

REVIEW

Education in Remote Areas from Teacher's Perspectives: a case study of East Kalimantan, INDONESIA

Anton RAHMADI (Australia), Irma ISTIQAMAH (Indonesia) and Mohamad ADRIYANTO (Indonesia)

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Abstract

Remote school districts with restricted access to teacher resources inherent extraneous challenges in educating youth. It is argued that quality of teachers in remote areas is inferior to that in big cities in East Kalimantan. Improvement on incentive ditto with teaching skills, and establishment of better facilities for education and local economy are proposed to play a key role in increasing quality of teachers in the remote areas. East Kalimantan is selected as a case study in this research in accordance to its potential development capacity and significant economic surplus from natural resources exploitation. All data were collected and analysed from respective government bodies, non-profit organization reports, newspaper pages and personal experience as teachers in urban area in East Kalimantan during 2003-2009. Students to teacher ratio in East Kalimantan was reasonable, but teachers converged in suburbs than in rural areas. Teachers in villages did not have sufficient competence and resources pursuing the rapidly refined policies, e.g. educational curriculum. As a conclusion, educational background of teachers in remote area should be creatively developed, not only conferring marginal scholarship but also offering just inducement and salary. Apart from working with inadequate provisions, teachers in remote areas, by a large proportion, were more dedicated to their responsibility. Upgrading quality of education in rural areas requires superfluous efforts. Decentralisation of educational policy in remote areas in East Kalimantan can be put into practice by increasing teacher incentive, inducing more frequent trainings especially during deployment of a new curriculum, and establishing better facilities on education in addition to encouraging local economy. Community supports on instating innovative programs in school, allotting time as voluntary teachers and providing internships, constructive feedback and endowment would contribute to improvement of teaching quality in remote areas. It is expected that this paper can act as a reference for decision-making pertaining to enhance the quality of national education in Indonesia.

Keywords: decentralization policy, community participation, teachers, remote area, East Kalimantan.

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Biography of the Authors

Anton Rahmadi is a lecturer in University of Mulawarman and was a vocational high school teacher for three years in East Kalimantan. He had coached and inspired many vocational students to receive provincial and national awards. He had been appointed as an assessor of competency examination for vocational students and an assessor for school teacher's examinations. He is now a researcher in University of Western Sydney, Australia. Mohamad Adriyanto obtained his education in Human Resource Management from University of Akron, USA, and is appointed as Principal of Airlangga vocational high school in Samarinda, East Kalimantan. Irma Istiqamah was a teacher in the same school.

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1 INTRODUCTION

Education is a basic right that governments should afford to their people. In Indonesian constitution, every individual has a right to access same quality of education. In chorus, it gives a mandate to government to guarantee equality in providing education for all citizens.

Education is a key to boost national prosperity. Macro educational quality, namely literacy and schooling participation, contributes roughly 30% in human development index (HDI). It also plays an essential element in education development index (EDI), and millennium development goals (MDGs) (UNDP, 2009). Overall HDI and EDI in Indonesia were fall into middle-low group in the world (EFA Coordination Team, 2006; Sulistyatuti, 2007). However, macro educational quality does not always represent quality of teachers, thus the concern of insufficient competent teachers in Indonesia has never gained much attention.

One fundamental element of education is quality of teachers. Providing good and competent teachers has always been a struggle in Indonesia. With regard to current condition, only 55% of teachers were competent. Coetaneous, they concentrated in cities (Ministry of Education, 2010). From the statement, it could be deduced that quality of teachers in remote areas is substandard compared to that in metropolitan.

East Kalimantan, from economic point of view, has a prodigious advantage. Since law for autonomy was enacted in 2001, East Kalimantan emerges as one of resourceful provinces in Indonesia and contributes roughly 30% of Indonesian GDP. East Kalimantan comprises an enormous land, greater than Java Island in terms of acreage. It is now segregated into 13 districts and regencies, in which 50% of them were just established within last 10 years (Bappeda East Kalimantan, 2010). From political circumstance, East Kalimantan is a developing province. As a consequence, many of the government functions are emergent.

General educational quality is observed from HDI and EDI. In that case, East Kalimantan is in a group of top five HDI provinces. All four cities in East Kalimantan were at 20 best in Indonesia (BPS Indonesia, 2010a). HDI in all regencies and districts in East Kalimantan are on par to average national HDI. EDI in all the regencies and cities are a notch better than that of Indonesian average. However, as observed from personal experience as teachers, we contend that either HDI or EDI do not sufficient to represent the real situation of educational development, more distinctively quality of teachers in rural areas in East Kalimantan. The interstice of educational quality in remote areas and cities is immense.

Those facts contribute to the thesis that people who live in villages and remote areas in East Kalimantan are not having equal educational quality attributable to limited teacher resources and educational provisions. In this paper, the actual conditions and challenges fostering teachers in remote areas of East Kalimantan will be discussed.

This study will try to deliver recent findings and data on how East Kalimantan try to cope with ever-changing educational policy in our perspective as teachers, considering to the real condition of education in remote areas in comparison to that in the cities within East Kalimantan. Providing a just incentive for remote area teachers, improving teaching skills, and establishing attractive facilities for education and local economy are proposed to play a

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key role in increasing quality of teachers in remote areas in East Kalimantan. Community participation is proposed to have strong implication in increasing quality of teachers by improving role of school principal, teachers, and links between school and community. A short success story of Airlangga vocational school is highlighted as a model of societal participation in increasing quality of teachers.

2 METHOD

2.1 Data Collection

Assumptions and analysis were developed upon secondary data that were collected from a number of government agencies dated from 2006 to 2009 and from non-government organization reports that were published within 2003 to 2009. A collection of clips from local and national newspapers were conjointly included, especially related to opinions and voices of teachers in remote areas that were not documented in any of the above reports. Number of telecommunication providers and electricity data were obtained from an unpublished survey conducted by bureau of information and communication technology of East Kalimantan in 2009. All data were available online unless stated otherwise.

2.2 Data Analysis

Datasets were re-arranged and analysed to give a clear comparison of teaching quality between remote areas and big cities in East Kalimantan. Number of schools, qualification of teachers, number of telecommunication providers and electricity data were recalculated based on available raw data. Analysis of data was carried out with spreadsheet software.

3 FINDINGS

3.1 Quality of teachers in demographic figure

HDI and EDI are demographic figures, representing prosperity and educational quality of a region, respectively. Quality of teachers in one extent can be inferred from the HDI and EDI values. EDI value and education proportion in HDI value are composed from equivalent indicators of literacy and school participation, although they are calculated in slightly different formulas. Hence, only HDI value will be analysed to get an unabridged

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outlook on macro educational quality related to prosperity in this paper. For the same rationale, literacy and school participation will be discussed further in separated sections, leading to qualitative description of quality of teachers in East Kalimantan.

3.1.1 Human Development Index

Human development index is generally accepted as a prosperity indicator of a particular region. HDI is a composite value, calculated in a balanced proportion of three major aspects: (1) general health, weighing more on average life span (2) education quality, counted as percentage of literacy to total population and school participation, and (3) economic prosperity, which is principally gross domestic product (GDP).

Based on UNDP (2009), rate of adult (population with age of 15+) illiteracy in Indonesia decreased from 36.7% (1980) to 19.5% (1990) and to 8.0% (2007). This criterion, along with school participation, is contributing one third to the human development index calculations.

As a macro indicator of prosperity, HDI is not representing quality of teachers in a particular area. Nonetheless, percentage of literacy, as a part of HDI calculation, is argued as an outcome of teaching quality. On the other hand, income per capita, as represented in GDP of HDI calculation, may also give an indirect link to educational quality in terms of buying power of people to educational facility.

