DESIGNING EFFECTIVE COURSE CURRICULUM FOR ENHANCING QUALITYOF ENVIRONMENTAL EDUCATION THROUGH DISTANCE INSTITUTIONS

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ABSTRACT

Continuous curriculum planning is seen today as an integral aspect of a good educational program. It is a constant striving to improve the quality of instruction. Development of very effective, learner centric course curriculum is very much essential in the distance learning process when question comes over environmental education program. Since environmental education appears to be the process that equips human beings with awareness,knowledge, skills, attitudes and commitment to improve environment, the whole process is valueless without a well-structured standard course curriculum. In the distance education process it is very challenging task to create interaction process without the presence of the audience.The main purpose of the EE program will be fulfilled when a positive attitude towards environment could be created .But in absentia of the proper instructor; the learners have to follow up the actual meaning of the lessons which seems really a very complex process where traditional systems fail to serve for the purpose. So this paper has made an attempt to critically evaluate the various dimensions, strategies and approaches and procedure of development of effective curriculum in distance education sector with special reference to environmental education program. This study also included a micro level content analysis study of curriculum of KKHSOU and IDOL (G.U.) especially for the compulsory Environmental Education program. Methodologies followed for the study were Questionnaire method, Content analysis method, Literature survey method and secondary document analysis. This paper will give a deep insight to the policy makers, academicians in revising the course curriculum, finding out the lacunae and developing a meaningful learner centric educational program.

Keyword: Curriculum, Distant education, Environment.

INTRODUCTION:

To develop a citizenry that is aware of, and concerned about, the total environment, and its associated problems, and which has the knowledge, attitudes, motivations, commitment, and skills to work individually and collectively toward solutions of current problems and the prevention of new ones.

(Tbilisi, USSR, 1977)

Building an educational program around the persistent life situations faced by learners requires that curriculum development be a central function of all who guide the learning experiences of children and youth.Because the curriculum for each group of learners is developing their attitude, their knowledge within the surroundings of that environment only .So the development of the educational curriculum cannot be counted in the production of typical course study which is the main basis of the entire program .An effective ,learner centric standardized course curriculum in distance education sector is thus proven to be the best mediator in communicating with the target audiences .Fundamentally improvement in teaching and learning follows from changes in people-changes their skills, understandings, values, relationships and use of resources no matter what the curriculum design may be.

Curriculum changes have always lagged behind the social and historical changes.One would expect that these profound changes in the aims of the education which follow revolution in world thought would be reflected in equally fundamental changes in the curriculum of the school; but in practice the changes have always been tardy and have seldom been complete. In order to determine the content of the curriculum the aim of the education must be stated in terms of both ideals and of activities. When the aims is stated in term of ideas only ,there is always a gap between the aims as stated and the curriculum as ostensibly derived from such a statement. Conversely, when the activities are stated without the ideals which dominate them,there is no means of selecting the proper method of performing the activities.

One would expect that those profound changes in the aims of education which follow revolutions in world through would be reflected in equally fundamental changes in the curriculum of the school;but in practice the changes have always been tardy and have seldom been complete.Changes in the curriculum are always preceded by modifications in our conception of the aim of the education .In the organized writings of educators,fundamental changes in the curriculum have been advocated only after the writers have brought forward a statement of aim differing from the current idea.While writers on the curriculum have begun with the statement of aim, none has been able to derive a curriculum logically from his statement of aim.In Plato's Republic the author states his aim clearly as follows: "Then in our judgment the man whose natural gifts promise to make him the perfect guardian of the state will be philosophical, high-spirited, swift –footed and strong."

