revealed that faculty who are civic minded and who place high value on students' personal development are more inclined toward student-centered pedagogy. Proponents of constructivism a learner-centered educational theory contend that, to learn anything, each [student] must construct his or her own understanding by tying new information to prior experiences (Henson, 2003, p. 13). A dual focus on both the individual learner and social interaction figures prominently in this approach. Combs (1962) and others including Kelly (1955) and Ausubel (1968), have argued that student-centered education is essential for healthy development because this approach is most conducive to promoting self-efficacy and positive self-concept. Based on his review of the extant literature on learner-centered education, Henson identified the following dispositions as centrally important:

a) Education should be experience based,
b) Each individual learner's own unique qualities and dispositions should be considered when planning a curriculum.
c) The learner's perceptions should shape the curriculum.
d) The learner's curiosity should be fed and nurtured.
e) Learning is best when it involves emotions and
f) The learning environment should be free of fear.

Implementing student-centered pedagogies means more, however, than simply introducing new teaching methods that portray an increased emphasis on students' interests, backgrounds, and learning styles. Such pedagogical methods also imply a fundamental shift in the role of teachers, whereby they no longer see themselves solely or even primarily as disseminators of knowledge, but rather construe themselves to be facilitators of student learning (Robertson, 2005, p. 181). The term, student- or learner-centeredness, however, appears to suggest that such pedagogies simply transfer the focus from teacher to learner, without acknowledging the continuing active role of teachers in the learning process. In order to account for the important roles played by both learner and teacher, the methods that are widely accepted in the literature as student-centered pedagogies are sometimes referred to teacher/learner centeredness, or system-centrism, a theoretical conception highlighted by Robertson (1999). Importantly, system-centrism treats both the teacher and the learners as unique persons, not roles, and puts them in interaction. The professors as teachers in this perspective attend to these systems and the human experience at their core that is, they attend to their own experience, to student's experience, and to the interaction of the two along with, of course, their fundamental content mastery (Robertson, 1999, pp. 283-284). Our main hypothesis in this study is that faculty's spirituality will play a key role in the way they approach their teaching. This expectation is based primarily on findings from

earlier research (see Lindholm, Astin, & Astin, 2005) which showed that faculty who self-identify as spiritual are more likely to endorse as important several goals for undergraduate education that can be considered to reflect a predisposition for engaging in student-centered approaches to teaching, such as enhancing students' self-understanding, developing students' moral character, and helping students develop personal values. Based on the extant literature, we also hypothesize that in addition to their values and beliefs, including spirituality, the faculty member's gender, race, and disciplinary affiliation, along with characteristics of the institutions in which they work, will differentiate use of student-centered pedagogical approaches. The present study is specifically designed to address the following questions:

i). What are the personal, professional, and organizational correlates of student-centered pedagogy among college and university faculty?
ii). To what extent does self-reported level of spirituality mediate faculty members' use of student-centered pedagogy within undergraduate courses?

3. EVOLVING ROLE OF SPIRITUALITY AND PEDAGOGY

This programme is funded by the Ministry of Human Resource Development (MHRD) and was first conceived in 1999 to pave the way for introducing multimedia and web technology to enhance learning of basic science and engineering concepts. Significant infrastructure has been set up earlier for production of video-based teaching material by the Indian Institutes of Technology (IIT) and Technical Teacher Training Institutes (TTTI). In the current (Phase I), seven IITs and the Indian Institute of Science (IISc) have been working together to develop web and video based material for basic undergraduate science and engineering courses in order to enhance the reach and quality of Technical Education in the country.

The concept of multimedia based courses with high potential of interactivity has become a popular and a viable option for both the developed and the developing nations, though for different reasons. Offering multimedia courses in technology- assisted modes has not only become invaluable for the learner, but also an attractive and creative option for faculty. Such courses have the potential to enhance the on- and off-campus learning experience for students and in a distance learning mode. Technology opens up several interesting avenues for innovation in design and delivery of courses as also for sharing expertise among faculty in different parts of the world. In India, where a large number of private institutions have entered the field of engineering education with inadequate faculty support and training, this paper is aimed at providing a standard for academic content for both the teacher and the student in India. The evolving role of value – based Higher Education shown in Fig. 1.

