

Review Of Research  
**IN PURSUIT OF ENHANCEMENT OF THE  
MESSAGE OF SUSTAINABILITY: A  
CURRICULUM CENTRIC ARCHETYPE  
APPROACH**



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**Abstract:-**

Education for sustainability is a prime concern in order to ensure spread of sustainability awareness in the societies. Universities and educational institutions play a critical role in this diffusion of the sustainability awareness. In this article, authors try to outline the contribution framework embedded with the curriculum at its centre, for the spread of Education for Sustainability, both inside as well as outside the institutional boundary. Authors come up with a generic but distinct strategic archetype which may carve the path for inclusion of innovative practices in order to enhance the spread of the message of sustainability.

**Keywords:**

Education For Sustainability, Curriculum, Higher Education, Management Programme, Innovation, Archetype.

## INTRODUCTION

Sustainability in today's times has become such a prime concern both in the body of knowledge and society that hardly any dimension of knowledge is left untouched from its purview. That is the reason whenever we want to talk about the sustainability; it needs to be specific in the light of existing context. This observation prevails because of the existence of specific sustainability problems. The reason behind it stands as the diverse contributions made by authors from different dimensions of the body of knowledge. In early times, several decade ago Brown, Hanson, Liverman, and Merideth (1987) stressed upon the context of sustainability and argued that context should be under consideration at the time of decision making. The reason behind it is that it has to have the relevance where the definition is going to be applicable. Though, it may have broader or narrower perspective depending upon the problem and the objective. Therefore, a worthy definition must specify the context explicitly and the scales under consideration, whether temporal or spatial. Nevertheless, here in this paper, we will stress on the classic definition of Brundtland (1987) which defines sustainability or sustainable development as "the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs". Sustainability communicates the ability of endurance with time. Since sustainability is a global issue, to see the world sustainable, we have to have the societies sustainable and to achieve that we need to establish a holistic approach by educating people of the society. Therefore, Education for Sustainability (EfS) for every individual is the need of current times. It is well known that to move on the path of sustainable development or sustainability, one need to have significant amount of knowledge about environmental resources, their optimum use as per the need and impacting elements associated with the mankind. That way some assessment can be made about the contributions made by people towards optimum utilisation of natural as well as manmade resources, whether it is global (off the premise) or on the premise. Therefore it is necessary to emphasize on the spread of awareness with regards to environmental and other sustainability related issues. That way, a holistic appeal towards the conservation of resources could take place. To achieve this, the practice should be to educate people of different societies and culture about the sustainable approaches and its need of adoption. A comparatively rational and rapid way to practice sustainability principles is by training individuals who are ready to be the part of outside world (corporate) in different positions of decision making i.e. students. Once done, this mix of education will help them in taking decisions in right directions in the context of sustainable development or sustainability which may further contribute in the significant conservation of resources as well as the communication of sustainability message.

## 2.RATIONALE OF THE STUDY

Brundtland (1987) report emphasized upon the creation of awareness about environmental issues to the common people. Earlier Talloires Declaration (1990) which talked about the universities' commitments towards sustainability came in existence (AASHE, 2010; von der Heidt & Lamberton, 2011; Wright, 2010). It was assumed to be an important step in this line. As on date it has been signed by over 400 colleges and universities of the world. Some universities have started their exclusive programmes for sustainability education in different educational disciplines like Agriculture,

Applied Science and Technology, Architecture and Design, Business, Economics, Education, Engineering, Environmental Management, Environmental Studies, General or Multidisciplinary Studies, International Studies & Law (ULSF, 2014). Despite of inclusion of variety of educational disciplines, the worldwide number of the signing institutions is quite low. The reasons may be many like lack of awareness, interest, sincerity and diligence. Nevertheless, such practices of enhancing the sustainability directly or indirectly should increase because it is a crucial step. If number of institutions for sustainability education will be less, then there will be comparatively less number of graduates per year, who are aware of the sustainable practices. This will result in a relatively slow diffusion of the Education for Sustainability (EfS) and consequently there will be lesser number of people who are aware about the environmental concerns and sustainability. To do that, we have to look at the motive of infusion of sustainability awareness to mass from the deeper perspective. One approach can be of, approaching random but homogeneous (from work environment perspective, which includes all the people except students) cohorts and making them aware about the concurrent and to be emerged future sustainability related issues, possible aftermath and the contribution they could make. The second approach as discussed above, could be to teach the students who are in pipeline and in that too, the higher level students, so that two things could be ensured-

1. Students can perceive the message in the same way we want to communicate, with an assumption that they are mature enough to understand the criticality.
2. When they enter the corporate, they proactively spread the message directly as well as by styles of the decision-making approaches.