An assumption for quality of teachers, in like manner, can be established through literacy of people which is derived from number of people entering formal educations per total population in the area. It could be deduced that, teachers in primary schools in a particular area are able to educate young pupils to at least have reading and writing skills. Hence, from macro educational quality point of view, HDI is argued to have positive coefficient with quality of teachers.

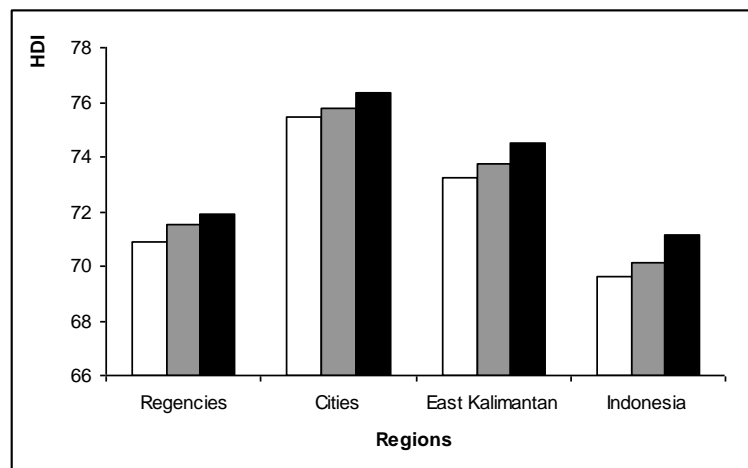


Figure 1 Average HDI of five lowest districts compared to average HDI of the all four cities in East Kalimantan (East Kalimantan BPS, 2009) as well as average HDI of Indonesia (BPS Indonesia, 2010b; BPS East Kalimantan, 2009). □ 2006, ■ 2007 ■ 2008. Higher is better.

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One important point inherent to HDI calculation is formulation and when the cross sectional data are obtained. These two rationales could elucidate that the value of HDI of Indonesia from UNDP (2009) is relatively higher than that of BPS Indonesia (2010a) for the same reporting year. For this paper, all tables were constructed using values indicated from official BPS Indonesia and East Kalimantan reports. HDI values in East Kalimantan suggested that cities in East Kalimantan were showing privileged prosperity than the national average. HDIs of five sample districts in East Kalimantan were mediocre. From Figure 1, it could be highlighted that macro educational quality in East Kalimantan is slightly above the average districts/regencies in Indonesia.

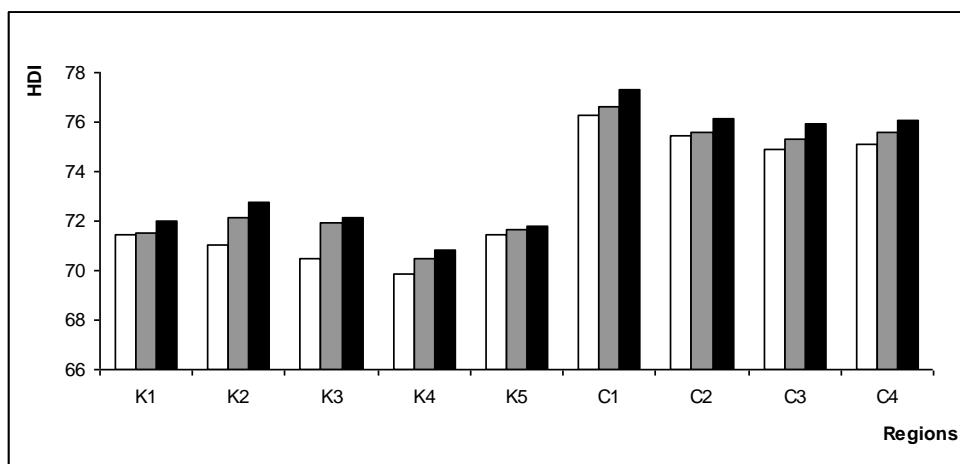


Figure 2 HDI of five lowest districts compared to HDI of all cities in East Kalimantan (BPS East Kalimantan, 2009). □ 2006, ■ 2007 ■ 2008. Kutai Kartanegara (K1), Berau (K2), Kutai Barat (K3), Kutai Timur (K4), Malinau (K5), Balikpapan (C1), Samarinda (C2), Tarakan (C3), and Bontang (C4). Higher is better.

Figure 2 is the extension of Figure 1, unfolding each district or city actual HDI value. There is no significant difference in prosperity of newly established districts of Kutai Barat, Kutai Timur and Malinau, compared to older districts of Kutai Kartanegara and Berau. It could be elucidated that there is a prosperity cavity for big cities and districts in East Kalimantan. With regard to quality of teachers, the prosperity interstice can lead to a gap in educational and teaching quality. It underlies two possible causes, less economical benefit from GDP and/or substandard educational achievements (Figure 2). This would be addressed elsewhere.

3.1.2 Literacy ratio

Literacy ratio could be deduced as an outcome of teaching quality, in which teacher is assumed to successfully educate a person on reading and writing skills. For an official figure, i.e. BPS report, literacy ratio is composed from number of people enters formal

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educations divided by total population in the area. A full report of literacy ratio gives an outlook of age-wise literacy in a particular region.

On average, Indonesian literacy ratio is 92% in 2007 (UNDP, 2009). According to BPS Indonesia (2010), more than 20% of 45+ years old people were illiterate, giving the highest proportion to the percentage of illiteracy in Indonesia. Approximately 8% of the school age population, 15+ years old, were also illiterate. From Figure 3, it could be elucidated that illiteracy ratio for 15-44 population age in East Kalimantan is trivial. In a comparative study on rural/urban in transitional countries like Eastern Europe, a gap for poverty and illiteracy is established at approximately 5% (Macours and Swinnen, 2008). In this paper, a larger proportion of illiterate in remote areas is anticipated owing to economic reasons, young marriage, limited access of information, and ditto with school facilities (Latifa et al, 2008). Qualification of teacher and students to teacher ratio may contribute indirectly to illiteracy ratio.

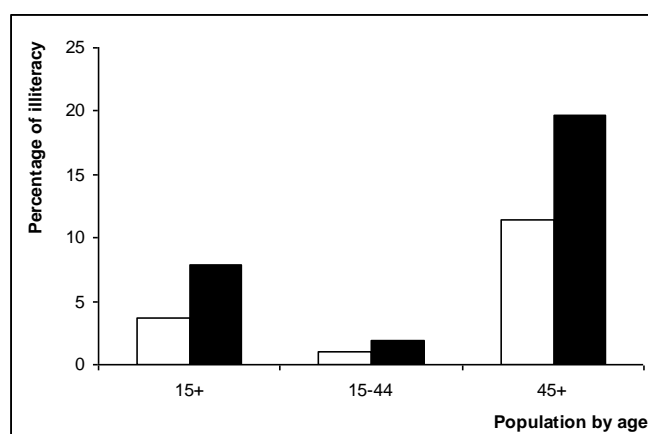


Figure 3 Average percentage of illiteracy segregated by age in population. □ East Kalimantan ■ Indonesia (BPS East Kalimantan, 2009; BPS Indonesia, 2010a). Lower is better.

3.1.3 School participation index

As BPS only calculates figures from formal education for its official reports, school participation becomes another key indicator to macro educational quality. Quality of teachers, once again, could not be directly linked to school participation index, as it only reported number of educational recipients (students) and not the servers (teachers). A teacher has much greater effects than a school (Buddin and Zamaro, 2009). However, from an assumption that a school must have at least one formally educated teacher, qualitative outlook on teaching quality can conjointly be obtained.

