IMPROVING TEACHING AND RESEARCH CAPACITY IN INDONESIA EDUCATION THROUGHT ASEAN COLLABORATION

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ABSTRACT

In the global higher education (HE) scenario, many countries face common challenges in higher education including rising demands for access to higher education, and the needs to improve the quality of higher education for international recognition. Although the harmonisation of HE process in Europe has not been without flaws, a regional platform to address and perhaps solve common challenges in higher education is of interests to the global regions. This project examines the teaching and research capacity of hight education in the case of ASEAN countries. Education for All (EFA) is a drive to decentralize basic and secondary educational planning, management and accountability, particulary in countries with highly centralized systems of governance, to make themm more responsive to diverse local needs and place more responsibility at the local level. The decentralization of higher education also played a part in Indonesia's many post-revolutionary reforms, and the Indonesian goverment identified a group of top tier universities to become more independent from central control. Considering a regional commitment to establish an ASEAN Community by 2015 and the international challenges in higher education, a more prominent role of the harmonisation of higher education process within the ASEAN region is crucial to build a strong foundation for the ASEAN Community and also to enhance higher education interconnectedness of ASEAN and beyond. This study explores the teaching and research capacity of Indonesia education , particularly from an ASEAN perspective. It also investigates the progress and impediments towards increased human resources development in Indonesia education in this region of ASEAN, to promote the connectivity in education among ASEAN countries and beyond.

*Keyword***:** research and teaching capacity, ASEAN collaboration, human resources development.

1. INTRODUCTION

Indonesia, a country of 249 million people has seen a surge in education attainment, with growing numbers og high school graduates continuing on the institutes and universities, and increasinglu highher percentages of teaching staff with advanced degrees. Participation and goes enrollment in higher education has increased significantly following independence from Deutch colonalization in 1945. Today, there are over four million stients enrolled in 2,800 institutions of higher education in Indonesia.

The Global index of cognitive Skills and educational attainment Indonesia position on the 40 rank with index of cognitive skills 2,03 and the first rank is Finland and others ASEAN member country Singapore on the fifth position (Table 1).

Table 1: Global Index of Cognitive Skills and Educational Attainment

	INDEX OF COGNITIVE SKILLS AND EDUCATIONAL ATTAINMENT		
	OVERALL INDEX RANK AND SCORE	COGNITIVE SKILLS RANK AND SCORE	EDUCATIONAL ATTAINMENT RANK AND SCORE
FINLAND	[Rank 1] 1.26	[Rank 1] 1.50	[Rank 3] 0.79
SINGAPORE	[Rank 5] 0.84	[Rank 2] 1.39	[Rank 33] -0.26
UNITED STATES	[Rank 17] 0.35	[Rank 14] 0.44	[Rank 21] 0.16
INDONESIA	[Rank 40]-2.03	[Rank 40]-2.04	[Rank 40]-2.01

The tables shows extracts from The Global Index of Cognitive Skills and Educational Attainment that compares the performance of the 39 countries and one region (Hong Kong) on two categories of education. (The Learning Curve 2012 Report).

Table 2: Country Index of Cognitive Skills and Educational Attainment

Indonesia	
	z-scores
Total	-2.03
COGNITIVE SKILLS	-2
Grade 8	-2
Reading – PISA	-2
Maths - Average of PISA and TIMSS	-2
Science - Average of PISA and TIMSS	-2
Grade 4	-2.1
Reading - PIRLS	-2.7
Maths - TIMSS	-1.5
Science - TIMSS	-2.1
EDUCATIONAL ATTAINMENT	-2
Literacy rate	
Literacy rate (15 and over), %	-2
Graduation rate	
Graduation rate at upper secondary level	-2
Graduation rate at tertiary level	-2.1

Source: *The Learning Curve 2012 Report*, developed by the Economist Intelligence Unit and published by Pearson. Available online at: http://thelearningcurve.pearson.com

Currently, there are approxiamtely 155,000 teaching staff at institution of higher education in Indonesia. However only an estimated 11,000 of the teaching staff (7%) have doctorates, while 61,000 (39%) have master's degrees. As a consequences, Indonesia highers educations lack of the number of qualified faculty needed to help students develop the knowledege and skills that are key to developing Indonesia's economic competitiveness.

