

The Effect Of School Zoning System To The Quality Of Education In Senior High Schools (Case Study Of Public Senior High Schools In Surabaya)

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Abstract: Education is a very important sector for every nation because it relates to human resource quality. The early stage to start formal education is through selection process which is called *Penerimaan Peserta Didik Baru (PPDB)*. The Regulation of Minister of Education and Culture No 17/2017 applies new system in *PPDB*, the zoning system. The zoning system is carried out as an approach to make students to get closer to their school, in order to create educational system more objective, accountable, transparent and zero discrimination. The zoning system is aimed to eliminate dichotomy between superior schools and non-superior schools. In fact, the zoning system raises many protests because it is considered less beneficial. Therefore, this study aims to know the impact of zoning system to education quality of senior high schools, particularly public senior high schools in Surabaya. The study applies descriptive quantitative method supported by paired *t*-test and ANOVA repeated measures results. The result shows that zoning system can increase and equalize education quality of senior high schools, particularly public senior high schools in Surabaya.

Keywords—school zoning system, new students admission, quality of education.

1. INTRODUCTION

Education has a central position in the development of the nation. The survival of a nation is determined by the progress or the failure of education system. This makes education play very important role in Indonesia.

The early stage to start a formal education is through the admission of new students. *Penerimaan Peserta Didik Baru (PPDB)* is a selection process which determine if a student is accepted or not in a particular school. Based on the Regulation of Minister of Education and Culture No. 17/2017 [1], education is expected to be delivered objectively, accountably, transparently and without discrimination that it shall encourage the acceleration of access towards education services. This regulation regulates zoning system in *PPDB*, where new students are expected to be close from their domicile to their school.

The Regulation of Minister of Education and Culture No. 17/20017 began its implementation by *Dinas Pendidikan Jawa Timur* during *PPDB* 2017. Surabaya as one of cities in East Java has affected by this regulation. *PPDB* 2017 in Surabaya implemented a zoning system as a regular admission for the senior high school level. The zoning system at that time was implemented by dividing Surabaya City into several zones. New students were given three alternatives namely first choice is school in the zone-second choice is school in the zone; first choice is school in the zone-second choice is school outside the zone; and first choice is school outside the zone-second choice is school outside the zone. Students who are prioritized are those who

select schools within their domicile zone. However, at that time, student admission selection was conducted using National Exam scores. This system lasts until *PPDB* 2018 for senior high schools, but several changes happened in the division of regional zones.

Implementation of *PPDB* for senior high schools of Surabaya City in 2019 and 2020 had some differences with previous years. The *PPDB* at that time applied zoning system by providing 50% quota of the total quota, which is the selection of students is based on distance of the students' house to school. Therefore, automatically students whose domicile are close to school will have opportunity to be admitted compare to those whose domicile are far from school. The selection which based on achievement, National Examination scores, progress report or *USBN* score have its own quota and system, separated from zoning system.

The zoning system raises many protests from students and parents. The system is considered impartial for students with high achievements. Students who have studied hard to study at the school they want will be defeated by students who live near the school or within the school zone. Other than that, the "favorite schools" are concerned about the decrease in the achievement index because students who are accepted through the zoning system have heterogenous learning and achievement abilities. It is assumed that several schools have not yet been able to face heterogeneity because of lack of educational or learning facilities.

Meanwhile, some study results are contradictory with existing controversy. Hendrawansyah and Zamroni [2] used goal-oriented model concluded that the zoning

system in public senior high schools of Bima City had successfully made fair distribution of National Examination scores because it was not only belong to a particular school. Wulandari et al. [3] also stated that the zoning system had a strong influence and significant effect to students' achievement of SMPN 1 Labuhan Ratu on East Lampung, where its academic achievement tends to improve after implementation of zoning system. According to Perdana [4], the zoning system implementation in PPDB in Central Sulawesi has equalized access and quality of education. The distribution of students and input quality is good so there is no dichotomy between superior schools and non-superior schools.

