



## **Analysis of the Availability and Gaps of Educational Facilities in Teluk Bintuni Regency Papua**

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### **Abstract**

Education is recognized as a human right and the main key to a nation's progress. The availability of adequate educational facilities in each region is crucial to ensure equal access to education for all citizens. However, Indonesia faces significant challenges in providing equitable educational facilities, especially considering the diverse geographical and demographic conditions between regions. Teluk Bintuni Regency in West Papua Province is one of the areas that requires special attention in improving educational access and facilities, especially because of its geographical conditions, the majority of which are islands with mountains and sea waters. This research aims to analyze the availability of educational facilities in Teluk Bintuni Regency, with a focus on the type and level of schools. Data obtained from the Education Department shows that by 2023, this district will only have 263 schools, consisting of kindergartens, elementary schools, middle schools, high schools and vocational schools. This figure is still considered insufficient and equitable, especially when compared with the population of around 60,000 people spread across 23 sub-districts. The main challenge in providing equitable educational facilities in Teluk Bintuni Regency involves diverse geographic and demographic conditions. Therefore, it is hoped that this research can provide an in-depth evaluation of the current condition of educational facilities, identify existing gaps, and formulate the need for improving educational facilities in the future based on population growth projections. It is hoped that the results of this research can provide a strong basis for policy making by the Teluk Bintuni Regency Government, especially in terms of planning and budgeting for the equitable development of educational facilities. It is also hoped that the conclusions from this research can become a reference for related agencies, such as the Education Office, Bappeda, and the Teluk Bintuni Regency DPRD, in preparing strategic plans for educational development for the next five years.

*Keywords:* Educational Facilities, Teluk Bintuni Regency, School Availability, Types and Levels of Education, Improvement of Educational Facilities.

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### **1. Introduction**

Education is a human right and the key to a nation's progress. Every citizen has the right to obtain quality education in accordance with his interests and talents. Therefore, the availability of adequate educational facilities in each region is important to ensure equal access to education for all levels of society without exception. One of the challenges in providing equitable educational facilities is Indonesia's geographical and demographic conditions which vary greatly between regions (Wahyudi et al., 2021; Asmaningrum and Irianto 2020). Differences in geographical conditions such as urban and rural areas certainly have their own challenges in providing schools. Apart from that, population density and growth also differ between regions, which has an impact on the need for educational facilities.

Teluk Bintuni Regency in West Papua Province is one of the areas that still requires special attention in improving educational access and facilities. Geographically, Teluk Bintuni Regency is an archipelagic area with most of its territory consisting of mountains and sea waters. This condition certainly makes it difficult to access education for residents in remote areas. Based on data from the Education Office, until 2023 Teluk Bintuni Regency will only have 263 schools consisting of kindergartens, elementary schools, middle schools, high schools and vocational schools. This number is certainly still not ideal and evenly distributed when compared with a population of around 60,000 people spread across 23 sub-districts. There is still a need to improve school facilities to meet the educational needs of this district (Azzizah, 2015; Modouw, 2023; Beneite-Marti, 2022).

Therefore, research regarding the availability of educational facilities in Teluk Bintuni Regency based on school type and level is important. It is hoped that this research will be able to evaluate in detail the current condition of educational facilities, as well as identify gaps and needs for improving educational facilities in the future based on population growth projections. Similar research was previously conducted by Mahmud (2020) who analyzed basic education facilities in Sorong Regency (Hermino, 2017; Seda et al., 2018). The results of the research show that there is still a gap in the availability of elementary schools between sub-districts and villages/sub-districts in Sorong Regency. Therefore, the research recommends improving elementary school facilities in certain sub-districts and villages/sub-districts to overcome this inequality (Werang et al., 2017; Malamassam et al., 2021).

Furthermore, research from Budiman (2021) regarding secondary education facilities in Jayapura City found that the ratio of the number of high schools to the population aged 16-18 years was still not ideal, namely 1:12,000. This study recommends improving high school facilities to accommodate future growth in the high school age population. These two studies show that studying educational facilities is very important to ensure the availability of schools that are equitable and based on needs in each region. Therefore, this research aims to analyze the availability of educational facilities in Teluk Bintuni Regency based on school type and level, in order to evaluate the current condition of educational facilities and the need for improvement in the future.

