B Background Information

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What is your understanding of ESD. ESD is an initiative using educational means and teachers as agents for social change in order to ensure that national development is done in a sustainable manner.

Name of Country: Malaysia

Does your country have a national policy on education for sustainable development in its teacher education institution? The report on a Regional Seminar on “Policy, Research and Capacity Building for Educational Innovation for Sustainable Development” organised by the National Institute for Educational Policy Research (NIER) of Japan and the Asia-Pacific Programme of Education Innovation for Development (APEID), UNESCO Bangkok in August 2004 reported that Malaysia has ‘No clear statement- though policies are in line with ESD’.

Does your country have programs on education for sustainable development in its schools? Yes, eg. Sustainable schools (Sekolah Lestari)

Is ESD featured in your institute? Describe how your institute gives attention to ESD. Has your institute attempted to consciously build in ESD (either in terms of its content, approach and pedagogy, or any one of them) in its curriculum? What are the difficulties and barriers encountered if there is such an attempt?

University Sains Malaysia on the whole, plays an important role in disseminating information on ESD to the public by conducting workshops and campaigns. The RCE which is based in USM, facilitates activities to create awareness among the university population about the importance of making ESD part of teaching activities. School of Communication has made EE part of their students’ coursework. In all other academic schools as in School of Educational Studies, attempts have been made by individual lecturer to infuse ESD elements in their teaching. However, it is still in infant stage and much more can be done and have to be done to assist lecturers making ESD as part of their lectures.

The problem foreseen would be the extra effort that lecturers have to make if they want to add/infuse ESD in their curriculum. The reluctant to change also may become a factor that inhibit the process.

C AIMS 7 OBJECTIVES

1. What is the overall mission of your institution’s training curriculum? The School of Educational Studies aims to develop and disperse knowledge through innovative teaching and research, to nurture exceptional professional educationists through international quality programs.

2. What are its official explicit aims and objectives? To produce teachers that are:
• Motivated and skilled to teach at least 2 school subjects’
• Possess positive attitudes towards the teaching profession and concerned towards students and the Malaysian society
• Ready to adapt oneself to the current situation in schools through trials and adaptations
• Ready to participate and lead in curricular and co-curricular activities and
• Ready/prepared to face changes and challenges, participate actively and to contribute towards educational development and innovation.

3 Do any these objectives cover the concerns of SD/ESD?
   If yes, explain/clarify how these aims/objectives deal with SD/ESD

No, not directly

4 Are the ESD/SD related objectives implemented?
   Describe how these objectives are implemented?(e.g. as topics within exciting courses, specific courses, separate training workshop etc)
   Assess the achievement of the SD/ESD related aims/objectives.

D APPROACH

1. How would you describe your institution’s approach to including ESD in its curriculum?
   Infusion into existing curriculum.

2. Is the ‘Whole School/Institution’ approach adopted?  No
   If yes, describe how your institution implements the ‘Whole School/Institution’ approach.
   Which are the various groups involved?
   How are they involved?
   Describe the work, roles and relationships of these various groups (school Principal, teachers, students, parent-teacher association, Community-e.g. immediate milieu, alumni)
   What are some of the insights and lessons arising from the implementation of the approach?

3 How far does the community, parents, religious and other social groups get involved in the work of your training institute vis-à-vis ESD? Elaborate briefly and comment on the relevance and effectiveness of such liaisons?
   The collaborations occur periodically, based on individual effort. The environmental NGOs involvement in projects help to promote awareness and understanding of ESD.
4. How does your institution involve/use the resources of related organizations (e.g., environmental, consumer, human rights, women’s organizations in your educational/training activities?
   Inviting them for talks and campaign.

5. Are there opportunities for staff and students to engage in research during training? Yes
   If so elaborate? E.g. kind of inquiry, focus and problem areas selected for research. Based on the area of specialisation.

6. Does your institution continue to provide follow-up support or/and continuing professional development to teachers after graduation? No. Once graduated, they are on their own, unless they come back and establish collaboration on their schools’ behalf.
   If yes, elaborate on these program/support.

E. CONTENT

1. Does your institute’s training curriculum give any attention to ESD (directly or indirectly)? Elaborate on the ESD coverage and scope in the whole curriculum. (Please refer to Appendix I for the different perspectives of ESD).
   Indirectly through research by academics and postgraduate students. There are 9 research studies on ESD/EE and 7 by postgraduate students at both Masters and PhD levels.

2. Is your training curriculum-subject centred, or are there opportunities for cross disciplinarity?
   Basically it is very curriculum-subject centred with very little opportunities for cross disciplinarity. Teacher trainees take education courses in my institute but other content subjects from other academic schools. USM is not structured as a Faculty but as Academic Schools.

3. Describe what is covered in the cross-disciplinary areas and its mode/mechanisms of delivery.
   Example is the course “History and Philosophy of Science” – mode of delivery are lectures and written assignments as continuous assessments.

4. Do these cross-disciplinary opportunities include coverage of ESD? If so, elaborate on the rationale for its inclusion. List the main content/topics covered and skills taught in these ESD related areas. Describe in detail what students learn (do not limit this to content knowledge only if other aspects are achieved) from this part of the curriculum?
   Yes in the course ‘History and Philosophy of Science’ – attempts are made to introduce students to the subject of ecophilosophy, and the concept of whole
systems thinking. Its inclusion is to bring attention to the fact that the ongoing degradation of the environment is due to the view that the mechanistic way of looking at things are lacking and to take on a more holistic view of the biosphere i.e. The interconnectedness of the ESD components of environment, economics, culture and society.

