A SYSTEMATIC REVIEW

Education at Remote Areas from Teacher's Perspectives

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

Abstract

1. INTRODUCTION

Regardless wherever they are, teachers are gate to knowledge. Being teachers in remote areas are very challenging profession, due to various limitations. This paper will descriptively discuss the actual situation of education in the remote of East Kalimantan in terms of teacher's challenges in improving the quality of education.

2. THESIS STATEMENT

Better policies in human resource development, socio-psychological state of teacher, and educational support facilities will produce more satisfactory output for education at the remote areas.

3. METHODOLOGY

Limiting factors were elaborated in a comparative perspective to the urban areas. All data were gathered and analysed from respective government bodies, non-profit organization reports, and our own experience as teachers in remote areas in East Kalimantan during 2003-2009.

4. FINDINGS

Teacher to student ratio in East Kalimantan is acceptable, but teachers are more congested in suburbs compared to remote areas. High cost economy is always the culprit of establishing better education in remote areas. We could also show that teachers in remote area did not have enough competence and facility to follow the rapidly changing policies in education. Teachers' educational background heavily needs attention and should be creatively improved. Regardless working in very limited facilities, teachers in remote area are, in many cases, shown to be more devoted to their responsibility.

5. RECOMMENDATION

There is a need to decentralize educational policy in remote areas like increasing teacher's incentive, more frequent trainings on new curriculum, and establishing better facilities to support education as well as economy. It is expected that this paper can be one of the Anton RAHMADI, Irma ISTIQAMAH and Mohamad ADRIYANTO Education at Remote Areas from Teacher's Perspectives

references in decision-making with regard to improving the quality of national education in Indonesia.

Keywords: policy decentralization, comparative study, teachers, remote area.

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 also 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 now being Principal of Airlangga vocational high school in Samarinda, East Kalimantan. Irma Istiqamah is a teacher in Airlangga vocational high school.

1 INTRODUCTION

Education is a key to increase national prosperity and a part of human development index (HDI) and millennium development goals (MDGs) calculation (UNDP, 2009). Above all, education is also a basic right that governments should provide to their people. In Indonesian constitution, every individual has a right to access same quality of education, in which it also gives a mandate to government to guarantee same quality of education for all citizens. On the other hand, people who live in villages and other remote areas are hardly to have good education. Overall education development index (EDI) in Indonesia was fall into middle-low group compared to other countries (EFA Coordination Team, 2006; Sulistyatuti, 2007).

One fundamental element of education is teacher's quality. Providing good and competent teacher has always been a struggle in Indonesia. With regard to current condition, only 55% of teachers are competent, and most of them are in cities (Ministry of Education, 2010). Here, we would discuss the actual conditions and challenges faced by teachers in remote area of East Kalimantan.

East Kalimantan is a good case, especially after law for autonomy was enacted. Being one of the richest provinces in Indonesia, contributing roughly 30% of Indonesian GDP is a big advantage. However, East Kalimantan comprises a huge land, a little bigger than Java Island, divided into 13 regencies, in which 50% of them were newly established within last 10 years (Bappeda East Kalimantan, 2010).

Based on HDI, East Kalimantan belongs to five highest HDI provinces and all four cities were at 20 best in Indonesia (BPS Indonesia, 2010a). However, HDI in all regencies in East Kalimantan are around average position compared to national HDI. Educational development indexes in all the regencies and cities are tad higher than that of Indonesian average. However, as we observed from our experience as teachers, we believe that either HDI or EDI do not enough to represent the real situation of educational development in rural areas in East Kalimantan. There are always huge gaps between remote areas and cities in East Kalimantan.

We characterized three indicators that will be studied in our paper, policy in human resource development, socio-psychological state of teacher, and educational support facilities. This study will try to deliver recent findings and data on how East Kalimantan try to cope with ever-changing educational policy and the real condition of education in remote areas in comparison to that in the cities within East Kalimantan in our perspective as teachers.

2 METHOD

2.1 Data Collection

Secondary data were used in our analysis. Data were collected from a number of government agencies dated from 2006 to 2009, along with non-government organization reports that were published within 2003 to 2009. We also collected some clips from local and national newspapers, especially related to opinions and voices of teachers in remote areas that were not documented in any of the above reports. All data were available online unless stated otherwise.

2.2 Data Analysis

Data analysis was done in Microsoft Excel and Prism software. Some data were recalculated based on available raw data and compared to that of published by respective government agencies or international bodies.

3 FINDINGS

3.1 Education in demographic figures

3.1.1 Education in Human Development Index

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 pupil registrations, is contributing one third to the human development index calculations. Human development index 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 basically gross domestic product (GDP).

