The Association for Engineering Education In Southeast Asia, East Asia and the Pacific (AEESEAP)-Activities in Malaysia

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Abstract

The Association for Engineering Education in Southeast Asia, East Asia and the Pacific was established with the aim to improve the education of engineers and technologists in its member countries. This paper will give an overview of AEESEAP objectives and its current activities, coordinated by the current secretariat based in Malaysia. The main issue being dealt with throughout the existence of AEESEAP is the issue of sustainability of the association. This paper will highlight the objectives and current activities of AEESEAP in Malaysia, with regards to sustaining this association.

1. BACKGROUND OF AEESEAP

The idea for a regional association for engineering education was first conceived at the UNESCO Regional Seminar on New Approaches to Engineering Education in Asia, held at the University of Malaya in Kuala Lumpur during March 9-13, 1970. During this seminar, it was recommended that a permanent organization for Engineering Education for the Southeast Asia region should be formed. The objective of this organization is to provide a platform for the exchange of ideas on new approaches and developments in Engineering Education.

This proposal was followed by a meeting at the UNESCO Field Service Office in Jakarta, which was sponsored by UNESCO and the World Federation of Engineering Organizations (WFEO). This meeting was attended by representatives from Australia, Indonesia, New Zealand, Malaysia, Japan, the Philippines, Singapore and Thailand. The Association for Engineering Education in South East Asia (AEESEA) was established. Its composition and aims was outlined in a constitution which upheld the resolutions formulated during the Regional Seminar of 1970.

The inaugural meeting of AEESEA was held at the College of Engineering, University of the Philippines in Manila during October 18-19, 1973 in conjunction with the UNESCO regional seminar on Education, Industry Cooperation and Training. In 1989, the name of the association was changed to the Association of Engineering Education in Southeast Asia, East Asia and the Pacific (AEESEAP), to comprehensively reflect the region of the member countries. Currently,
there are 15 voting members of the AEESEAP. The activities of AEESEAP are regulated by a secretariat, which is rotated between the voting member countries every 3 years.

2. ACTIVITIES OF AEESEAP IN MALAYSIA

2.1 Introduction

The seat of the AEESEAP Secretariat is to rotate between the 15 voting member countries every 3 years. Currently, for the session of January 2004-December 2006, the AEESEAP Secretariat is held by The Faculty of Engineering, University of Malaya.

The role of the Secretariat is to coordinate all AEESEAP activities during the assigned period. Amongst the activities coordinated and organized by the AEESEAP Secretariat are:

- To organize conferences, workshops and seminars with the intention of improving the quality of engineering education in the region.
- To facilitate the dissemination of information and knowledge to member institutions, through printed and electronic media.
- To provide a common platform for discussion between engineering education institutions, industries and professional engineering bodies, in order to address current problems faced in engineering education.
- To promote collaborative research between member countries and between engineering education institutions and industries.

As a means to assist in achieving these objectives, the following committees have been set up within the AEESEAP secretariat:

1. The conference committee
2. The training committee (for short courses, training programmes, etc)
3. The publications committee
4. The excursions committee (for educational exchange visits)
5. The publicity committee

As further course of action, the Secretariat has taken the initiative to include other Engineering Education Institutions in Malaysia. This step is timely, as the field of engineering education in Malaysia is an emerging topic which is of primary interest. The associate members in Malaysia have now been extended to:

- Universiti Kebangsaan Malaysia (UKM)
- Universiti Malaysia Sarawak (UNIMAS)
- Malaysian Multimedia University (MMU)
- Universiti Institut Teknologi Malaysia (UiTM)
- Kolej Universiti Teknologi Tun Hussein Onn (KUiTTO)
- Universiti Putra Malaysia (UPM)

Meetings are held quarterly, and all decisions pertaining to the AEESEAP activities in Malaysia involve input from these associate members, who are enrolled as members of the Secretariat.
One of the pertinent issues faced by the Secretariat is the issue of sustainability, i.e. to sustain and develop AEESEAP’s activities to achieve its aims and objectives. Two of the main activities in AEESEAP, the AEESEAP Conference and the AEESEAP Journal will be presented in section 2 and the sustainability of the association’s activities will be discussed further in section 3.

2.2 The AEESEAP Conference 2003

The AEESEAP Conference for 2003 was titled, “Enhancing Engineering Education and Training: A University-Industry-Government Partnership” and was held on December 8-9, 2003 in Kuala Lumpur. The conference focuses on issues in enhancing engineering education, to make it more dynamic and responsive toward the need of student, government, industries and society, in Southeast, East Asia and the Pacific region. It also identifies barriers and means of overcoming them.

The conference format included oral presentations and scheduled discussion periods. The scope of the conference includes the following areas:

- Resource and manpower planning
- Curriculum development
- Research and development interactions
- University-Industry collaboration
- Industrial Training
- Cooperative education
- Information technology in engineering education
- Alumni issues in engineering education
- New strategies in engineering education

The number of participants that attended the conference was 59. Based on Figure 1, the classification of papers is divided into five categories: teaching technique, policy, general, evaluation and curriculum. Out of the five categories, teaching techniques field has the highest number of papers with a total of 27 papers.

![Figure 1: Paper classification of the AEESEAP Conference 2003](image_url)
2.3 The AEESEAP Conference 2005

The AEESEAP Conference for 2005 was titled, “Engineering a Better Environment for Mankind” and was held on June 7-9, 2005 in Kuala Lumpur. Its objectives were as follows:

1. To provide a prestigious international forum for stimulating presentations and interactions for engineering educationists. The conference theme provides a common platform for these educationists, to demonstrate the impact that engineering has on the environment and society.

