

# **Building Research and Teaching Capacity in Indonesia through International Collaboration**

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## Foreword

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This briefing paper, “Building Research and Teaching Capacity in Indonesia through International Collaboration,” published by the Institute of International Education’s Center for International Partnerships, provides a detailed, data-driven look at the research and teaching capacity of Indonesian universities. The authors, Flavia Ramos-Mattoussi and Jeffrey Ayala Milligan, report on key findings from a USAID-funded project in which faculty members from Florida State University worked in collaboration with university partners in Indonesia to develop and implement a series of activities with the aim of building the capacity of teacher education institutions. This IIE briefing paper examines recent efforts in building the research and teaching capacity of Indonesian universities and the specific challenges in developing the research capacity of university lecturers in Indonesia.

At the Institute of International Education, we have long been committed to strengthening and linking together higher education institutions, and to build the capacity of educators around the world. We partner with governments, international development agencies, foundations, universities and corporations to promote and advance international development goals. In Indonesia, we are proud to partner with our affiliate, the Indonesian International Education Foundation (IIEF), on a number of projects that advance higher education collaboration between the United States and Indonesia. For example, IIE is currently implementing a USAID-funded project that sponsors future leaders from the public and private sectors in Indonesia to pursue graduate degrees in the United States, and we just completed a U.S. Department of State-supported project, the U.S.-Indonesia Partnership Program for Study Abroad Capacity, which encouraged engagement between U.S. and Indonesian higher education institutions while simultaneously addressing the supply and capacity concerns of increasing U.S. study abroad to Indonesia.

We applaud President Obama’s signing of a joint declaration with President Yudhoyono in November 2010, which committed the two countries to “seeking an enduring Partnership that transcends official exchanges and fully leverages the extraordinary talents of our strongest asset, the Indonesian and American people.” The increased engagement of the United States and Indonesia in multiple sectors, including education, represents a critical step toward the inculcation of mutual understanding.

This briefing paper complements the spring edition of IIE's biannual *IENetworker* magazine. The issue explores new and creative models for international development that are being led by universities and other types of institutions, as well as innovative partnerships between higher education and funding organizations. You can read the issue online at <http://www.nxtbook.com/naylor/IIEB/IIEB0113/index.php>.

## Executive Summary

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The Learning Systems Institute (LSI) at the Florida State University (FSU) is a multidisciplinary research and development organization that designs innovative strategies to address critical challenges facing our world. Since its inception in 1968, LSI's Center for International Studies in Educational Research and Development (CISERD) has been engaged in international development efforts to build, reform, or strengthen international education systems. From 1984 to 1994, LSI directed the USAID-funded Improving the Efficiency of Educational Systems (IEES) project. The \$58 million effort involved a consortium of universities and resulted in the development of multiple research and assessment tools used by government ministries and international organizations in more than a dozen developing nations.

### A HISTORY OF GLOBAL ENGAGEMENT IN HIGHER EDUCATION IN INDONESIA

Florida State University's Learning System Institute involvement in Higher education in Indonesia began in 1991, with the implementation of the Higher Education Development Support (HEDS) project. HEDS was a unique multinational donor agency project inasmuch as the Governments of Indonesia, Japan and the United States formed an organic partnership to carry out every phase of the five year project. FSU concentrated on improving the faculties in math and science and business management and set up job and economic development centers in 25 universities in Sumatra and Kalimantan; and conducting major policy studies for the Ministry of Education. The project supported 141 docents from 12 Sumatran (both secular and Islamic) universities to get advanced degrees in the U.S.

During the late 1990s and early 2000s, the Madrasahs or Islamic schools under the Ministry of Religious Affairs (MORA), underwent a major change to orient their curriculum and instruction toward more secular subjects, placing strains on the Islamic universities to train Madrasah teachers to teach the national curriculum and upgrade physical resources. This transition is still going on. The objective was to have these schools participate more fully in reaching the national goal of providing and increasing access for all children to at least nine years of basic education within ten years. This effort by Indonesia to expand access to basic education from what had been six years to nine years was in keeping with a worldwide drive for all nations to provide *Education for All* (EFA) through nine years, fostered and supported by all the national and multi-national donor agencies.