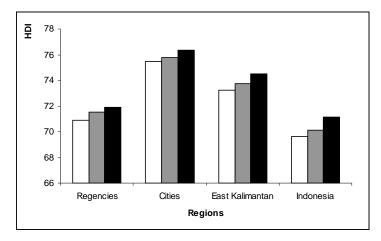


Figure 1Average HDI of five lowest regencies compared to average HDI of the all four cities in East Kalimantan (East Kalimantan BPS, 2009) as well as average HDI of Indonesia (BPS Indonesia, 2010b; BPS East Kalimantan, 2009).

2006, 2007 2008. Higher is better.

HDI data suggested that cities in East Kalimantan are relatively better compared to the national average. Even the HDI of five sample regencies in East Kalimantan were actually still higher than the national average. Many factors contribute to this issue, but most importantly is contribution of high gross domestic product in all that regions. It also draws our attention that value of HDI of Indonesia from UNDP (2009) is relatively higher than that of BPS Indonesia (2010a).

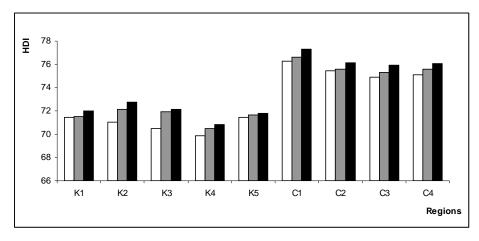


Figure 2 HDI of five lowest regencies compared to HDI of all cities in East Kalimantan (BPS East Kalimantan, 2009). ☐ 2006, ☐ 2007 ☐ 2008. Kutai Kartanegara (K1), Berau (K2), Kutai Barat (K3), Kutai Timur (K4), Malinau (K5), Balikpapan (C1), Samarinda (C2), Tarakan (C3), and Bontang (C4). Higher is better.

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However, we could show here that compared to cities in East Kalimantan, remote areas were having less HDI index, which underlay two possible causes, less economical benefit from GDP and lower educational achievements (Figure 2). This would be addressed later on in our discussion.

3.1.2 Literacy ratio

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. Around 8% of the school age generation, 15+ years old, were also illiterate. From Figure 3, it can be concluded that East Kalimantan has a better proportion in illiteracy ratio. We could assume that illiterate people is more common in remote areas due to economic reasons, young marriage (Latifa et al, 2008), and very limited access of information as well as school facilities as we explained in this paper.

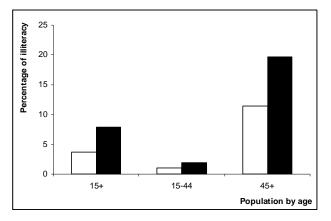


Figure 3 Average percentage of illiteracy segregated by age in population.

East Kalimantan Indonesia (BPS East Kalimantan, 2009; BPS Indonesia, 2010a). Lower is better.

3.1.3 School participation index

Average primary school attendance 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 our constitution. In a remote area in East Kalimantan, Nunukan, Latifa et al (2008) published that average schooling year was less than 6 year. From this we can infer that around 50% young generation did not finish their primary school. Poverty is always number one indicator, followed by young marriage and distance between villages to school

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as stated by Latifa et al (2008). Nonetheless, gross school participation index in East Kalimantan is still relatively higher than that of national average (Figure 4).

Related program, Kejar level A, a schooling group equal to primary school, has also meet many hurdles, most importantly teacher's availability and books in those areas. For example, in some very remote villages in Nunukan, there is no transportation medium except a very basic airport, followed by non-hardened pedestarian road. To distribute national examination material, local education office needs to hire flights that cost them 40 million rupiah (US\$ 4500) (Jauhari, 2010). Delivering books, followed by regular teacher's attendance from closest urban area would mount educational cost even higher.

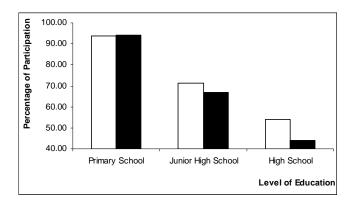


Figure 4 Gross school participation index at a specific level of education in 2008 East Kalimantan Indonesia (BPS East Kalimantan, 2009). Higher is better.

3.2 Teacher's perspective

3.2.1 Students to teacher ratio

We could report that student to teacher ratio in each level of educations is relatively adequate in East Kalimantan. This province can provide around one teacher for 20 primary school students and around one every ten high school students (Figure 5).