Average primary school participation is around 92% in 2009. The figure is decreased to 70% for junior high school and to around 42-43% for senior high school. This indicates that 30% of school age people do not get a proper education as stated in 9-year schooling program by Indonesian constitution. In a particular remote area in East Kalimantan, Nunukan, Latifa et al (2008) published that average schooling year was less than 6 years. It

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can be inferred that around 50% young generation did not finish their primary school education. Subsequent to poverty, young marriage and distance between villages to school are regarded as major factors contributing drop outs as stated by Latifa et al (2008). Nonetheless, this gruesome condition is still better comparatively to other districts in poor provinces in Indonesia. This argument is supported by gross school participation index in East Kalimantan which is slightly superior to that of national average (Figure 4). In connection with quality of teacher, as per 2006, during our visit to sub-district of Lumbis in Nunukan, two or three qualified personnel (S1 degree) were teaching in all level of schools, in spite of students to teacher ratio was reported adequate.

Indonesian government adopts open schooling program of study group (*Kelompok belajar – Kejar*). Level A is equivalent to primary school. Level B and C of *Kejar* are for higher school. Apt to formal classes, this program meets many hurdles, most importantly the availability of teacher and books in remote areas in East Kalimantan. For example, in several very remote villages in Nunukan, there is no inexpensive and uncomplicated transportation medium except a pioneer-class air transport subsequent to non-hardened pedestrian footpath in the dense forest. To distribute national examination material which is a compulsory for all *Kejar* levels, local education office requires hiring flights that cost 40 million rupiah (US\$ 4500) (Jauhari, 2010). Delivering books ditto with regular attendance of teacher from closest urban area would extravagant educational cost.

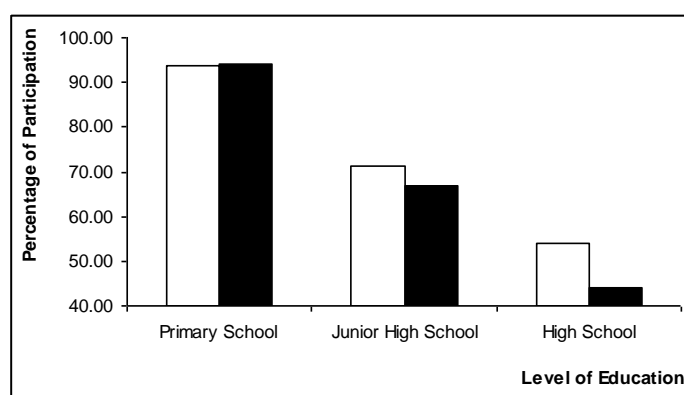


Figure 4 Gross school participation indexes at levels of education in 2008 □ East Kalimantan ■ Indonesia (BPS East Kalimantan, 2009). Higher is better.

3.2 Factors contributing Quality of Teachers

3.2.1 Ratio of students to teacher

Darling-Hammond (1999) argued that a prediction to effectiveness of teacher in a class can be obtained from students to teacher ratio. During the course of a longitudinal study in early childhood, a positive correlation between students to teacher interaction in reading and mathematics was established (Croninger et al, 2007). A proposed ideal class size to

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support good interaction between student and teacher is 18 students to one teacher (Gross, 2009). Ratio of students to teacher in each level of education is adequate in East Kalimantan. This province can provide around one teacher for 20 primary school pupils and around one for ten high school students (Figure 5).

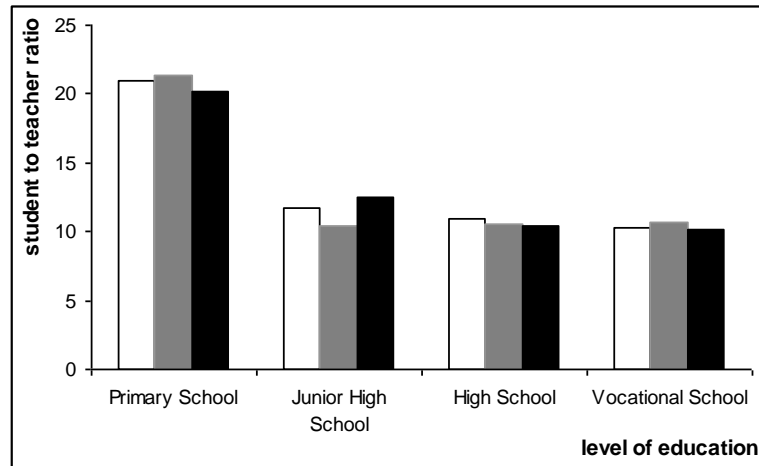


Figure 5 Average students to teacher ratio in specific levels of education in East Kalimantan. (BPS Indonesia, 2010a) □ 2006, ■ 2007 ■ 2008.

Table 1 shows students to teacher ratio in five sample districts and four cities in East Kalimantan. It presents reasonable ratio of students to teacher in regency/district level. However, a thorough data for students to teacher ratio in sub-districts could not be obtained as this may be crucial to show imbalance ratio between student and teacher in villages. However, assumption of teacher is more congested in suburbs compared to in remote area can still be inferred from percentage of functional school in those areas (Figure 6). In a particular district, Malinau, ratio of students to teacher for junior high school is paramount. One teacher should serve around 65 students (Table 1).

Table 1 Students to teacher ratio in five districts and four cities in East Kalimantan (BPS East Kalimantan, 2009)

District (Cities in bold)	Students to teacher ratio		
	Primary school	Junior high school	High school
Kutai Kartanegara	15.1	9.4	17.4
Berau	14.4	17.3	16.3
Kutai Barat	14.5	12.2	11.3
Kutai Timur	13.3	17.0	11.6
Malinau	14.0	64.8	13.1
Balikpapan	23.8	18.7	17.6
Samarinda	21.1	11.3	12.6
Tarakan	21.2	16.1	10.1
Bontang	22.8	13.4	11.7

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It is a common fact that rural areas have less density of population resulting smaller proportion to number of primary and junior high schools operated in those areas. Nevertheless, in East Kalimantan case, proportion between primary school to junior high school is not balanced. This affixes to the problem that primary school students could not complete their 9-years obligatory education as required by the constitution. Junior high schools are more concentrated in urban areas in at least three districts as shown in Figure 6. At present, quality of education offered in primary schools in remote area compared to urban area is not observed and not available as secondary data. As a consequence, it is not possible to give data-based evidence to strengthen common hypothesis of education in remote areas is generally less qualified than that of in urban or cities.

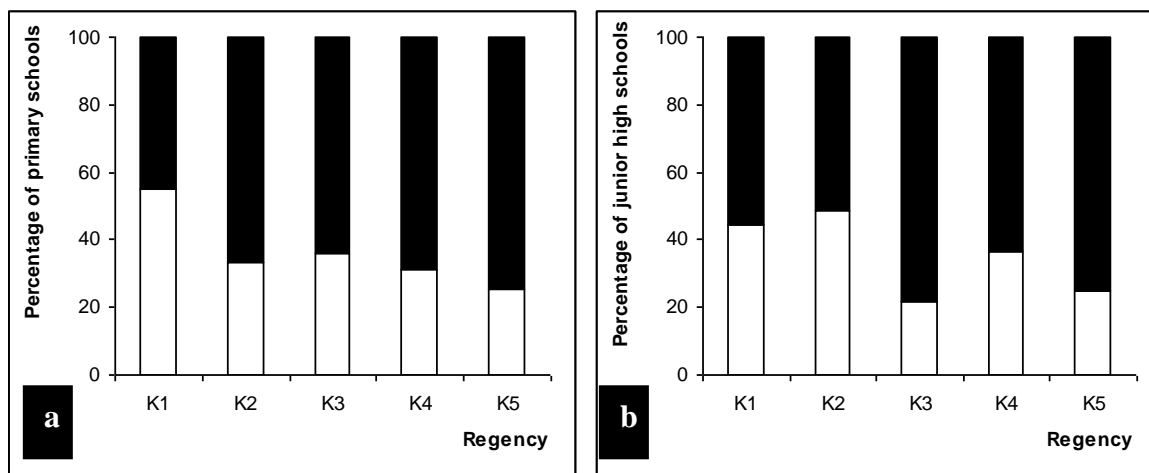


Figure 6 Percentages of primary schools and junior high schools in five districts/regencies in East Kalimantan in relation to its location □ in remote or rural areas, ■ in urban areas and district capital. Kutai Kartanegara (K1), Berau (K2), Kutai Barat (K3), Kutai Timur (K4), and Malinau (K5). (Data were calculated from GN-OTA, 2009).