Based on the above reasons, the authors hoped to know the effect of the zoning system to education quality of senior high school especially in public senior high schools of Surabaya City. Surabaya is one of metropolitan cities which is the capital city of East Java Province, where the scale of activities of the population are large and varied. Therefore, this study is expected to provide conclusion and overview of whether or not the zoning system in new students' acceptance is good and feasible to be implemented in Surabaya.

2. METHOD

This study applied descriptive quantitative method supported by secondary data analysis approach. Descriptive quantitative method is a research method which describes information in accordance with variable and numeric data [5]. The secondary data analysis approach in this research is using paired t-test method and ANOVA repeated measures. Data, article and literature quoted are obtained from Google Scholar, Neliti, Elsevier, *Sekolah Kita*, Springer, Questia, Jawa Pos, Times Indonesia and TribunNews.

3. RESULT

Table 1 shows an increase in the percentage of educational qualification of high schools' educators in City of Surabaya who were $\geq D4/S1$. A decrease was also seen on the percentage of educational level which was $< D4/S1$ [6][7][8]. The decrease and increase in percentage are significant in 2019/2020, which includes period after implementation of the zoning system.

Table 1. Educational Qualification of High School level Educators in Surabaya City

Education	School Year	Percentage
$\geq D4/S1$	2015/2016	97%
	2016/2017	98.2%
	2017/2018	98.3%
	2018/2019	97.7%
	2019/2020	99.2%

$< D4/S1$	2015/2016	3%
	2016/2017	1.8%
	2017/2018	1.7%
	2018/2019	2.3%
	2019/2020	0.8%

Table 2 shows the average scores of National Examination for senior high schools in Surabaya which tend to increase after implementation of zoning system [6][7][8].

Table 2. Average Score of National Examination for Senior High Schools in Surabaya City

Category	Academic Year	National Examination Average Score
IPA	2015/2016	65.8
	2016/2017	59.1
	2017/2018	61.73
	2018/2019	62.11
	2019/2020	63.51
IPS	2015/2016	57.6
	2016/2017	52.4
	2017/2018	55.67
	2018/2019	55.56
	2019/2020	58.62

An increase also occurred in the performance of public high schools in Surabaya [9]. This can be proved using paired t-test and ANOVA repeated measures. Right tailed paired t-test was conducted on previous achievement before zoning (academic year 2014/2015 until 2016/2017) and after zoning (academic year 2017/2018 until 2019/2020), which were normally distributed. The analysis resulted in p-value = 0.012 or less than $\alpha = 0.05$, therefore, it can be concluded that the zoning system has a significant effect on the achievement scores of public senior high schools in Surabaya, where achievement scores after zoning are greater than before zoning.

Results of ANOVA repeated measures for achievement data for 2016/2017 to 2019/2020 academic year show the Greenhouse-Geisser p-value of 0.002 or less than $\alpha = 0.05$ so it can be concluded that there are differences in the achievement scores of public high schools in Surabaya in the 2016/2017-2019/2020 of academic year interval. Based on advanced testing including bonferroni pairwise comparisons and paired t-test, it can be concluded that achievement scores of public senior high schools in Surabaya City from 2016/2017 to 2018/2019 are the same, then starting to increase in 2019/2020.

Table 3 describes classroom condition after zoning system was implemented, marked by a decrease in the number of classrooms that were severely damaged and an increase in the number of classrooms that were in good condition [6][7][8].

The improvement of the quality of senior high schools in Surabaya City as observed from the percentage of accredited schools can be seen in Table 4. The table demonstrates that starting in the 2017/2018 academic year, there were no C accredited schools and there was a decrease in the percentage of schools which were not accredited [6][7][8].

