ANALYSIS OF THE QUALITY OF ELEMENTARY AND HIGH SCHOOLS USING WEB-BASED GEOGRAPHIC INFORMATION SYSTEM (Case Study: Mojokerto City, East Java)

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Abstrak

Mojokerto city is a smallest government in the Indonesia, it has 135.024 populations with population density reached 8.208 people per km. Needed number of schools and these infrastructure to support the high level of education for school-age population in Mojokerto city. A Geographic Information System is needed in order to assist the government in planning and managing education in the region.

In this research, geographic information system is built using web-based with topographic map on scale of 1: 25,000 as basic maps and tabular data from the Department of Education and Citizenship and the results of research in the field as an attribute. Merging of multiple data will be displayed on this web.

The results from the analysis of the ratio of teachers with students are 6 elementary schools and 2 vocational high schools concluded an ideal criteria and resulting of class sizes analysis are 7 elementary schools, 6 junior high schools, a senior high school, and 2 vocational high schools concluded an ideal criteria, too. Comparison of age-school with school capacity in Magersari subdistrict obtained shortage capacity 5,824 units for elementary school and excess 957 units for high school, but for the Prajurit
Kulon subdistrict shortage capacity of 5,503 units for elementary school and 116 units for high school. Distribution number of schools have an ideal value, as shown by the inclusion of the entire region of the outer Mojokerto in a radius of 3 km and 6 km for each elementary school and high school.

The result of this research is WebGIS-education in Mojokerto city which contains some information, including information on the number of students, teachers, school infrastructure, address and photograph of the school. Aims of the distribution map in WebGIS is intended to give information and an evaluation of the quality in education, especially in elementary and high school in Mojokerto city.

Keywords: WebGIS, Geographic Information System, Education, Mapserver