Understanding of Sustainability amongst Students of Management– A Case of Indian Institute of Management, Raipur, State of Chhattisgarh, India

Dr Pramod Kumar Sharma
Centre for Environment Education, Ahmedabad, India

Prof. (Dr) Sanjeev Prashar
Indian Institute of Management, Raipur, India

Abstract: India has compulsory teaching and learning of Environmental Education at all levels of formal education. This was mandated through a Supreme Court directive. This study was conducted using a survey instrument that was used as a proxy of sustainability literacy. The instrument had open-ended questions to gauge the respondent's perspectives, close ended knowledge-based questions, statements to understand attitudes and their awareness of eco-labelling/certification. The target group of study was the entire batch of 90 students (15 Female and 75 Male) that had joined the postgraduate programme in 2014. The students came with about of year of work experience. The major background was engineering and science with only eight percent with commerce background. All were found to be high achievers in their previous education in school and graduation.

Content analysis of the open ended question showed that 24 percent of the students agreed that economic development at the cost of environment is a short term solution, followed by 16 percent each saying that there is a need to have a balance or economic development should be at the least environmental cost. About seven percent said that economic profit can improve the environment and there is no option left if we need economic development. Only six percent putting comfort over the environment. Although the attitude was very positive, about 62 percent of the students were not able to articulate the difference between the quality of life and standard of living. 75 percent of the respondents supported the compulsory CSR act. 71 percent were in favour of extended producer responsibility. There seems to be a limited understanding of sustainable development and equates it to environmental conservation as any lay person who is informed by mass media. 72 percent did not understand the term Green Washing. The awareness was found to be moderate. Profit maximisation was the understanding as the goal of a business. Nearly half of them were of the opinion that consumers will not pay for environmentally friendly products. Although a high of 89 percent said that eco-labelling has an influence on consumer behaviour, very few of them were aware of eco-labels. Almost all agreed that polluters should pay 67 percent of them also believe that environmental clearances are an impediment to economic growth and 64 percent believe that privatisation leads to better utilisation of resources.

The study shows a pro environment attitude but at the same time a limited understanding of the depth of issues and only the economic centric perspective of sustainable development.

Dr. Pramod Kumar Sharma is working with Centre for Environment Education, Ahmedabad and has been managing programmes of education for sustainable development for more than 17 years. An MBA himself, he has a keen interest to engage business leaders to develop perspective on sustainable development. He has PhD in assessment of environmental literacy.

Prof. (Dr.) Sanjeev Prashar is faculty of Marketing Management at IIM Raipur. Before joining IIM Raipur, Drhe worked as Professor with Institute of Management Technology (IMT), Ghaziabad, India in the area of Marketing Management. His last assignment was at Dubai as Chairperson- Professor In charge of PGDM, Dual Country Progamme, an internationally approved academic programme Prior to this, he worked with Amity Business School Noida as Professor and Program Incharge MBA (Entrepreneurship and Leadership).

Only 16 percent gave some hint of social dimension to sustainable development. Awareness of HDI and GDP was high but connection to quality of life was missing. The environment was high on priority as 24 percent of the students agreed that economic development at the cost of environment is a short term solution, followed by 16 percent each saying that there is a need to have a balance or economic development should be at the least environmental cost. There seems to be a limited understanding of sustainable development and equates it to environmental conservation as any lay person who is informed by mass media.

Also it was found that students were influenced by common business perspective being projected in Indian media. Business is becoming a major driver of sustainable development with increasing production and consumption along with population as a major reason for environmental degradation. It is recommended that social and environment be part of ethical framework of business education. It would be useful if details sustainability literacy assessments are done to inform the business management curriculum for the need to include environmental /sustainability management. The impact of undergraduate discipline was found to influence awareness and perception and hence it is important that the management curriculum removes the gap in sustainability literacy amongst students.

1. Introduction

The crisis of environment is now well understood and for the same reason, teaching and learning about the environment have been made compulsory at all level of education in India through a Hon. Supreme Court Directive. University Grants Commission has introduced a compulsory six months core module for implementations in all the University colleges of India (Bharucha E. Textbook for Environmental Studies, UGC and BVIEER, 2004).The students who have taken admission in the 2014 batch of Post Graduate Programme in Management would have gone through the compulsory module and are expected to have a basic understanding of environmental sustainability issues.