EVALUATING FROM AN ENVIRONMENT EDUCATION PERSPECTIVE:

Evaluation is integral to developing and implementing curriculum and provides continuous feedback at all levels of planning. It involves the collection of information for reflection and review with the aim of ensuring informed decisions about learning and teaching in the program, class, school and system. The effectiveness of environment education in the school and its success in becoming part of the school ethos:

- How is the program effective?Does the program Allow the development of
  -Understanding about the environment-Positive attitudes towards the earth and its life
  -Confidence and skills to make positive change?
- Is the program include a coherent learning path that matches the development of values,

CURRICULAR PLANNING IN ENVIRONMENTAL EDUCATION:

PLANNING FOR INSTRUCTION: THE GENERAL TEACHING MODEL:

EE must be practical in nature. Without any practical activities EE cannot fulfill its main goal. During the development process of EE curriculum effective activities, practical experiences should be included so that the learners can feel the interaction with the nature and which may help in change of their attitude towards the environment. Regardless of the set of goals used by instructional planners, a functional instructional model must be applied in order to achieve any semblance of validity in the final product (e.g., the unit, module, activity, and curriculum). Effective instructions are generative and dynamic which recognizes an art as well as a science to teaching. To produce instructional products without serious consideration being given to the very act of instruction usually results in invalid, inappropriate, and inconsistent materials. An instructional model which can be used for planning for instruction is diagrammed on the following page and is called «The General Teaching Model». This diagram provides a model for the instructional planner which, if applied rigorously, can

result in organized, internally consistent, and valid EE materials for any learner group further; it can be applied to any grade level and any content area. Not only in the formal education sector but also in case of distant education sector the curriculum plays a very vital role in the whole process of learning.

The following model will definitely help the learners in understanding the value of environment and also in developing positive attitudes towards environment. Both for the regular and distant mode education sector 2 different models of curriculum development are proposed here which may give insight in fulfilling the actual goal of EE which is made mandatory course for the all levels of education.

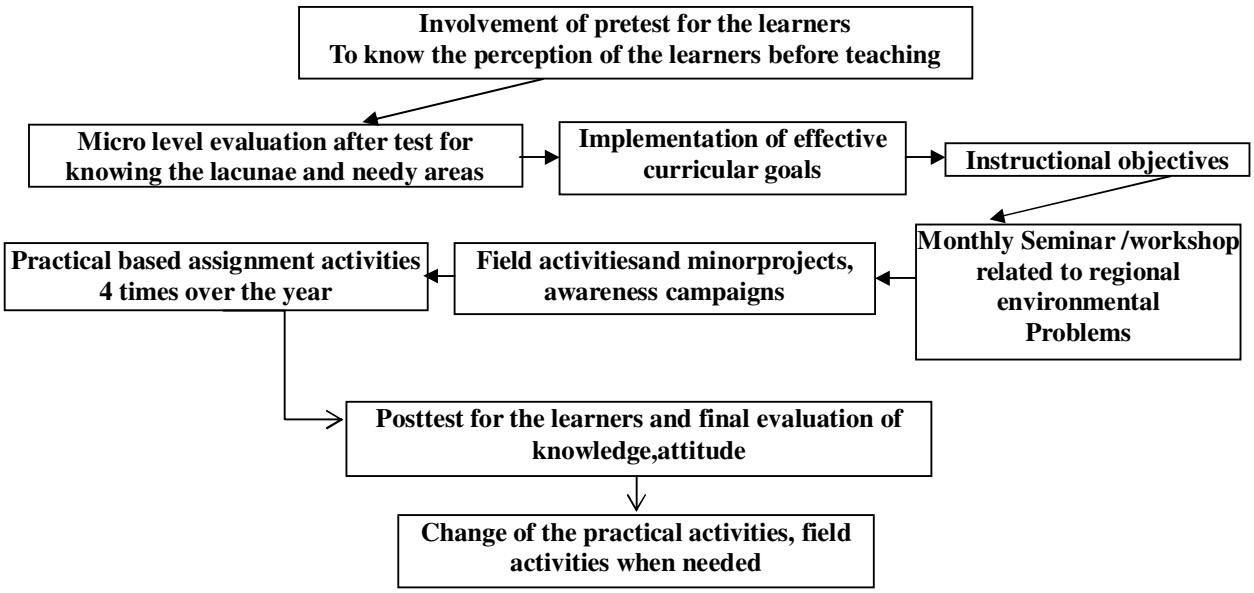
RESEARCH METHODOLOGY:

The research methodology applied for the study were

1. Content analysis: Content analysis of the SLM of the compulsory environmental program.
2. Personal Interview: Personal interview was taken of the Program coordinators from both the institutions to know the process of curriculum construction and also course development process.
3. Literature survey: Literature survey of research papers, articles and books were done.