Table 3. Classroom condition of Senior High Schools in Surabaya City

Condition	Academic Year	Total
Heavy Damage	2015/2016	59
	2016/2017	10
	2017/2018	33
	2018/2019	17
	2019/2020	18
Light Damage	2015/2016	566
	2016/2017	562
	2017/2018	665
	2018/2019	30
	2019/2020	31
Good	2015/2016	1255
	2016/2017	1220
	2017/2018	1296
	2018/2019	2129
	2019/2020	2130

Table 4. Senior High Schools Accreditation in Surabaya City

Rank	Academic Year	Percentage
Accreditation A	2015/2016	64.5%
	2016/2017	63%
	2017/2018	57.3%
	2018/2019	67.7%
	2019/2020	66.2%
Accreditation B	2015/2016	22.7%
	2016/2017	15.9%
	2017/2018	24.2%
	2018/2019	30.1%
	2019/2020	28.2%
Accreditation C	2015/2016	2.1%
	2016/2017	0.7%
	2017/2018	0%
	2018/2019	0%
	2019/2020	0%
Not yet accredited	2015/2016	10.6%
	2016/2017	20.3%
	2017/2018	18.5%
	2018/2019	2.3%
	2019/2020	5.6%

4. DISCUSSION

According to Barnadib (1986) there are four factors influencing education, namely goal, educator, student and educational tool. Reviewing the objective of national education as stated in Article 3 of Constitution No.

20/2003 on the National Education System, the Government in 2017 issued The Regulation of Minister of Education and Culture No. 17/2017 which was a new policy on *PPDB*. This policy was aimed to guarantee the implementation of *PPDB* to carry out objectively, accountably, transparently and without discrimination that it shall encourage the acceleration and equalization of access towards education services. *Dinas Pendidikan Jawa Timur* has this policy since 2017 for the *PPDB* system in senior high school level.

Zoning system in *PPDB* is a breakthrough so that the community or government shall not only prioritize “favorite schools” located in the city centers, therefore in the future all schools shall experience the same rights. Zoning system is used to fix the various education national standards microscopically [9]. Zoning system can also form an education ecosystem through educational three-central synergy, therefore students will receive better education from their schools and family. Family closeness gives positive influence to students’ learning skills and achievements [10]. The closer the student’s existence and communication to the family, the higher the learning skills and achievements will be.

Reviewing from the factor of educator, the average highest education background of educators in senior high school level in Surabaya City is equal to *D4/S1* (Bachelor’s degree) or higher. The percentage of educators with education qualification continuously improves. However, this percentage significantly rises in the 2019/2020 academic year (included in the period after zoning system is enforced), which is supported by decreasing of educators’ percentage with education level lower than *D4/S1*. It shows that there is improvement in the quality of educators in senior high school level in Surabaya City, including after the zoning system is enforced.

In addition, the factor of students is also highly important in improving the quality of education. The condition of students’ capability can be observed through scores in the National Examination and their school achievements. The average scores of senior high school National Examination in Surabaya City tend to increase. After the zoning system, the senior high school National Examination scores in Surabaya City are equalized because high scores are no longer centered in “favorite schools” only [11]. The result of paired t-test analysis and ANOVA repeated measures also shows that there is improvement in the achievement of public senior high schools in Surabaya City after the zoning system, especially in the 2019/2020 academic year. These show that there are improvements in

students’ capability, in academic and non-academic sectors, after the zoning system is enforced.

Improvement of educational quality in the factor of educational tools may be observed through the condition of classrooms. The condition of classrooms after zoning system is getting better. Moreover, the accredited schools' percentage is growing bigger.

Based on the point of view of the three factors above, it can be concluded that the quality of senior high school educational quality in Surabaya City is becoming more evenly distributed and increasing when the system is introduced. The most significant improvement of quality is in the 2019/2020 academic year, where the selection is based on the distance between the students' houses and the school begin its implementation. During the years, the Government has started to find many gaps and deficiencies located in each region that massive improvement can be performed. Although it starts to receive positive outcomes, researcher will still suggest the Government to continuously equalize the facility and quality of education, and integrated socialization of *PPDB* system and channel, so that the goals of national education can be achieved perfectly.

5. ACKNOWLEDGEMENT

Researchers would like to express their gratitude to the Indonesian Ministry of Education and Culture for funding this research.

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