

Strategic Rethinking of Management Education : Green MBA Model

P. S. Aithal* & Priti Jeevan**
School of Business Administration
Srinivas University, Mangalore - 575001, INDIA

ABSTRACT

The conventional Masters degree in Business Administration (MBA) aims at study of business primarily from a functional standpoint, namely efficient production, effective marketing of products and services, some attention to management of people, and some of conventional economic theory, and business ethics. This suffers from a serious limitation that it has failed to grow over time and situation. The basic raw material for any industry at some stage is a natural resource. So also, every industry ends up with some bio-non-degradable products or byproducts. The danger is twofold. On the one hand, it depletes nature and on the other it generates a stockpile of waste. The adverse effects of global warming and its consequence on climate change are yet larger forms of this danger. Therefore, a sustainable business is one in which any organization that involves in environmentally friendly or green activities in all processes, products, and manufacturing activities and adequately addresses environmental concerns while maintaining profit. In other words, it is a business that "meets the needs of the present day world" without compromising the ability of "the future generations to meet their own needs". It is the process of assessing how to design, market, use and dispose products that will take advantage of the current environmental situation and how well a company's products perform with renewable resources. The business education of today has to shift focus. A sustainable MBA program should re-orient traditional subjects with special emphasis on eliminating those models and processes which directly or indirectly contribute to depletion of resources, destruction of environment and extended global warming. Such programme can be also called as Green MBA. This paper discusses the need for a thoroughly re-structured curriculum, revised pedagogy, refined businesses processes, expanded business opportunities and enhanced placement avenues for the proposed sustainable new model in business management education - Green MBA.

Keywords : Innovations in MBA curriculum ; Sustainable business management; Green MBA.

I. Introduction

Higher education in business management is a much sought-after field for Indians. Today, the best and brightest students want to do higher education in business management because it is a sure way to well-paid jobs with great prospects for advancement. However, the most serious problem with business management education today concerns the placement of B-school graduates. The placement of a graduate depends on his/her competitiveness and the ability to manage sustainable business. Present corporate world is full of competition. New technologies are emerging every day and everything is turning towards globalization. In such challenging situation, young managers possessing management degree with competitiveness to manage sustainable business turn out to be survivors. The biggest challenge of the corporate world is to produce efficient managers. A management degree from a reputed institution certifies that the person holding the degree has enough managerial skills required to face the competition. Management courses develops skillful workforce which constitutes of leaders of future as well as competitive managers. They have the ability to handle complex business situations. They maintain healthy relationships with clients. But due to changes in technology, changes in business models, and changes in concern on environment, current management education models are losing their relevance. A decade ago, a management degree was the golden passport to get lucrative salaried jobs, but due to changed management perception in the society on sustainability question the analytical approaches prevalent in today's business management programs. In the slogan of 'innovate for sustainability or die', the executives have to focus their decisions on sustainability of profit and social responsibility rather than quick profit to their organization. The executives of the past were sensible and required to sell things proficiently, but business leader today must touch lives and change paradigms to create an environment for sustainability (Springett, 2005)

Present requirement in global business arena is making business operations sustainable and developing "green" products for sustainable environment. In order to handle green inputs provided by the suppliers, to plan sustainable manufacturing with new equipment and processes; to full fill customers demand on more eco-friendly products and services, most executives need to become knowledgeable in sustainable business objectives as well as in corporate social responsibility. Not surprisingly, the change needed in conventional management practices to save the planet has turned into a pitched battle between governments and firms, between firms and consumer activists, and sometimes between consumer activists and governments. To force businesses to become sustainable, both legislation and proper education to all stakeholders of business firms are necessary. Unless the managers of business firms are educated in environmental sustainability, they may not be able to solve the environmental sustainability problems quickly or completely.

Ram Nidumolu et. al. (2009) showed that sustainability is a mother lode of organizational and technological innovations that yield both bottom-line and top-line returns. Becoming environment-friendly lowers costs because firms end up reducing the inputs they use. In addition, the process generates additional revenues from better products or enables firms to create new businesses. In fact, because those are the goals of corporate innovation, it is observed that smart companies now treat sustainability as innovation's new frontier. Indeed, the quest for sustainability is already started to transform the competitive landscape, which will force companies to change the way they think about products, technologies, processes, and business models. By treating sustainability as a goal today, early movers will develop competencies that rivals will be hard-pressed to match. That competitive advantage will stand them in good stead, because sustainability will always be an integral part of development. Enterprises that have started the journey towards transforming themselves as sustainable, environmental friendly organizations, have adapted five distinct stages of change (Ram Nidumolu et. al. 2009). They are (1) Viewing Compliance as Opportunity, (2) Making Value Chains Sustainable, (3) Designing Sustainable Products and Services, (4) Developing New Business Models, and (5) Creating Next-Practice Platforms. Sustainability can lead to interesting next practice platforms. To handle business platforms, managers should get specialized training in all areas of organizational problems to make effective decisions. By making suitable and rapid changes in business management education, the new set of business executives can be created who have specialized skills in sustainable business practices. The sustainable business models need customized management education, curricula customization, Specific material development & faculty specialization etc. No doubt some of the B-schools have introduced MBA, program, focused on some area of sustainable business management but still it requires more efforts on customization in order to broaden the Specializations. This need a complete modification and re-design of business management education model leading to MBA degree in the entire world. Such MBA model is called sustainable MBA. A sustainable MBA program should re-orient traditional subjects with special emphasis on eliminating those models and processes which directly or indirectly contribute to depletion of resources, destruction of environment and extended global warming. Such programme can be also called as Green MBA. In this paper we have discussed the need for a thoroughly re-structured curriculum, revised pedagogy, refined businesses processes, expanded business opportunities and enhanced placement avenues for the proposed sustainable new model in business management education - Green MBA. We have suggested the possible core subjects and specialized subjects with desired modifications in the focus on curriculum development.