3.2.2 Educational qualification of teachers

Undergraduate certificate is considered as a baseline qualification of a teacher, according to law for teacher and lecturer number 14/2005. Influence to output quality of a good teacher is more than that of a good school (Buddin and Zamarro, 2009). Positive relationships of teacher education to student achievement can be observed in more than 60% of the sample studies (Lockheed and Komenan, 1989). As a consequence, academic qualification of teachers in remote area should be up to standard. A part from academic qualification, dedicated teacher with experience of more than two years will result better outcome compared to a new teacher (Croninger et al, 2007).

Educational qualification of 7082 teachers has been upgraded since 2006; giving 47.98% teachers are now at strata 1 or diploma 4 qualifications. This achievement is claimed to be above national average, which is stood at 37.5% (Ishaq, 2010; Harto, 2010). Summary of

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academic qualifications of teachers in East Kalimantan and Indonesia is highlighted in Table 2.

Indonesia ascertains an ambitious goal, stating there is no teacher below Diploma 4 or Strata 1 in 2015. The minimal academic qualification of teachers was set in law number 14 about teacher and lecturer which was passed in 2005. It would need a very effective strategy to reduce these academically not qualified teachers, which the number stood at 1,445 million for primary and high school teachers.

Table 2 Academic qualification of teachers in East Kalimantan in 2010 in comparison to 2005 and national average figures (BPS Indonesia, 2010a; BPS East Kalimantan 2009; Ishaq, 2010)

Academic Qualification	East Kalimantan		National Average 2010
	2005	2010	
High School School Teacher Education	73,76%	52,02%	62.5%
Diploma I - II			
Diploma IV, Strata 1 and above	26,24%	47,98%	37.5%

Presently, not every local government gives scholarship to teachers. Thus, teachers are required to upgrade their education by their own capital. Local governments in East Kalimantan started to give scholarship to teacher in remote areas a few years back, giving them chances to enter special Primary School Teacher Program at Open University of Indonesia. However, from our assessments in 2006, the policy appeared not effective. It did not address the root of problems. Most important issues in this regard were marginal supports to study incentive and facilities. In predominant regions of East Kalimantan, teachers could not pass a standard to be government employees and had substandard salary to support their daily needs. A vicious cycle of scant income, below par educational qualification but towering expectancy was not hitherto resolved by partially addressing marginal teacher scholarship.

A government effort to improve salary is by certification program, which is not applicable in remote areas. Academic background of teacher restricts the chance to pass in certification program, as a result improvement in salary or incentive is none. Conjointly, government increases recruitment academic baseline to undergraduate since law of teachers and lectures puts in practise in 2005. Non qualified educators cannot be government employees. From this policy, unqualified teachers keep their status as voluntary teacher with scant income.

In 2006 observation to Lumbis, a sub-district of Nunukan, it is concluded that scholarship given by local government is marginal. It affords tuition fee of Open University for Special Teacher Program. However, operational costs to attend a lecture in closest urban area are often neglected. The shoddier condition occurred in an exam period, teachers need to spend more capital to cover assessor expense.

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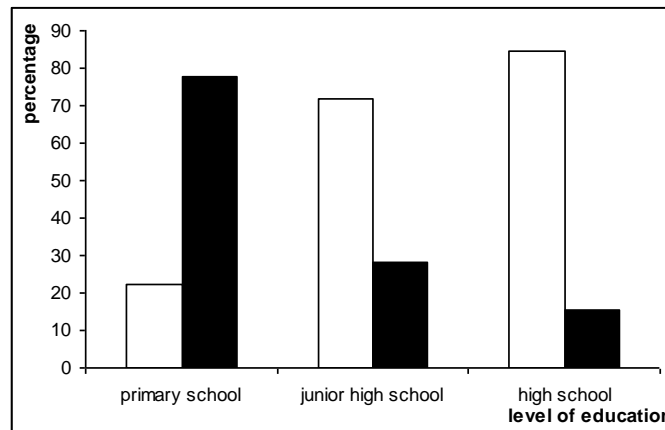


Figure 7 Percentage of qualified and non-qualified teachers at specific level of educations based on academic qualification (higher than Diploma IV or Strata 1) in Indonesia, 2007-2008. (Ministry of Education, 2010) □ qualified, ■ non qualified.

The most encouraging value observed from teachers in remote areas was motivation. It is a common idea that people would go for better options. In this case, they were keen to forfeit the better option and preferred to stay and teach young generations in their homeland. From this point of view, government and community should give a full respect to the vocation.

Conditions in remote areas are severely restricted in comparison to what a city can have. These considerations should always be remembered by policy makers. Unfortunately, until present time, all policies are centralized and not being lenient for teachers in remote areas. Teaching certification program is an immaculate example of centralized policy which needs to be better addressed. One very basic question for this program is, how government can support or at least to give an equal opportunity to pass certification program for teachers in remote areas. Teachers are in dilemma complying with certification components, i.e. academic qualification, attendance in upgrading and training sessions, establishment of standard operational procedure for teaching, and submission of analytical paper on a regular basis.

In a 2006 visit to Lumbis, only two or three teachers had sufficient academic background (S1 degree or equivalent). Others were university drop outs or high school graduates. To upgrade educational qualification, it requires at least four years finishing a degree. By the moment, teachers cannot obtain certification, which means no improvement in salary. Another dilemma fostering the teachers is composing a paper. It requires reading material that is not effortless to obtain. The internet access is absent and library is hardly functional.

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3.2.3 Poverty as a Socio-culture factor to Education

East Kalimantan is the third wealthiest province according to gross domestic product contribution since Indonesian independence. Nonetheless, population of poor households is increasing over decades (Figure 8). In a computer simulation, average proportion for poor households is around 20.52-21.05% (Table 3). In surveyed regencies, namely Nunukan, Malinau, Kutai Barat, Kutai Timur, at least one third of population lived in poverty (Suryahadi and Sumarto, 2003; Latifa et al, 2008). A positive relationship between socio-culture of a student, i.e. family possession and parent education, and student achievement was observed (Nguyen and Griffin, 2010). Ditto with student achievement, positive relationship between economic status of a teacher and quality of teacher can conjointly be concluded, by inferring limited capacity of the teacher to upgrade the knowledge.