The knowledge of environmental sustainability is also important for would be business managers as they are at the core of production and consumption practices that can have a big impact. The current government through its Make in India Campaign has also highlighted the need to conscious of conserving the environment through the pronouncement of Zero Defect and Zero Effect as the strategy. To reflect business reality, schools of management must make it clear to students that they can be good managers and good environmentalists at the same time. As the research across faculties suggest that the management profession remains the last among professional fields to acknowledge the fact (Hoffman 2000). Empirically, as the world becomes more globalised, and the impact of industrial and commercial activities become more extreme, no solution to the environmental problems society faces will be solved without the involvement of business. (Hoffman 2004).

2. Literature Review

According to the American Marketing Association, green marketing is the marketing of products that are presumed to be environmentally safe. Thus green marketing incorporates a broad range of activities, including product modification, changes to the production process, packaging changes, as well as modifying advertising. Yet defining green marketing is not a simple task where several meanings intersect and contradict each other; an example of this will be the existence of varying social, environmental and retail definitions attached to this term. Other similar terms used are Environmental Marketing and Ecological Marketing.

It is assumed that academic institutions, especially business schools, have a key part to play in helping achieve more sustainable modes of economic activity (Coopey, 2003), but most business students are not trained to consider the environment as a key factor in business decision making (Hoffman, 2000), while paying attention to environmental issues has become an integral part of the way business practitioners do their job. Several studies were conducted to examine the question of socially and environmentally responsible management education. Though business students may need training in social, environmental and moral reasoning more than most other students, as they face these challenges and dilemmas in managing, they do not always receive such education, and if they do it is usually not mandatory. Matten and Moon (2005) studied the social and environmental education – including teaching and research – in Europe. They found that 47% of their respondents

offered subjects in these areas, or related fields as optional subjects and 38% embedded the concepts in existing subjects. A more recent study by Nicholson and DeMoss (2009) showed that from the perspective of curriculum coordinators, there was a significant gap between current and normative levels of instruction on social, ethical and environmental responsibility in business school curricula. Social and environmental responsibility was rated lower than ethics by all department coordinators. Furthermore, a study of top business schools in the United States found that business school education not only fails to improve the moral character of students but may also potentially weaken it (Segon & Booth, 2009).

In a study by Contreras (2014), it was found that students have imbibed the proper values on environmental protection and preservation. The Greater concern is also evident more on females over males, the older respondents over the younger ones. High education level had a positive effect on environmental concern. It is assumed that academic institutions, especially business schools, have a key part to play in helping achieve more sustainable modes of economic activity (Coopey, 2003), but most business students are not trained to consider the environment as a key factor in business decision making (Hoffman, 2000). One major impediment to increasing student interest is the fact that environmental management is generally perceived as part of "socially responsible business". As such, it lies on the periphery of "real" business decision-making and is thus outside the standard business curriculum (Hoffman, 1999). According to Gardiner and Lacy (2005), there is a growing need for business educators to grab this issue by the horns.

Jóhannsdóttir (2009), reports the main result of the research, which is the limited environmental literacy of MBA and Masters Students. According to the author, this does not come as a surprise. To some degree, this can be attributed to a lack of environmental education. The majority of the students (85-90%) claim that they have not acquired such training. What came as a surprise was that 2.6-6% of the students did not know whether or not they had received environmental or sustainability education. What is also of interest is the list of environmental terms which students claim to know best, which includes climate change and greenhouse gas emissions. The explanation might be that those terms are frequently employed by the media. Still, the knowledge is neither good nor limited. It is also of interest that there is a passable knowledge about corporate social responsibility or social responsibility, but the students do not seem to relate the term to triple bottom line (TBL) which ranks very low in the research (1.2) despite the fact that the term includes economic, environmental and sociological elements, i.e. CSR can be regarded as one dimension of the TBL concept.

Hoffman et.al. (2014), opined that environmental protection, as an issue of corporate concern, has become much more complex and requires a more sophisticated view to be managed effectively. To treat environmental and business issues as separate and distinct leaves at a strategic disadvantage, unable to efficiently recognise the reality of a changing society – one that will demand even greater corporate responsibility for protecting the environment. Technical fixes arising from our existing knowledge base can only, at best, slow the advances of unsustainability. The root problem arises from outmoded beliefs deeply embedded in our

political economy and most of our societal institution. Sivamoorthy et.al. (2013) found that the level of awareness is high among the respondents irrespective of gender difference but in practice level, there is the difference between genders i.e. males practising more than females. In another study, Sengupta et.al. (2010), observed that unlike other findings, science students scores on environmental awareness and behaviours were less than that of art students. This is inconsistent with other findings of Yilmaz et.al. (2004), Simmons (1998), Sebastian and Nima (2005). The girl students are observed to be more environmentally aware although the gender has no effect on environment related behaviour.