Teixeira, Bacelar-Nicolau, Caeiro, Dams, and Dorp (2012) by taking the account of climate change education, argued that if we have to move it beyond self serving and have to contribute in response to the issues of sustainable development or sustainability, then we have to make its scope wider. That way a diverse mix of students from different age, social group and ethnicity could be included. Additionally, emphases need to be on the messages or contents, which are to be shared. It has to be crystal clear, appealing, concise and in eye-loving appearance. For random cohorts of people, it needs to be designed as per the ease and accessibility of the target audience. On the other side, in case of students, particularly the management students (as they play a critical role in planning and decision making of a business, it should be

a part of the curriculum. Fien, Maclean, and Park (2008) commented on the development of curriculum of sustainable development. According to them, there are four times of sustainability inputs which individually or together play a critical role in order to generate a rational and purposeful curriculum. These are bio-environmental, bio social, psycho social, and education. They also argued further that these kinds of courses or curriculum could have two types of target audience-

1. One group may be of those students who might specialise in some form of environmental education.
2. Second group may be of those students who choose to study some part of sustainability curriculum along with their major subjects.

If we specially focus on management courses which are considered to be an 'ought to have' education for executives, there is still a wider scope of inclusion of sustainability related contents. Huckle and Sterling (1996) argued that management education, which prepares managers for future times and beyond, must come up with a fine balance between the skills and techniques needed for the improvement of environmental performance within business. Additionally, the practice should also be in retaining the required changes, in order to prepare managers for continuously changing paradigm of sustainable enterprise, considering the future existence. A portion of that paradigm may come up with a commitment for continual learning with a deed of welcoming the challenges for change and becoming able to envision the future with a critical analysis of the present. Although we are aware that many university nowadays offering courses on graduate and undergraduate level with regards to sustainability education, especially in 'social issues in management' or 'business and society', some universities are trying to educate the managers holistically about ecological issues. Some among these, offer courses with strict focus on "environmental management" or propose a provision of joint degrees between the school of management or business and the school of natural resources or forestry (ULSF, 2014). Many of these kinds of efforts are smaller, new and experimental through which academic bodies try to cross-pollinate management concepts with the consideration of ecological aspects by encouraging management students for taking environmentally oriented courses. Although, this job is not that easy particularly in higher education, because at times, even faculties find it (EfS or Education for sustainable Development (ESD)) difficult or inaccessible (Cotton, Warren, Maiboroda, and Bailey (2007)). Thus, considering the exclusive programme oriented view, the significant efforts should also be taken by universities in identification of sustainability management concepts, skills and tools in order to deliver a good interdisciplinary or exclusive sustainability management programme. Such kinds of educational projects have unique characteristics like clean, substantive and ideological state and suitable philosophy content and course creation. These also reduce the tendency of adding 'sustainability' as a fancy terminology in curriculum which is an often practice in modern times (Wankel & Stoner, 2008, pp. 160). However, in case of developing countries where population is much and the educational system is not so versatile and latest, such educational efforts cannot be a successful option. In those cases cross border educational bodies which offer open and flexible learning programme may play a promising role. Teixeira et al. (2012) did some work in this regard and commented on the role of open and flexible learning in the area of widening the participation. Huckle and Sterling (1996) long time ago argued about implementation of partnership in order to help institutions of higher education in achieving the transition for 'education for sustainability (EfS)', along with green campuses development and other efforts at undergraduate level. They also suggested the enablement of central and state governments, institutions of higher education, professional societies and private and non profit sectors, which could support the pre-service professional development in education for sustainability. Similarly, Allen-Gil, Walker, Thomas, Shevory, and Elan (2005) by taking the context of environmental studies argued about enhancement of sustainability curriculum. According to them, universities and educational institutions by doing partnership with local environmental management organisations can together integrate the existing and emerging environmental issues in the course curriculum. It may also include the contemporary best practices and use of modern technology used in response to these issues, which will give a better exposure to the upcoming graduates by making them aware of the modern practices in line of sustainability. Some studies have emphasized about the importance of the inclusion of debates on Education for Sustainability (EfS) in educational institutions and in the courses of the management (Palma, Alves, & Silva, 2013). Education for sustainability (EfS) in higher education prepares future professionals to be effective citizens towards a comparatively more sustainable society. Curricula that emphasizes sustainability, covers a range of topics based on the academic department (Barlett and Chase, 2004), If we take the context of higher education, particularly the management program, we have number of modes available to make learn and engage the students with the message we want to communicate. These are: Pedagogy, Curriculum, Internship programmes, Projects and assignments, Researches etc. These modes help students in grasping the message in a wider form in the real time environment by following an exclusive set of content. Therefore, keeping the sustainability education in view, existence of robust and competent curriculum is extremely needed for the institutions and academic bodies. (Hahn & Reimsbach, 2014). Therefore the emerging research gap is in the form of identification of appropriate sustainability curriculum and associated practices and approaches which ensure the reinforced learning to managers and students.