II. Present MBA Curriculum

The universal mission of MBA programs is to deliver an applied business education in a multi-cultural learning environment. MBA programs aim to improve students' decision-making capabilities by providing a functional business foundation while enhancing their analytical, communication and

technological skills. Upon completion of their programs, graduates are typically equipped to work effectively in teams, sell their ideas, apply theory to understand real practical situations, think "outside the box" and develop novel solutions, integrate the functional department issues into a coherent strategic whole, analyze and synthesize problems, manage the development of their own careers. MBA graduates are also knowledgeable about current international and global issues, ethical and diversity issues, current technology issues, leading change in an organization, and current management trends.

A growing trend in MBA programs is for students to go through the entire program together as a cohort class. In large MBA programs the cohort may be divided into smaller sub-cohorts. The members of each cohort journey together along a common path of professional learning and socialization that leads to lifelong personal and professional growth and development. Thus, each student is part of a group in which fellow students take an interest in each other's attainments. MBA cohort members form mutually supporting networks that endure, for many of them, throughout their professional careers. The MBA classroom experience will often resemble actual management experience wherein students are encouraged to examine problems, explore alternatives and apply theories and concepts to derive solutions. This approach helps hone critical-thinking, logic and problem-solving skills, preparing students for the daily challenges in the business marketplace. This experience is typically delivered in the form of discrete learning modules that may comprise a number of classes, activities and assignments ranging from just a couple of weeks to a full semester of studies. In fact, elements of one module may span an entire MBA program of studies. They may be taught by individual instructors or by teams of instructors, and they may be presented as independent classes or as an integrated unit.

Skills required for future global manager would be Information management skill, Information technology management skill, Decision-making in very dynamic environment, HRD Skill, Innovation/Creativity, Service Sector management Skills, Time Management Skills, Stress Management Skills, Environment management Skills, Entrepreneurship skills Customers Services Management Skills and Management schools will have to develop these skills among students.

Rehder (1983) also predicted that, if business schools fail to adapt, their functions would be increasingly carried out by Corporations. A number of corporate universities have subsequently come up. A joint effort by AACSB (American Assembly of Collegiate School of. Business) and EFMD (European Foundation for Management. Development) (Dymsza 1982), known as "Managers for the 21st Century" study represented the first comprehensive initiative to make management education more relevant for the future since Carnegie Corporation and Ford Foundation established standards for professional management education in schools of business in 1959. The major recommendations of the joint AACSB and EFMD study were: Management Schools should provide an education that combines both generalist and specialist components. Management

Education should be much more holistic in character. It needs to be more integrated — incorporating a number of functional, quantitative, non-quantitative and analytical fields including the humanities and sciences — to educate the “whole” manager to meet the responsibilities and challenges of the future. Management schools, thus, should aim to develop future managers with a “portfolio of capabilities” quantitative, computer and other analytical skills, functional knowledge and communications, interpersonal, bargaining, negotiation, entrepreneurship, administration and other non-cognitive skills. A closer partnership should be developed between educators and managers in the future. Management schools should strive to develop experiential courses in creativity and managerial innovation.

The global challenges exerted pressure on management schools to change. Growing globalization of national economies through trade and investment made it even more vital to further the understanding of processes and consequences of internationalization. It was certain that institutions lacking a vigorous, systematic and coherent strategy for internationalization of existing management curricula, putting all concerned at a serious disadvantage in the years to come. Global companies increasingly recognize the need to develop leaders who are equally comfortable and effective working anywhere in the world (Miller, 1998). Howe and Martin (1998) indicated that best practices cannot be easily transferred across the globe. One of the major problems they identified was to find an internationalization strategy that accommodates the interests of Western business schools as well as those of the host countries. It was becoming clear that as one of the most market oriented sectors, business schools have the opportunity to participate in the transformation of higher education. Business schools started becoming initiators of change.