Nicholson & DeMoss (2009) asked why business schools do not change their curricula to become more socially responsible and answered that in market-driven MBA programs, curriculum size (i.e. the number of required courses) is cut to make a program more competitive (i.e. allow students to complete the curriculum faster), with the ethics course as one of the casualties. Another reason is that business schools believe that their stakeholders (including students) are indifferent to the subject matter beyond superficial inclusion or review (Nicholson & DeMoss, 2009). In their study, Luthar and Karri (2005) asked students if the social and environmental cause is good business and if it yields higher performance and market position for the firm. It was found that students saw a significant disconnect between these and professional performance or rewards (i.e. it does not pay to be good). However, exposure to these in the curriculum had a significant impact on student perceptions of what should be the ideal linkages between organisational ethical practices and business outcomes. Gender-based differences were found with female students having a higher expectation of what should be the ethics practices and business outcomes link. Some more recent studies indicate a change occurring in students' attitudes, particularly among females. Sleeper et al. (2006) found that business students, particularly women, are indeed interested in social and environmental education. A substantial sample of business students reacted very positively to business school education on corporate conduct affecting social and environmental issues. Female students exhibited significantly higher scores, reflecting a stronger tendency among women than men to agree that business schools should address social and environmental issues in their curricula. The authors further found a strong but non-cumulative relationship between donating, volunteering and organisational membership of respondents and their propensity to believe that social and environmental issues are appropriate content for business courses (Sleeper et al., 2006). In 2009, Segon and Booth studied attitudes of part-time MBA students on Business Ethics, Social and Environmental Responsibility. The majority of respondents (73.5%) identified these as a fundamental requirement for good business and a civil society.

3. Research Methodology

A survey instrument that served as a proxy of their sustainability literacy was designed that had
   a. Eight statements to gauge the respondent's perspectives through open-ended responses.
   b. Testing their knowledge through eight true-false statements.

    c.   Fifteen statements to understand attitudes as agree/disagree response.
    d.   Awareness of Eco-Labeling programmes/certification.

The instrument was shared with four colleagues for feedback and finalised after incorporating the comments. The survey purpose was explained to the students and administered to the 90 students for the first year of Post Graduate Diploma Programme in the month of July 2014 i.e. just after their admission.

4. Findings

4.1 Descriptive analysis of sample

A total of total 90 students participated in the survey. As we see in Table 1, most of the students are with less than 6 months of experience. The students had a mean of 11.5 months of work experience. Since most of them graduated after the Supreme Court directive, all of them have gone through the compulsory module introduced in 2004.

Table 1: Summary profile of students

Work Experience (Months)	Male	Female	Total
0 to 6	34	13	47
7 to 12	2	2	4
13 to 18	7	0	7
19 to 23	4	0	4
24 to 35	13	0	13
36 and above	7	0	7
Not Known/provided			7

Most of the students are engineers and with science students constitute the majority. Only about 8 percent of the students are from commerce background. The students are also high performers (Table 3) as the average is above distinction i.e. 75 percent in school and a very high 73 percent at graduation level. This is expected as the selection examination is highly competitive.

Table 2: Background as per their undergraduate/bachelor's degree

Bachelor Degree	Male	Female	Total
Science/ Engineering	61	14	75
Commerce	6	1	7
Not provided			7

Table 3: Average achievement in percentage at different levels of education

Level of Education/Examination	Average Score/Percentage
Secondary Level	82
Higher Secondary Level	78
Bachelors	73

4.2 Analysis of responses to the perspectives

Students were given eight statements to share their perspectives.

