

# A Case Study: The Local Education Authorities (LEAs) Capacity Support on ICT Integration National Policy in Public Secondary Schools in Kepulauan Riau Province, Indonesia

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Received: September 9, 2014

Accepted: November 20, 2014

Online Published: December 4, 2014

doi:10.5430/jct.v4n1p14

URL: <http://dx.doi.org/10.5430/jct.v4n1p14>

## Abstract

This study addresses the support towards the policy of ICT implementation in public secondary schools from the local education authorities (LEAs) as part of society capacity, in case of Kepulauan Riau province, Indonesia. The study involves three sub themes; local policy support, management program, and partnership. Therefore, the researcher qualitatively gathered the data through semi-structured interview from a number of local government stake holders; education commission legislator, the head of education office, and Baltekomdik (Education-Communication Technology Center) office as his participant. The result findings confirm previous researches that government capacity as external support have serious influence for the successfulness of national policy implementation of ICT integration in education in Kepulauan Riau province. Therefore, three sub themes found; local policy, management programs, and partnership should seriously and continually be restructured and innovated.

**Keywords:** *ICT integration; national policy; society capacity*

## 1. Introduction

ICT seems inevitable in every daily activity now. In the road, people enjoy and busy with their mobile phone, in car people amused by their iPad or tablet, in café or during spare time in office young or old are upgrading the information, checking inbox email, updating status or love dating in face book, twitter and other social network, doing electronic transaction of e-bank, online registration or downloading new types of songs through yahoo, Google, Wikipedia, you tube, mp3 free download website and many more of this kind of online activities recently.

Thus, in respect with the ICT national integration policy, government as the element of society capacity (Eade, 1997) has strong influence in pushing forward the mandate that being implemented such regulate the tax, they sue, making plan, set the vision and mission or justify culture values, setting programs, giving loan programs, give rewards and sanction or regulate and re-innovate the financial funding of donation for technology development in one nation (Dukeshire and Thurlow, 2002; Manitoba, 2003; Jordan, 2012). This all conducted by government in order to bring social change and improving human living, individually or organizationally (Smith, 1973) which may involve several players such as public or local bureau, legislators as the law maker, community (Lusthaus et al, 1995; CIDA, 2000; JICA, 2004; UNESCO-IICBA, 2006).

In short, the element of digital technology life likely has been absorbed and global in all level of human aspect of living; economic and business sectors, government, healthcare, information and education too (Babin and friends, 2009; Le Masson et al, 2010; Hanna, 2010; Charalabidis and Koussouris, 2012; Hanna and Knight, 2012). Base on that background, Indonesian government keep developing their national policy of ICT implementation. Now with the two mandate of Five Year Action Plan of ICT Development – Implementation, and National ICT Board, the ICT use is expected to be more integrated in all government sectors in Indonesia (Indonesian Telematics Coordinating Team/TKTI, 2001; Kepres No.20 Tahun 2006).

In case of education, the ICT use is also expected to be more integrated as the same as with other government institution level. It is also mandated clearly in that Five Year Action Plan that the government as part of society capacity should provide support and facilitate the use of internet satellite and kiosks for making teaching and learning more efficient in school, develop the curricula of ICT, building the collaboration or partnership with other society community both public or private sectors, financing and provide human resource development of ICT training for teachers, implementing for community telecenter concept, developing and building cyber city and intelligent people too (TKTI, 2001).

However, some previous research done by Marwan and Sweeney (2010) noted if the leader's role in implementing one policy, in this case ICT integration in education reported lack of sensitivity in giving improvement toward the lectures skill and knowledge in ICT usage in classroom. In addition, other previous researches also reported the same thing that the implementation of national policy on one nation, in regard with government capacity support especially for developing countries often ended in unsatisfied way without achieving best performance (Yuhetty, 2003; Hartati, 2003; Makinde, 2005; Marwan and Sweeney, 2010).

Therefore, in respect with the fact above, this study tries to highlight the support given by Kepulauan Riau province local education authorities (LEAs) towards the implementation of national policy of ICT integration in education in case of Kepulauan Riau province, Indonesia which encompasses three themes; local policy, management programs, and partnership, and the barriers they face regarding with it.

## 2. Method

The study was conducted in qualitative. Therefore, the researcher used semi-structured interview as the researcher felt flexible with it so that he could elaborate more or probe the interview question further when conducting the interview with the participants in order to get deep information about the fact that being studied (Corbetta, 2003). The interviews data were tape-recorded tool and also supported by field notes that written during and after each interview. Then the audio recordings were transcribed and analyzed by using the computer software of NVivo 8. The process of coding was conducted by researcher by making tree nodes that help him much to classify and categorize the idea, notions, definition related to the subject of being studied. The data interviews also were classified according to the key themes based on the literature and themes that came up during the process of coding.