Research samples:For this study 2 distant institutions were considered. These were Institute of Open and Distant Learning (IDOL),Gauhati University and Krishna KantaHandiqui State Open University.For Content analysis 2 SLMs of Environmental program are considered. 4 program coordinators were selected for personal interview to know the construction process of curriculum.

CURRICULUM MODEL FOR REGULAR LEARNERS



DISTANT MODE CURRICULUM MODEL:

In the distant mode institutions it happens that only few of students attend the counseling sessions which is not at all effective and can't make any kind of help in awareness generation. This new form of education though helps people in providing higher education yet, it is least meant for environmental education. Students are studying this program as because it is made compulsory.

Therefore it's the time to think for solution of this problem. In the absence of the teachers to make aware of environmental issues is quite tuff and foolishness where traditional system fails.So an effective curriculum is the main tool which may create all kinds of value, attitude, and new perspective in this field.

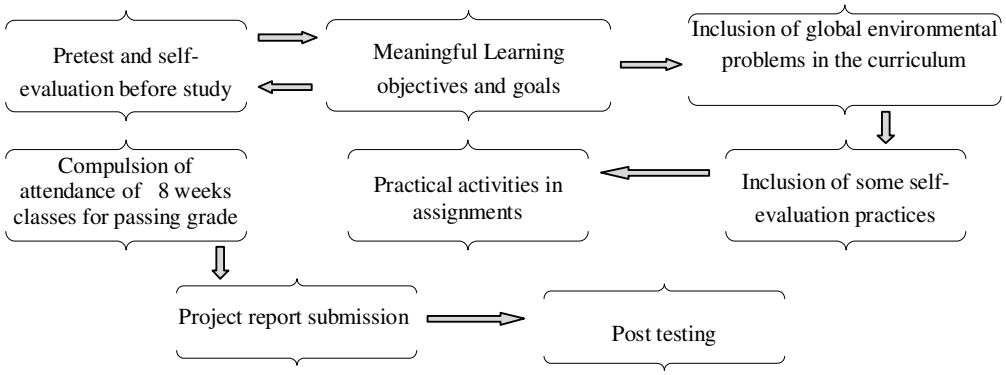
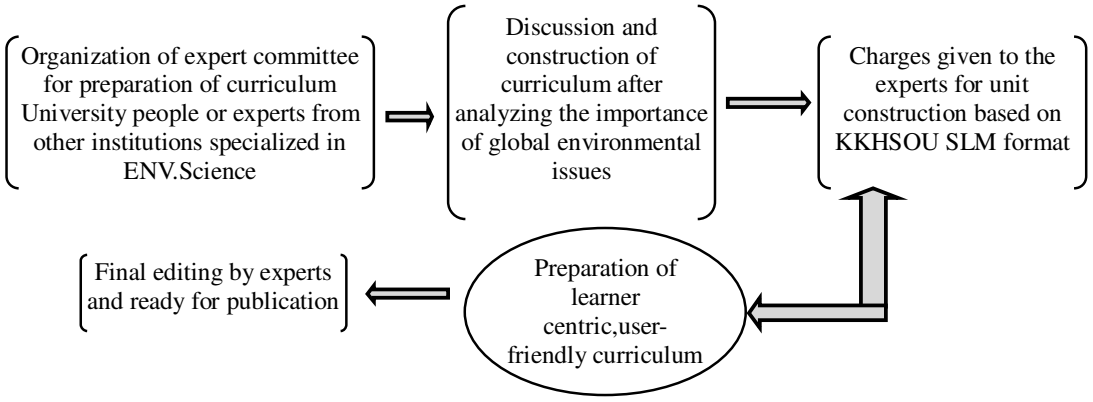