Table 4: Summary perspective to Statement 1 "Economic development at the cost of environment is sustainable"

Perspective Shared	No. of Students	Percentage
Only short term solution	22	24%
Have to make a balance and/or both have to co-exist/ both should go hand in hand	14	16%
Economic development shall be without harming the environment and/or economic development should be at the least environmental cost /economic development harms environment	14	16%
Economic development depends on environment and/or clean environment is necessary	10	11%
Damaging environment leads to disasters and/or damage done is already too big	10	11%
We have to take care of environment and/or environment has to be kept in mind/first environment than economic development/we have to love our nature more than ourselves	5	6%
Economics profit shall be used to maintain environment and/or economic damaging environment should compensate anywhere else	4	4%
Find ways to sustain development and environment and/or more research will stop environmental degradation	3	3%
Yes, if there are no other options left to develop economy and/or resources need to be consumed to increase economic development/environment degrading has to be done to build up industry	3	3%
Others	5	6%

The majority shared the need to keep environment in mind. 24 percent mentioned that this is a very myopic thinking and believed that economic development has to factor in environmental conservation. 58 percent of the respondent more or less gave a perspective that for sustainable development environment is a key element and we have to be conscious of it with about 6 percent stating that environment is more important than economic development. 16 percent talked about balancing the two and 10 percent made a point of looking at some compromises. The response shows that the students are aware of the challenges being faced and had some understanding of the conflict. This pro-environment attitude is also reflected in Statement 2 (Table 5) with only 6 percent putting comfort over the environment. Although the attitude was very positive, about 62 percent of the students were not able to articulate the difference between the quality of life and standard of living.

Table 5: Summary perspective to Statement 2 "We should be willing to tolerate environmental degradation for comfortable lifestyles"

Perspective Shared	No. of Students	Percentage
We should not destroy long term future	26	**29%**
Comfortable lifestyles should not be preferred over environment and/or economics depend on a healthy population, through clean environment	16	**18%**
A comfortable lifestyle is not achievable without environment	15	**17%**
We should promote eco-friendly living	8	**9%**
We have to limit environmental degradation and/or degradation due to increase of lifestyle has to be compensated	7	**8%**
We should always keep environment in mind and/or we have to make both simultaneously/ research will discover ways to make everything non-environment degrading	6	**7%**
Environmental degradation will lead to disasters and/or damage done to environment is already too big	5	**6%**
Damage not endangering human lives is acceptable and/or it`s okay to a certain extent, then there should be programs tackling it/we cannot have both- environment and comfortable lifestyles	3	**3%**
Comfortable lifestyles can be achieved by controlling environmental degradation and/or environmental degradation is sometimes acceptable, but never tolerable	3	**3%**

Table 6: Statement 3 "Quality of life and Standard of living"

Perspective Shared	No. of Students	Percentage
Understood the difference between the two and made an argument for quality of life	34	38%
Did not understand the meaning at all	56	62%

One major impediment to increasing student interest is the fact that environmental management is generally perceived as part of 'socially responsible businesses. As such, it lies on the periphery of 'real' business decision making and is thus outside the standard business curriculum. (Hoffmann, 2009). According to Porter and Reinhardt (2007) companies that persist in treating climate change and other environmental issues, solely as a corporate social responsibilities issue, rather than business problems will risk the direct consequences. 75 percent of the respondents (Table 7) supported the compulsory CSR act. Rest of them felt that it should be voluntary and 2 of them event stating that it may lead to wrong practices. The sentiments also reflected a similar trend for sustainable development (Table 8). When asked about extended producer responsibility, 71 percent (Table 10) gave the perspective that the business should be responsible for the product and to some extent brought the concept of Life Cycle Analysis.

Table 7: Statement 4 "Compulsory corporate social responsibility"

Perspective Shared	No. of Students	Percentage

CSR is a good instrument for companies to give back to society	**56**	**63%**
CSR act was right	**11**	**12%**
CSR should not be forced, we should do it out of own purpose	**9**	**10%**
Few companies do it on their own	**9**	**10%**
Compulsory CSR may lead wrong practices	**2**	**2%**
Should be depending on companies economic sector	**1**	**1%**
CSR money should be spent on expanding, ensuring new jobs	**1**	**1%**

Table 8: Statement 5 "Sustainable development (SD)"

SD is the need of the hour/ is important	**26**	**30%**
Sustainable development = long term development, securing the future	**22**	**25%**
Development should not be done at the cost of environment/or compensate damage done	**19**	**22%**
It`s important to start managing (renewable) resources	**14**	**16%**
Balance in the economy is the key to SD	**4**	**5%**
Have to make a balance between created products and natural resources	**1**	**1%**
SD is done by research	**1**	**1%**

Although nearly all of them were positive to sustainable development and seemed to understand it in terms of time and balance perspective, but were off the mark on the understanding of sustainable development as a concept. Only 14 percent brought **(Table 9)** the issues of health. Rest only looked it at from the perspective of environmental resource consumption and argued for its sustainability. There seems to be a limited understanding of sustainable development and equates it to environmental conservation as any person who is informed by mass media.

