



**UNIVERSITI PUTRA MALAYSIA**

**INTEGRATION OF ENVIRONMENTAL EDUCATION FOR  
SUSTAINABLE AGRICULTURE: STATUS IN TERTIARY  
INSTITUTIONS AND GUIDELINES FOR INSTITUTIONAL  
POLICIES AND CURRICULUM MANAGEMENT**

**DINA S. DE LA C RUZ**

**FPP 2000 2**

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GUIDELINES FOR INSTITUTIONAL  
POLICIES AND CURRICULUM  
MANAGEMENT**

**By**

**DINA S. DE LA CRUZ**

**Thesis Submitted in Fulfilment of the Requirements for the  
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**January 2000**



***TO JESUS CHRIST, POWERFUL ALMIGHTY GOD,  
WITH ALL HIS EVERLASTING GUIDANCE,  
PROTECTION AND BLESSING . . . .  
I PRAISE YOU LORD !***

**and**

***TO NANAY and TATAY  
my departed parents***

*whose dreams now turned into a reality ....*

***This piece of work is wholeheartedly dedicated.***

Abstract of thesis submitted to the Senate of Universiti Putra Malaysia in fulfilment of the requirements for the degree of Doctor of Philosophy.

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**January 2000**

**Chairperson: Associate Professor Gan Siowck Lee, Ed. D.**

**Faculty : Institute for Distance Education and Learning (IDEAL)**

The study aimed to: 1) ascertain the current status of environmental education (EE) for sustainable agriculture (SA) in 12 selected tertiary institutions in Luzon, Philippines, and 2) develop a set of guidelines for institutional policies and curriculum management for the integration of EE into the curriculum for SA.

A questionnaire-guided interview of 27 educational administrators and 54 curriculum planners from the institutions was conducted for data collection. Data were analyzed by frequency counts, percentages, means and standard deviations.

The status of the integration of EE into the curriculum for SA was rated by respondents as “medium” level. Tertiary institutions offered EE and SA as separate courses in their curricula and more EE courses were offered than SA courses.



Respondents agreed to support the implementation of a clearly defined policy for the integration of EE into the curriculum for SA. All (12) tertiary institutions have good number of qualified and available teaching staff. Teaching materials were available for appropriate teaching processes, although these must be further improved in terms of quantity and quality.

Based on the data obtained from the survey, as well as literature review related to EE and SA, a set of guidelines for effective policy implementations was formulated. Three basic sequential considerations were identified, namely: (1) institutional diagnosis of plans and planning, (2) institutional development of strategies and programs of action, and (3) the ripple model of institutional policymaking. Parameters of importance were also identified and included to serve as guidelines for curriculum management. These were: development and enrichment of the curriculum, plans of actions, provision of facilities, establishment of linkages and monitoring and evaluation. To resolve the question of implementation, pointers were also included to guide tertiary institutions in selecting and adopting a suitable curriculum model for implementation and specification of content, through the identification of important features of curriculum management, and appropriate administrative approaches for offering EE and SA.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi syarat Ijazah Doktor Falafah.

**PENERAPAN PENDIDIKAN ALAM SEKITAR UNTUK PERTANIAN  
MAMPAN: STATUS DI INSTITUTISI PENGAJIAN  
TINGGI DAN GARISPANDUAN MERANGKA POLISI  
INSTITUSI DAN PENGURUSAN KURIKULUM**

Oleh

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Kajian ini mempunyai dua tujuan: 1) mengetahui status terkini pendidikan alam sekitar untuk pertanian mampan di 12 institusi pengajian tinggi di Luzon, Filipina; dan 2) merangka satu garis panduan mengenai polisi pengurusan kurikulum bagi kegunaan institusi pengajian tersebut menerapkan pendidikan alam sekitar dalam kurikulum pertanian mampan.

Data kajian dikumpulkan secara temubual dari 27 orang pentadbir pendidikan dan 54 orang perancang kurikulum institusi pengajian berkenaan. Penganalisan data kajian dibuat secara bilangan, peratusan, min dan sisihan piawai.

Hasil dari kajian ini mendapati bahawa tahap penerapan pendidikan alam sekitar ke dalam kurikulum pertanian mampan adalah tahap “sederhana”. Juga,

institusi pengajian tinggi tersebut menawarkan ‘pendidikan alam sekitar’ dan ‘pertanian mampan’ sebagai kursus berasingan ke dalam kurikulum yang ada, dan jumlah kursus alam sekitar yang ditawarkan adalah lebih dibandingkan dengan kursus pertanian mampan. Responden kajian bersetuju menyokong pelaksanaan satu polisi yang jelas mengenai penerapan pendidikan alam sekitar ke dalam kurikulum pertanian mampan.

Hasil kajian ini juga menunjukkan bahawa kesemua (12) institusi mempunyai cukup tenaga pengajar yang bersedia terlatih dan untuk mengajar perkara yang dibuat tinjauan itu. Bahan sokongan pengajaran adalah mencukupi. Namun begitu ianya masih memerlukan peningkatan dari segi kualiti dan kuantiti.

Berdasarkan tinjauan literatur dan data kajian ini, beberapa garis panduan telah digubal untuk pelaksanaan dasar yang berkesan. Tiga asas rangkaian pertimbangan telah dikenalpasti : 1) mengenalpasti perancangan program (2) merangka strategi dan pelan tindakan dan (3) menyesuaikan perancangan dengan model “ripple” bagi penggubalan dasar institusi. Beberapa parameter penting telah juga dikenalpasti untuk menjadi garis panduan kepada pengurusan kurikulum. Ini termasuklah: pembangunan dan; pengayaan kurikulum; pelan tindakan; penyediaan kemudahan; pembentukan rangkaian pemantauan dan penilaian. Aspek tumpuan yang khusus juga dikemukakan bagi menjelaskan agar prosidur memilih dan melaksanakan model kurikulum yang dikenalpasti itu dapat mencirikan pengurusan kurikulum yang selaras dengan pendekatan bagi menawarkan konten pendidikan alam sekitar.

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I certify that an Examination Committee met on 28 January, 2000 to conduct the final examination of Dina S. De La Cruz on her Doctor of Philosophy dissertation entitled "Integration of Environmental Education for Sustainable Agriculture: Status in Tertiary Institutions and Guidelines for Institutional Policies and Curriculum Management", in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Pertanian Malaysia (Higher Degree) Regulations 1981. The Committee recommends that the candidate be awarded the relevant degree. Members of the Examination Committee are as follows:

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## DECLARATION

I hereby declare that the dissertation is based on my original work except for the quotations and citation which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or other institutions.

*Dina S. de la Cruz*  
DINA S. DE LA CRUZ

Date: *25 March 2008*

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