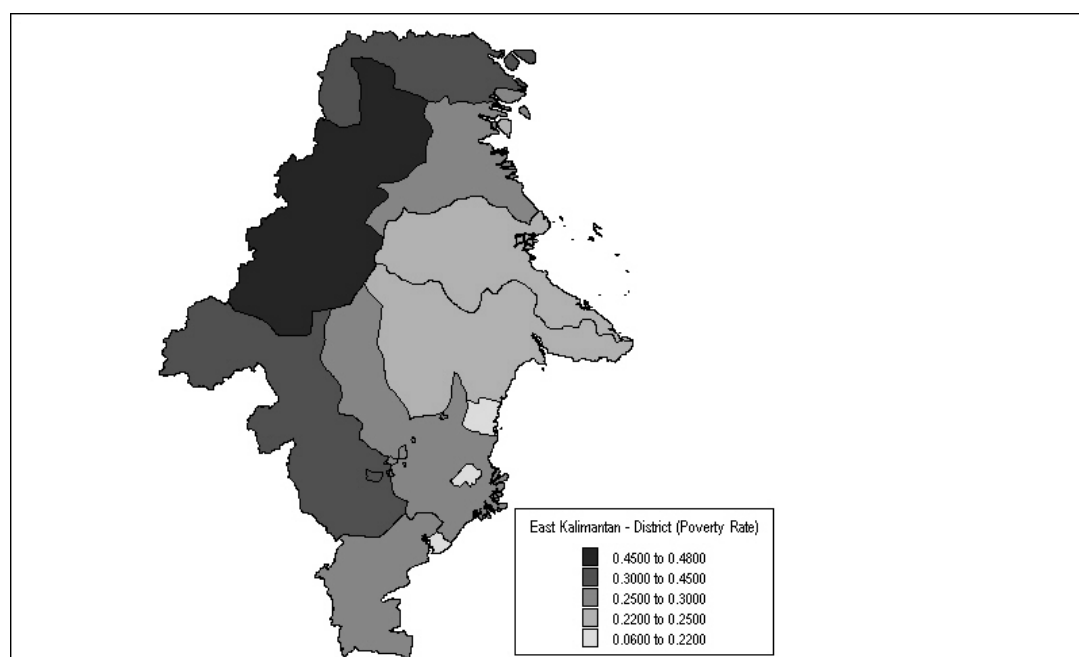


Figure 8 Poverty distributions in East Kalimantan according to computer simulation (Suryahadi and Sumarto, 2003). Lighter colour is better.

Social demographic calculation on poverty has shown that during 2008, 43.1% poor condition households were found in Nunukan regency, East Kalimantan (Table 3). This number is steeply increased from 20.52% in 1999 (Latifa et al, 2008; Suryahadi and Sumarto, 2003). Apart from discussing differences in calculation methodology, it could be assumed that poor people tend to focus their lives on fulfilling their economic needs and dampen education of young generation (Sulistiyatuti, 2007).

Table 3 Poverty calculations based on social demography method and expenditure criteria according to studies conducted in 2008 and 1999 (Latifa et al, 2008; Suryahadi and Sumarto, 2003)

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Household Criteria	Methods of calculation	
	Social demography (%)	Expenditure criteria (%)
Nunukan District (2008)		
Poor	43.1	32.7
Non Poor	56.9	67.3
East Kalimantan (1999)		
Poor	20.52	21.05
Non poor	79.48	78.95

State of education reflects in economical capacity. Latifa et al (2008) reported that proportion of people not finishing their basic education in Nunukan regency was exorbitant. Average year of schooling for people aged more than 15 years is 5.95, 15% of this number contributed by people aged more than 45 years who were not attending any formal education in the past. Nevertheless, it can be a sign of significant percentage of poor households. Young age marriage was argued to be a key factor deterring their potentials. Average marrying age for girl was 17.7 years (Sulistiyatuti, 2007; Latifa et al 2008).

During our visit in 2006 to Lumbis, a district in Nunukan regency, it was only one functional junior high school. The sub-district covers a very wide area of villages and has poor transportation in between villages. Pupils were expected to be on farmland. These factors would dissuade school age population to attend higher education. According to Sulaiman (2009), teachers in border areas were lurking dilemma in giving more leniencies to pupils attributable to its socio-cultural conditions.

A model solution to poverty in Pakistan is government encouragement of private and society organisations in rural educations (Barrs, 2005). However, without a proper monitoring program, private education can easily be converted from charity to business, creating an unanticipated consequence of government induced anti-poverty program (Klitgaard, 1997).

3.2.4 *Teacher Attendance*

Poverty and remoteness contribute to teacher attendance and affect student performance in rural area (Alcazar et al., 2006). In a study conducted in 2004, a positive correlation of teacher attendance to employment status of teacher is established. Negative coefficients are shown for teacher attendance versus location of school from closest urban area, and distance between teacher's houses to school (Usman et al, 2004). On average, teachers tend to absent in one of five sessions (Table 4).

An interesting fact in Usman et al (2004) study was teachers who lived in metropolitan areas have hovering tendency to reduce their attendance compare to teachers who lived in remote areas and small towns. Higher economical opportunity may be a major concern in metropolitan teachers, eschewing their primary duty at schools.

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Table 4 Teacher's absence segregated to several possible factors (Usman et al, 2004)

Parameter	Percentage of absence
Distance between house to school*	
- long	25.3%
- short	17.5%
Distance between school to closest urban area*	
- long	26.4%
- short	16.3%
School facilities	
- with toilet	18.4%
- no/limited toilet	29.2%
- with full electricity	18.4%
- no/limited electricity	23.0%
Employment status	
- full employment (government employee)	18.2%
- half employment (non-government employee)	27.8%
Area	
- Metropolitan/big cities	27.1-33.5%
- Remote areas/towns	17.7-18.8%

* There was no quantitative explanation on the difference between long and short distances.

3.2.5 Access of Information

The only source to information is printed books, as other means of information are restricted to people living in remote areas. Northern part of East Kalimantan, for example, has relatively never been developed until few years back. In this region, four new districts were established within last ten years. All facilities are emergent, including electricity and telecommunication access.

However, from a survey conducted in 2009, only Bulungan, one of the oldest established regencies, has adequate number of providers for mobile and landline telecommunication. All other areas, recently, are at least having only one to four providers (Table 5). Access of information, more specifically mobile telecommunication, is reasonably new in those areas. During a visit to Lumbis in 2006, none of the teachers was discussing internet as a teaching resource. In fact, they too did not watch Indonesian television network due to lack of coverage. People in those areas were benefited from Malaysian network.

From the facts of daily electricity, telecommunication coverage, and television access, it could be concluded that access to information should be upgraded. The table would directly challenge Ministry of Education's program on electronic book for primary and junior high school. People in remote areas did not able to utilize this feature. Hence, burden on education pertaining to providing books to students is lofty.

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Table 5 Recapitulation of electricity coverage and number of telecommunication provider in northern part of East Kalimantan as indicators to access of information (calculated from an unpublished survey, 2009)

Districts/ Regencies	Number of sub- districts	Number of Telco Provider	Daily Electricity coverage (%)
Berau	13	1-4	0-100
Bulungan	10	2-7	100
Kutai Timur	18	4	0-100
Tana Tidung	3	2	0-50
Nunukan	9	1-2	0-100
Tarakan (city)	4	4	100

3.2.6 Teaching facility

Electricity is a basic need in improving education. It is also a prerequisite for better access of information. Usman et al (2004) argued that school with electricity is better in teacher attendance compared to one with no electricity. On the other hand, electricity is a peculiar issue in this energy rich province. A conclusion could be drawn from Figure 9 that daily electricity coverage profoundly needs an upgrade. Centralized energy policy plays a very important role in this issue. Resources to energy, i.e. coal, gas and oil, are abundant, but people cannot access them. Energy resources are prime export commodities, which are regulated by central government.