The global education and training market will continue to be growth areas. Short courses offered by consulting companies are emerging as alternative business schools and the research conducted by various professional service firms are becoming alternative sources of business research. It has been stated that business schools, if they have to survive, have to focus on research to solve problems of enduring importance and to build such (evaluated) curricula that can actually prepare students to be effective in practicing the profession. This is with reference to the role of business schools. On the other hand, a recent report on financing of universities has stated that when universities depend on taxpayers, their independence and standards suffer (Stevens, 2004). Under- priced goods and services are usually wasted. Flexibility in setting sources of income is necessary for inducing business schools to compete on standards. Competition will make business schools continuously evolve and develop relevant and result-oriented curricula and teaching tools. Such is the scenario of global management education market.

Logically MBA schools need to come out new subjects, modules, majors or have more emphasis on the areas of organizational learning (or learning organization), knowledge management, organizational development & change management, business processes optimization, talent

management, merger & acquisition management, supply chain management, value chain management, technology management, risk management, asset management, globalisation management, etc. One of the top priorities of businesses in the 21st century is to generate creative products and services and conduct business in an innovative way. MBA schools need to study some very innovative businesses (like Google, Yahoo, Amazon, Dell, Alibaba, etc), understand the structure and philosophies of those companies, and equip students with capability to create and manage such companies (Sajal, 2010).

III. Opportunities for Sustainable Management Education based on Present Industry Strategy

The basic concept of a green business lies in business sustainability. This can be well understood by both consumers and organizations. The organizations which adopted green technologies and processes in their business activities have been driven by changes in the market environment like the regulatory regime and customer's demand. Some of the drivers for green business adoption are (1) Global environmental pressures and public awareness, (2) Capital markets acceptance for green products, (3) Enhanced market demand for clean tech products or services, (4) Creating environmentally-friendly market, (5) Providing extra financial backing to clean tech companies etc. (Sajal Kabiraj et.al. 2010). Some of the Characteristics of the green business model are (1) Environmental benefits and sustainability, (2) Transformation from industrial economy to service economy, (3) An important non-technological innovation. (Jing, Hao, 2013). More and more companies are increasingly becoming aware of green business opportunities and the need to examine their corporate responsibility. Business and government are now evaluating their triple bottom line i.e., their environmental, economic and social impact on the planet. Business may discover that becoming more energy efficient will also translate into valuable money savings too.

There are three types of sustainability goals (Hart, 1997). The first goal is to prevent pollution by minimizing the level of emissions, effluents, and wastes. The second and higher level goal is product stewardship, where one focuses on both reducing pollution and also minimizing the adverse environmental effects associated with the full life cycle of a product. The third and ultimate goal is the use of clean technology that creates no harmful emissions or waste. The three goals can apply at three different levels: individual, organizational, and societal.

Emerging markets for greener products and services on the one hand, and the rise of sustainability and green growth agendas in corporate management on the other, are increasingly leading firms to integrate non-financial metrics into their decision-making processes, to revisit the concepts of value and profitability that drive their business models, and to reconsider the balance between the dual

objectives of short-term profitability and long-term sustainability (Bryson & Lombardi, 2009). This examination, evaluation and implementation of environmental change, retrofitting, upgrades and green improvements require qualified skilled staff in green jobs. Many of these new jobs never existed even 10 years ago. In India, number of large, small and mid-size companies is setting the trend with green initiatives. The top ten companies adopted green business initiations are:

☛ **Suzlon Energy**, the world's fourth largest wind-turbine maker is among the greenest and **best Indian companies** in India. Tulsi Tanti, the visionary behind Suzlon, convinced the world that wind is the energy of the future and built his factory in Pondicherry to run entirely on wind power. Suzlon's corporate building is the most energy-efficient building ever built in India.

☛ **ITC Limited** strengthened their commitment to green technologies by introducing 'ozone-treated elemental chlorine free' bleaching technology for the first time in India. The result is an entire new range of **top green products and solutions**: the environmentally friendly multi-purpose paper that is less polluting than its traditional counterpart.

☛ **Tata Metaliks Limited (TML)** is one of the **top green firms in India**. A practical example that made everyone sit up and take notice is the company's policy to discourage working on Saturdays at the corporate office. Lights are also switched off during the day with the entire office depending on sunlight.

☛ Adjudged the best performer in the 2009-2010 Green Business Survey, **Tamil Nadu Newsprint and Papers Limited (TNPL)** was awarded the Green Business Leadership Award in the Pulp and Paper Sector. The initiatives undertaken by this **top green firm in India** includes two Clean Development Mechanism projects and a wind farm project that helped generate 2,30,323 Carbon Emission Reductions earning Rs. 17.40 Crore.

☛ **Wipro Technologies** climbed to the top five brand league in Green peace's 'Guide to Greener Electronics' ranking. Despite the global financial crisis, Wipro held fast to its commitment towards energy efficiency and was lauded for launching energy star compliant products in the market.

☛ **HCL Technologies** is considered as the icon of **Indian green initiatives**, for taken steps in solving the problem of toxics and e-waste in the electronics industry. HCL is committed to phasing out the hazardous vinyl plastic and Brominated Flame Retardants from its products and has called for a Restriction on Hazardous Substances (RoHS) legislation in India.