Concomitant with EFA was a drive to decentralize basic and secondary educational planning, management and accountability from highly-centralized systems to try to make them more responsive to diverse local needs and place more responsibility at the local level for planning, management and accountability for results in the countries with highly centralized command systems of governance.

As part of Indonesia's many post-revolutionary reforms, began the decentralization of higher education, identifying a group of top tier universities to become more independent from central control. While more closely related to provincial needs, they would still attract students nationally and fulfill national needs for economic development, but they would accept more responsibility for their own planning, management, fund raising and accountability. They are still under a variety of controls by the Ministry of National Education (MONE), which is responsible for the public and non-Islamic universities and continue to receive substantial national funding, but they have strong incentives to raise funding on

their own: locally, from wealthy donors, international donor agencies (coordinated with MONE) or from business and industry.

More recently, faculty and students from the Learning Systems Institute and the College of Education at the Florida State University have provided technical assistance in higher education instructional and research capacity to the USAID-funded DBE2 under a subcontract to the Education Development Center (EDC). The Decentralized Basic Education (DBE) project was implemented in six provinces from 2005 to 2011 as the result of a cooperative agreement between the United States Agency for International Development (USAID) and the government of Indonesia targeting three objectives:

1. More Effective Decentralized Education Management and Governance
2. Improved Teaching and Learning
3. Increased Relevance of Junior Secondary and Non-Formal Education to Life Skills

FSU faculty members have worked with university partners in Indonesia under DBE2 to develop and implement a series of activities with the aim of building the capacity of teacher education institutions including:

- Professional Development and Training in Action Research involving 19 Indonesian universities
- Distance Education and Instructional Technologies in collaboration with the Open University in Jakarta
- Scholarships for Indonesian Graduate students at Florida State University
- Short-term study visit to FSU by Indonesian university presidents and education officials
- Collaborative research and scholarly publications
- Long-term relationships with Indonesian university partners through cooperative agreements and memoranda of understanding signed by university presidents and deans of colleges on each side

FSU faculty members have worked in tandem with Indonesian university partners to build the capability of key teacher education institutions by strengthening and expanding the organizational capacity of lead universities and disseminating and promoting good practices in higher education, research and development in Indonesia. This work was done in part as a response to the government of Indonesia's ambitious combination of educational policies and the desire of higher education institutions—both secular, under the Ministry of National Education (MONE) and Islamic universities under the Ministry of Religious Affairs (MORA) to become "21<sup>st</sup> century universities." The institutions aspire to build the capacity of their faculty to engage in global partnerships with universities abroad; build their research capacity and disseminate scholarly research internationally; provide excellence in teaching; and produce world class graduates who can compete in the global marketplace.

## Key Findings

Indonesia, a country of 249 million people has seen a surge in education attainment, with growing numbers of high school graduates continuing on to institutes and universities and increasingly higher percentages of teaching staff with advanced degrees. Participation and gross enrollment in higher education has increased significantly after the nation became independent of the Dutch in 1948. Today, there are over four million students enrolled in 2,800 institutions of higher education in Indonesia.

There are over 75 national universities, strategically located in every Indonesian province, augmented by literally thousands of secular, religious (mostly Catholic) and Islamic (non-state funded) private universities. Many of the public universities were *IKIPS*, or teachers colleges, that have now been converted to state colleges, serving more or less local constituencies. Many of these have grown rapidly tapping into local demands for cheaper access to a wide variety of academic and technical programs now being offered beyond teacher education, although teacher education still remains a major component of their offerings, usually constituting their largest enrollments. The private institutions, along with the public universities, are under the oversight and accountability (accreditation) of the National Accreditation Board (BAN).