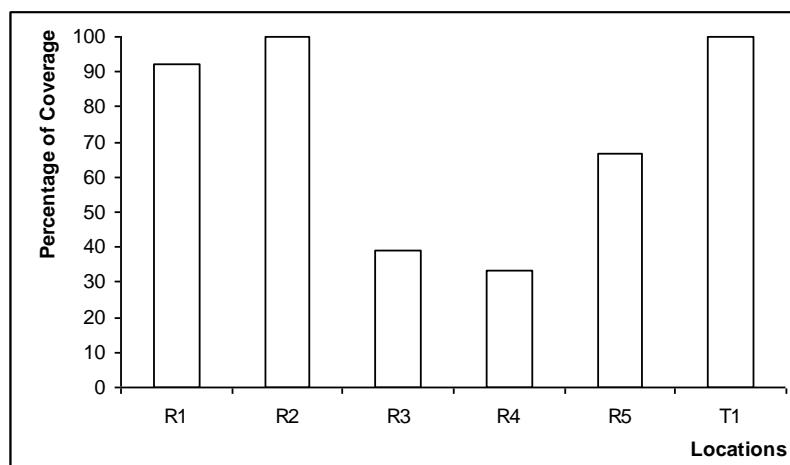


Figure 9 Average number of electricity daily coverage in five regencies and one city in northern part of East Kalimantan. (calculated from an unpublished survey, 2009) □ district/regency (R1) Berau, (R2) Bulungan, (R3) Kutai Timur, (R4) Tana Tidung, (R5) Nunukan and (T1) Tarakan. Higher is better.

Teachers in remote area could not effortlessly upgrade their knowledge as a result of perturbed access to information. Majority of the teachers in remote area, observed in our visit to Lumbis in 2006, did not able to operate computer and browse information from Anton RAHMADI, Irma ISTIQAMAH and Mohamad ADRIYANTO
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internet. Hence, they should rely on conventional way of learning, books. Nonetheless, libraries, that provide books for students and teachers, are inherently difficult to find in remote areas. In Figure 10, it can be inferred that there is a large interstice between numbers of library operated in remote area compared to in suburbs. Only one of three schools has a library, and only one of ten villages has a library in five districts surveyed in East Kalimantan.

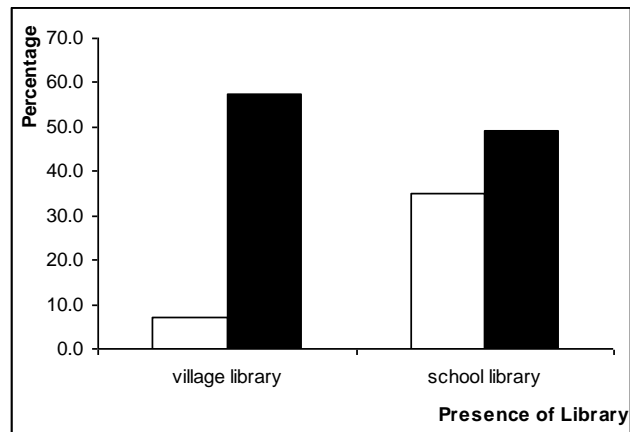


Figure 10 Average percentage of library presence in five districts and four cities in East Kalimantan. (Calculated from BPS East Kalimantan, 2009) □ districts (Kutai Kartanegara, Berau, Kutai Barat, Kutai Timur and Malinau), ■ cities (Balikpapan, Samarinda, Tarakan and Bontang). Higher is better.

In conjunction with possibility that there is a significant improvement in computer and internet skills of teachers between 2006 and recent conditions, it could be reported that mobile carriers as a mean of obtaining information in five northern districts in East Kalimantan are still below par (Figure 11). People in remote areas usually do not have landline connection. Hence, mobile connection is the main way to communicate with others. However, quality of voice and text services, ditto with quality of data access offered by those mobile providers are not covered in the survey.

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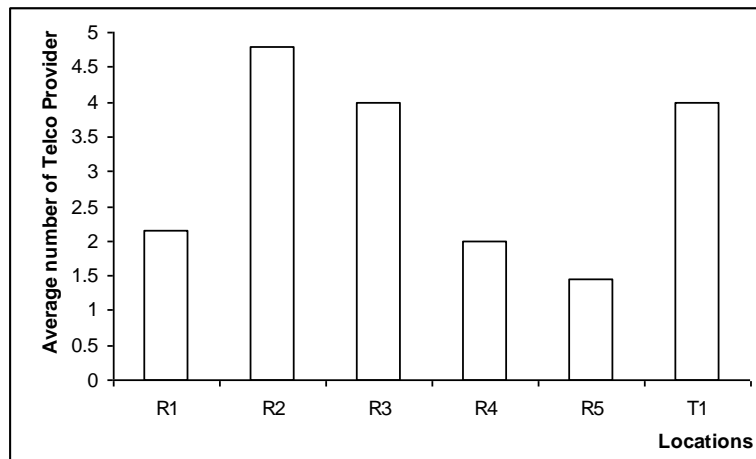


Figure 11 Average number of telecommunication providers in five districts and one city in northern part of East Kalimantan. (calculated from an unpublished survey, 2009) □ district/city (R1) Berau, (R2) Bulungan, (R3) Kutai Timur, (R4) Tana Tidung, (R5) Nunukan and (T1) Tarakan. Higher is better.

3.2.7 *Living Facilities*

Teachers were provisioned temporary housing due the fact that they are usually originated from other villages and far from the assigned school. During a visit to Lumbis, a northern sub-district of Nunukan, East Kalimantan, Tanoto Foundation informed houses for teacher were inhabitable because of health concern (Sulaiman, 2009). Correspond to our survey in the same location in 2006; teachers were living in substandard facilities. Single school teachers were usually renting a room close to school, while married teachers were usually renting or live in a modest house. Inducement provided by local government was picked up quarterly by a representative of teachers, as if they took it every month, it would not be sufficient to cover travel cost to capital of Nunukan. Off school time, teachers land cleared an area of forest and established agricultural fields to support daily needs.

3.3 Decentralization Policy to Improve Quality of Teachers

The ideal of decentralization includes increase in societal responsibility, improved decision making to account local speciality and knowledge, and improved effectiveness in service delivery (Parry, 1997). A just teacher incentive, improvement in teaching skills ditto with educational facility while encouraging local economy are proposed as government decentralization policy to enhance quality of teachers in remote area. Degree of educational decentralization can be differentiated into full or partial decentralization in administrative, finance, and policy.

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3.3.1 Improving Remote Area Teacher Incentive

Teacher incentive is best achieved through administrative and financial decentralization. A surplus province can provide better incentive compared to national average. A poor province should be in central government subsidy. The central government plays a role in justifying a window of upper and lower incentive by considering local needs.

Inducement to teacher should not only be composed on percentage of base salary, but should also be attributed to many other factors, namely remoteness, overpricing allowance, productivity and loss of opportunity. In a case of remoteness, an intriguing result of unjust incentive produces negative coefficient to teacher attendance. A 15 kilometre distance of teacher house to school will increase the probability of absence by 8–9 percentage points (Alcazar, 2006).

However, incentive is only an abridged solution to increase quality of teachers in remote area. A criticism to incentive model, it could not be a just rationale to attract qualified teachers to work in rural (Urquiola and Vegas, 2005).

A suited policy on incentive opens better recruitment system and retention of qualified teachers. It encourages the existing teachers in rural area to increase their academic qualifications. A successful model of incentive is a group incentive. Bonus and inducement are given on the basis of group-wise teacher assessment for efficiency and productivity (Santibanez, 2010).

3.3.2 Improving Teaching Skills

A model of decentralized education can be obtained from developed countries, whereas every state or province plays a role in creating suitable standards for education. Central government establishes a set of guidelines and measure the quality of graduates in a national examination. However, educational policy is governed in provincial level.

National government of Indonesia has established a set of measurable actions to improve teaching skills, namely teacher certification, training, and scholarships. This is inline with Hanushek and Rivkin thesis (2006). A part from establishing a just inducement and salary for teacher, Hanushek and Rivkin (2006) proposed three other measurable characteristics in teaching skills improvement, that are teacher experience and education, teacher certification and teacher tests.

With regard to teacher certification, providing more access to information is a must to reduce remoteness disadvantage fostering teacher in rural areas. In coherent with teaching skill improvement, electricity, internet, and television access should conjointly be established. A better access to information improves teacher knowledge and delivery to students.