Many of the courses, especially basic core courses in science and engineering are similar across the IITs and to a lesser extent across many institutions in the country. Most institutions offer programme in traditional branches of engineering with a large number of similar courses forming a substantial part of the undergraduate curriculum. There is clearly a lot of advantage in sharing the development work in these courses. The value understood and communicated by employees and through marketing communication initiative in this regard is to help institutions all over the country to substantially increase the number and quality of

the engineering graduates (i.e. education + character + wisdom= success).

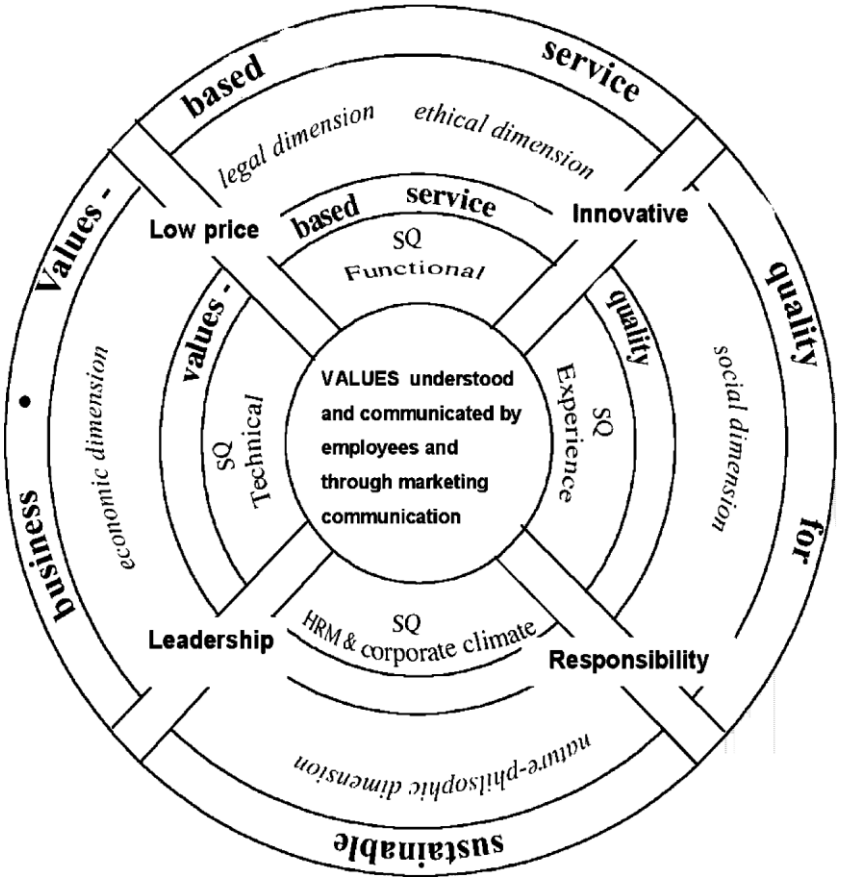

Fig.1: Evolving Role of Value- Based Higher Education

Table 1: Student-Centered Pedagogy: Faculty Use of Various Methods in Most or All Courses

Student- Centered Indicator	**Percentage**
Class discussions	81.7
Cooperative learning (small groups	47.7
Student presentations	44.7
Group projects	33.3
Student evaluations of their own work	19.4
Reflective writing/journaling	18
Student evaluations of each other's work	16
Student-selected course topics	15

Overall, 22 percent of faculty registers as high scorers on the Student-Centered Pedagogy measure and 21 percent are low scorers. Not surprisingly, as shown in Table 1, class discussions

are the most prevalently used student-centered teaching method; eight in ten faculty reports that they engage students in class discussion in most or all of the courses they teach. For many faculties, cooperative learning, student presentations, and group projects are also practical teaching techniques. Less widely used student-centered teaching methods include student evaluations of their own work, reflective writing/journaling, student evaluations of each other's work, and student selected course topics.