Table 9: Statement 6 "Tribal way of life (TL) is most sustainable"

TL is sustainable because it exerts negligible load on the resources	**28**	**32%**
We have to be aware of differences between tribal life and life in modern society with way more people live	**27**	**31%**
We can learn from them on how to make our lifestyle sustainable	**15**	**17%**
TL is not always sustainable, i.e. diseases (no medical), hunting down species	**12**	**14%**
TL focuses on Quality of life, not on Standard of Living	**4**	**5%**
Tribes shall be conserved for the tradition	**1**	**1%**
We can learn from each other to improve our lifestyles	**1**	**1%**

Table 10: Statement 7 "Companies should adhere to extended producer responsibility""

It`s a company's responsibility to care for everything about their products, especially to secure environment	**51**	**71%**
Yes, they should be made able to held liable for their policy	**8**	**11%**
Yes	**5**	**7%**
Yes, it will increase consumers faith in a brand	**3**	**4%**

Producer responsibility has to be limited to keep the company competitive	**2**	**3%**
No	**2**	**3%**
Companies should follow guidelines reducing consumption of resources	**1**	**1%**

On asking whether Green Washing increases footprint, 72 percent of the respondents did not understand the term. Most of the people who understood it agreed to the statement.

4.2 Analysis of responses to the quiz

On the quiz, three questions had a response of around 50 percent which is a result very close to guessing work probability. The results are summarised in Table 11. The average right answers were 5 from best possible 8. Nearly 40 percent got more than 6 correct and only 16 percent of the respondents got 3 or less ass right answers, with 3 of them only getting one statement correct. Overall it shows a fair awareness amongst the students.

Table 11: Summary of the response to the true/false quiz.

S. No.	Questions/Statements	Correct response	Wrong response	No response
A	The water footprint of a cup of tea is anywhere between 30-35 litres	48%	39%	13%
B	The theme of world environment day 2013 was Think; Eat; Save	69%	24%	7%
C	40 litres per capita per day (LPCD) is the estimation of water required for humans in rural areas in India and about 140 litres in urban areas	53%	42%	6%
D	Ozone depletion or Ozone hole is one of the causes of global warming.	75%	23%	2%
E	As per UNDP 2013 report, India is ranked 137 among 186 countries on Human Development Index that progress in life expectancy, access to knowledge/education and a decent standard of living or gross national income per capita.	87%	8%	4%
F	India is the 3rd largest economy by purchasing power parity and 10th largest by nominal GDP	79%	17%	3%
G	Up to 150 species are lost every day	63%	33%	4%
H	It now takes the Earth one year and six months to regenerate what we use in a year	48%	44%	8%

The awareness level of human development index and GDP can also be attributed to the preparation to the entrance examination. The same did not link to their understanding of sustainable development.

4.3 Analysis of the response on debatable environmental issues

Some statements were also put to understand the attitude and inclination to the ongoing debates. The respondents seem to have profit maximisation as their understanding of business and that reflected in 73 percent agreeing environmental cost should be added to the

business cost. They also seem to have a common misconception that population alone is the cause of environmental degradation and high economic growth states have high HDI.

Table 12: Response to the environmental debates

Statements	% agree	% disagree
a. Organic farming cannot meet the food need of growing population	**53%**	43%
b. The States with high economic growth have high human development index (HDI)	**41%**	57%
c. The business cannot make profits if the cost of environmental mitigation is factored.	**20%**	73%
d. Increasing population alone is the cause of environmental degradation.	**13%**	85%
e. High debt countries are using natural resources in order to pay off the debts and the interest.	**82%**	16%
f. Technological advancement will take care of the environmental problems.	**42%**	58%
g. Consumers are not willing to pay for environment-friendly products.	**47%**	52%
h. Eco-labelling has an influence on consumer behaviour.	**89%**	10%
i. Polluters should pay.	**97%**	3%
j. High economic growth will lead to sustainable development.	**31%**	66%
k. Environmental Impact Assessment and Approvals delay are leading to declining economic growth.	**67%**	25%
l. Slums contribute to GDP of a city.	**68%**	30%
m. Tourism that encourages visits to slums and the tribal area is ethical.	**66%**	33%
n. Higher education leads to sustainable consumption.	**70%**	27%
o. Privatisation will lead to better utilisation and management of resources.	**64%**	36%

67 percent seem to be influenced by the business perspective being reported in media that regulatory framework are impediments in economic growth. Also most of them 65 percent are in favour of privatization for netter utilisation and management of resources. They seem to be unaware of the population in slums contributing to GDP.