☛ **Oil and Natural Gas Company (ONGC)** being largest oil producer is all set to lead the **green Indian companies** with energy-efficient, green crematoriums that will soon replace

the traditional wooden pyre across the country. ONGC's Mokshada Green Cremation initiative will save 60 to 70% of wood and a fourth of the burning time per cremation.

☛ **IndusInd Bank has started its green banking initiatives by opening** the country's first solar-powered ATM and pioneered an eco-savvy change in the Indian banking sector. The bank is planning for more such initiatives in addressing the challenges of climate change.

☛ **IDEA Cellular** paints India green with its national 'Use Mobile, Save Paper' campaign. The company had organized Green Pledge campaigns at Indian cities where thousands came forward and pledged to save paper and trees. IDEA has also set up bus shelters with potted plants and tendrils to convey the green message.

☛ **Hero Honda Motors** is one of the largest two-wheeler manufacturers in India and an equally responsible **top green firm in India**. The company's philosophy of continuous innovation in **green products and solutions** has played a key role in striking the right balance between business, mankind and nature.

This global 'green transition' presents an enormous economic opportunity as new product markets and new ways of doing business emerge. Markets for low carbon technologies will be worth at least US\$ 500 billion by 2050 if the world acts on the scale required (WWF, 2010).

The global climate and environmental challenges are changing the agenda for businesses and policy makers who are shifting their thinking of climate change and resource constraints as environmental problems to seeing them as economic potentials and opportunities (WBCSD, 2010). As a result, most of small and big companies are thinking to shift/convert many of their business processes to green processes by means of suitable modifications through re-designing/re-engineering. This opportunity created enhanced demand for executives with the knowledge of green business strategies.

IV. Requirement of New Curriculum

Innovations in management came from thought leaders and consultancy firms as well as from business schools who designed and delivered MBAs. One of the major drivers of changes of management education has been the influence of thought leaders. They brought in new concepts and new perspectives that enriched management education. Porter introduced the diamond of competitiveness (Porter, 1980). This helped in conceptualizing the sources of competitiveness in firms as well as in industry. Prahalad and Hamel (1990) brought in the concept of core competence and this has been used widely. The third major thought leader in management has been Senge. Senge emphasized the role of learning. It plays a major role in developing and implementing strategy (Senge, 1990). The next major contribution was "emotional intelligence" (Goleman, 2004). The movement by Goleman led to "rationalize" feeling and emotive or intuitive aspects in a western cognitive frame rather than a European/Oriental existential and simultaneous frame of reference. These provide for richer frameworks that are more integrative and provide new insights for decision

making. The intense competition, coupled with the changing market, has forced most business schools to look at cooperation among the schools themselves. Business school – business school partnerships, and business school – industry partnerships are increasing. MIT and BP have started a cooperation project, with MIT providing the leadership inputs. Top business schools are specializing and customizing their program and curricula, as well as changing the sources of their income. Many business schools are attempting to use executive MBAs as a source of major revenue.

The conventional Masters degree in Business Administration (MBA) aims at study of business primarily from a functional standpoint, namely efficient production, effective marketing of products and services, some attention to management of people, and some of conventional economic theory, and business ethics. This suffers from a serious limitation that it has failed to grow over time and situation. The business education of today has to shift its focus. Accordingly many variations in MBA programmes are provided based on developments in the society with time. MBA programmes presently offered are designed in various functional areas like Human Resource Development, Marketing, Finance & Accounting, Production & Distribution etc. Presently, other important futuristic areas are also getting importance and independent full-pledged MBA program can be designed like MBA in Entrepreneurship, MBA in Banking & Insurance, MBA in International Business, MBA in Agri-business, MBA in Technology management, MBA in E-business & M-Business, MBA in Green business, MBA in Business Analytics, etc based on corporate demand.

As the corporate and business world scramble to devise strategies to address sustainability, business schools are incorporating eco-friendly courses and degrees into their curricula. One particular degree that is gaining momentum in the business school world is the Green MBA. The Green MBA degree is also referred to as a master's of business administration degree in sustainable enterprise. The degree seeks to emphasize an education in ecological sustainability, financial viability, and social justice. As the world tackles pressing issues such as climate change, the need for individuals to take jobs in clean technology and other ecology sectors is growing. The MBA degree was born out of the world's need to educate students to effectively tackle climate change and other environmental problems by finding an alternative business processes or business models or usage of renewable energy sources to control carbon emission and climate change. By modifying the Business Management curriculum as green supportive, we can prepare graduates as “green executives” with specialized knowledge and skills on sustainable business practices. Such efforts of producing responsible green executives will definitely improve the industry contribution towards sustained environment. An MBA education in Green Business addresses the need for professionals who can effectively and efficiently integrate environmental concerns with other demands of traditional business operations. This concentration develops students' knowledge and proficiency in the assessment and development of organizational environmental strategies, including green supply chain practices, green marketing and risk management.