Table 2 displays the proportions of faculty who score high and low on Student-Centered Pedagogy and the differential use they make of each of the teaching approaches included within the Composite measure. Here, we find dramatic differences in the percentages of high and low scorers on Student-Centered Pedagogy who employ each of the teaching methods included in the composite measure in most or all of their courses. For example, nearly all *high scorers* (99%) use discussion in most or all of their courses, whereas less than one-third (31%) of *low scorers* report the same. In addition, half or more of those who score high on Student-Centered Pedagogy employ all but one of the teaching methods included in the composite measure student-selected course topics in most or all of their courses. By contrast, with the exception of class discussions, fewer than 10 percent of low scorers use any of the pedagogical practices included in the measure within most or all of their courses.

Table 2: Use of Various Teaching Methods among High and Low Scorers on Student-Centered Pedagogy (in percentages)

Student-Centered Pedagogy			
Student-Centered Indicator	**High Scorers**	**Low Scorers**	**Difference**
Class discussions	99	31.2	67.8
Cooperative learning	91.3	4.2	87.1
Student presentations	90.1	8.3	81.8
Group projects	74.3	2	72.3
Student self evaluation	62.4	0.7	61.7
Student evaluation of each other's work	55	0.2	54.8
Reflective writing/journaling	53.6	1.1	52.8
Student-selected course topics	44.6	0.8	43.8

Table 3 displaying Turning to the Spirituality Measure, we find that over three-quarters (81%) of faculty consider themselves to be a spiritual person; more than two-thirds (69%) say that they seek out opportunities to grow Spiritually and just under half (47%) consider it essential or very important to integrate Spirituality into their lives. Based on their responses to the three items, we categorized 43 percent of faculty as high scorers on Spirituality and 15 percent as low scorers. While at first glance such a finding appears to be surprising given faculty's strong stance on empirical evidence and observation, the fact remains that the sample of faculty responding to the

survey is a non-biased representation of teaching faculty at U.S. colleges and universities. Looking specifically at the pedagogical practices of high and low scorers on Spirituality, we find that just over one-quarter (28%) of those who score high on Spirituality are also high scorers on Student-Centered Pedagogy. On the other hand, just 12% of low Spirituality scorer shares high scorers on Student-Centered Pedagogy. Those who score high on the Spirituality measure also tend to use all types of student-centered approaches more frequently than their low scoring colleagues. The greatest pedagogical variance between high and low Spirituality scorers is evident in the percentages that use cooperative learning in most or all of their courses (54% of high Spirituality scorers versus 35% of low scorers).

Table 3: Use of Various Student-Centered Teaching Methods among High and Low Scorers on Spirituality (in percentages)

Spirituality			
Student-Centered Indicator	**High Scorers**	**Low Scorers**	**Difference**
Class discussions	84.5	76.3	8.2
Cooperative learning	53.6	35.4	18.2
Student presentations	48.6	36.5	12.2
Group projects	37	24.3	12.7
Student evaluation of each other's work	24.8	10.8	14.8
Student self evaluation	24.8	10.8	14
Reflective writing/journaling	23.9	10	13.9
Student-selected course topics	17.8	10.2	7.6

Irrespective of their Spirituality score, women are more likely than men to score high on Student-Centered Pedagogy. Not unexpectedly, however, both women and men who are high scorers on Spirituality are notably more inclined than their low scoring, same sex colleagues to score high on Student-Centered Pedagogy. For example, 36 percent of women and 20 percent of men who score high on Spirituality also score high on Student-Centered Pedagogy. By comparison, just 19 percent of women and 10 percent of men who score low on Spirituality score high on Student-Centered Pedagogy.

