Management of facilities and infrastructures at one roof schools:
A Multicase Study at One Roof Public Primary and Middle Schools
and Islamic Primary and Middle Schools in East Java

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Abstract:
This research was aimed at describing the management of facilities and infrastructure at one roof public primary and middle schools as well as Islamic primary and middle schools in East Java. This research employed the qualitative approach with multi sites design. The location of this research was in three one roof schools. Data was collected by using interview, observation, and documentation. The researcher was the main key instrument. The analysis was done by employing individual analysis within each case and cross case analysis among the three cases. Results of this research showed that the management of facilities and infrastructures among the one roof public primary and middle schools and islamic primary and middle schools vary in planning, usage, supervision, and abolition.

Keywords:
Management of facilities and infrastructures, One roof schools, State public primary and middle school, and islamic primary and middle schools

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1. Introduction

One roof schools are those developed as the governmental policy to succeed the oblighted 9 years basic education in Indonesia. This has been aimed at all children within 13-15 years of age who graduate from public and islamic primary schools from various isolated areas due to the geographical area can be absorbed in middle schools. Generally in the isolated and sprawl areas, there have not been middle schools being managed to build for children. If only there is one, this usually is not reachable by the graduates of primary schools in such areas. This can happen due to the limited numbers of the primary school graduates from the areas. Therefore, the establishment of new middle schools are also limited. The new establishment of middle schools are seen as not efficient in terms of the funding and human resource supports. Meanwhile, there have been some areas having low index participation of education for middle schools due to having no adequate schooling services. This gives ideas of establishing the so-called one roof schools.

The one roof schools are educational institution operating education covering integrated primary and middle schools. The integration can be in the forms of physical and management matters. The integrated physical matter concerns with the integrated location for both primary and middle schools. The integrated management means that the management of the integrated location include integration in (a) the development of basic education vision and mission, (b) formulation of annual school programs, (c) management of new students enrolment, and (d) efforts in managing the numbers of drop outs, repeating, and transition by using cohort analysis, (e) efforts to manage the needs for educators, (f) efforts to manage the needs for facilities and infrastructures, and (g) basic education quality development.

The one roof school operation is expected to comply the needs for educational equalization service access. In fact, there still have problems in practice. Surya (2010:1) states that based on the monitoring in such schools, it has been found out that their readiness is being forced resulting the needs for improving the human resources and facilities as well as infrastructures. The obvious problems concern the limited supporting aspects for the good educational management. The decree of the Indonesia Republic Government no 32, 2013 regulating the National Education Standard, chapter, verse 1 strongly mandates to manage educational standard covering content standard, process standard, graduate competence standard, teachers and educational staff standard, facilities and infrastructure standard, management standard, budgetting standard, and evaluating standard. The education operation, thus, must comply the 8 National Education Standards by law as the realiation of the educational quality attainment. Such message has been enforced with the governmental regulation no 32, 2013 chapter 3 describing that National Education Standard functions as the foundation of educational planning, actuating, and controlling to consummate the excellent national education. Therefore, each of the educational institution is oblighted to operate the educational processes on the basis of those standards.

Facilities and Infrastructures are parts of the standards to be complied. In the context of the one-roof schools, these are important and crucial aspects to be managed. Considering that such schools are established to integrate primary and middle schools at the same time, the facilities and infrastructure play important roles in the schools operation. Facilities and infrastructures are the supporting components to ensure the smoothness of teaching and learning processes. Matin and Fuad (2014:1) say that facilities and
infrastructures are one of the important to support the learning process at schools. The success of education at schools are influenced by the condition and completeness of the facilities and infrastructures as well as their optimum usage.

There have been some one roof schools in Sidoarjo and Surabaya. Based on the preliminary research, the researcher found out that there have been unique one roof schools named (1) the state public primary school of Sidotopo IV (SDN Sidotopo IV) integrated with the state public middle school of Surabaya 44 (SMPN 44 Surabaya), East Java, Indonesia, (2) state public primary school of Sawohan II (SDN Sawohan II) integrated with state public middle school of Buduran, Sidoarjo, East Java, Indonesia, and (3) the one roof islamic private primary school “Nurul Huda” (MI Nurul Huda) integrated with the islamic private middle school “Nurul Huda” (MTs Nurul Huda) in Sedatim Sidoarjo, East Java, Indonesia. The uniqueness of these schools are two folds, first it concerns with the differences of the state and private school status and second, it concerns the operational concepts which include the differences in managing facilities and infrastructures. These three schools have different cases.