4.4 Statistical analysis of some awareness level questions and perception on gender and faculty/discipline of study at under graduate level

H1: There is association between the gender of the respondent and their Awareness level regarding the theme of World Environment Day 2013 being Think; Eat; Save

 Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.438[a]	2	.803
Likelihood Ratio	.456	2	.796
Linear-by-Linear Association	.213	1	.645
N of Valid Cases	83		

At the 5% level, the hypothesis is rejected and we can conclude that awareness level regarding the theme of World Environment Day 2013 being Think; Eat; Save is not associated with the gender of the respondents. It suggests that gender does not have any role to play with respect to people's perception about awareness level.

H2: The Awareness level regarding the theme of World Environment Day 2013 being Think; Eat; Save is associated with graduation discipline of the respondent.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	31.927[a]	14	.004
Likelihood Ratio	26.284	14	.024
Linear-by-Linear Association	5.693	1	.017
N of Valid Cases	83		

At the 5% level, we accept our hypothesis (p<0.05). And can conclude that Awareness level regarding the theme of World Environment Day 2013 being Think; Eat; Save is associated with graduation discipline of the respondent.

H3: There is an association between the gender of the respondent and their perception about Ozone depletion or Ozone hole as the cause of global warming.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.583[a]	2	.453
Likelihood Ratio	1.266	2	.531
Linear-by-Linear Association	.735	1	.391
N of Valid Cases	83		

At the 5% level, we reject our hypothesis and conclude that there is no association between the gender of the respondent and their perception about Ozone depletion or Ozone hole as the

cause of global warming.

H4: There is an association between graduation discipline and perception for Ozone depletion or Ozone hole as the cause of global warming.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	36.569[a]	14	.001
Likelihood Ratio	17.083	14	.252
Linear-by-Linear Association	1.858	1	.173
N of Valid Cases	83		

At the 5% level, we accept our hypothesis. We can say that there is an association between graduation discipline and perception for Ozone depletion or Ozone hole as the cause of global warming.

H5: There is an association between gender and awareness level about 150 species being lost every day.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.748[a]	2	.417
Likelihood Ratio	2.411	2	.299
Linear-by-Linear Association	1.614	1	.204
N of Valid Cases	83		

At the 5% level, we do not accept our hypothesis and conclude that there is no association between gender and awareness level about 150 species being lost every day.

H6: There is an association between graduation discipline and awareness level about 150 species being lost every day.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	25.606[a]	14	.029
Likelihood Ratio	21.143	14	.098
Linear-by-Linear Association	1.319	1	.251
N of Valid Cases	83		

At the 5% level, we accept our hypothesis. There is an association between graduation discipline and awareness level about 150 species being lost every day.

H7: There is an association between gender and perception about Organic farming not meeting the food need of growing population.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.166[a]	2	.558
Likelihood Ratio	1.186	2	.553
Linear-by-Linear Association	1.093	1	.296
N of Valid Cases	83		

At the 5% level, we do not accept our hypothesis and conclude that there is no association between gender and perception about Organic farming not meeting the food need of growing population.

H8: There is an association between graduation discipline and perception about Organic farming not meeting the food need of growing population.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.004[a]	14	.165
Likelihood Ratio	13.864	14	.460
Linear-by-Linear Association	1.260	1	.262
N of Valid Cases	83		

At the 5% level, we do not accept our hypothesis. There is no association between graduation discipline and perception about Organic farming not meeting the food need of growing population.

H9: There is an association between gender and perception about increasing population alone being the cause of environmental degradation.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.782[a]	2	.020
Likelihood Ratio	6.290	2	.043
Linear-by-Linear Association	6.859	1	.009
N of Valid Cases	83		

At the 5% level, we accept our hypothesis. And conclude that there is an association between gender and perception about increasing population alone being the cause of environmental degradation.

H10: There is an association between graduation streams and perception about increasing population alone being the cause of environmental degradation.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.969[a]	14	.529
Likelihood Ratio	10.543	14	.722
Linear-by-Linear Association	.157	1	.692
N of Valid Cases	83		

At the 5% level, we do not accept our hypothesis. There is no association between graduation streams and perception about increasing population alone being the cause of environmental degradation.