Table 3: Indonesia National Statistics

INDONESIA INDICATORS	PERCENTAGE	YEAR
Public expenditure on education as % of total government expenditure *Source: UNESCO Institute for Statistics (UIS)*	17.14%	2010
Public expenditure per pupil as % of GDP per capita. All levels *Source: UNESCO Institute for Statistics (UIS)*	12.18%	*2010*
Public expenditure per pupil as % of GDP per capita. Tertiary *Source: UNESCO Institute for Statistics (UIS)*	23.14%	*2010*
Graduation rate at upper secondary level *Source: National Statistics Office*	45.47	*2010*
Graduation rate at tertiary level *Source: National Statistics Office*	13.48	2010
Labor force. Tertiary attainment (%) *Source: ILO*	7.10%	*2008*
Human Development Index *Source: UNDP*	0.62	*2011*

The governments of Indonesia recognize a link between the knowledge and skills with wich young people enter the workforce and long-term economic competitiveness for the countries.

2. RECENT EFFORTS IN BUILDING THE RESEARCH AND TEACHING CAPACITY OF INDONESIA EDUCATION

In particular, the Government has strived to increase Indonesian students' performance on international student assessment tests to meet that of its neighbours and economic competitors ASEAN, such as Malaysia and China. Teachers are increasingly being held accountable for poor student performance. As a result, the Government has focused its attention on upgrading its teacher workforce, which has presented a number of challenges. Quality teachers are essential to a successful educational system and, unfortunately, contract teachers are getting left behind in the reform process. The education reforms that are currently being implemented are inadequate in terms of sufficient teacher training facilities as well as poor consideration of teachers' needs. Moreover, other factors that contribute to quality education, such as adequate funding for school infrastructure as well as teaching and learning materials, need to be considered in the context of reforms.

Table 4: Teacher's qualification in Indonesia Education

Teacher's qualification

No	Education level	Total	Qualification				
			<D1	D2	D3	Bachelor	Master/ Doctor
1	Kindergarten	137,069	90%	6%	-	4%	-
2	Primary	1,234,927	49%	40%	2%	8%	0.05%
3	Junior Sec	466,748	11%	21%	25%	42%	0.31%
4	Senior Sec	230,114	1.1%	1.9%	24%	73%	0.33%
5	Voc. Sec	147,559	3.5%	2%	30%	64%	0.33%

1.5 million teachers need upgrade!!

With a workforce of approximately 3.6 million teachers, and about 50 million students in 250,000 schools, Indonesia manages one of the largest and most diverse education systems in the world. This has consequently led to a number of challenges: while primary and secondary school enrolment has increased substantially at the national level, wide regional disparities continue to persist, not only between the provinces but also between districts within the provinces. Children from low-income families in the rural, remote and, thus, poorer parts of the country, are more likely than those children who come from the wealthier districts to drop out of school at the secondary level, without having completed basic education. According to the World Bank, primary school net enrolment levels in Indonesia are below sixty per cent in poorer districts. While net enrolment rates have experienced a steady increase at the lower-secondary and upper-secondary levels, they are still very low compared to other countries in the region.

Uneven distribution of the teacher workforce

The majority of Indonesian teachers do not possess the minimum qualifications required by the Ministry of National Education, and it is estimated that around 600,000 contract teachers are employed throughout the country, largely in the more remote schools, arguably, in provinces and districts with the highest needs for an increased investment in education. Many of these contract teachers earn around a tenth of the salary of a regular teacher (sometimes as low as 5 Euros a month). While pupil-teacher ratios are on average relatively low in Indonesia, the distribution of teachers is highly uneven, resulting in a high number of multi-grade schools in more remote areas. The attempt to address the shortage of teachers by hiring contract teachers has resulted in an oversupply, many of whom are not well-qualified or are forced to share full-time contracts between them.

3. ASEAN RESEARCH CLUSTER ROADMAP

A roadmap for South East Asian Nations (ASEAN) to introduce sustainability education into universities by 2015 is being finalised, with an outline for teaching and research across the region presented to top officials during a meeting in Bangkok.

Policy-makers in fast-growing ASEAN countries are focusing increasingly on sustainable development, which requires a balance between economic growth, social development and environmental protection.

But this needs to filter down to academic research and teaching, particularly as universities are taking on a more important role in tackling global and regional challenges, according to Norizon Mohammed Nor,2011, director of the Centre for Global Sustainability Studies at Universiti Sains Malaysia in Penang.