The main focus of this research was the management of facilities and infrastructures of the one roof state public primary and middle schools and the one roof private islamic primary and middle schools in East Java, Indonesia. This focus was elaborated to be sub focus as follows: (1) planning of the facilities and infrastructures, (2) usage of facilities and infrastructures, and (3) controlling and abolition of the facilities and infrastructures.

2. Research Method

This research employed qualitative approach by multisite case study design at three one-roof schools, which were the state public primary school of Sidotopo IV (SDN Sidotopo IV) integrated with the state middle school of 4 Surabaya (SMP Negeri 44 Surabaya), the state public primary school of Sawohan II (SDN Sawohan II) integrated with the state middle school of 4 Buduran Sidoarjo (SMPN Buduran Sidoarjo), East Java, Indonesia, and the islamic private primary school of “Nurul Huda” (MI Nurul Huda) integrated with the private islamic middle school of “Nurul Huda” (MTs Nurul Huda) in Sedatim Sidoarjo, East Java, Indonesia. The multicas design of this research suited the characteristics of these schools differences as follows:

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The data was collected using interview, observation, and documentation. The researcher was the main key instrument. The presence of the researcher in the location of the research was openly made, which means that the informen knew the presence of the researcher. The data sources of this research were (1) informen, (2) activities or occasions, (3) places or locations, (4) objects and pictures, and (5) records, documents, and files.

The data analysis was done in two stages, which were (1) individual analysis within the single and (2) cross case analysis among the multiple cases on the basis of the Yin’s (1984) theory. The procedure of analysis refered to Bogdan dan Biklen (1982:13), which were interactive data collection during the collection time and after the collection time by tracking, organizing, selecting, synthesizing, and understanding to seek for patterns, interpreting and presenting the meaning of the phenomenon. Such interactive process folloing the Miles dan Huberman (1992:90) approach comprised the data reduction, presentation, and conclusion.

Steps of the data collection done following the Bogdan and Biklen’s (1998) advised which was practices by (1989) included: (1) limiting the study scope, (2) deciding on the kinds of the study, (3) developing analysis inquiry, (4) planning data collection phases by considering the previous mapping, (5) writing observer’s comment about the appearing ideas, (6) writing memo to the researcher himself about the studied matters, and (7) exploring relevant liturature sources. To ensure the validity of the data, the researcher followed Moleong’s (2006:324) advise on looking at the credibility, transferability, dependability, and confirmability. Of these four types of validity measurements the credibility was prioritized.

3. Results of the Research
This research revealed that the management of the facilities and infrastructures of the one-roof schools in East Java vary one among others. There have been similarities and differences among them. Herewith, these are described in detail on the basis of the focus of this research, which are, (1) planning of the facilities and infrastructures, (2) usage of the facilities and infrastructures, and (3) supervision and abolition of the facilities and infrastructures.

a. Planning of the facilities and infrastructures
Planning of the facilities and infrastructures consisted of identification, planning, and provision of the facilities and infrastructures. The three schools had similarities in planning the facilities and infrastructures in terms of (1) forming facilities and infrastructures team and conducting need analysis in identifying the needs of the facilities and infrastructures, (2) the planning design was made in the schools plans and adjusted with the funding ability, (3) the provision was based on the proper and real needs to fulfill for buying. Their differences turned out to be (1) the need identification in case 2.
involved school committee and priority scale; in case 3 it was done by first doing benchmark in successful school, and (2) in case 1, the planning was discussed with the school stakeholders; in case 1 and 2, the planning also made by writing proposal submitted to the regional department of education; and in case 3, the planning involved the foundation entities, (3) The provision of the facilities and infrastructures in case 1 and 2 was made by having a cooperation with regional office of the education department and vendors; Meanwhile, in case 3 the provision was obtained by having donation from third parties.