H11: There is an association between gender of the respondents and mindset for Technological advancement will take care of the environmental problems.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.085[a]	1	.771
Continuity Correction[b]	.000	1	.997
Likelihood Ratio	.085	1	.770
Fisher's Exact Test			
Linear-by-Linear Association	.084	1	.772
N of Valid Cases	83		

At the 5% level, we do not accept our hypothesis. There is no association between gender of the respondents and mindset for Technological advancement will take care of the environmental problems.

H12: There is an association between graduation stream of the respondents and mindset for Technological advancement will take care of the environmental problems.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.353[a]	7	.393
Likelihood Ratio	10.323	7	.171
Linear-by-Linear Association	3.607	1	.058
N of Valid Cases	83		

At the 5% level, we do not accept our hypothesis. And conclude that there is no association between graduation stream of the respondents and mindset for Technological advancement will take care of the environmental problems.

H13: There is a relationship between the discipline of the respondents and their perception about slums contributing to GDP of a city.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.862[a]	7	.997
Likelihood Ratio	1.498	7	.982
Linear-by-Linear Association	.658	1	.417
N of Valid Cases	83		

At the 5% level, we do not accept our hypothesis. We can conclude that there is no relationship between the discipline of the respondents and their perception about slums contributing to GDP of a city.

H14: There is relationship between the gender of the respondents and their perception about Higher education leading to sustainable consumption

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.508[a]	2	.064
Likelihood Ratio	5.418	2	.067
Linear-by-Linear Association	5.357	1	.021
N of Valid Cases	83		

At the 10% level of significance, we accept our hypothesis and conclude that there is a relationship between the gender of the respondents and their perception about Higher education leading to sustainable consumption.

H15: There is a relationship between the different graduation streams of the respondents and

their perception about higher education leads to sustainable consumption.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.454[a]	14	.801
Likelihood Ratio	11.058	14	.682
Linear-by-Linear Association	.626	1	.429
N of Valid Cases	83		

At the 5% level, we do not accept our hypothesis. There is no relationship between the different graduation streams of the respondents and their perception about higher education leads to sustainable consumption.

H16: There is an association between graduation disciplines and the perception that privatisation will lead to better utilisation and management.

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.667[a]	7	.112
Likelihood Ratio	13.624	7	.058
Linear-by-Linear Association	3.658	1	.056
N of Valid Cases	83		

At the 5% level, we reject our hypothesis and conclude that there is no association between graduation disciplines and the perception that privatisation will lead to better utilisation and management.

Conclusion and recommendation

The study shows a pro environment attitude but at the same time a limited understanding of the depth of issues and only the economic centric perspective of sustainable development. Only 16 percent gave some hint of social dimension to sustainable development. Awareness of HDI and GDP was high but connection to quality of life was missing. The environment was high on priority as 24 percent of the students agreed that economic development at the cost of environment is a short term solution, followed by 16 percent each saying that there is a need to have a balance or economic development should be at the least environmental cost. There seems to be a limited understanding of sustainable development and equates it to environmental conservation as any lay person who is informed by mass media.

Only six percent putting comfort over the environment. Although the attitude was very positive, about 62 percent of the students were not able to articulate the difference between the quality of life and standard of living. The common belief amongst them was that

consumers will not pay for environmentally friendly products. Although a high of 89 percent said that eco-labelling has an influence on consumer behaviour, very few of them were aware of eco-labels. Almost all agreed that polluters should pay. 67 percent of them also believe that environmental clearances are an impediment to economic growth and 64 percent believe that privatisation leads to better utilisation of resources. This is a common business perspective being projected in Indian media.

Business is becoming a major driver of sustainable development with increasing production and consumption along with population as a major reason for environmental degradation. One way that business schools can meet their obligation to society is by ensuring that graduates are environmentally literate (Lillah R.). It is recommended that social and environment be part of ethical framework of business education. The paper only gives some overview of the status of the sustainability awareness of the students entering a management course. It would be useful if details sustainability literacy assessments are done to inform the business management curriculum for the need to include environmental /sustainability management. The impact of undergraduate discipline was found to influence awareness and perception and it is hence important the management curriculum removes the gap in sustainability literacy amongst students. The environment day theme recall is high and hence the institutions can weave those days in the curriculum.

According to Hoffamn (2004) following justify the need to have an environmental course as part of management education.