It is hoped that this research can provide clear policy recommendations to the Teluk Bintuni Regency Government in terms of planning and budgeting for equitable development of educational facilities. Apart from that, it is also hoped that the results of this research can become a reference for related agencies such as the Education Office, Bappeda, and the Teluk Bintuni Regency DPRD in preparing strategic plans for educational development for the next 5 years (Werang et al., 2022). The scope of this research is formal education facilities at the kindergarten, elementary, middle school, high school and vocational school levels in 23 sub-districts in Teluk Bintuni Regency. Data on the number of schools per type and level in each sub-district was obtained from the Teluk Bintuni Regency Education Office or other relevant secondary data sources.

## 2. Research methods

This research uses a descriptive research design with a quantitative approach to analyze data on the availability of educational facilities in Teluk Bintuni Regency. A quantitative descriptive design was chosen because this research aims to describe, summarize various conditions, and seek answers to questions related to the current status of a phenomenon, namely the availability of educational facilities in Teluk Bintuni Regency.

### 2.1. Object of research

The population in this study were all formal schools at kindergarten, elementary, middle school, high school and vocational school levels in 23 sub-districts in Teluk Bintuni Regency. The total school population in Teluk Bintuni Regency is 263 schools based on 2023 data. The sampling technique used is total sampling, where all members of the population are used as research samples. Thus, the sample in this study was 263 schools in Teluk Bintuni Regency.

### 2.2. Data collection

The data collected in this research is secondary data in the form of the number of schools by type (kindergarten, elementary school, middle school, high school, vocational school) and level of education in each sub-district in Teluk Bintuni Regency. Data was obtained from the Teluk Bintuni Regency Education Office or other relevant secondary data sources such as Dapodik Kemendikbudristek.

**Table 1:** Data on number of schools

No	region	Kindergarten	elementary school	Junior High School	Senior High School	vocational school	Total	Average
1	District Bintuni	18	11	6	6	0	41	8.2
2	District Manimeri	14	7	2	0	1	24	4.8
3	District Sumuri	10	6	4	2	0	22	4.4
4	District Tomu	5	3	2	1	0	11	2.2
5	District Aroba	3	3	2	0	0	8	1.6
6	District Merdey	1	7	1	1	0	10	2
7	District Placenta	3	3	2	1	0	9	1.8
8	District Wamesa	3	5	2	0	0	10	2
9	District Meyado	3	2	1	1	0	7	1.4
10	District Babo	5	2	1	1	0	9	1.8

11	District Kaitaro	1	5	1	1	0	8	1.6
12	District Aranday	1	5	1	0	0	7	1.4
13	District Kuri	1	5	1	0	0	7	1.4
14	District Tuhiba	2	3	1	0	0	6	1.2
15	District Weriagar	1	1	1	0	0	3	0.6
16	District South Moscow	1	3	1	0	0	5	1
17	District Fafurwar	2	2	1	0	0	5	1
18	District Kamundan	1	1	1	1	0	4	0.8
19	District West Moscow	1	1	1	1	0	4	0.8
20	District Northern Moscow	0	2	1	0	0	3	0.6
21	District Beimes Plain	1	1	1	0	0	3	0.6
22	District Eastern Moscow	0	1	1	0	0	2	0.4
23	District Masyeta	0	2	0	0	0	2	0.4
24	Total	77	81	35	16	1	210	42
25	Average	3	4	2	1	0	9	2