5. Name the disciplines and their respective subjects where concerns of ESD are addressed. What are the related topics/themes covered? Describe how ESD is addressed in these subjects, including the ways in which the related ESD content is being taught. (can be different in each subject/discipline – describe as many as you can).

Under Graduate level
- Biology, Chemistry and Physics Teaching Methods
- Geography Teaching Methods
- History & Philosophy of Science

Graduate Level
- Science, Technology and Society
- Research Issues in Science Education
- The Development of Philosophy and the Foundations of Scientific Thought

6. Is ESD offered as a separate specialization? If so, explain why and how did this come about?

Not yet… A graduate course has been developed for the Master’s level and is awaiting endorsement from the University. Course is entitled Science Education and Technology for Sustainable Development.

7. Does your institute’s curriculum address wider global issues e.g. international understanding, climatic changes, pollution, sustainability/sustainable development, peace, poverty, human rights, gender equality etc? Comment on the extent of its coverage and how these topics are being taught? What do students learn from this part (ESD related) of the curriculum?

Some...

8. Are local issues and concerns reflected in the teaching and learning? If so, what are the main local issues covered and elaborate where possible their relevance to pupils and teachers? Comment on the extent of its coverage and how these topics are being taught? What do students learn from this part (ESD related) of the curriculum?

Some… as examples
F. PEDAGOGY & ASSESSMENT

1. List and elaborate on the main types of teaching methodologies that your institute employs in presenting the curriculum to students.

Lectures    Inquiry
Discussion   Investigation
Field Work   Role Play/Drama
Experiments  Critical reviews of Articles
Project-Based ICT Based
Problem-based Simulations
Data Acquisition and Analysis Case Studies
Problem Solving Seminars

Data Acquisition and Analysis Case Studies
Problem Solving Seminars


Main mode is via Lectures and Discussions,
Tutorials through experiments and presentations
Continuous Assessments through mixed mode eg. Project-based/Critical reviews and others

3. If ESD is included in the curriculum, what teaching and learning styles are being employed? Why are these styles of learning adopted? Describe each of them, emphasizing on the learning process and pedagogical principles. Are there some more effective than others and why? Which of these are more effective?

(In Teacher Education Program)

![Fig. 3: Teaching Methods Used (N=32)](source: Sharifah & Abdul Rashid, 2006)
4. Elaborate on how teacher trainees are assessed and monitored during training both inside and outside the institution (i.e during the practicum)?

**Inside institution:**
- Quiz, tests, exams, presentations, continuous assessments

**Outside institution:**
- Classroom observations of actual teaching
- Assessment of teacher record book
- Reflective journals

5. To what extent is student self assessment practiced, specify where possible. Describe the self-assessment methods used)

- Reflective journals during Teaching practicum

G. RESOURCES

1. List the resources/material that you/your institute have used and found used in teaching ESD. Are there some more effective than others and why?


(ARIES) for The Department of the Environment and Heritage, Australian Government.


Available online: www.bath.ac.uk/cree/sterling.htm


**Journals:**
- Canadian Journal of Environmental Education
- Environmental Education Research
- International Journal of Sustainability in Higher Education
- International Research in Geographical and Environmental Education
- Journal of Environmental Education

2. Has your institute/staff developed any material/resources that are useful/effective in the teaching and learning of ESD areas? Describe them. Appendage these material to your report.

1. In Progress. Sharifah Norhaidah Idros & Ian Robottom (Eds) “Teaching & Learning Initiatives for EfSD - Malaysia”

**H. OUTCOME**

1. What outcome/s does your institute expect from the ESD related parts of the curriculum? Discuss to what extent these expected outcomes are or are not achieved.
   - A heightened awareness on the reduced quality of life, degraded environment, and global conflicts as the indirect impact of an unsustainable lifestyle.
   - A more ecologically literate citizenry.
   - A realisation that the responsibility of taking care of the environment is not just the responsibility of the Government but every individual.

2. From your observation/assessment what capabilities and skills are fostered in the ESD part of the curriculum.
   - Living Skills – camping activities, helps to inculcate civic knowledge, skills and disposition.
   - Critical thinking

3. What are/would be the main barriers in developing ESD as (a) a separate discipline (b) as part of an interdisciplinary curriculum in your institute?
The tedious process of developing a new course. The process will go through various meetings and it takes an academic year or two to get it passed and ready to implement. Also:

4. Describe the kind of sustainability literacy you think your institute is addressing in the current curriculum.
   Whole systems thinking, ecoliteracy
   Autonomous and lifelong learner. Be responsible for their own learning.

5. Would your institute be interested to incorporate ESD (more if there is already) into its present curriculum. What are some of the existing efforts/initiatives? How can these efforts be further consolidated/ expanded?
6. What program/action can be initiated to foster further interest in ESD in your institute?

Since many of us are not trained in teaching for sustainability, strategies and approaches that are hands-on will be helpful. Programs to create awareness about what ESD is really about. The understanding of individual roles will encourage them to really think and act accordingly.