b. The usage of facilities and infrastructures
The usage of the facilities and infrastructures in these three schools concerned inventory, storage, and optimization of the facilities and infrastructures. These showed the tendency of similarities in practice, which were, (1) the inventory was done by recording and coding the goods delivery, (2) the goods storage was done by sorting used goods being stored in the working rooms or units of users, and those additional as well as damage goods were stored in warehouse, (3) the optimization of the goods usage was done by using the goods for learning with periodic maintenance.

c. Supervision/Controlling and abolition of the facilities and infrastructures
The supervision or controlling and abolition of the facilities and infrastructures concerned all related aspects of these. These turned out to have similarities among the three schools, which was, the principals supervised and controlled the usage of the facilities and infrastructures. The differences concerned delegation and coordination. In case 1 and 2, the Principals delegated his supervisory or controlling roles to special officers. In case 3, the principal coordinated with the foundation officers.

d. Management of the facilities and infrastructures
Wholistically, the management of facilities and infrastructures in these three schools included the planning, usage, controlling, and abolition dimensions. These can be summarized in Table 2.

Table 2 Findings of the management of facilities and infrastructures in the one-roof state primary and middle schools and private Islamic primary and middle schools in East Java
| Planning | a. Conducting School Stakeholders meeting | b. Conducting RKAS (School Budget Need Plan) adjustment | c. Doing Proposal writing and submission | a. Making RAB (Expense Budget Plan) | b. Conducting school community member meeting | c. Writing and submitting proposal to the regional office of education | a. Identifying and selecting needs | b. Conducting meeting to discuss the needs and budget availability | c. Conducting meeting with the foundation officers | Similarities: | a. Formulating needs in the school plan | b. Adjusting needs provision with the available budget | Differences: | 1. Case 1 the plan was discussed in the school stakeholders meeting | 2. Case 2 and 3 writing and submitting proposal to the regional education department office | 3. Case 3 involving the foundation members |


| Usage | a. Receiving Delivery b. Coding | a. Recording incoming delivery b. Coding | a. Receiving Delivery b. Coding | a. Receiving Delivery b. Coding | a. Receiving Delivery b. Coding | a. Used goods were stored in working rooms | b. Unused and damaged goods were stored in warehouse | a. Used goods were stored in working rooms | b. Unused and damaged goods were stored in warehouse | a. Used goods were stored in working rooms | b. Unused and damaged goods were stored in warehouse | |

| Storage | a. Used goods were stored in working rooms | b. Unused and damaged goods were stored in warehouse | a. Goods were stored on the basis of their characteristics | b. Goods were handed over to reporting unit | c. Unused goods were stored in warehouse | a. Goods were stored on the basis of their characteristics | b. Goods were handed over to reporting unit | c. Unused goods were stored in warehouse | a. Goods were stored on the basis of their characteristics | b. Goods were handed over to reporting unit | c. Unused goods were stored in warehouse | |


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The management of the facilities and infrastructures at state public primary and middle schools and private Islamic primary and middle schools can be formulated in the following diagram. Figure 1.

**Figure 1** Management of the facilities and infrastructures at One-Rooftop state public primary and middle schools and private Islamic primary and middle schools in East Java

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SD : Sekolah Dasar (Primary School)
PS : Primary School
SMP : Sekolah Menengah Pertama (Middle School)
MS : Middle School
F & I : Facilities and Infrastructures
RKAS/SBNP : Rencana Kebutuhan Anggaran Sekolah (School Budget Need Plan)
RAB/PBF : Rencana Anggaran Biaya/Funding Budget Plan

4. Discussion

a. Facilities and Infrastructure Plan

The aims of the facilities and infrastructure plan is to know the condition of the quantity and qualities of the need goods for supporting the school operation. There were varies similarities and differences in the three schools facilities and infrastructure management procedures. The similarities of having the need identification internally and externally were in line with Depdiknas (2003:21) advised by which such activities were important to do before planning process. Viewed from the theories, the internal condition concerned with the academic and non academic needs; meanwhile, the external condition concerned with the needs on the basis of the science and technology development. Such practices of identifying the internal and external needs support the notion need analysis process as mentioned by Sumarmo (2011:1) that the needs assessment is a comprehensive evaluation by identifying the real needs and analyzing the existing gap.