The use of Student-Centered Pedagogy for those scoring high and low on Spirituality within each of 14 disciplinary affiliations and within 8 types of colleges and universities were also compared. Disciplinary differences in faculty members use of Student-Centered Pedagogy based on their spiritual self-identification are shown in Table 4. Variations in the percentages of high scorers on Student-Centered Pedagogy based on their Spirituality score are most pronounced in English (46% of high scorers on Spirituality versus 27% of low scorers scored high on 13 Student-Centered Pedagogy) and Health Science (29% of high scorers versus 9% of low

scorers on Spirituality scored high on Student-Centered Pedagogy). By contrast, there was a difference of only five percentage points or less in the proportions of high and low scorers on Spirituality who scored high on Student-Centered Pedagogy in the biological sciences, the physical sciences, business, and math/statistics. Only in engineering did more low than high scoring faculty on Spirituality score high on Student-Centered Pedagogy (12% versus 11%).

Table 4: Percentages of High and Low Scorers on Spirituality Who Score High on Student-Centered Pedagogy, by Discipline (in percentages)

Spirituality			
Discipline	**High Scorers**	**Low Scorers**	**Difference**
English	46.1	27.3	18.8
Education	42.9	34.5	8.4
Fine Arts	36.7	26.7	10
Other (Unspecified) Major	33.2	15.6	17.6
Health Science	29.1	8.7	20.4
Business	23.9	20.1	3.8
Humanities	21.8	11.7	10.1
Social Science	19.3	6	13.3
Agriculture/Forestry	18.4	5.3	13.1
Biological Science	12.9	7.6	5.3
Other (Unspecified) Technical Field	12.4	4.2	8.2
Engineering	10.8	12.3	-1.5
Physical Science	8.1	3.5	4.6
Math/Statistics	5.1	2	3.1

4. TECHNOLOGY ENHANCE LEARNING THROUGH SPIRITUAL WISDOM

The objective of TEL is to enhance the way students learn concepts, to enhance the learning component and to reduce the tedious and mechanical aspects of some of the current learning methods through the use of technology in a variety of forms:

4.1. Computer applications include:

i). Computer-Assisted Instruction (CAI) that uses the computer as a self- contained teaching machine to present individual lessons.
ii). Computer-Managed Instruction (CMI) that uses the computer to organize instruction and track student records and progress. The instruction itself need not be delivered via a computer, although CAI is often combined with CMI.
iii). Computer-Mediated Education (CME) consisting of applications that facilitate the delivery of instruction. Examples include networked classrooms, electronic mail,

discussion boards, real-time computer conferencing and World-Wide Web (WWW) applications.

4.2 Voice - Instructional audio tools that include interactive technologies of telephone, audio conferencing, and the passive (i.e., one-way) audio tools of tapes and radio.

4.3 Video - Instructional video tools that include still images such as slides, pre- recorded moving images (e.g., film, videotape), and real-time moving images combined with audio conferencing (one-way or two-way video with two-way audio).