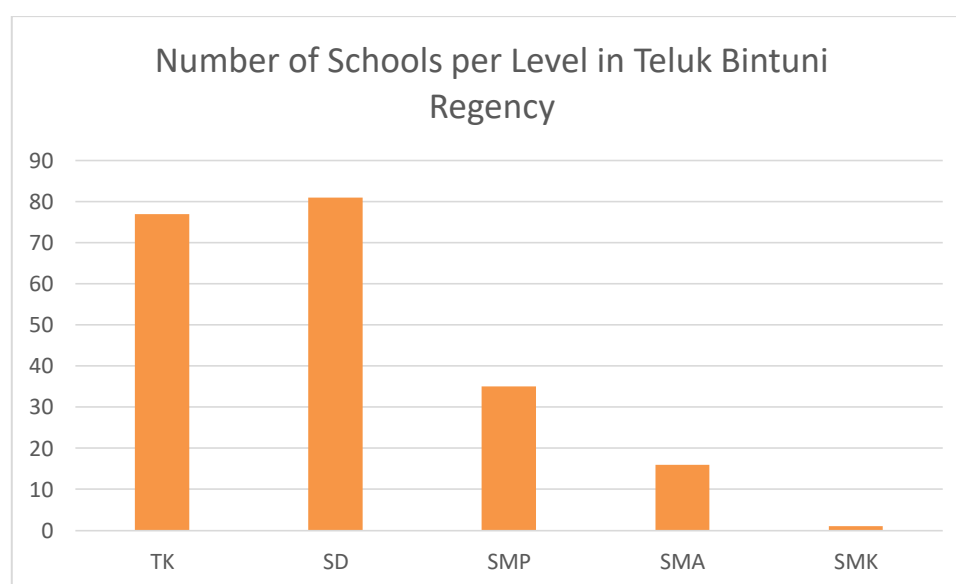
### 2.3. Data analysis

Data analysis techniques used in this research include:

- Frequency distribution analysis to see the distribution of data on the number of schools at each type and level in each sub-district
- Percentage analysis to see the comparison of school availability at each level in each sub-district
- Mean/average analysis to determine the average availability of schools at each type and level

## 3. Results and Discussion

### 3.1. Distribution of the Number of Schools in Teluk Bintuni Regency



**Figure 1:** Number of schools per level

Based on data analysis of the availability of educational facilities in Teluk Bintuni Regency, a general picture was obtained that the highest number of schools was at the elementary school level, namely 81 schools (30.8% of the total schools). Meanwhile, the lowest number of schools is at the high school level, namely 16 schools (6.1% of total schools).

### 3.2. Distribution of School Distribution in each District

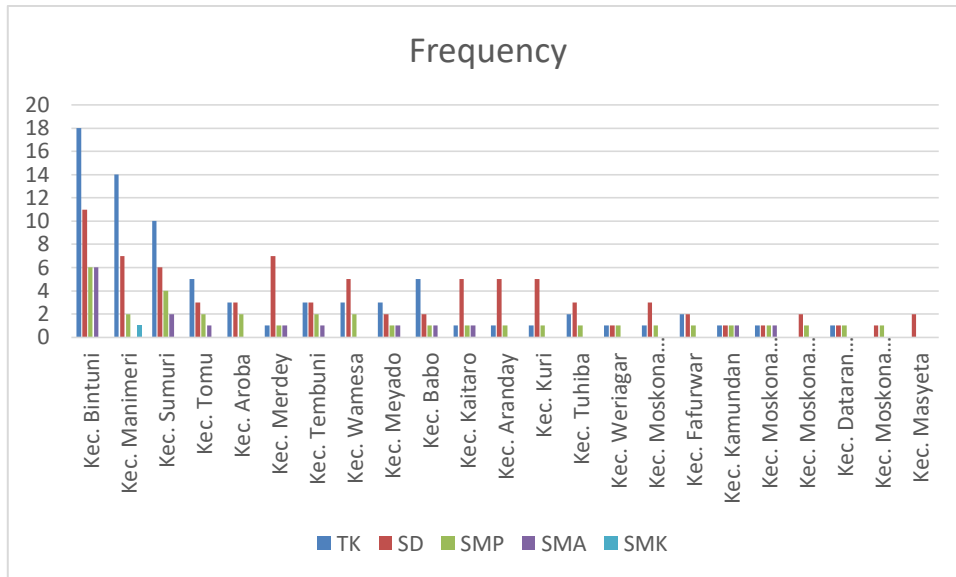


Figure 2: Frequency distribution

The frequency distribution shows that the most elementary schools are in Bintuni District with 11 schools, while for SMA there are only 6 schools spread across 6 sub-districts. North Moskona District has the smallest number of schools, namely only 3 schools from all levels.