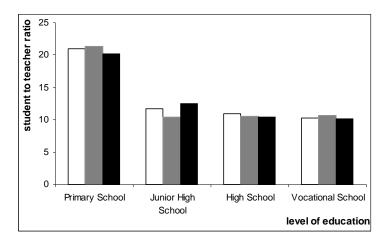


Figure 5 Average student to teacher ratio in specific level of educations in East Kalimantan. (BPS Indonesia, 2010a) ☐ 2006, ☐ 2007 ☐ 2008.

Table 1 shows student to teacher ratio in five sample regencies and four cities in East Kalimantan. Even in regency level, it is presented that student to teacher ratio is still adequate. However, we could not gather district level ratio to show imbalance ratio between student and teacher in remote area. However, assumption of teacher is more congested in suburbs compared to remote area can still be inferred from percentage of school operated in those areas (Figure 6). In particular regency, Malinau, student to teacher ratio for junior high school is very high. One teacher should serve around 65 students (Table 1).

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

	Student to teacher ratio			
Regency/City	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	

Regardless 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, proportion between primary school to junior high school is not balanced. This will add

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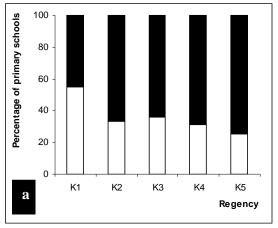
The Indonesian Student International Conference 2010

Thinking of Home while Away:

The Contribution of Indonesian Students Studying Overseas for Education in Indonesia Melbourne, Australia, 16-18 July 2010

another problem that some primary school students could not complete their 9-years obligatory education as it is required by the constitution. Junior high schools are more concentrated in urban areas in at least three regencies as shown in Figure 6.

At the moment, quality of education offered in primary schools in remote area compared to urban area is not observed and not available as secondary data. Thus, we could not give data-based evidence to strengthen common hypothesis that education in remote areas is generally less qualified than that of in urban or cities.



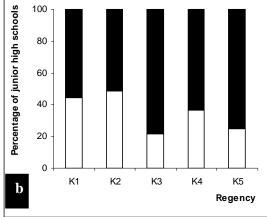


Figure 6 Percentages of primary schools and junior high schools in five regencies in East Kalimantan with regard to its location \square in remote or rural areas, \blacksquare in urban areas and regency's capital. Kutai Kartanegara (K1), Berau (K2), Kutai Barat (K3), Kutai Timur (K4), and Malinau (K5). (Data were calculated from GN-OTA, 2009).

3.2.2 Teacher's qualification development

Educational qualification of 7082 teachers has been upgraded since 2006, given 47.98% teachers are now strata 1 or diploma 4. This achievement is claimed to be above national average, which is stood at 37.5% (Ishaq, 2010; Harto, 2010). Summary of academic qualification of teachers in East Kalimantan and Indonesia is highlighted in Table 2. Indonesia establishes a very ambitious goal, stated that in 2015, there is no teacher below Diploma 4 or Strata 1 as stated in law number 14 year of 2005 about teacher and lecturer. This would need a very effective strategy to reduce this academically non-qualified teacher, which the number stood at 1,445 million primary and high school teachers.

Table 2 Qualification of teacher in East Kalimantan in 2010 compared to 2005 (BPS Indonesia, 2010a; BPS East Kalimantan 2009; Ishaq, 2010)

Teacher's Qualification	East Kalimantan		National	
	2005	2010	Average 2010	
High School				
Specialized Teacher school	73,76%	52,02%	62.5%	
Diploma I - II				
Diploma IV, Strata 1 and	26.240/	47.000/	37.5%	
above	26,24%	47,98%	37.3%	

At the moment, not every local government gives scholarship to teachers. Thus, teachers are required to upgrade their education by their own. Local governments in East Kalimantan already start to give scholarship to teacher in remote areas, giving them chances to enter special Primary School Teacher's Program at Open University. However, as we experienced on this kind of assessment, the policy seems not to be very effective due to several reasons, most importantly the incentive to study and facilities are marginal. In most parts of East Kalimantan, teachers are not yet being government employees and have very small salary to support their daily needs.

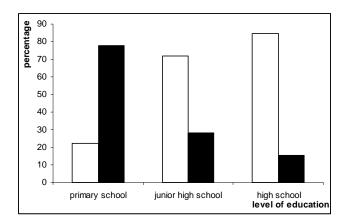


Figure 7 Percentage of qualified and non-qualified teachers at specific level of educations based on academic qualification (higher than Diploma IV or Strata 1) in Indonesia, 2007-2008. (Ministry of Education, 2010) \square qualified, non qualified.