In one roof Sawohan II primary and Buduran Middle school, the determination of the facilities and infrastructure was done by prioritizing from the most important to the least important. This is in line with what Imanda (2009:1) says that there are four objectives of the need assessment, which are: (a) screening for identification of the institutional needs, (b) Diagnosis to diagnose the needs on the basis of the priority scale,, (c) program planning through needs assessment, (d) guidance which can be used to consider alternative in attaining the objectives and (e) concensus as a process of learning and considering the limitation in budgetting supports.

In the case of the Nurul Huda Islamic Primary and Middle Schools, the provision of the facilities and infrastructures were done steps by steps. The identification in terms of the internal condition was done by accepting all proposals from the school community members for the certain period of budgetting and integrating the plan and the existing previous condition, integrating the needs for purchasing and the availability of existing budgets, and determining the final facilities and infrastructure provision plan. Furthermore, this school involved lots of stakeholders comprising principals, school committee members, facilities and infrastructure team members, foundation members, teachers, staffs, and parents representatives.

In the case of the one roof school of integrated Sidotopo IV state primary school and Surabaya 44 state middle school, the steps to work for the facilities and infrastructure plan were firstly, conducting planning meeting participated by Principalsm teachers, employees, and schools committee members; secondly, formulastin the School Budget Need Plan suited with the identified needs; thirdly, purchasing goods on the basis of the School Budget Need Plan, and fourthly reporting the facilities and infrastructures condition and purchase to the local/regional department of education. According to Nawawi (1981), educational acilities can be classified into (1) exhausting condition, (2)
moving condition, and (3) function, which is related to learning. The planning process must be done creatively in which the creativity is the factor, power, influence, and relation to the attainment of educational goals.

Planning the facilities and infrastructures in Sawohan II state primary School and the Buduran state middle schools was done periodically using priority scale, considerinf the availability of fund, and proposing funding to related local and regional department of education in Sidoarjo. The planning process was initiated by designing the budget, formulating provision committee, and determining the needed goods. The people involved in this process were principals, teachers, school committee, and parent representatives.

b. Provision of the facilities and infrastructures

The procedures of the facilities and infrastructure provision in the integrated one roof Nurul Huda Islamic primary and middle schools in Sedati, Sidoarjo, were identifying and analyzing the school needs involving coordinator of proposal in each section of the schools, selecting the proposal by designing a program concept and recording the existing facilities and infrastructures, and finally, determining the fund resources and the amount of the school budget. According to Gunawan (2005:5) the management of facilities and infrastructures is the overall process of activities designed and taken action consciously and seriously with continuous guidance in order to be ready for uses in learning process. Such process is aimed at smoothing the learning process.

The facilities and infrastructure provision in those three schools tended to use dropping technique, purchasing, and borrowing among the primary and middle schools. The limitation of the school budget made the schools unable to fulfill all their needs. Such condition is suitable to Bafadal’s (2004:31) advise that the facilities and infrastructure provision can be done by using (1) dropping, (2) purchasing, (3) obtaining charity, (4) renting or borrowing, and (5) exchanging.

c. Usage of the facilities and infrastructures

The first instant to use the facilities and infrastructure was inventory. This a process of recording and filing for considering the quantitative and qualitative analysis of the facilities and infrastructure needs. This also involved coding and labelling on the basis of the kinds and dates. In the cases of both integrated one roof schools of Sidotopo IV state primary school and Surabaya 44 state middle school as well as the Sawohan II state primary school and Buduran Middle School in Sidoarjo, the schools used coding system referencing to the date accepted, year of purchase, kinds of goods, origin of the goods, and numbers of goods. The facilities and infrastructures were noted and recorded neatly to show the clear assets of the schools.

The inventory system employed in the integrated one roof Nurul Huda islamic primary and middle school, in Sedati, Sidoarjo, East Java, were identified as follows: (1) recording the school facilities and infrastructure using delivery receive book, inventory book, and stock book, (2) making specific code for all official assets, and (3) making report or such official assets.