The rapid expansion of education in Indonesia offers many challenges and opportunities for international cooperation and collaboration between U.S. and Indonesian institutions. Despite the recent increases in higher education enrollment and attainment, the number of young people participating in higher education is far below what many think Indonesia needs to support the nation's efforts to foster economic growth. Indonesia ranks in 40<sup>th</sup> place according to the *Global Index of Cognitive Skills and Educational Attainment*,<sup>1</sup> which compares the performance of 40 countries on two categories of education: Cognitive Skills and Educational Attainment (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
<b>FINLAND</b>	[Rank 1] 1.26	[Rank 1] 1.50	[Rank 3] 0.79
<b>SINGAPORE</b>	[Rank 5] 0.84	[Rank 2] 1.39	[Rank 33] -0.26
<b>UNITED STATES</b>	[Rank 17] 0.35	[Rank 14] 0.44	[Rank 21] 0.16
<b>INDONESIA</b>	[Rank 40]-2.03	[Rank 40]-2.04	[Rank 40]-2.01

Source: The table shows extracts from *The Global Index of Cognitive Skills and Educational Attainment* that compares the performance of 39 countries and one region (Hong Kong) on two categories of education: Cognitive Skills and Educational Attainment. The indicators used in this Index are: (1) Cognitive Skills: PISA, TIMSS and PIRLS scores in Reading, Math and Science; and (2) Educational Attainment: literacy and graduation rates. The data within the Index was last collected and/or calculated in September 2012. The full table can be found in *The Learning Curve 2012 Report*, developed by the Economist Intelligence Unit and published by Pearson. Available online at: <http://thelearningcurve.pearson.com>

<sup>1</sup> *The Learning Curve* report, published by Pearson and written by the Economist Intelligence Unit. Available at: <http://thelearningcurve.pearson.com>

**Table 2: Country Index of Cognitive Skills and Educational Attainment**

<b>Indonesia</b>	
	z-scores
<b>Total</b>	-2.03
<b>COGNITIVE SKILLS</b>	-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
<b>Reading - PIRLS</b>	-2.7
<b>Maths - TIMSS</b>	-1.5
<b>Science - TIMSS</b>	-2.1
<b>EDUCATIONAL ATTAINMENT</b>	-2
<b>Literacy rate</b>	
Literacy rate (15 and over), %	-2
<b>Graduation rate</b>	
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>

Among the challenges facing the nation's education system is the quality of education that Indonesian institutions currently offer. Global indicators suggest that teacher performance is the main culprit in improving the quality of education. Consequently, improving teachers' education at all levels has been the focus of many development programs worldwide. Indonesia is not an exception. The Indonesian government with the support of international donors has put in place an ambitious policy requiring teachers at all levels of education to acquire and complete higher degrees and professional development by 2015. This new policy has increased the demand for teacher education and distance education programs offered by colleges and universities in Indonesia and elsewhere.

Currently, the teaching staff at institutions of higher education in Indonesia number approximately 155,000. However, only an estimated 11,000 of the teaching staff (7%) have doctorates, while 61,000 (39%) have master's degrees. As a consequence, Indonesian higher education institutions lack the number of qualified faculty needed to help students develop the knowledge and skills that are key to developing Indonesia's economic competitiveness. The governments of Indonesia and the United States both recognize a link between the knowledge and skills with which young people enter the workforce and long-term economic competitiveness for their country. International donors could play a significant role in fostering change and paving the road leading to the 21<sup>st</sup> century university ideal.



**Table 3: Indonesia National Statistics**

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

## Part I: Research and Teaching Capacity of Indonesian Universities

### A. Recent Efforts in Building the Research and Teaching Capacity of Indonesian Universities

One of the tasks FSU faculty had over the five year engagement with DBE2 project was to design a series of professional development workshops for Indonesian lecturers and faculty, and to then produce and disseminate *The Action Research in Education Training Module for Indonesian University Lecturers*. The module was developed “on the ground” and from the experiences shared in a series of workshops and on-going collaborations between FSU and a consortium of 19 Indonesian universities. The action research workshops were designed to deliberately apply learner-centered activities, with emphasis on the practical aspects of learning how to carry out action research. The module takes into account the Indonesian cultural and educational contexts, the teaching and research responsibilities of university lecturers, and the capacity level of university lecturers to carry out action research and produce research reports for publication.

In the process of conducting workshops for Indonesian university lecturers, we have learned about the challenges universities face in moving forward, including an over-dependence on government funding. Indonesian university lecturers, for the most part, lack the appropriate training in research methodologies, or the academic writing abilities necessary to conduct and disseminate research; formal and informal assessments indicate that the majority of lecturers at higher education institutions neither employ effective instructional methodologies nor use relevant, high-quality curriculum. The problem is exacerbated by the fact that low salaries provide little incentive for faculty to invest significant time in improving pedagogy or curriculum and focus on research.