### 3. RESEARCH OBJECTIVE

As directed by the research gap, the objective of this research is to develop an archetype to enhance the communication of message of sustainability through curriculum and unique teaching and other

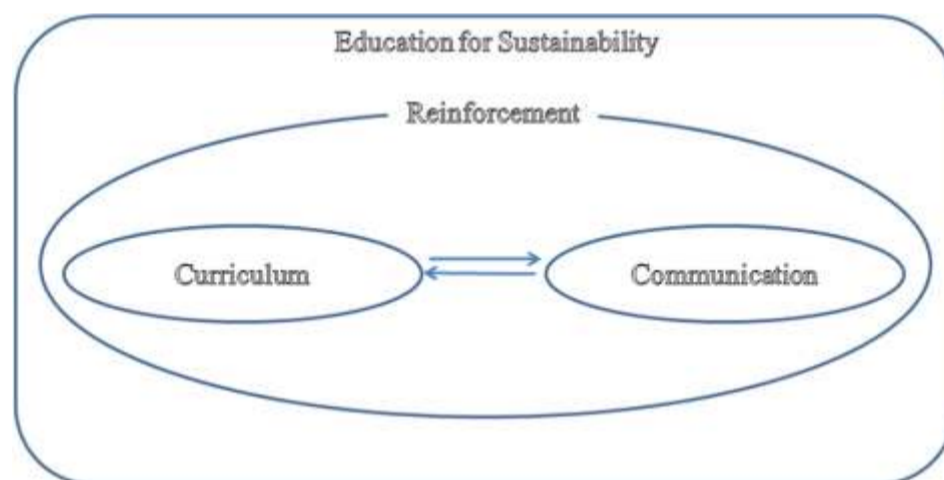
methodologies.

**4. RESEARCH METHODOLOGY**

In the researches, methodology of the research plays a key role. It needs to be crystal clear and appropriate so that it could lead to the appropriate results. The methodology chosen in this paper is integrated literature review which facilitates the researcher in identification of the key attributes related to a particular event or a problem and further establishment of the relationship between those attributes. This establishment of structure is subject to the researcher rationality and judgment capacity and by the systematized motion of the methodology adopted.