1. The business decision about what inputs to use and how to manage outputs ultimately determine environmental quality.
2. Firms, in general, are the sources of technological evolution within society.
3. Governments no longer possess the full array of resources and knowledge necessary to dictate environmental solutions to business.
4. The power of business organisations to determine the structure of our social, economic and political activity has grown to such enormous proportions that industry now possesses the most resources both individually and through markets to create a more efficient coordinating mechanism.

Bibliography

1. Bharucha, E. (2004). Textbook for Environmental Studies, UGC and BVIEER, 2004 Available on www.ugc.ac.in.
2. Contreras, L. E. (2003). A sustainable university: What can be the matter? CITA conference on education for sustainable development.
3. Coopey, J. (2003). Sustainable development and environmental management: The performance of UK business schools. Management Learning, 34, 5–26.
4. Debbie, H. (2012), Principles for Responsible Management Education (PRME). Macquarie Graduate School of Management. Available online http://www.unprme.org/resource-docs/PRMEMBAStudentStudy.pdf.
5. Gardiner, L. & Lacy, P. (2005). Lead, respond, partner or ignore: the role of business schools on corporate responsibility. Corporate Governance, 5(2), 174-185.
6. Hoffman A J., (October 2004), Business Decisions and the Environment: Significance, Challenges, and Momentum of an Emerging Research Field. Michigan Ross School of Business Working Paper Series Working Paper No. 904 Version 5.0.

7. Hoffman, A. J. (2000a). Competitive environmental strategy. A guide to the changing business landscape. Island Press: Washington, D.C. and Covelo, California.

8. Hoffman, Andrew J, (1999), Environmental Education in Business School

9. http://www.indiaenvironmentportal.org.in/files/file/EIA%20Report%20Final_151013.pdf

10. Johannsdottir L, (2009), Environmental Literacy of Business Students, Institute of Business Research – the University of Iceland, Working Paper Series (W09:03), ISSN 1670-7168

11. Lillah R., Viviers S., Venter E. Environmental Literacy: A Case Study at A South African University.

12. Luthar, H. K., & Karri, R. (2005). Exposure to ethics education and the perception of linkage between organizational ethical behavior and business outcomes. Journal of Business Ethics, 61, 353–368.

13. *McKeown R.* May 2002. ESD Toolkit, Version 2.0 accessed from http://www.esdtoolkit.org/discussion/default.htm.

14. Moon, J., Crane, A., & Matten, D. 2005. Can corporations be citizens? Corporate citizenship as a metaphor for business participation in society. Business Ethics Quarterly, 15: 427– 451.

15. Nicholson, C. Y. & DeMoss, M. (2009). Teaching ethics and social responsibility: An evaluation of undergraduate business education at the discipline level. Journal of Education for Business, 84(4), 213–218.

16. Porter, M. E., & Kramer, M. R. (2011). Creating shared value. Harvard Business Review, January 2011, 62-77.

17. Segon, M and Booth, C 2009, 'Business ethics and CSR as part of MBA curricula: An analysis of student preference', International Review of Business Research Papers, vol. 5, no. 3, pp. 72-81. Available at https://www.researchgate.net/publication/303698702_Segon_M_and_Booth_C_2009_'Business_ethics_and_CSR_as_part_of_MBA_curricula_An_analysis_of_student_preference'_International_Review_of_Business_Research_Papers_vol_5_no_3_pp_72-81.

18. Segon, M., & Booth, C. (2009). Business ethics and CSR as part of MBA curricula: An analysis of student preference. International Review of Business Research Papers, 5(3), 72-81.

19. Sengupta, M., Das, J. and Maji, R.K., 2010. Environmental awareness and environmental related behaviour of twelfth grade students in Kolkata: effects of stream and gender. Anwesa5, 1-8

20. Singh, R. 2016. Environmental awareness among undergraduate students in relation to their stream of study and area of residence. ISSN 22788808. SRJIS SEPT-OCT 2016, VOL-4/26 Available on www.srjis.com.

21. Sivamoorthy M, Nalini R, Satheesh Kumar C (2013). Environmental Awareness and Practices among College Students. International Journal of Humanities and Social Science Invention, 2(8): 11-15.

22. Sleeper, B. J., Schneider, K. C., Weber, P. S., & Weber, J. E. (2006). Scale and study of student attitudes toward business education's role in addressing social issues. Journal of Business Ethics, 68, 381–391.