The Government of Indonesia provides limited public funding for higher education and there are few indications that such funding levels are likely to change, despite the recognition of higher education’s importance to Indonesia’s social and economic development. Recent World Bank data regarding higher education spending by MONE and MORA indicates that Indonesia’s public expenditures as a percentage of GDP are among the lowest in the world, though private resources compensate to some extent for the low spending.

### B. Action Research in Indonesia

Indonesia is undertaking an exciting and ambitious combination of educational policy, training, and implementation by supporting teachers conducting ongoing Classroom Action Research (CAR) to improve their teaching practice. University lecturers have the central role in training, mentoring, and supervising teachers in conducting CAR. University lecturers are also expected to carry out research and produce scholarly publications, as well as engage in community service. Action Research combines both an opportunity for academic research as well as a way for lecturers to serve their communities by engaging in reflection, informed inquiry, and planned improvement of practices in a variety of settings.

Action research consists of planned, continuous, and systematic procedures for reflecting on professional practice and for trying out alternative practices to improve outcomes. Action Research can be implemented in the classroom or at the institutional level—schools, universities, organizations, community—to diagnose and solve problems, test the effectiveness of new methods, and to implement change. It requires several cycles or phases from designing an intervention, to implementing change and from there to assessing the impact of applied intervention. All phases of the action research process require collaboration and participation of concerned parties.

### C. Action Research Workshops

The approach we employed in the development of the Action Research workshops and training module was to practice what we teach: involve the participation of all concerned, assess the situation in collaboration with local agents, design and implement the workshops as we go—no pre-determined curricula, and introduce a ‘practicum’ where university lectures would have a chance to carry out their own action research project. Workshops were carried out in six regions of the country by a team of FSU and Indonesian faculty over a period of four years.

The Action Research Training Module was developed based on a series of workshops and field experiences in Indonesia. Workshop I is organized around basic concepts in Action Research, the action research cycle, problem identification, data collection methods, and preparation for field work or “Practicum.” In the Workshop II or Practicum, University lecturers carry out their own action research projects, meet periodically to discuss their progress and review their research design and data collection strategies. Workshop III focuses on data analysis procedures, presentation of data and reporting of action research projects.

#### The training module has a two-fold goal:

1. To provide lecturers with the basic concepts of action research in ways in which they will be able to apply these concepts and methods in their own educational practices;
2. To serve as a “training the trainer” resource manual, which can be used by lecturers to guide their own action research practice and also to guide others—collaborators and student-teachers—in the process of doing action research to improve their practices.

The writing of the module and the Indonesia field test were made possible by the four-year collaboration between FSU and the Indonesia University Consortium under the auspices of USAID-funded DBE2. The module has been field-tested by Indonesian university lecturers from 19 universities who participated in a series of workshops on action research in education.

## Part II: Challenges in Developing the Research Capacity of University Lecturers in Indonesia

For the most part, the education and training university lecturers receive tend to be largely theory-based; they simply do not have any practical research experience. Student-centered, problem-oriented learning materials like case studies are largely absent. Other challenges we had in implementing the workshops were due to the schedule of activities and time allocated for doing research. Indonesian lecturers have very heavy teaching loads and are usually called by their superiors to participate in all kinds of service activities, leaving little time for research. Working in teams, having access to research sites, sharing and managing data were amongst the difficulties the teams had due to the lack of resources, practice, and research skills. Very few participants had taken part in a research methods course prior to the workshops.

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

- Limited institutional or financial support available for research;
- Uneven research skills among university lecturers from various departments;
- Lack of peer and external review mechanisms to ensure quality and relevance of academic research;
- Absence of a practical link between research and practice.

Given the existing situation, the workshops were designed to deliberately apply learner-centered activities, with emphasis on the practical aspects of learning how to carry out action research, and less on the theoretical foundations of the method. Further assistance and support will be needed to improve the conditions for research, teaching and service requirements of Indonesian university lecturers. Some suggestions for improvement of current conditions may include:

- Review of current support systems for academic research.
- Establishment of a practical evidence-based research grant program for lecturers.
- Increased numbers of university lecturers trained in research methods.
- Provision of information regarding training opportunities abroad.