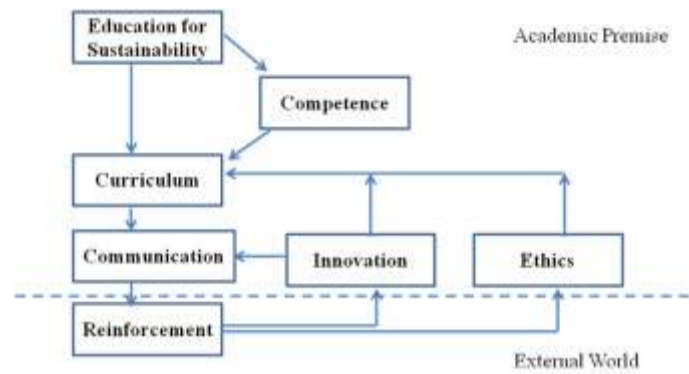
**5. STRATEGIC ARCHETYPE – THE MODEL**

It is evident from the literature that education for sustainable development or sustainability (EfS) has certain key attributes (Sibbel, 2009; Vincent & Focht, 2011; von der Heidt & Lamberton, 2011). Therefore, if a curriculum is being developed, it needs to have some specified attributes if we want to make it competent. These attributes should carry sustainability to its centre, should explain sustainability focusing three basic dimensions viz. environment, society and economy. They should also cater the needs at both global and local levels. They should be culturally adaptable, inclusive with evolving nature of sustainability, should facilitate group decision-making and be interdisciplinary. Lastly, they should be inherent of various techniques related to pedagogy in order to promote and participate learning and thinking skills (Bindé & Matsuura, 2005). As the past decade (2005-2014) was declared as a ‘Decade of Education for Sustainable Development (DESD)’ by United Nations, the expectation of a significant improvement over the past condition is genuine. The successive contributions to the body of knowledge will clarify the success achieved. However this should not be the end. The worldwide implementation of the strategy of Education for Sustainability (EfS) must be continued because this is how the organizations and communities can spread the message among and through the common man and this, as discussed above can be effectively done through educational curriculum for students and versatile content promotion. Education for Sustainability (EfS) has many forms pertaining to different disciplines. That is the reason, curriculum in the light of Education for Sustainability (EfS) needs to be looked from an exclusive systems’ point of view. A system’s view facilitates the observer in analysing the inter-relativity of key elements by putting them together in a visualisation, and indirect things aside. Thus, if we look at the phenomena of Education for Sustainability (EfS) from systems perspective, the backbone curriculum forms the central part along with the communication (figure 1).



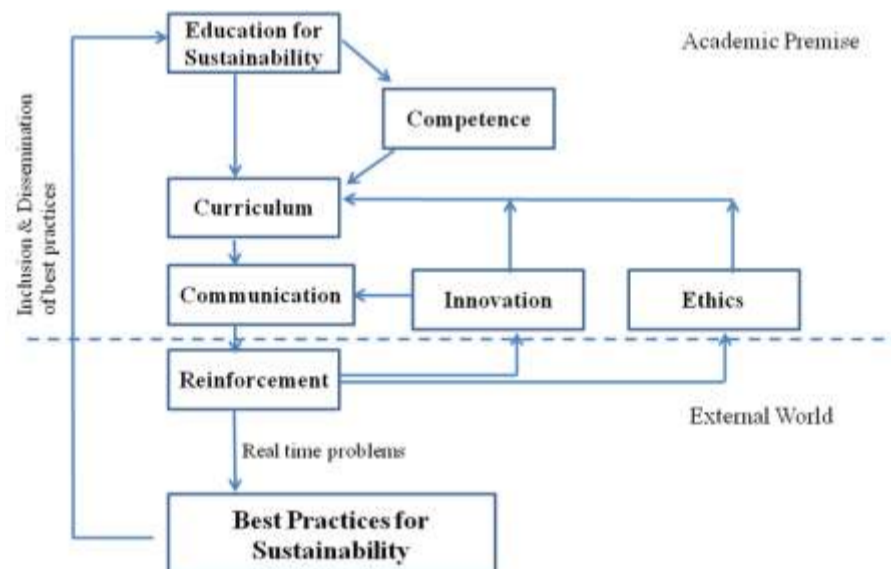
**Figure 1: Systematic view for effective education for sustainability**

The interactivity between curriculum and communication forms the main flow of the content delivery dynamics. We can also observe that just like other learning processes, the Education for Sustainability (EfS) too encompasses the whole dynamics. As, in normal cases, the sustainability curriculum includes topics on environmental, social, economical and on some other aspects of the context; the communication in turn acts as an evaluating parameter by giving feedbacks. To observe this, we need to look at the more detailed strategic archetype framework (figure 2).



**Figure 2 Strategic Archetype for enhancement of curriculum of education for sustainability (EFS)**

In this detailed strategic archetype, information flows have been lined up. The ideology behind this archetype is that Education for Sustainability (EFS) is an action research oriented programme wherein the participants need to be an active listener and critique. Keeping this role of participants in view, the archetype depicts the dynamics of the process. Education for Sustainability (EFS) is driven out by the preparation of a robust, appealing, easy to understand curriculum which is inclusive of latest and best practices. Alongside of this process, ‘competence’ is also taken into consideration. This curriculum then made accessible to the students or the learners. The communication takes place between the sender and recipient. Here one of the important things is to ensure that the message which has been communicated to the recipient has been perceived in a same manner which sender was intending to. The grasped message is reinforced in the outer world as the person applies his learning in the field. At the same time repeated confrontation of the same practice leads the person in developing innovative ways of applying his learning. When these innovative ways become popular, people are asked to contribute to the body of knowledge by sharing their experiences and the breakthroughs. These are done by guest lectures, town halls, simulation labs and round tables. When doing this, the ethical attributes also play their role. Although in some literatures culture is also a key impacting factor (AASHE, 2010) but considering this system, the ethics are majorly culture oriented. Thus, through the processes of reviews and updates, curricula are made pragmatic and latest. One may argue that when person after their education goes to the external world (Organisation, Corporate or Society) it is not necessary that they will enter in an idealistic work environment where they can then expect to pursue the sustainability learning (Figure 3). The Justification lies in the archetype below by the information flow. As a sustainably aware person enters the external or practical world, sustainability related problem confrontation provokes recalling of the troubleshooting practices which he learned during his education and eventually to act against them.