## 3. Results

The findings are reported into three themes. Firstly, LEAs support in policy, secondly, LEAs support in management programs, and thirdly, local government support in partnership. Each theme has its sub themes which also would be discussed and reported.

### 3.1 LEAs Policy Support

Based on the study result, the researcher found four sub themes of support that provided by LEAs of Kepulauan Riau province in underpinning national policy of ICT implementation in education. These four themes encompassed vision-mission, financial funding of ICT facility, criteria rule standard for good quality school, incentive and sanction that to be discussed below. In case of vision and mission, in order to underpin national mandate of ICT implementation and integration into education, the study found that local government have their own vision that described the goal and the target to be achieved in regard with ICT integration in schools.

#### 3.1.1 Vision and Mission

From the vision stated, technology of ICT was one of the work planning of local government of Kepulauan Riau province where Kepulauan Riau society should be knowledgeable in technology. Further explanation was stated in the mission where it was written more detail that ICT as the media to increase the quality of education in Kepulauan Riau province. However, the stake holder of local authority reported that it was expected in future that mission and vision was not as primary thing that should be achieved, but the motto like technology yes and character also yes. So, balance between them for students and teachers could be possessed (Interviewee 3).

#### 3.1.2 Financial Funding of ICT Facility

In case of financial funding of ICT facility, based on the study, it was found that the local government provided support toward the national policy of ICT integration in school. This could be discerned from the policy of financial funding for ICT facility they established. For example, another stake holder confirmed they as local government had

allocated the budget from APBD (Regional Budget) for around 7 million of Indonesian Rupiah for ICT facilities. This budget policy confirmed by the stake holder was allocated for some ICT instruments of teaching and learning media such as laptops, computer. Not just that, the local government confirmed as well that the financial policy also contributed for some other physical building such digital library, computer lab and language lab. The stake holder confirmed as well that they allocated for 3 million of Indonesia rupiah for iPad and tablet for teachers in school. The budget policy had been allocated since 2010 until 2014 according to the participant (Interviewee 2).

### 3.1.3 Criteria Rule Standard for Good Quality School

Meanwhile, in case of standard criteria rule for good quality school, the local government did not have it yet as they still wait for the mandate for establishing the ICT-based learning in school as the criteria rule of good quality standard to be possessed by schools in Kepulauan Riau province. In this case, as what the education legislator reported that they were waiting for that will or policy to mandate it (Interviewee 2).

### 3.1.4 Incentive and Sanction

In other sub theme of incentive and sanction, the result of the study also found that the local government provided some supports regarding with incentive. The incentive given included rewards and bonus, and also increased status for teachers. The incentive could be provided to teachers in time when they won the competition which held by local district such the competition of ICT-based learning for teachers. The winners were then awarded in form of bonus of money. The sum of the money ranging from 5 million Indonesian rupiah for three champions of first, second, and third winner as the participant reported. The winners and the participants then were proceeded to be facilitator in seminar of ICT-based learning that then the program also channeled through education TV where they would be watched by other teachers and other society in Kepulauan Riau province as the participant reported, however so far, there was no sanction given to teachers from local authority in term of ICT integration implementation in school (Interviewee 1).

### 3.2 LEAs Management Programs Support

Based on the study result, it was found that local government of Kepulauan Riau province had some agendas in supporting national policy of ICT integration in schools. They conducted socialization, established the program of cyber school program, gave ICT training to teachers as the manifestation of human resource development by Baltekomdik. This LEA also provided some facilities such as laptops, CD or VCD, iPad or tablets, computers, labs, digital library and also conducted evaluation and monitoring by publishing a book about Identification and Survey of ICT use and implementation in Kepulauan Riau province (Interviewee 1-6). However, unfortunately the local government had not yet provided special technician of ICT for schools thought the local authority had curriculum team due to they had to consolidate and collaborate with state government, Baltekomdik of Jakarta (Interviewee 3).

### 3.3 LEAs Partnership Support

The study result found that the local government of Kepulauan Riau had attempted to build partnership with other external society to make the implementation of national policy of ICT well conducted. According to the local stake holder (interviewee 1) said that Baltekomdik (Education-Communication Technology Center) had built partnership with Telkom (Telecom) agent to build server connection of internet in several rural areas such Lingga, Natuna as these are remote areas in Kepulauan Riau province. According to him, Baltekomdik had asked Telkom to build VSAT system that could be directly connected to satellite as the alternative solution of problems for rural areas such Natuna and Lingga and other small islands in Kepulauan Riau (Interviewee 1).

Unfortunately, Baltekomdik could not get full cooperation from Telkom due to the classic reason. Business profit became the barrier between Baltekomdik and Telkom agent. Telkom agent had to think twice in building serve network of Wifi for remote islands as the profit they gained there was not match with the capacity of network they build, in addition, Telkom also provided training for those schools that connected yet to the internet about some problems in IT (Interviewee 1).