V. Green MBA Model

Today's corporate sector is increasingly emphasizing the concept of sustainability and incorporating a triangle of economic, environmental and social viewpoints when making ethical management decisions about corporate growth and development. As companies around the globe face the challenges of sustainability, there is an increasing need for leaders who have the capacity to incorporate strategies for both sustainability and profitability into their businesses to achieve value maximization in a more holistic way. With environmental issues such as global warming, pollution and the depletion of natural resources threatening our very existence, corporations must learn to reduce, reuse and recycle in order to protect our planet while taking care of people and maximizing profit. Sustainable management looks beyond short-term quarterly profits, and focuses on long-term gain by incorporating the environmental and social costs of doing business into management decisions.

A sustainable MBA program includes traditional subjects with special emphasis on eliminating those models and processes which directly or indirectly contribute to extend global warming and also study of managing for environmental and social sustainability for long term benefit. Such program can be also called as Green MBA. The purpose of Master of Business Administration (MBA) program in green business is to adopt and incorporating environmental sustainability concepts into business administration curriculum. Constance Bates et. al. (2009) have designed a new green management course at Florida International University, USA. The outline given in this paper is also used as a guide for developing this new course 'Green MBA' in the area of business sustainability. There are many post graduate programmes in sustainable business with customized innovations (Jabbour, C.J.C., 2010). But we have designed an optimum Green MBA programme with many unique features in order to support the students learning and enhance their knowledge, skills and experience along with job opportunities. This Green MBA model supports the business organizations to solve their problems for achieving sustainability by supplying competent executives.

The objectives of Green MBA/ MBA in Green Business programme are :

- (1) Prepare students for managerial and leadership positions in both business corporations, government, and non government (NGO) agencies to manage and promote sustainability as a model for balanced economic growth and human development
- (2) Challenge and support the students to engage with the growing international debate and practice around sustainability, business, social and ethical responsibility.
- (3) Enable students to join the global movement for protecting environmental resources for future generations as well as the spread of social and economic opportunities for everyone to develop a shift in paradigm of business thinking as a means of establishing sustainable marketing strategies.

- (4) To educate the students in adopting sustainable businesses practices and encourage them to promote sustainable social enterprises as leaders and facilitators.
- (5) To prepare individuals who are well informed, about social and environmental sustainability for contributing to social changes within the context of ethics, social sustainability, and specify the kinds of laws, regulations, and professional rules professionalism that bear on ethical decision-making.
- (6) Challenge the status quo and suggest new and innovative opportunities for businesses to grow without compromising social and environmental responsibilities
- (7) To develop smartness among the students to deal with the threat of negative environmental and sociological impact of business is to convert them into opportunities of improvements and excellence.

The expected focuses of Green MBA programme are:

- (1) The green MBA focus on the sustainability concepts of financial investment by optimum utilization of resources, and fosters an understanding of how sustainability principles & models can create value in all aspects of organizational business functions.
- (2) Green MBA follows the conventional MBA course structure which typically includes core subjects followed by a suit of electives called specializations. Core subjects include business fundamentals like accounting, economics, business organizations & environment, marketing statistics, and other essential skill based topics like communication & leadership etc. with special emphasis on sustainability of environment & resources but integrate the principles of sustainable business, the environment, and social responsibility into each subject. Electives of Green MBA includes “Sustainable business systems, Food & water systems and Safety management, Green development management, Green energy & environment management, Green marketing, Green entrepreneurship, Green finance & investment, Green electronic business, Green technology management etc.” which covers the potential for business innovation in conventional developments, energy, alternative energy, green buildings, water, materials and personal mobility. These electives train managers in environmentally sustainable strategy & operations, delves into the environmental challenges, and how to tackle these problems and use them to create a competitive advantage.
- (3) Sustainability by nature is a broad concept that affects all markets and industries, and has become a factor in many business decisions. Many ideas about the nature of business, including “Conscious Capitalism” believe that true capitalism and sustainability are synonymous, not unconnected separate ideas. Courses that integrate green ideas and strategies into the MBA candidate’s core classes will not only require all students to learn

them, but will also be more true to the realities of sustainable profit and to become winning organization.

The green MBA programme is suitable for candidates who are in the early or mid-career and wants to:

- Initiate sustainability thinking and incorporate them into the business strategies
- Increase profit and the satisfaction of their employees and partners to benefit their companies, community, and planet.
- Executives who want to create an edge above the rest
- For Sustainable Responsible Investors & bankers
- For companies looking to green their production and supply chains
- For CSR officers documenting the company’s environmental and social impact
- Wants to be innovative and globally competitive
- Anyone who wants to be specialized in different functional areas of Green Business

Like any MBA programmes of Business Schools, the green MBA programme shall have core subjects and specializations, The core subjects are more general in nature and designed to provide essential basic knowledge in the course. The specializations are usually electives chosen by a student based on his/her interest to get focused study on chosen functional area of Green Business. As per this MBA programme model of two years duration developed through a focus group method, the total subjects to be learned are divided into four semesters. In the first two semesters, the students have to study nine core subjects and one compulsory project in each semester. In the third and fourth semester, the students have to choose two specialization in the given area of sustainable business. A student has to take two papers in each specialization so that he will study four papers in dual specialization during third semester and four papers in same dual specialization during fourth semester. The entire Green MBA programme plan is given in Table 2.