One biggest value that we saw from teachers in remote areas was motivation. It is a common idea that people would go for better options. In this case, they are willing to sacrifice that better option to stay and teach young generations in their places. From this point of view, we should respect this choice and try to help them. To realize that conditions in remote areas is very limited in comparison to what we usually have in city, these considerations should be always add to policy making. Unfortunately, until this

moment, all policies are centralized and not being lenient for teachers who are working in remote areas.

Teacher's certification program is a perfect example of centralized policy which needs to be better addressed. One very basic question that can be delivered for this program is, how we support teacher in remote area to pass certification program, or at least to have equal opportunity to this issue. Certification components are not easy to be completed in remote areas, like academic qualification, education and training, standard operational procedure for teaching, and analytical paper that needs to be submitted regularly.

3.2.3 Poverty as a Socio-culture factor to Education

Regardless East Kalimantan is the third wealthiest province based on the gross domestic product since our independence, population of poor households is looming (Figure 8). Based on computer simulation in 2003, 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).

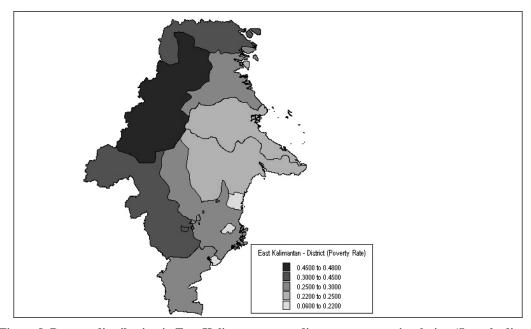


Figure 8 Poverty distribution in East Kalimantan according to computer simulation (Suryahadi and Sumarto, 2003). Lighter colour is better.

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 Anton RAHMADI, Irma ISTIQAMAH and Mohamad ADRIYANTO Education at Remote Areas from Teacher's Perspectives

number is increased from 20.52% in 1999 (Latifa et al, 2008; Suryahadi and Sumarto, 2003). Apart from discussing differences in calculation methodology, we could assume that poor people tend to focus their lives on fulfilling their economic needs and disregard education to young generation (Sulistyatuti, 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)

Household Criteria	Methods of	s of calculation	
	Social demography (%)	Expenditure criteria (%)	
Nunukan Regency (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	

Latifa et al (2008) reported that proportion of people not finishing their basic education in Nunukan regency was high. 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 education in the past. However, it could also be a reflection of high percentage of poor households. Young age marriage was believed to be one factor affecting this issue. Average marrying age for girl was 17.7 years (Sulistyatuti, 2007; Latifa et al 2008).

During our visit in 2006 to Lumbis, a district in Nunukan regency, we saw only one junior high school operated in that district. One district covered a very wide area of villages and having poor transportation from one village to another. This condition would defer pupil's motivation to attend higher education as well as they were needed to help their parents on farming. According to Sulaiman (2009), teachers in border areas were facing dilemma and put more leniency to pupils due to its socio-cultural conditions.

3.2.4 Teacher's attendance

Based on a study conducted in 2004, there is a relationship between teacher's attendance to employment status of teacher, location of school from closest urban area, and distance between teacher's houses to school (Usman et al, 2004). Teachers who lived in metropolitan areas have higher tendency to decrease their attendance compare to teachers who lived in remote areas and towns. On average, teachers tend to absent in one of five sessions (Table 4).

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

Parameter	Percentage of absence	
Distance between Teacher's houses 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%	
Techer's employment status		
- full employment (government employee)	18.2%	
- half employment (non-goverment 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

Northern part of East Kalimantan has relatively never been developed until few years back. In this region, there are four new established regencies within 10 years. All facilities are now being improved, including electricity and telecommunication access. However, from a survey conducted in 2009, we could show that only Bulungan, one of the oldest established regencies, that has seven providers for mobile and landline telecommunication. All other areas, recently, are at least having one to four providers (Table 5). Access of information, more specifically mobile telecommunication, is quite new in those areas. During a visit to Lumbis in 2006, we could see that none of the teachers was discussing internet as a facility to teaching. In fact, they also did not watch Indonesian television network due to lack of coverage. Instead, people in those areas were benefited from Malaysian television network.

We could assume that from daily electricity coverage, television access and telecommunication coverage, access to information should be heavily upgraded. The table would also directly challenge Ministry of Education's program on electronic book for primary and junior high school. People in those remote areas simply did not able to use this facility. Hence, burden on education with regard to providing books to students is very high.