During new curriculum dissemination, a clear teacher instruction and set of teaching resources should be provided. It is observed that the national education ministry often disregards remoteness and restricted access of teacher in remote areas. For example, a new curriculum is established today. Dissemination to provincial department of education,

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books and other resources are made available in the next fiscal year. It will require another year to solicit the curriculum to teacher remote areas. Ditto with bottom line implementation, teacher will adjust their teaching material to the instructions for another year. A full implementation of a new curriculum proceeds in at least four year. Unfortunately, by the time, a newer or revised curriculum is being introduced and simultaneously enforced through the national examination.

Regardless information technology can be employed to disseminate a new policy, absorbing and implementing the policy requires a longer timeline. A better planning is required and a time span for a curriculum must be in consensus.

3.3.3 Establishing better provisions of education and local economy

The strongest government driving force to decentralization of education is argued not a budgetary problem but human resources. Hence, private sector and civil organizations are encouraged to actively involve in designing, executing and monitoring educational programs, ditto with influencing in financial resources. In a Pakistani province, Punjab, government welcomes private and society organisations to increase the influence in rural educations as a decentralization policy to fight against poverty (Barrs, 2005). However, a trend of making education as a business but disregarding poor people has become an unforeseen concomitant of poverty eradication program (Klitgaard, 1997).

In an attempt to establish improved provisions on education and local economy, decentralization by means of community driven development (CDD) should always be inline with government monitoring system. Government educational surveillance program is proposed to reduce the risk of elite capture (Fritzen, 2007). This will certify capital flows to empower people hence reducing the economic cavity between remote areas and metropolitan.

Most required educational facility is text book in hard copy form. A proposed program by Indonesian Student Association of Australia (www.ppi-australia.org) to deliver books to rural areas is required in a larger format. This program can also be extended from donation of hard copy in foreign language to initiation of translating and printing text books in Indonesian language.

3.4 A Community Room for Improving Quality of Teachers

School pupils are similar to an unpolished jewel. This is a heartening conclusion from our experience of teaching local students in East Kalimantan since 2003-2009. A good and qualified teacher can unleash student potential, i.e. students are able to compete nationally and internationally. On the other hand, to put all the strain of increasing quality of teachers to government is not a wise elucidation. The government does have a limit to support education. This is not solely budgetary problem, owing to 20% of the budget has been dedicated to conform implementation of law for national education system in 2003.

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Vocational school of Airlangga (www.smkti.net) in Samarinda, East Kalimantan, has a unique method in doing transformation from a marginal school to a school for winners. Since it was established in 2001, Airlangga focuses on information of technology vocational education at a level equal to high school. In 2004, Airlangga acquired 4th rank in national vocational competency competition and has been constantly in five best ever since. It now sets an ambitious target to be the first quality vocational school of information technology in South East Asia. Although having an analogous name, Airlangga vocational school in East Kalimantan does not affiliate with University of Airlangga in East Java.

Quality of teachers resembles in quality of the graduates. The success path of Airlangga vocational school began with accepting voluntary but professional teachers, employing a new principal in 2003, and establishing a strong link to Computer Entrepreneur Association (Apkomindo) of East Kalimantan. Principal, teachers, and community are keys to create a top grade school, which will be discussed in separated sections. This is called as bottom up approach of parent to teacher association (PTA) according to Friedman (2010). Replicating the success recipe of Airlangga vocational school to other schools in remote areas in East Kalimantan will enhance quality of teachers and overall educational quality of young generation.

3.4.1 Role of a School Principal

The inimitable approach of Airlangga vocational school is inspiring students and teachers. In so doing, the principal has successfully established a concept of school as an extension of family institution. The approach is aligned with Therkildsen (2000) proposed solution in educational decentralization. Students are always encouraged to develop their talent and to get proper acknowledgement irrespective to age and seniority. As a result, in 2005, a first grader of Airlangga achieved second rank in national competition and received an offer from prestigious company in Indonesia.

The role of school principal extends to create a mutual link with community. Accordingly, society starts instating creative school programs, e.g. parent teacher family outbound and local student competitions. A popular event in community, for example open source operating system distribution release party, benefits student to grasp new information post-haste.

One student one laptop is an ingenious program influenced by the school principal. A local finance company established student computer credit scheme in Airlangga vocational school. This gives not only stupendous advantage to students but also encouraging local economy.

3.4.2 Role of Teachers

Buddin and Zamarro (2009) contends that teacher has more influence than school. Hence role of teachers in Airlangga vocational school has developed to a learning partner
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compared to a conventional teacher. Teachers are showing enthusiasm to learn new things and creating an ideal condition to students. In the decentralization framework, teacher precedes appropriate powers influencing a bottom-up process of implementing curriculum (Therkildsen, 2000).

An intriguing observation from teachers in Airlangga is the degree of deviation from national competency curriculum. From personal communication in 2003-2009 with assessors of competency examination, Airlangga students were generally well above the national standard. It can be deduced that students learnt more than the text books. This suggests a fundament on retaining five best ranks in national competition for more than six subsequent years.

An additional key factor is the participation of community in teaching. A number of teachers are professional volunteers, allotting several working hours educating youth. The model can be adopted by East Kalimantan government. In a region close to an established company, government can persuade professionals to teach in class as a part of community social responsibility scheme.

3.4.3 Role of Community

Further recommendation to community is actively nurturing the future of students. In an ideal, holiday internship gives better insight to students. During the off school period, students are welcomed to visit local industry. As a vocational school student, third grader of Airlangga must have an industrial experience to graduate. Further, the knowledge is disbursed to school. From there, teacher can conduct a scrupulous analysis of industrial qualifications to develop student skills which then transformed into in class instructions.

Aside from internship program, a strong relation between Airlangga and community is established in the course of end user and improvement feedbacks. Community sponsorship and charity also craft an ideal condition for education, accommodating teacher to advance the knowledge and skills.

4 SUMMARY

Conversely to the prodigy of the provincial GDP, education in remote areas in East Kalimantan needs a profound attention. Students to teacher ratio in East Kalimantan is acceptable in districts and metropolitan area. Nevertheless, teachers are more concentrated in suburbs compared to remote areas as shown by percentage of functional schools in both areas. Improving education in remote areas requiring extraneous economical efforts since transportation and telecommunication facilities are not hitherto developed. Scores of primary school teachers were academically not qualified. Facilities attached to teachers were marginal. Despite working in exceptionally restricted facilities, teachers in remote areas were, in general, shown to be more devoted. Providing a just inducement to teachers,

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conducting more frequent trainings on teaching skills, and establishing better facilities to support education ditto with encouraging local economy are the recommendations to government. Community can play an essential part in establishing a fruitful effort to increase quality of teachers in remote areas. To support on innovative programs direct by school principal, to actively act as voluntary teachers and to provide internships, useful feedbacks and charity are several key recommendations to society in East Kalimantan.