2. To promote interdisciplinary discussions and collaborations between the different engineering disciplines, through the dissemination of technical knowledge and sharing of experiences.

The purpose of this conference is to provide an international forum for engineering educationists, to present recent results and developments with regards to the positive impact that engineering has on the environment in particular, and on society in general. The topics presented included:

- Engineering Education
- Electrical and Electronic Engineering
- Telecommunications Engineering
- Mechanical Engineering
- Chemical Engineering
- Civil Engineering
- Manufacturing Engineering
- Environmental Engineering

The conference attracted 107 participants including those from the Philippines, India, Bangladesh and amongst others. The conference also included two half-day workshops on academic writing and curriculum assessment, of which the participants found tremendously useful in helping to hone their skills on the respective topics. The conference was successful in garnering interest in the current developments in the field of Engineering Education in the region. Based on Figure 2, the total number of general papers is 103, which is the highest among the four sectors.
2.4 The AEESEAP Journal

The AEESEAP Journal was published as a biennial journal, under the editorial management helmed at the Faculty of Engineering, University of Malaya. The list of editorial board members and referees were selected from the member institutions. The maiden edition published under the Malaysia Secretariat was launched in November 2005. The contents of the journal contained papers pertaining to Engineering, with an emphasis on Engineering Education. The initial selection was from the collection of papers presented at the AEESEAP Conference 2005 described above. However, there was considerable interest from academics from the member institutions, and the submissions were extended to those other than the conference papers for subsequent issues.

3. SUSTAINABILITY OF AEESEAP

3.1 AEESEAP Funding

The activities of AEESEAP are organized with the aid of funding from an existing account, which is managed by the Secretariat, i.e. it is the responsibility of the Secretariat in term to ensure that the funding is sufficient for the activities organized under the auspices of AEESEAP. Therefore, the Secretariat must aim to sustain the activities of the association in the long run, bearing in mind the financial constraints of running such activities. Member institutions are encouraged to implement collaborative activities on a cost-sharing basis. Furthermore, since engineering education is not only the domain of engineering education institutions but also industry and governments, there is the possibility of seeking financial assistance from foundations and companies who are willing to support these relevant activities.

In order to ensure the success of the AEESEAP activities in achieving the aims and objectives of the association, there are a few pertinent indicators of success which will be discussed as follows:

1. **Cooperation of Member Institutions**

   Deans or representatives from each member institution must actively participate in the committee’s activities. One of the challenges that the Secretariat realized during the running of the secretariat is that the representatives of the institutions keep changing on a regular basis, and therefore, it is sometimes difficult for us to trace the responsible personnel. This raises difficulties in disseminating information and obtaining feedback from the member institutions, for example in obtaining response for contributions to the AEESEAP Journal and conferences.

2. **Quality of Output**

   Quality outcomes for the association’s activities are a prerequisite for sustainability. With reference to the association’s core activities mentioned above, it is the Secretariat’s aims to maintain the standards of these activities. For example, in the case of the AEESEAP journal, the aim is for at least 60% of the publications to be specifically under the topic of Engineering Education, and there is continuous effort to reach out and solicit contributions from most member institutions. Similarly, for the AEESEAP conferences, it is the secretariat’s aim to achieve an attendance profile which is truly international and reflects the members institutions’ involvement.
3. **Human Networking**

The key to successfully sustaining AEESEAP’s activities lies in the strength of its human networking. Frequent and effective contact between the staff in each member institution through the platform of AEESEAP should act as a driving force in promoting collaborations between interested members. This will spur on active exchange of ideas and collaborations in the interest of Engineering Education. The Secretariat is actively reaching out to its members through constant dissemination of information of the association’s activities, through written and electronic media, and the association’s website. However, these efforts must be a two way communication and it is hoped that these efforts will be reciprocated by the member institutions, in order for the association’s activities to be fully successful and sustainable.

3.2 **Sustainability with partnership for mutual benefits**

Based on our discussion so far regarding the activities of AEESEAP and efforts made to sustain it, it is evident that a strong partnership between the member institutions is necessary. For example, the member institutions from the less developed member countries have difficulty in fully participating in AEESEAP activities outside their countries, due to their lack of funding. This is where the assistance from the more developed countries can be of immense benefit. Such aids cannot be quantified in monetary terms per se, but can be viewed as a long term investment for future partnerships between different member institutions. It is a win-win situation, as both parties will benefit from such a partnership, in terms of exchange of ideas, research facilities and contribution of expertise.

4. **CONCLUSIONS**

This paper has outlined the origins, objectives, and activities of AEESEAP. The current activities helmed by the secretariat in Malaysia, was highlighted. There has been considerable effort in generating and sustaining the activities of AEESEAP, with the intention of promoting an interest in Engineering Education in Malaysia and in the region. A key issue encountered in the running of AEESEAP is the issue of sustainability, and this matter has been discussed at length in this paper. It is recognized that a key factor in sustaining AEESEAP lies in better communication and networking between the member institutions, in order to establish beneficial partnerships. It is hoped that the member countries can all work together in tandem with the Secretariat, in order to contribute towards greater interest in Engineering Education in Malaysia and the region.

**ACKNOWLEDGMENTS**

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REFERENCES

3. AEESEAP webpage http://www.aeeseap.org