Fig: Curriculum Model For Distant Learners

- **Involvement of pretest:** The pretest of the learners will help in understanding the base concepts of the learners about the environment before learning the chapters.This will help the learners in measuring knowledge,ideas and own perception about the environmental issues which they may acquire from observation or own ideas. This will also enable the learners in finding out the lacunae and needy areas.
- **Effective curricular goals:** The EE goal levels imply that EE should, to a large extent, is issue-based. The environmental issue represents the interface of social change and involves the conflict between the positive and negative consequences involved in that change process. Goal Level III provides for learners' investigation and evaluation of environmental issues, and Goal Level IV provides for issue resolution skills. These levels are also compatible with sustainable development. Middle level learners, in the investigation mode, may well investigate the human, technological, environmental, and/or economic dimensions of a real environmental issue. In fact, Goal Level IV calls for learners to use their investigation data to develop and evaluate an «action plan» to help resolve the issue under investigation.
- **Curriculum Instructions:(P.Sarma 2005)**Effective instruction is guided by general pedagogical approaches and specific instructional which are eclectic in nature .These instructions are tied directly to the success of the learning experiences. These instructions are empowered professional practice in action. Well formulated instruction integrates the components of the Core Curriculum. This kind of instruction finds best expression when educators collaborate to develop, implement, and refine their professional practices.Instructional methods play a very crucial role in the distance education sector where teachers are not present face to face. The effective instruction acknowledges a comprehensive understanding of the instructional cycle.Activity based SLM are the main tool in this process which must be very interactive.
- **Practical activities:**To know and examine the nature with own experience is the main process of creating feeling. Within the boundary of imagination it is very tuff to draw conclusion in any issue.EE education is such a program which needs practical interpretation for each objective.To understand the destruction of nature it is important to observe the present scenario, and then only one can generate his positive attitude towards the environment.So inclusion of some problem based activities like field activities, projects, seminars,workshops are the main strategies in the curriculum may give effective results. Plantation, teaching school children, adults can be included in this program in both the form of education distant and regular mode.But unfortunately these activities are accomplished by local NGOs where Governmental organization fails.Such kind of activities helps both the learners and pedagogue. The main goal of compulsory EE program in higher education system was to create awareness among people and to fulfill such goals these are the activities which should be incorporated in the curriculum
- **Assignment submission**: Assignments are the home based activities done by the distant learners which marks are also added in the final result .Though these are not taken seriously but for successful EE program practical based assignments may bring the ultimate success in this process.Those learners who can't access instructor face to face they can be motivated by these practical activities with the help of appropriate teaching instructions.
- **Post test and evaluation**: Posttest or end term examination are the main process of measuring the knowledge gain, value addition and development of positive attitude.

CURRICULUM CONSTRUCTION PROCESS OF ENVIRONMENTAL PROGRAM IN KKHSOU

The curriculum construction process in KKHSOU involves the following steps:



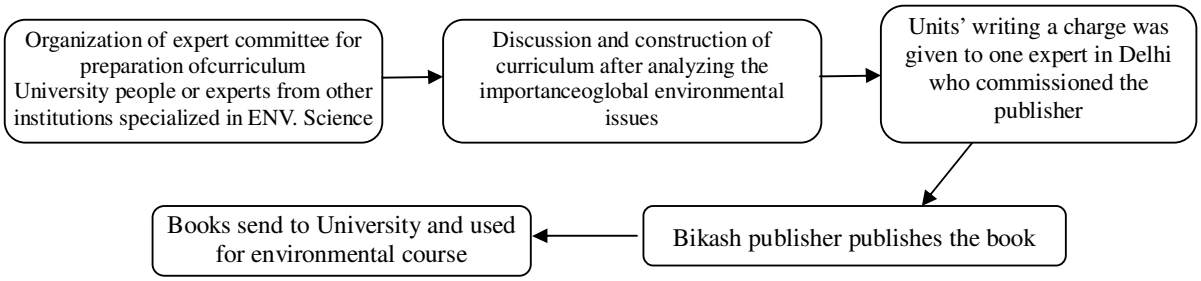
The compulsory environmental course prepared for the degree level students of KKHSOU is named as Environmental studies and disaster management. The syllabus is comprised of seven chapters namely:

- UNIT: 1 "Concept of Environmental studies" which includes multidisciplinary nature of the study, rules and regulations and public awareness process.
- UNIT: 2 "Natural Resources" elaborates types of various natural resources, its management and sustainable development.
- UNIT: 3 "Ecosystem" gives all information related to food chain, food web, energy flow and types of ecosystems.
- UNIT: 4 "Biodiversity and its conservation" incorporates values,threats and conservation of biodiversity in global context.
- UNIT: 5 "Environmental Pollution" gives overall idea of types of pollutions, effects and mitigation measures.
- UNIT: 6 "Concept of disaster" defines various disaster's impacts and mitigation measures.
- UNIT:7 "Disaster Management" describes various safety measures,methods taken for disaster management, regional planning and management.

Each unit is built with specific learning objectives, Introduction part defining the brief idea of the unit and subunits. It is followed up by Let us sum up ,further readings which gives the list of reference books for gaining more knowledge, Answer to check your progress is the best activity which gives self –interaction. Finally it is followed by possible questions.

The chapters included showed a very good elaboration of all kinds of natural environmental issues in the curriculum .Though the curriculum showed the incorporation of all important environmental issues but the curriculum lacks the main aspect of the Environmental Education that is practical activities such as project report which gives the better opportunity to interact with the environment. Curriculum showed the complete theoretical nature which hardly helps in creating awareness. A very urgent need to incorporate some practical activities in the curriculum to generate awareness towards environment unless meaning of EE is vague.

ENVIRONMENTAL CURRICULUM CONSTRUCTION PROCESS IN (IDOL)2011:



The compulsory environmental program offered by Institute of Open and Distant Learning (IDOL), Guwahati has started in 2011 for the B.Sc. IT and BCA learners. The curriculum is divided into 8 chapters.These are as

follows:UNIT 1: The multidisciplinary nature of Environmental Studies which includes importance,scope of Environmental studies.
UNIT 2:Natural Resources which includes different types, utilization, value and current problems.
UNIT 3: Ecosystem describes concept, structure, function, types and characteristics of different ecosystems.
UNIT 4: Biodiversity and its conservation elaborate types, value and conservation practices of biodiversity.
UNIT 5: Environmental pollution gives detail information about various types of pollutions, its causes, effects and mitigation measures.
UNIT 6: Social Issues and the Environment is the chapter which relates to different social issues like sustainable development, water management, environmental ethics and some case studies.
UNIT 7: Human population and the environment deals with population growth, population explosion, human welfare, ICT and environment.
UNIT 8: This is field work which leads to visit to some local areas to document environmental assets like polluted sites, ecosystem.

A COMPARATIVE STUDY BETWEEN THE ENVIORNMENTAL CURRICULUM OF KKHSOU AND IDOL(G.U.)

KKHSOU	IDOL (G.U.)
1. Course curriculum is divided into seven chapters. 2. UNIT1 -5 is almost same with IDOL curriculum,only UNIT-6&7 is replaced by disaster concept and management. 3. There is no project report /field work. 4. Total nos. of "Answer to check your progress" is 28. 5. 2 Units contain 5 activities. 6. At the end of the Unit "Let us know" gives the overall idea of the Unit. 7. Some critical terms are given in the boxes adjacent to the units. 8. Questions are very short, short and long questions including short notes. 9. "Let us know" giving one formula was found in the Unit -6. 10. There is no mention of the sources and references from which units are prepared.	1. Course curriculum is divided into 8 chapters. 2. UNIT-6&7 contains Environmental issues and human population respectively. 3. Unit -8 is consists of local level project report. 4. Total nos. of "Answer to check your progress" is 11. 5. No activity was found. 6. At the end of the Unit Summary gives the overall idea of the Unit. 7. "Key terms" in each unit give the meaning of the difficult words. 8. Questions divided into the category of short questions and long questions. 9. There is no mention of such activity. 10. Well formatted sources and references are given at the end of the Unit from which the author took the references for preparation of the units.