Meanwhile, other stake holder (Interviewee 3) reported that the collaboration in term of sponsorship, it had become national policy to focus deeper of technology cooperation only for vocational schools, whilst for non-vocational schools or general schools only had little cooperation of sponsorship from industry sectors. The general schools originally still depended the donors on government budget of APBD (Regional Budget), differ with vocational schools indeed they were concentrated to support the industry world after they finish the study (Interviewee 3).

#### 4. Discussion

In this part of discussion of the LEAs capacity support of national policy implementation on ICT integration in education in case of Kepulauan Riau province, Indonesia , three sub themes were found based on the study result conducted by researcher obtained from interview data collection and to be discussed here; local policy support, management programs support, and partnership support. In term of first support of local policy, the researcher, based on the study result found that there were four sub themes that support national policy of ICT integration implementation in education; local vision and mission on ICT, local financial funding on ICT facility, criteria rule standard of good quality school, and incentive and sanction. In term of vision and mission, LEAs of Kepulauan Riau province possessed quite clear agenda and target, namely, to make Kepulauan Riau society to be compatible in technology of ICT especially for education community and to make ICT as one of the media to push up its education quality. However, LEAs of Kepulauan Riau did not want to let the technology become the only thing to be achieved everyone, moral or character was also considered as an important aspect that should be pay attention. In term of financial funding of ICT facility, some financial fund for ICT facilities had been provided by LEAs in Kepulauan Riau from APBD (Regional Budget) for around 10 million of Indonesian Rupiah that allocated since 2010 until 2014. The fact above indicated that there was good initiation and commitment from LEAs of Kepulauan Riau to support national policy of ICT implementation in education. However, in term of ICT as good standard of criteria rule, the local government still waited for this will to establish the ICT-based learning as good quality school, and the study also found no sanction given to in order to make ICT use more integrated. Meanwhile, in second theme of support, in term of local management program, the study result found, at least there were seven types of support from LEAs of Kepulauan Riau; socialization, cyber school, human resource development (HRD), facility of ICT, monitoring, evaluation, and curriculum team of ICT integration in school. Unfortunately, for the support of technician team was not available yet. In fact, the technician team or ICT coordinator is also the essential element for ICT implementation in education in order the change in process of learning in schools (Strudler, 1994; Marcovitz, 2000; Lai et al, 2002; Lai and Pratt, 2004). In relation to the third theme of support, in term of local government partnership, the study found that the Baltekomdik (Education-Communication Technology Center) encountered classic hindrance. Profit of business in network service of internet connection still could not put aside. The local government need other alternative solution, that is, not only depend on one single partner but two or three could be much better (Shaeffer, 1994; ADEA, 1997; Morgan and CIDA, 1998). Finally, based on the finding above, there were several things that still unresolved; local policy support in term of ICT as standard good school criteria, management ICT program support in term of technician team or ICT coordinator, and partnership support in term of financial donor sponsors for ICT and building more collaboration of network link partner between LEAs and other private participation are some important keys that need to be noted by any LEAs to support their national policy of ICT implementation for general or non-vocational public secondary schools especially in Kepulauan Riau and could be important thing for studies in the future.

#### References

- Association for the Development of Education in Africa. (1997). *Partnership for capacity building and quality improvements in education*: Dakar, Senegal: Association for the Development of Education in Africa.
- Babin. G., Kroft, P., Weist, M. (Eds.). (2009). *E-Technologies: Innovation in an Open World*. Ottawa, Canada: Springer.
- Bolger, J. (2000). *Capacity Development: Why, what and how*. Gatineau, Quebec: Canadian International Development Agencies.
- Corbetta, P. (2003). *Social research theory, methods and techniques*. London: Sage.
- Dukeshire, S., & Thurlow, J. (2002). *A brief guide to understanding policy development*. Rural communities impacting policy.
- Eade, D. (1997). *Capacity building: An approach to people –centered development*. Oxfam: UK and Ireland.
- Hanna, N.K. (2010). *Transforming Government and Building the Information Society*. Challenge and Opportunities for the Developing World. University of Maryland, USA. Springer.
- Hanna, N.K., & Knight, P.T. (2012). *National Strategies to Harness Information Technology*. Seeking Transformation in Singapore, Finland, the Philippines, and South Africa. Springer, New York.
- Hartati, S.R.S. (2003). How does courseware's design affect learners' cognitive strategy? University of Indonesia.