### Part III: Disseminating the Action Research Module

After a series of workshops, production and translation of the *Action Research Module for Indonesian University Lectures* a follow-up workshop was planned to review and disseminate the module in Indonesia. A conference-style meeting was organized by the staff of DBE2 and hosted by Sebelas Maret University (UNS) and implemented by the Florida State University's Learning Systems Institute at the Best Western Premier Hotel, Surakarta on 18-21 July, 2011.

Technical assistance provided by FSU to the Indonesian university partners evolved in response to our partners' request for assistance in developing the capacity of their lecturers to conduct and disseminate research. However, this interest also reflects the goals of the Indonesian government and the MONE to increase the quantity and quality of research conducted by Indonesian universities as well as their capacity to both disseminate that research internationally and make it accessible to regional policy makers so that they might make informed decisions regarding regional development. Our experience has demonstrated that this is not simply a matter of training lecturers in research techniques and design. It is also a matter of institutional and systemic reform in policies, procedures, governance structures, and expectations of faculty necessary to realize the research mission envisioned for Indonesia's universities.

## Future Opportunities for International Partnerships in Indonesia

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In 2010, President Barack Obama and Indonesia's President Yudhoyono announced a Higher Education Partnership to boost academic exchange between the two nations and to share in efforts to improve Indonesia's system of higher education.

Florida State University's Center for International Studies in Educational Research and Development (CISERD) is engaged in a new initiative in Indonesia, to build the capacity of local teacher education institutions with the aim of improving education systems. In the next five years, CISERD will send an interdisciplinary team of experts in international education to Indonesia to focus on building the nation's capacity to train primary and secondary schoolteachers and improve teaching methods in math, science and reading, among other goals. CISERD also will bring education leaders to Florida for a study tour of university programs integral to teacher education.

FSU's work in Indonesia is part of a larger, \$83 million USAID effort —Prioritizing Reform, Innovation, Opportunities for Reaching Indonesia's Teachers, Administrators, and Students (PRIORITAS) — managed by the Research Triangle Institute. Other PRIORITAS partners are the Education Development Center and World Education. Also involved are Sampoerna School of Education, SMERU, Sesame Workshop/Creative Indigo Productions' Jalan Sesama, Room to Read and Urban Planet.

CISERD's new initiative to support Indonesia's teacher training programs is part of this U.S. commitment to support expanding the nation's capacity for providing high-quality education.

## About the Institute of International Education

The Institute of International Education, founded in 1919, is a world leader in the exchange of people and ideas. IIE has a network of 30 offices and representatives worldwide and 1,100 college and university members. In collaboration with governments, corporate and private foundations, and other sponsors, IIE designs and implements programs of study and training for students, educators, young professionals, and trainees from all sectors with funding from government and private sources. These programs include the Fulbright and Humphrey Fellowships and the Gilman Scholarships, administered for the U.S. Department of State, and the Boren Scholarships and Fellowships administered for the National Security Education Program. IIE's publications include the *Open Doors Report on International Educational Exchange*, supported by the Bureau of Educational and Cultural Affairs of the U.S. Department of State, as well as *Funding for United States Study*, the *IIE Passport Study Abroad* print and online directories, and the [StudyAbroadFunding.org](http://StudyAbroadFunding.org) website. **[www.iie.org](http://www.iie.org)**

## About IIE's Center for International Partnerships

The IIE Center for International Partnerships in Higher Education assists higher education institutions in developing and sustaining partnerships around the world. The Center engages in the following activities:

- Guiding colleges and universities through a customized partnership planning process to develop institutional strategies for fostering international partnerships.
- Conducting training activities focused on implementing and sustaining partnerships with higher education institutions in a focus country.
- Providing advice and liaison services through IIE's network of international offices and partners. Collecting and disseminating best practices in developing institutional linkages and programs.
- Convening conferences and symposia of international educators and other leaders in the field.
- Producing timely policy research papers on critical issues.
- Organizing U.S. study tours for higher education administrators and experts from around the world to enrich their understanding of U.S. higher education's diversity and bring them together with potential partners.

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