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)

Regencies	Number of 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 one basic need in improving education. It is also a prerequisite for better access of information. From Usman et al (2004), school that has electricity will have better teacher's attendance compared to one that has no electricity. On the other hand, electricity is still a big issue in this energy rich province. From Figure 9, we could draw a conclusion that daily electricity coverage heavily needs improvement. Centralized energy policy plays a very important role in this issue. Energy resources are abundant, but people cannot access them, as they are prime export commodities, which are regulated by central government.

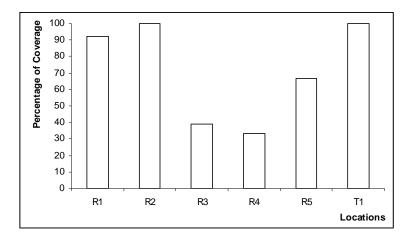


Figure 9 Average number of electricity daily coverage in five regencies and one city in northern part of East Kalimantan. (calculated from an unpublished survey, 2009) \square regencies/city (R1) Berau, (R2) Bulungan. (R3) Kutai Timur, (R4) Tana Tidung, (R5) Nunukan and (T1) Tarakan. Higher is better.

Teachers in remote area could not easily upgrade their knowledge due to lack of 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 through internet. Hence, Anton RAHMADI, Irma ISTIQAMAH and Mohamad ADRIYANTO Education at Remote Areas from Teacher's Perspectives

they should rely on conventional way of learning, from books. Libraries, that provide books for students and teachers, are also difficult to find in remote areas. In Figure 10, it can be easily inferred that there is a big gap between numbers of library operated in remote area compared to in suburbs. Only one of three schools has library, and only one of ten villages has library in five regencies surveyed in East Kalimantan.

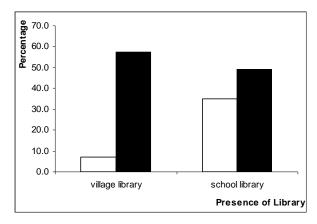


Figure 10 Average percentage of library presence in five regencies and four cities in East Kalimantan. (calculated from BPS East Kalimantan, 2009) Tegencies (Kutai Kartanegara, Berau, Kutai Barat, Kutai Timur and Malinau), cities (Balikpapan, Samarinda, Tarakan and Bontang). Higher is better.

With regard to possibility that there is a significant improvement in teacher's knowledge to computer and internet between our last visit to a remote area in Nunukan in 2006 and recent conditions, we could still report that average number of mobile and landline telecommunication providers in five northern regencies in East Kalimantan is still low (Figure 11). Mobile connection is the main way to communicate with others, as in remote areas, people usually do not have landline connection. However, quality of service, including ability to access internet from mobile connection, offered by those mobile providers is not covered in this survey.

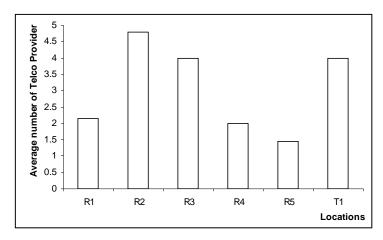


Figure 11 Average number of telecommunication providers in five regencies and one city in northern part of East Kalimantan. (calculated from an unpublished survey, 2009) Tegencies/city (R1) Berau, (R2) Bulungan. (R3) Kutai Timur, (R4) Tana Tidung, (R5) Nunukan and (T1) Tarakan. Higher is better.

3.2.7 Teacher's Living Facilities

Teachers were provided temporary housing due the fact that they are usually originated from other villages that are far from their assigned school. During a visit to Lumbis, northern district of Nunukan, East Kalimantan, Tanoto Foundation informed houses for teacher were inhabitable because of health concern (Sulaiman, 2009). Correspond to our own experience during a visit in late 2006; teachers were usually struggle in their daily lives due to very limited facilities. Incentive provided by local government was taken three monthly by a representative of teacher's group, as if they took it every month, it would not be sufficient to cover travel cost to capital of Nunukan regency.

4 SUMMARY

Regardless East Kalimantan is one of the biggest contributors to Indonesian GDP; we could show that education in remote areas in East Kalimantan heavily needs attention. Teacher to student ratio in East Kalimantan is relatively balance, but teachers are more congested in suburbs compared to remote areas as shown by percentage of schools operated in both areas. Improving education in remote areas requiring more economical efforts since transportation and telecommunication facilities are not yet developed. Primary school teachers were generally non-qualified, based on academic background. Facilities Anton RAHMADI, Irma ISTIQAMAH and Mohamad ADRIYANTO Education at Remote Areas from Teacher's Perspectives

attached to teachers are also marginal. Regardless working in very limited facilities, teachers in remote area are, in many cases, shown to be more devoted to their responsibility.

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