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6 REFERENCES

- Alcázar, L., Rogers, F.H., Chaudhury, N., Hammer, J., Kremer, M., and Muralidharan, K. (2006) Why are teachers absent? Probing service delivery in Peruvian primary schools. *International Journal of Educational Research*, 45(3), pp. 117-136.
- Bappeda East Kalimantan (2010) Profil Daerah Provinsi Kalimantan Timur. [Article in Bahasa] Retrieved on 15 May 2010 from <http://www.bappedakaltim.com/profil/profil-daerah-kaltim.html>.
- Barrs, J. (2005) Factors contributed by community organizations to the motivation of teachers in rural Punjab, Pakistan, and implications for the quality of teaching. *International Journal of Educational Development* 25(3), pp. 333-348.
- BPS East Kalimantan (2009) East Kalimantan In Figure 2009. Statistic Bureau of East Kalimantan. Retrieved on 1 May 2010 from <http://www.bappedakaltim.com/produk-bappeda/kaltim-dalam-angka.html>.
- BPS Indonesia (2010a) Statistical Figures of Indonesia Section Education in 2003-2008. Retrieved on 15 May 2010 from <http://mcaf.ee/fa452>
- BPS Indonesia (2010b) Provincial Human Development Index from 1996 to 2008. Retrieved on 15 May 2010 from <http://mcaf.ee/4e0f8>
- Buddin, R. and Zamarro, G. (2009) Teacher qualifications and student achievement in urban elementary schools. *Journal of Urban Economics* 66(2): pp. 103-115
- Croninger, R.G., Rice, J.K., Rathbun, A., Nishio, M. (2007) Teacher qualifications and early learning: Effects of certification, degree, and experience on first-grade student achievement. *Economics of Education Review* 26, pp. 312-324.
- Darling-Hammond, L. (1999) Teacher Quality and Student Achievement: A Review of State Policy Evidence. Retrieved on 26 November 2010 from <http://saf.li/b8zxJ>
- EFA Coordination Team (2006) Education Development Index 2006. UNESCO. Retrieved on 15 May 2010 from <http://mcaf.ee/01e93>
- Friedman, T. (2010) U.S.G and P.T.A. The Opinion Pages. The New York Times Op-Ed Column. Retrieved on 26 November 2010 from <http://mcaf.ee/98cd4>

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Education in Remote Areas from Teacher's Perspectives

A book chapter in *Education Counts* Edited by Zulfa Sakhiyya, I Made Andi Arsana, and Mikha Rahmadewi. Perhimpunan Pelajar Indonesia Australia. 2010.

- Fritzen, S. (2007) Can the Design of Community-Driven Development Reduce the Risk of Elite Capture? Evidence from Indonesia. *World Development* 35(8), pp. 1359-1375.
- GN-OTA. (2009) Summary of number of school operated in East Kalimantan. Retrieved on 15 may 2010 from <http://mcaf.ee/85e26>.
- Gross, M.K. (2009) The Effects Of Class Size In Elementary Physical Education: An Examination Of Student Activity Levels, Class Management Time And Teacher Attitudes. [Dissertation] The Graduate School of Auburn University, Montgomery. Retrieved on 26 November 2010 from <http://saf.li/a8zxj>
- Hanushek, E. and Rivkin, S.G. (2006) Chapter 18. Teacher Quality. [book chapter] in Hanushek E., Welch, F. (eds.) *Handbook of the economics of Education* vol. 2, pp 813-1504, 11-128.
- Harto, A. (2009) Waduh, Puluhan Ribu Guru di Kaltim belum Sarjana. [Article in Bahasa]. [Newspaper article] *Kompas* 10 November 2009. Retrieved on 15 may 2010 from <http://mcaf.ee/b721f>
- Ishaq, A.F. (2010) Gubernur Sampaikan Orasi Ilmiah di Universitas Negeri Malang: 2010 Beri 1000 Laptop untuk guru. [Article in Bahasa]. [Newspaper article] *Kaltim Post* 30 March 2010. Retrieved on 15 may 2010 from <http://mcaf.ee/c413d>.
- Jauhari, A. (2010) Disdik Nunukan Harus Carter Pesawat: Distribusikan Soal dan Pengawas UN. [Article in Bahasa][Newspaper article] *Jawa Post News Network* 09 March 2010. Retrieved on 15 may 2010 from <http://mcaf.ee/2d4a9>
- Klitgaard, R. (1997) "Unanticipated consequences" in anti-poverty programs. *World Development* 25 (12), pp 1963-1972.
- Latifa, A., Aswatini, Romdiati, H. (2008) Population and Social Demographic Poverty: a Case Study in the Border Areas of East Kalimantan and North Sulawesi. *Journal of Indonesian Social Sciences and Humanities* 1, pp. 175-191. Retrieved on 15 may 2010 from <http://www.kitlv-journals.nl/index.php/jissh/index>
- Lockheed, M.E. and Komenan, A. (1989) Teaching Quality And Student Achievement In Africa: The Case Of Nigeria And Swaziland. *Teaching & Teacher Education* 5(2), pp. 93-113.
- Macours, K. and Swinnen, J.F.M (2008) Rural–Urban Poverty Differences in Transition Countries. *World Development*,36(11), pp. 2170-2187.
- Ministry of Education. (2010) Facts Book of Indonesian Education 2007-2008. Retrieved on 15 may 2010 from http://www.depdiknas.go.id/statistik/0708/bukusaku_0708.pdf
- Nguyen, C. and Griffin, P. (2010) Factors influencing student achievement in Vietnam. *Procedia Social and Behavioral Sciences* 2, pp. 1871–1877.
- Parry, T.R. (1997). Achieving Balance in Decentralization: A Case Study of Education Decentralization in Chile. *World Development*, 25(2), pp. 211-225.
- Santibanez, L. (2010) Teacher Incentives. [Book Chapter] In Peterson, P., Baker E., and McGaw, B. (2010) *International Encyclopedia of Education* [Third Ed.], pp. 481-488. ISBN: 978-0-08-044894-7
- Sulaiman, N. (2009) East Kalimantan Schools Still Using Dayak Dialect. [Newspaper Article] *The Jakarta Post* 21 October 2009. Retrieved on 15 May 2010 from <http://www.thejakartapost.com/news/2009/10/21/east-kalimantan-schools-still-using-dayakdialect.html>
- Sulistiyatuti, D.R. (2007) Pembangunan Pendidikan dan MDGs di Indonesia. [Article in Bahasa] Retrieved on 11 May 2010 from <http://mcaf.ee/641f0>
- Suryadarma, D., Suryahadi, A., Sumarto, S. (2005) Penentu Kinerja Murid Sekolah Dasar di Indonesia: Peranan Guru dan Sekolah [Article in Bahasa] SMERU Worksheet. Jakarta.
- Suryahadi A., Sumarto, S. (2003) Poverty Mapping Efforts in Indonesia. Paper in Ad Hoc Expert Group Meeting on Poverty Mapping and Monitoring using Information Technology. UN-ESCAP, Bangkok 18-20 August 2003. Retrieved on 15 May 2010 from <http://mcaf.ee/1d0fe>
- Anton RAHMADI, Irma ISTIQAMAH and Mohamad ADRIYANTO
Education in Remote Areas from Teacher's Perspectives

- Therkildsen, O. (2000) Contextual issues in decentralization of primary education in Tanzania. *International Journal of Educational Development*, 20(5), pp. 407-421.
- UNDP. (2009) Human Development Report 2009. Indonesian Data Sheets. Retrieved on 15 May 2010 from http://hdrstats.undp.org/en/countries/data_sheets/cty_ds_IDN.html
- Urquiola, E. and Vegas, M. (2005) Arbitrary variation in teacher salaries: An analysis of teacher pay in Bolivia. In: E. Vegas, (Ed.) (2005) *Incentives to Improve Teaching: Lessons from Latin America*, The World Bank, Washington, DC, pp. 187–211.
- Usman, S., Akhmadi, Suryadarma, D. (2004) Ketika Guru Absen: Kemana Mereka dan Bagaimana Murid [Article in Bahasa] SMERU Worksheet. Jakarta.

7 CONTACTS

Anton RAHMADI
University of Mulawarman/University of Western Sydney
Dept. of Pharmacology, School of Medicine
Building 30 University of Western Sydney
Locked Bag 1797 Penrith, South DC, 1797
AUSTRALIA
Email: arahmadi@unmul.ac.id, a.rahmadi@uws.edu.au

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