**Figure 3 : Strategic Archetype for enhancement of curriculum of education for sustainability (EFS) - The complete picture**

Thus, the repeated confrontation of the real world and its sustainability centric problems trigger individuals to put their best efforts in troubleshooting them. It may be anything, like the uncontrolled use of resources (eg water, electricity etc), system specific health problems (eg. psychological health of employees, citizens in the society), conflicts (Organisational, corporate, communal or national) etc. This is how, through the gradual improvement over time, best practices are developed. These practices then may

further be communicated or included in the literature using appropriate means. To do it effectively, there is a need for the organisations to reorient their setup inline of the motion. They also need to should make sure that they are following a sustainable strategy and the same as being communicated throughout the hierarchy.

## 6.CONCLUSION

In the literature, on the provisions of creating awareness for sustainable development or sustainability, the role of students is much significant (AASHE, 2010; Teixeira et al., 2012). Barth (2013) argued of a student centric leadership pattern in which the communication is top-down. It talked about the campus environment activities which were controlled by students and were on high visibility. By this, the reflections of people may be more frequent and rapidly diffusing. If we think this situation from the Education for Sustainability (EfS) point of view, it will trigger the informal learning about sustainability practices among students which is more lasting as compared to any other approaches. Moreover, to make that effort wider, the interdisciplinary nature of the educational approaches has been suggested. However management stream which makes an individual, capable of decision-making position may turn out as one of the best practices for spreading out the sustainability message. The second aspect worth discussion is the enhancement of robustness and applicability of the curriculum. For this the traditional practice adopted by universities and institutions is appropriate in which curriculums are fine-tuned by periodical reviews and contemporary updates. According to authors despite of these traditional practices and learning approaches there is a very strong need of reinforcement of sustainability communications through external world which can be done during and post course-pedagogy. From example,

1. In couple of business school, there exists the provision of social internship wherein students are asked to contribute to the society. A slight change of thought can be adopted in the form of changing that internship into a sustainability oriented internship. The only change made in that may be of looking at it because now students have to contribute to the society in the light of sustainability awareness. By doing so, benefits can become twofold, one, students will feel motivated that they are acting for the benefit of society and second they can use it as a positive point during their placements. In sustainability oriented practices this may be a matter of consideration over other candidates.
2. After the course, as they have already done some form of work related to sustainability awareness they will have a different insight with regards to the identification and ways of dealing with sustainability issues in the outer world.
3. In the developing countries or other areas where the educational system is not much developed, the role of open and flexible learning can be significant. The curriculum offered to the students should be updated with the latest information, issues and contemporary practices to attract the interest of students. Additionally, to provoke the participation of students the strategy of additional credit system or linking with other areas of interests can be followed.
4. As people move over time on the key authoritative positions in the academic institutions, there should be a dedicated code of conduct regarding the structuring and review mechanism of the curriculum. By doing so we can have greater certainty of getting the procedure done unbiased.
5. One Additional practice which is difficult to make is if Education for Sustainability (EfS) could be made Libera Scientia at different levels, facilitating the world wide access to the universal and brilliant sustainability content for education.

To make all these efforts effective we can also consider the role of competent faculty members. Allen-Gil et al. (2005) despite of all other efforts for the enhancement of Education for Sustainability (EfS) encouraged the active involvement of faculty members in the spread of message of sustainability. This is because they hold a key position from the point of view of sustainability message dissemination. They can act as controlling heads for the entire communication and can ensure that the communication is taking place in the right form, with required effectiveness. The greater will be the competence of faculty member the more effective will be the sustainability communication. They can also ensure about the communication of an ethically expected responsibility of individual in spreading the sustainability awareness in the external world. Further, they can identify the upcoming and critical issues with regards to Education for Sustainability (EfS), under their observation. To conclude, this is how we can ensure the sustainability awareness by triggering up the curriculum enhancement and allied mechanisms at university or institutional level which duly ensures the spread of sustainability awareness and indirectly the adoption of sustainability practices in the society. This can be observed as a long time approach of making the societies sustainable.

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