Table 2 : Green MBA Programme Plan

Semester	Duration	No. of Core Subjects	No. of Elective Subjects	Project
Semester I	24 weeks	09	-	01
Semester II	24 weeks	09	-	01
Semester III	24 weeks	02	04	-
Semester VI	24 weeks	-	04	02
Total	96 weeks	20	08	04

Table 3. Green MBA Programme Structure

SEMESTER I (22 WEEKS)					
S. No.	Subjects	H/w & Credit	Int. Marks	Sem. Exam Marks	Total Marks
1	Financial Accounting	4	30	70	100

2	Environmental Economics	4	30	70	100
3	Sustainable Business Environment & Strategies	4	30	70	100
4	Principles & Concepts of Sustainability	4	30	70	100
5	Business Statistics/Analytics	4	30	70	100
6	Green I.T. & I.S. concept & Management	3	30	70	100
7	Computer Aids for Managers	3	30	70	100
8	Principles of Environmental Management & Practice	2	30	70	100
9	Business Communication	2	30	70	100
10	Mini Project 1	4	30	70	100
TOTAL		34			1000

SEMESTER II (22 WEEKS)					
S. No.	Subjects	H/w & Credit	Int. Marks	Sem. Exam Marks	Total Marks
1	Green Production and Supply Chain Management	3	30	70	100
2	Management Science & Decision Making	4	30	70	100
3	Green Energy Management	4	30	70	100
4	Corporate Finance	4	30	70	100
5	Marketing management & Green Marketing	4	30	70	100
6	Business Research Methods	3	30	70	100
7	Sustainable Business Strategy	3	30	70	100
8	International Business	2	30	70	100
9	Legal aspects of Sustainable Business	2	30	70	100
10	Mini Project 2	4	30	70	100
TOTAL		34			1000

SEMESTER III (20 WEEKS)					
S. No.	Subjects	H/w & Credit	Int. Marks	Sem. Exam Marks	Total Marks
1	Climate change & Development	4	30	70	100
2	Corporate Social Responsibility & Ethics	4	30	70	100
Elective : GREEN FINANCIAL & INVESTMENT					
1	Indian Financial System	4	30	70	100
2	Financial Analysis	4	30	70	100
3	International Financial Management	4	30	70	100
Elective : GREEN MARKETING					
1	Retailing Management	4	30	70	100
2	Consumer Behaviour and Marketing Research	4	30	70	100
3	Services Marketing	4	30	70	100
Elective : GREEN DEVELOPMENT MANAGEMENT					
1	Economics of natural resources	4	30	70	100
2	Environmental Law – Green Development	4	30	70	100
3	Urban Planning Fundamentals	4	30	70	100
Elective : FOOD, WATER SYSTEMS & SAFETY MANAGEMENT					
1	Food Systems and Sustainability	4	30	70	100
2	Food Systems Policy and Law	4	30	70	100
3	Food Supply Chain Management	4	30	70	100

Elective : GREEN ENTREPRENEURSHIP					
1	Sustainable Venturing	4	30	70	100
2	Sustainable Innovation and Entrepreneurship	4	30	70	100
3	Projects in Enterprise Sustainability	4	30	70	100
Elective : GREEN ELECTRONIC BUSINESS					
1	Electronic Business Models & Sustainability	4	30	70	100
2	Mobile Business Models & Sustainability	4	30	70	100
3	Mobile Transaction Security	4	30	70	100
Elective : GREEN TECHNOLOGY MANAGEMENT					
1	Information Technology Management	4	30	70	100
2	Nanotechnology Business Opportunities	4	30	70	100
3	Customer Relationship Management (CRM)	4	30	70	100
4	Logistics and Supply Chain Management	4	30	70	100
TOTAL		32			800
SEMESTER IV (12 + 12 = 24 WEEKS)					
S. No.	Subjects	H/w & Credit	Int. Marks	Sem. Exam Marks	Total Marks
1	Opportunity Analysis & Job Search Skills	1H, Non credit	-	-	-
Elective : GREEN FINANCIAL MANAGEMENT					
4	Security Analysis and Portfolio Management	4	30	70	100
5	Risk Management and Derivatives	4	30	70	100
Elective : GREEN MARKETING MANAGEMENT					
4	Digital Marketing	4	30	70	100
5	Green supply chain management & Logistics	4	30	70	100
Elective : GREEN DEVELOPMENT MANAGEMENT					
4	Sustainable Community Development	4	30	70	100
5	Hazardous Materials Management	4	30	70	100
Elective : FOOD SYSTEMS & SAFETY MANAGEMENT					
4	Sustainability in Food Retail Business	4	30	70	100
5	Management of productivity and innovation in food business and safety	4	30	70	100
Elective : GREEN ENTREPRENEURSHIP					
4	Sustainable Growth Management	4	30	70	100
5	Project Management in Enterprise Sustainability	4	30	70	100
Elective : GREEN ELECTRONIC BUSINESS					
4	Sustainable venturing	4	30	70	100
5	Website & E-business Development (Theory + Practical)	4	30	70	100
Elective : GREEN TECHNOLOGY MANAGEMENT					
4	ERP - Retail Operations	4	30	70	100
5	ERP - Sales and Distribution (SD) or Financial Accounting (FI) – Practical Modules	4	30	70	100
6	Project based on Corporate Internship (To be carried out between Third and Fourth Semester)	8	100	200	300
7	Project Based on Empirical Research (To be carried out between Third and Fourth Semester)	8	100	200	300
TOTAL		32			1000