RESEARCH FINDINGS AND DISCUSSION:

The comparative content analysis of both the SLM curriculum gives a fare picture of quality of the course.Up to unit 5 curriculums the UNITs show to be very much similar with the inclusion of same topics in same sequence. But in case of KKHSOU curriculum there is a huge lacking of the activity work specially project report. The whole course seems to be theoretical based, where there was no practical activity which could help in awareness generation.But the curriculum of IDOL, G.U. shows inclusion of field work in the 8th Unit where all the practical activities are described distinctly.All the steps for preparation of a project report are elaborated.This is the very plus point of the distant learners which cross the barriers of the traditional based curriculum and provide the learners an opportunity to interact with the own environment and learn by their own experience.Visit to a local area including river environment,forests ,grasslands ,hilly areas and documentation of these assets leads to think about these issues critically which brings positive attitude or motivates learners towards environment which they may not have thought before. Visit to local polluted sitesincluding industrially

polluted areas generates thinking capacity of the environment.Study of plants, birds and insects helps understanding the conditions, types, values and problems of these creatures and also mitigation measures. Thus a very clear picture is observed from the research that absence of project report in the KKHSOU Curriculum poses a very negative impact in the learning process. Classroom based traditional age old education system never create any change in perceptions, values and ideas of the learners in both formal and distant modes.

PROPOSED SUGGESSIONS:

- If the EE curriculum is to provide thelearner with an awareness of the local environment, an inventory and evaluation of available community and regional resources should be made.
- The primary responsibilities of the policy makers, academicians will be in the organization of the curriculum - designing the use of EE materials so they efficiently and effectively infuse into the existing curriculum according to the needs and constraints of the situation. As the scope is refined, for example, it should begin to reflect the needs and resources of the population for which it is designed by referring to local cultural impacts, environmental resources and issues, etc.
- Extreme care should be taken to assure the acquisition and use of sample curriculum models which promote a rational perspective of EE.
- The curriculum development team (CDT) must be constantly on the alert to screen out documents which do not fit the parameters of the desired curriculum design.
- Classroom teachers should experience training in curricula based on the same criteria as the EE curricula they are expected to teach.
- The exact nature of the implementation process will vary according to the educational structure and character of the school, region, or nation involved.
- This area of evaluation should begin even during the curriculum development process and continue into and beyond initial implementation phases.
- EE must provide not only for the acquisition of knowledge, cognitive skills and attitudes, but for their transfer to decisionmaking by learners. Thus the content, sequencing, and teaching strategies encompassed by an EE curriculum must reflect appropriate principles of learning and cognitive development.

CONCLUSION:

Environmental education (FE) as an entity unto itself is of fairly recent origin. Itsroots, however, extend back in time to that moment when man first envisioned an interrelationship between himself and the biosphere which resulted in an evaluation of his role in the maintenance or deterioration of the environment. Exactly when this took place and the context of this interaction are, of course, uncertainties.Both the cause of environmental problems and possibilities for addressing them depend on human perceptions, attitudes and behavior, which are linked to values, preferences and beliefs about the world. Communication is key to analyzing the relation between all of these aspects. So proper curriculum planning can boost up the learners to interact with the environmental problems and helps in creation of value, perception, awareness towards the environment. My comparative study thus tried to analyze the differences between both the curriculums of Environmental Education of KKHSOU and IDOL (G.U) .A very striking difference was noticed in case of the project report which were not there in KKHSOU curriculum. For natural Science practices these activities provide the main platform for value addition. Small differences were found in case of curriculum construction. The study proposed 2 models for curriculum for both the formal and distant mode institutions which will benefit the program coordinator to follow for the further developmental activities. Thus this study will give insight to the policy makers, experts of the both the institutions to revise the curriculum based on learner's need and regional problem.

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