### 3.3. Average Availability of Schools at Each Level of Education

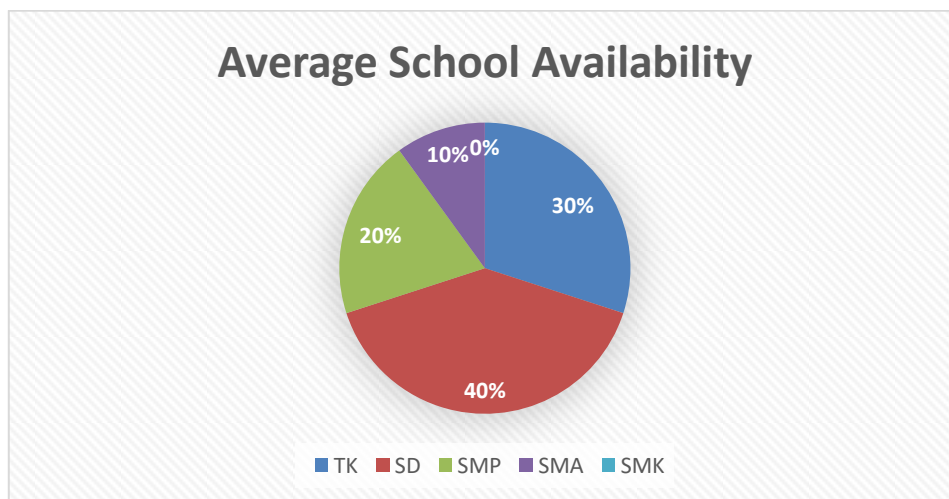
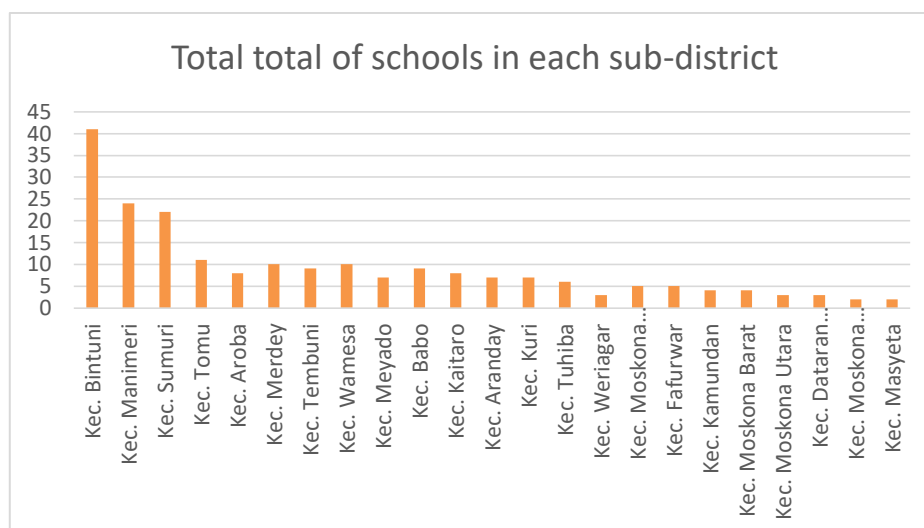


Figure 3: Average school availability per education level

The average availability of kindergartens in Teluk Bintuni Regency is 3 schools per sub-district. The average elementary school is 4 schools per sub-district. Meanwhile, the average SMA is only 0.7 schools per sub-district.

### 3.4. Overall Total from Each Level of Education



**Figure 4:** Grand total

The district with the highest educational facilities is Bintuni District with 41 schools at all levels. Meanwhile, the lowest educational facilities are in East Moskona District and Masyeta District with only 2 schools.

## 4. Conclusion

Based on the results of research using a quantitative descriptive research design, it can be concluded that Teluk Bintuni Regency has variations in the availability of educational facilities in each sub-district. The highest number of schools is at the elementary school level, accounting for around 30.8% of the total schools, while the lowest number of schools is at the high school level, reaching 6.1% of the total schools. The frequency distribution shows significant differences between sub-districts, with Bintuni District having the largest number of elementary schools, while high schools are spread across 6 sub-districts, and North Moskona District has the least number of schools. The average availability of schools per level of education shows that on average there are 3 kindergartens per sub-district, 4 elementary schools per sub-district, and only around 0.7 high schools per sub-district. Overall, Bintuni District has the highest educational facilities, while East Moskona and Masyeta Districts have the lowest educational facilities, only 2 schools each. This conclusion provides a comprehensive picture of the status of the availability of educational facilities in Teluk Bintuni Regency based on type and level of education.

The main references are international journals and proceedings. All references should be to the most pertinent and up-to-date sources. References are written in APA style. Please use a consistent format for references – see examples below (10 pt):

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