Unique features of our Green MBA model:

- Focus on sustainability in core subject curriculum.
- Many electives/specializations in different functional areas of green business.
- Dual specialization opportunity in second year of the programme.
- Sustainability projects in every semester so that a student gets practical experience.
- Project based on corporate internship and empirical research
- Compulsory core papers of 76 credits, elective papers in any two specialization areas of 20 credits and four integrated projects of 24 credits making a total of 120 credits.

Some of the global and Indian institutions offering MBA programmes in sustainable management are listed in Table 4.

Table 4 : List of some of Global & Indian Green MBA programmes

S. No.	Programme	School	Country
1	MBA in Sustainability	Antioch New England	
2	MBA in Global Sustainable Management	Anaheim University	USA
3	MBA in Sustainable Business MBA in Sustainable Systems	Bainbridge Graduate Institute, Pinchot University	USA
4	MBA in Sustainability	Bard College, New York	USA
5	MBA in Design Strategy	California College of the Arts	USA
6	Green MBA	Dominican University	
7	MBA/MS in Natural Resources & Sustainability	Erb Institute at the University of Michigan	USA
8	Leading Green MBA	Harvard Business School	USA
9	Green MBA Online	Marylhurst University	USA
10	Sustainable MBA	Meridian University	USA
11	MBA in Sustainable Management	Presidio Graduate School	USA
12	PG Diploma in Sustainable business	Asian International College	
13	MBA in Carbon Management	London School of Business & Finance	U.K.
14	MBA (Business Sustainability)	TERI University	India
15	MBA in Natural Resource Management	Amity School of Natural Resources & Sustainable Development, NOIDA	India
16	MBA – Energy and Environment	Symbiosis Institute of International Business, Pune	India
17	MBA in Sustainability Management	Xavier University Bhubaneswar	India
18	PG Program in Sustainable	IIM, Lucknow	India

	Management		
19	MBA – Green Business	Srinivas School of Business Management	India

VI. Industry Benefit

The industries who employ Green MBA graduates will get support in :

1. Controlling wastage of resources,
2. Decreasing environmental degradation & pollution
3. Optimum carbon management
4. Effective Corporate Social Responsibility
5. Sustainable business profit
6. Green & renewable energy management
7. Recycling of wastage and lowering cost
8. Green marketing & Brand building
9. Stake-holder satisfaction etc.
10. Producing green products or provide services that green other businesses or consumers.
11. To transform themselves as eco-industry.

VII. Job Opportunities

The Green MBA graduates can find employment in a growing number of companies, nonprofit organizations, and government agencies. Since sustainability must be integrated at all organizational levels, candidates find jobs in a wide range of departments, including finance, marketing, and operations, as well as corporate citizenship departments in some larger companies to ensure the practices of the organizations are legally fall within government regulations, and align with the organization's own environmental goals. Other opportunities are :

- (1) Operations management which managers implement and oversee environmental performance plans and sustainable operations in production and service divisions of organizations.
- (2) Energy Management which decides organizational strategy of using renewable energy in business operations.
- (3) Corporate social responsibility (CSR) division of all organizations need managers to investigate the environmental impact of existing business operations and the long-term sustainability of raw materials and other resources to devise alternative corporate structures,

operational methods, and resources to improve environmental performance and ensure a company's long-term viability and growth.

(4) Finance & Accounting departments, where they will evaluate and report on the relationships between financial performance and their company's environmental initiatives.

(5) Opportunities in environmental consulting to be consultant in pollution control, Green buildings, green energy, green operations, risk management etc.

(6) Compliance department of the organizations to ensure that business activities are conducted according to company values and within legal parameters.

(7) Corporate Citizenship Division to oversee the organization's environmental initiatives as a whole to work as a liaison between all departments to communicate, encourage and ensure consistency in environmental practices to meet company goals and objectives.

(8) Any other areas of business organizations, Government organizations, non-profit organizations and all other NGO, s to work in planning and maintaining sustainable resources for long term profits.