The plan at the Bangkok meeting of officials of the South East Asian Ministers of Education Organisation, SEAMEO, on 4 April. It was prepared on behalf of Malaysia's Ministry of Higher Education a year after a SEAMEO meeting in Vietnam in March 2011 proposed a new ASEAN agenda on sustainability in higher education.

It is important to draw up a roadmap for universities in the region, the *University World News*. "Universities in ASEAN countries have a very fragmented administrative structure, making it difficult to implement intergovernmental policies. Different departments have different ideas on sustainability." The roadmap comes ahead of the United Nations Conference on Sustainable Development – the Earth Summit – due to take place in Rio de Janeiro in June, often referred to as Rio+20 as it will be 20 years after the first Earth Summit in Rio in 1992.

The UN has launched a programme for sustainable universities and research in advance of what is expected to be one of the largest gatherings of heads of government in over a decade to discuss sustainable development.

The ASEAN roadmap will be "an important step in bringing sustainability principles and practices into the entire fabric of educational systems across the ASEAN region," Often governments had focused on environmental research and education, without relating it to development.

ASEAN member countries like Thailand, Malaysia and Singapore already focus on sustainability in both teaching and research, sharing with other universities in the region. But it is more difficult to make changes in poorer countries such as Myanmar and Cambodia. The assume there will be not the same approach in all countries in ASEAN.

The roadmap will be important for universities to focus research on the 'bottom billion', referring to the world's poorest people.

In some cases this may mean reorienting research.

ASEAN countries are already involved in regional research cluster to target major problems:

(1) Health and medicine,
(2) Agriculture and food security,
(3) Energy,
(4) Environment and biodiversity, and
(5) Socialsciences.

The research needs to resolve sustainability problems facing society. The New knowledge is needed to solve new problems.

The roadmap was not just about research but also about including a ***"sustainability mindset"*** across all levels of education. At universities this meant making undergraduate teaching less theoretical and more attuned to society.

The roadmap will be one of the main areas of SEAMEO activities for 2012. A more detailed implementation approach will be presented at an ASEAN meeting on 8 May inKualaLumpur. The next step will be to invite all the ASEAN members to make a commitment and endorse with a comprehensive action plan that can start on ASEAN Community 2015.

4. CHALLENGES IN DEVELOPING RESEARCH CAPACITY OF INDONESIA HIGHT EDUCATION LECTURES

For the most part, Indonesian university lecturess tend to receive largely theory based education and training, and simply do not engage in any partical research experience. In addition, student-centered, peoblem-oriented learning materials like case studies are largely absent.

Barriers to the full development of research capacity of Indonesian lectures include:

(1) Limited institutional or financial support available for research,

(2) Uneven research skills among university lectures from varoius departments,
(3) Lack of peer and external reviewer mechanisms to ensure quality and relevance of academic research,
(4) Absence pf a practical link between research and practice.

Further assistance and support will be needed to improve the condition for research, teaching and service requirements of Indonesian University lectures. Some suggestions for improvement of current conditions may include:

(1) Review of current support systems for academic research,
(2) Establishment of a practical evidence-based research grant program for lectures,
(3) Increased numbers of University lectures trained in research methods,
(4) Provision of information regarding training opportunities abroad,
(5) Increased number of University jointed in Roadmap ASEAN research Cluster

Table 5 shown that the number research apllication from 2005 until 2007 increased rapidly on the indutrial research application and also start-up grants with total 2,786 applicant.

The patens application is low than compared with others ASEAN countries like Malaysia, Singapore and Thailand. Indonesia patent application year 2007 only 68 applicant.

Table 5: Industrial and Patent Application Grants in Indonesia High Education

Industrial & patent application grants

Industrial (Research Application) Grants

Program	2005	2006	2007	Total
Industrial Research Application	428	507	418	1353
Voucher	253	207	149	609
Start-up Grants (var)	177	297	350	824
Total	858	1011	917	2786

Patent Application

Year	Application
<2000	22
2000	53
2001	57
2002	32
2003	42
2004	52
2005	43
2006	50
2007	68
Total	419

The goal of the Indonesian goverment and the Ministry of Education and Culture (MoEC) to increase the quality and quantity of patent, research, publication conducted by Indonesian universities as well as their capacity to both desiminate that research Internationally and make it accesible to ASEAN region. The experience has demonstrated that this is not simply a matter of training lectures in research techniques and design. It is also a matter of institutional ans systemic reform in policies, procedures, governance structures, and expectations of faculty necessary to realize th research mission envisioned for Indonesia's universities.

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