4.4 Print – instructional print formats that include textbooks, study guides, workbooks and case studies.

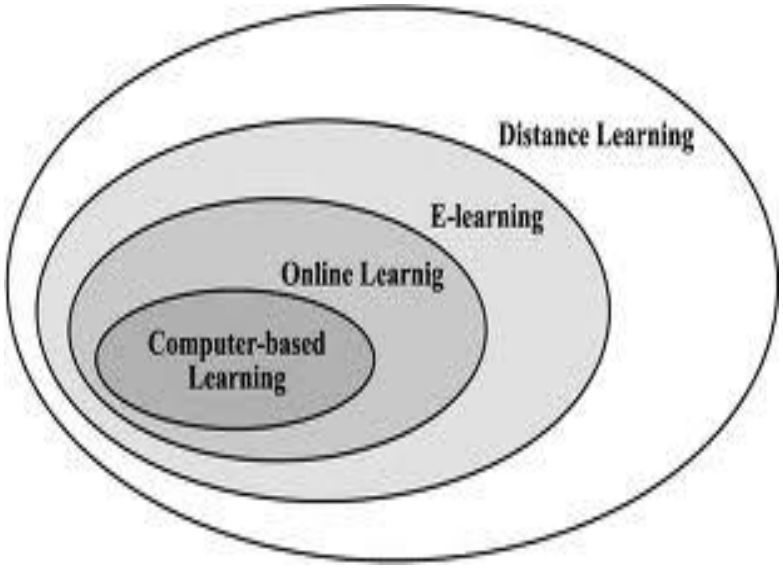

Fig. 2: Technology Enhance Learning through Spiritual Wisdom

Technology enhanced learning initiative involving IITs and Indian Institutes of Management (IIMs) was first proposed by IIT Madras in the year 1999, immediately following a Workshop on Technology Enhanced Learning conducted in Chennai in collaboration with Carnegie Mellon University (CMU), Pittsburgh, USA. The vast experience of CMU in setting up a successful virtual university in Mexico was useful in drawing up the initial proposal which envisaged four initiatives, namely providing distance education, developing interactive and electronic resources for core courses for undergraduates, conducting joint Ph. D. programmes and setting up a digital library focused on the role of technology in knowledge accumulation, storing and disseminating content for education in three sectors: University, Industry and Government. Computer based learning, On-line learning, E-learning and Distance learning i.e. Technology enhance learning through spiritual wisdom shown in Fig. 2.

A formal Memorandum of Understanding (MoU) between five IITs, four IIMs and CMU established a Virtual Centre for Technology Enhanced Learning (VCTEL). It was the first initiative in which all IITs and IIMs shared a common vision and proposed to work together to

improve the quality of science, engineering and management education all across the country by offering courses through VCTEL. This proposal was submitted to MHRD in 1999 and revised several times.

Table 5: Education expenditure by source of funds to all levels of education combined selected countries (in Percentage).

Country	Public Source	Private Source
India	89	11
Japan	73.9	26.1
United States	78.6	21.4
Haiti	20	80
Denmark	99.4	0.6
Australia	85	15

Education expenditure by source of funds to all levels of education combined selected countries shown in Fig. 2, Source World Bank 1999.

5. DISCUSSION AND CONCLUDING REMARKS

From findings of the present study, reinforce the notion that the teaching methods faculty primarily selects to use reflect who they are and what they believe. In particular, those who are more highly Spiritual based on their own self-identification, the personal priority they place on seeking opportunities to grow Spiritually and the Personal Value they attribute to integrating Spirituality in their lives are much more likely to use Student-Centered Pedagogical methods when teaching undergraduate students. Most importantly, this spirituality effect is largely independent of the faculty's personal characteristics, field of study, or institutional affiliation. That said, the findings also suggest a number of potentially subtle, but important, interrelationships between faculty members personal and professional characteristics, their Spirituality, and their approaches to undergraduate teaching and learning that warrant future study. Here, we focus on the overarching importance of understanding how faculty member's spiritual inclinations may impact their teaching methods and offer recommendations for additional work aimed at advancing empirically-based knowledge within this area. Why should we be concerned with the spiritual dimension of college and university faculty members' lives and its implications for professional practice? One reason is that faculty attitudes and behaviors are known to have important implications for student development. The actions of faculty, both within and outside the classroom, impact the learning and development of future teachers,

lawyers, physicians and policymakers, not to mention their very own academic successors and the thousands of others whose work affects our daily lives.

This paper is possibly the first instance or roll out of a major national mission for quality education using value based education set over an Education Grid environment. This will continue to grow and evolve into the networked E-learning framework for all types of educational needs. Our first goal is to see that the quality of education offered in the 1500+ engineering colleges is significantly and perceptibly improved. Continue Education Programme is an acronym for Technology Enhanced Learning which is an initiative by seven Indian Institutes of Technology (IIT Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras and Roorkee) and Indian Institute of Science (IISc Bangalore) for creating such an idea in Engineering and Science.

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