According to (2013:5) inventory means recording and organizing state properties systematically, neatly, and structurally based on the certain requirements and guidance. Such opinion suits the way the inventory system was done in integrated one roof Sidotopo
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IV state primary school and Surabaya 44 state middle school as well as the integrated one roof Sawahan II state primary school and Buduran state middle school in Sidoarjo, East Java. On the other hand, the integrated one roof Nurul Huda private islamic primary and middle school developed their own system.

Usage and storage of the facilities and infrastructures were managed to suit the needs of the schools. Those which are not eligible for use are stored in warehouse. The storage of materials or goods were mainly done by identifying the characteristics of the materials whether they are consumable materials or non consumable materials. The maintenance in the integrated one roof Sawihan II state primary school and Buduran state middle school was done systematically by checking the materials or goods periodically, doing periodical repair, and properly doing storage. Such procedures are in line with what Bafadal (2004:49) says that (1) viewed from the characteristics, maintenance means checking, preventing, light repairing, and heavy repairing, and (2) viewed from the time of maintenance means daily maintenance and periodical maintenance.

The maintenance process in the integrated one roof private Nurul Huda islamic primary and middle school was done by designing preventif maintenance program, schedulling maintenance, and evaluating maintenance performance. The maintenance became the responsibility of the maintenance team.

d. Supervision/Controlling and Abolition
Two integrated one roof schools, which were Sidotopo IV state public primary school and Surabaya 44 state public middle school implemented the supervision or controlling and abolition by categorizing the goods or materials into light and heavy dammages. Those having light damage were repaired. Those having heavy damage and were unable to repair were stored in the wherehouse. The supervision and controlling was done periodically to ensure that the facilities and infrastructures could be used and maintained. All materials and goods which could not be repaired were abolished and replaced with the new ones. The lost materials and goods were also abolished. The abolition was done by having official meeting, throwing away in the provided place, burning, or reselling.

The supervision and controlling process in the Nurul Huda private islamic primary and middle school was initiated by having observation, role model, recording, and limitation of authority. Those who involved in supervision were assigned stiffs. Teachers, and students controlled by the principals. For materials and goods being abolished, the principal made official investigation and report. The foundation members and the assigned stiffs provided records of materials or goods being abolished. There was an abolition committee who were responsible to check and to record the materials or goods being abolished.

According to Arifin (2013:8) and Gunawan (2005) the abolition activities are aimed at: (1) preventing and limiting the schools loss due to high cost of maintenance and storage, (2) preventing the wase of cost, (3) freeing the institution from the unbefitted maintenance and security, and (4) easing the inventory load.

The Sidotopo IV state public school determined the criteria for abolishment by identifying the unusable materials or goods, damage materials or goods, and those which could not be

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used for learning process. These were also true for the state public Surabaya 44 middle school. This school also abolished those over twenty five years of life times.

Results of this research supported the findings of other researchers such as Djatmiko (2006), Krisdianawati (2007), Hasan (2012), Lestari (2012), Widiartini (2012). The facilities and infrastructures turned out to influence the process of learning Belmo (2012), Suratman (2009), Santoso (2011), Fajariana (2011), Parjono (2014), Bahar (2015), and Arafat (2016). Therefore, it is important to manage and fulfill as required.

5. Conclusion and Recommendation

It is concluded that the three schools being research had similarities in managing facilities and infrastructures in terms of (1) needs identification process and procedures, (2) planning process and documentation resulting the school funding budget plan (3) purchasing the needed facilities and infrastructures. There were also differences in (1) the way the need identification was done, (2) the way planning was done, and the way the provision was done. Meanwhile, in terms of the usage, these three schools showed similarity in doing inventory, storing and doing maintenance, and optimizing the usage. The supervision and controlling as well as the abolition also indicated the similarities. Principally they controlled the materials or goods usage for the benefit of teaching and learning process. In case 1 and 2 they preferred to delegate the process to assigned staffs, whereas, the case 1 preferred to coordinate with foundation members.

It has been suggested that Principals and Foundation members determined the priority scale to fulfill the needs for school facilities and infrastructures in order to support effective learning process. The provincial department of education and the regional or district department of education are suggested to pay attention and take care of the needs or facilities and infrastructures among schools in East Java.

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