VIII. Systems approach to Green MBA curriculum developed based on the study

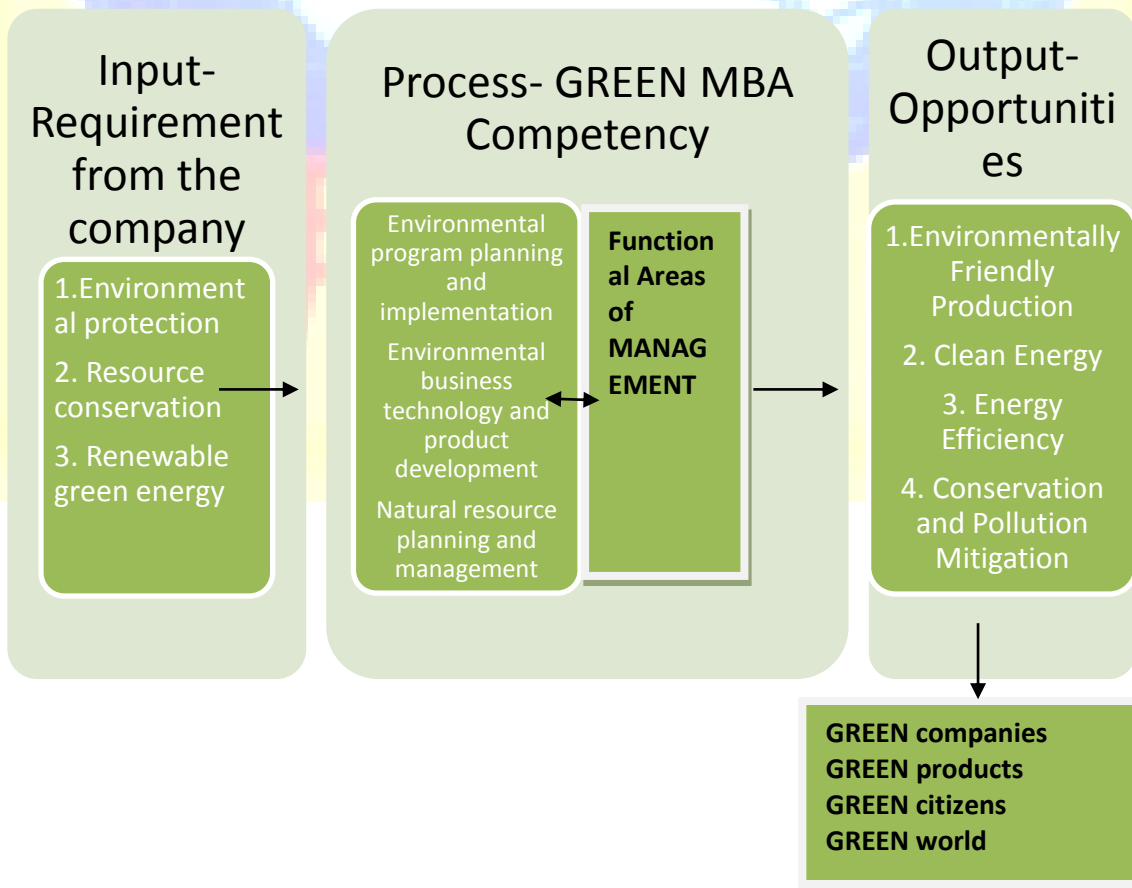


Fig. 1 : System model of Green MBA curriculum.

The systems model of Green MBA programme is developed based on above discussions and is depicted in figure 1. The systems approach of our Green MBA model consists of input requirement from the companies as industry requirements and the MBA programme will mould the students competency in various Green Business processes and develops them to face challenges in business corporations, government and non-governmental agencies as opportunities by converting companies into green companies, products into green products, which in turn transform citizen into green citizen and contribute to creation of green world, the ultimate goal of the universe.

IX. Conclusion

When business organizations begin to focus on strategies to gain competitive advantage through environmentally sustainable practices, such as carbon reduction, energy efficiency and cleaner technologies and discover that considerable opportunities to save money exist by doing so they will need business leaders who can lead in these efforts and who understand the issues and opportunities to convert the business green/sustainable. To create such business leaders & decision makers, in this paper we have presented a new systematic model of two years Masters degree program in Green Business called Green MBA. The objective of Green MBA is to provide training in the theory and practice of business management with a focus on managing the enterprise in a sustainable manner by managing the environmental impact of the business, increasing energy efficiency, reducing waste, finding ways to promote sustainable practices in all aspects of the business from product development, to supply chain, production, packaging, distribution and marketing. The programme contains four semesters, spread over two years with blending of core papers, dual electives and four integrated projects. Even though many higher education institutions in India and abroad provides Masers degree programmes in Sustainable management, this model is more effective in terms of specific core subjects, dual specializations and integrated projects in each semesters with industry and research orientations. This vigorous Green MBA to be started at Srinivas University will be expected to provide better leaders & decision makers with enhanced knowledge, skills and experience to build business that changes the focus from short term financial gains only to a long term appreciation of economic, social and natural capital; often called the triple bottom line.

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