- Makara, Sosial Humaniora*, 7(1). Retrieved from Journal.ui.ac.id/index.php/humanities/article/download/713/679
- Indonesian Telematics Coordinating Team/TKTI. (2001). *Five Year Action Plan For the Development and Implementation of Information and Communication Technologies (ICT) in Indonesia*. Jakarta.
- Japan International Cooperation Agencies. (2004). *Capacity Development Handbook for JICA Staff*. JICA Task Force. Retrieved from [jica-ri.jica.go.jp/IFIC\\_and.../study/capacity/200403/pdf/200403.pdf](http://jica-ri.jica.go.jp/IFIC_and.../study/capacity/200403/pdf/200403.pdf)
- Jordan, M.J. (2012). *Information, Technology, and Innovation*. John Wiley & Sons, Inc. Hoboken, New Jersey.
- Keputusan Presiden Republik Indonesia. No.20. (2006). *Tentang Dewan Teknologi Informasi dan Komunikasi Nasional*. Jakarta. Retrieved from [www.kemendagri.go.id/media/documents/2006/11/11/KEPPRES\\_No.20-2006.doc](http://www.kemendagri.go.id/media/documents/2006/11/11/KEPPRES_No.20-2006.doc)
- Lai, K. W., & Pratt, K. (2004). Information and communication technology (ICT) in secondary schools: the roles of the computer coordinator. *British Journal of Educational Technology*, 35,461–475. <http://dx.doi.org/10.1016/j.compedu.2007.05.003>
- Lai, K. W., Trewern, A., & Pratt, K. (2002). Computer coordinators as change agents: Some New Zealand observations. *Journal of Technology and Teacher Education*, 10(4), 539–551. Retrieved from <http://www.editlib.org/p/9525>
- Lusthaus, C., Anderson, G., & Murphy, E. (1995). *Institutional Assessment: A framework for strengthening organizational capacity for IDRC's Research partners*. International Development Research Centre. Ottawa, Canada. Retrieved from [www.idrc.ca/EN/Resources/Publications/Pages/IDRCBookDetails](http://www.idrc.ca/EN/Resources/Publications/Pages/IDRCBookDetails)
- Makinde, T. (2005). Problems of policy implementation in developing nation: The Nigerian experience. *Kamla-Raj. J. Soc. Sci.*, 11(1), 63-69. Retrieved from [www.krepublishers.com/02-journals/JSS/JSS/11-0-000-000-2005-web/...](http://www.krepublishers.com/02-journals/JSS/JSS/11-0-000-000-2005-web/)
- Manitoba. (2003). *A guide to policy development*. Office of the auditor general. Retrieved from [www.oag.mb.ca/wp-content/uploads/2011/06/PolicyDevelopmentGuide.pdf](http://www.oag.mb.ca/wp-content/uploads/2011/06/PolicyDevelopmentGuide.pdf)
- Marcovitz, D. (2000). The roles of the computer coordinators in supporting technology in schools. *Journal of Technology and Teacher Education*, 8, 259–273. Retrieved from <http://dl.acm.org/citation.cfm?id=363046>
- Marwan, A., & Sweeney, T. (2010). Teachers' perception of educational technology integration in an Indonesian Polytechnic. *Asia Pacific Journal of education*, 30(4), 463-476. <http://dx.doi.org/10.1080/02188791.2010.5195>
- Matachi, A. (2006). *Capacity Building Framework: UNESCO-IICBA*. United Nations Economic Commission for Africa. Addis Ababa, Ethiopia.
- Morgan, P. (1998). *Capacity and Capacity Development-Some Strategies*. Note prepared for the political and social policies divisions. Policy Branch, CIDA. Retrieved from [www.impactalliance.org/file\\_download.php?...10343697570CIDA\\_Strat...](http://www.impactalliance.org/file_download.php?...10343697570CIDA_Strat...)
- Shaeffer, S. (1994). *Participation for Educational Change*. UNESCO: International Institute for Educational Planning.
- Smith, T.B. (1973). The policy implementation process. *Policy sciences* 4. 197-209. Elsevier Scientific Publishing Company, Amsterdam-Printed in Scotland.
- Strudler, N.B. (1994, April). *The role of school-based technology coordinators as change agents in elementary school programs: A follow-up study*. Paper presented the annual meeting of the American Educational Research Association, New Orleans, LA. Retrieved from <http://www.eric.ed.gov/PDFS/ED381139.pdf>
- Yuhetty, H. (2003). ICT in the Classroom: A case study of Indonesia. Retrieved from [www2.unescobkk.org/elib/publications/ICT\\_Classroom/Country...](http://www2.unescobkk.org/elib/publications/ICT_Classroom/Country...)
- Yuhetty, H. (2008). *ICT and education in Indonesia: Centre for information and communication technology for education*. Ministry of educational education, Indonesia. Retrieved from <http://lusitriana.wordpress.com/2008/03/03/ict-and-education-in-indonesia-by-harina-yuhetty/>