

## Conference Paper

# The Infrastructure Standards of Early Childhood Education Units in South Sulawesi Province

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**Abstract**

Early childhood (0-6 years) is a very important period that affects all stages of human development. This period is often referred to as the golden age because in this period children's intelligence develops more rapidly than in the next period. Children need good quality educational services during early childhood so that their potential can develop optimally. It is therefore important to support early childhood education facilities and infrastructure. Each educational unit must have infrastructure such as land, classrooms, leadership rooms, teachers' rooms, administration rooms, library rooms, sports venues, places of worship, places to play, and places to support the learning process. There are still many people who do not understand what infrastructure is needed by early childhood education units to support the needs of children, or how to manage it. This can be seen in the results of this exploratory study, which analyzed the standards of the infrastructure in the district and municipal early childhood education units in South Sulawesi province.

**Keywords:** infrastructure standards, early childhood education program

## 1. Introduction

Early age (0-6 years) is a very important period and affects all stages of human development. This period is often referred to as the golden age or golden age because in this period the potential for children's intelligence develops more rapidly than the next period. Therefore, early childhood children really need educational services so that the growth process of their various potentials can develop optimally. Law on National Education System Number 20 of 2003 Article 1 point 14 states that Early Childhood Education is a coaching effort aimed at children from birth to six years of age which is carried out by providing educational stimuli to assist physical and spiritual growth and development so that children have readiness to enter further

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education [1]. In the framework of organizing educational institutions in various types and streams of education as stipulated in Article 28 of Law Number 20 of 2003, supporting educational facilities and infrastructure are required. Furthermore, the explanation of the infrastructure needed by an educational institution is confirmed in Government Regulation Number 19 of 2005 concerning National Education Standards Article 42 paragraph 2 which states that every educational unit is required to have infrastructure which includes land, classrooms, room for leadership of educational units, teachers' room, administration room, library room, laboratory room, work shop room, production unit room, canteen room, power and service installation, sports venue, place of worship, play area, creative space, and other spaces / places needed to support the learning process regular and ongoing [2]. Furthermore, in the Regulation of the Minister of Education and Culture number 137 of 2014 concerning Standards for Early Childhood Education, it has been stated about the principles and requirements of the infrastructure that must be owned by an early childhood education institution [3, 4].

Even so, the facts in the field show that there are still many people who do not understand the infrastructure needed by an Early Childhood Education institution that suits children's needs and do not know how to manage it. Based on the foregoing, an exploratory study was carried out related to Early Childhood Education Infrastructure in Districts and Cities in South Sulawesi Province. The results of this exploratory study provide an overview of the condition of the development of early childhood education infrastructure in South Sulawesi Province as well as infrastructure management standards which include structuring, maintenance, and infrastructure management signs. Early childhood education infrastructure is all kinds of tools, equipment, or objects that support the implementation of educational activities, care and protection of early childhood optimally. The provision of Early Childhood Education infrastructure needs to be adjusted to the number of children, social, cultural conditions, and types of Early Childhood Education services with the principles of being safe, comfortable, fulfilling health criteria for children, according to the stage of child development and utilizing the potential and resources available in surrounding environment [5].

The functions of early childhood education infrastructure, namely; Equipping a play environment with the right infrastructure for children, Supporting the smooth learning process of children in Early Childhood Education institutions, increasing the efficiency and effectiveness of the implementation of Early Childhood Education by placing the right infrastructure and developing positive characters in children. Benefits of Early Childhood Education Infrastructure; Fostering a sense of security and comfort, motivating children in learning activities, carrying out early childhood education services

properly and learning processes for early childhood education to be more optimal [6, 7].

Children's needs as a basis for infrastructure design. Optimal early childhood growth and development can be achieved if the infrastructure is designed with attention to children's needs, namely children's freedom in carrying out activities. Early childhood is very active, so an environment is needed that provides opportunities for children to move freely. Therefore, it is very important for educators to provide and organize infrastructure that provides stimulation or motor stimulation in children. Children's comfort in using infrastructure. Children will feel free to explore in the environment if the child feels comfortable. Therefore, educators need to plan infrastructure arrangements that foster children's interest in learning. The level of children's ability to use infrastructure. Every child is unique and has different stages of development of abilities. Therefore, educators need to understand and pay attention to the level of difficulty of children in utilizing infrastructure so that children use infrastructure independently. The level of sensitivity of children in using infrastructure. Early childhood needs to be trained in their sensitivity to the environment. Therefore, educators need to provide various experiences that increase their sensitivity to the body's reactions when using infrastructure, for example when children walk on a slightly slippery floor and lose balance so they need to hold on to a wall to restore their balance [8–10].

Based on the foregoing, a preliminary study was carried out related to the implementation of standard guidelines for early childhood education infrastructure after it was published in 2014 and the quality of infrastructure in several early childhood education schools in districts and cities of South Sulawesi Province. This initial study was conducted to determine the implementation of infrastructure standards in the Early Childhood Education unit after publication, and to determine the quality of the infrastructure that has been implemented in the Early Childhood Education unit [11–13].

## 2. Related Works/Literature Review

### 2.1. Understanding Learning Facilities and Infrastructure

Education is one of the main activities that are of important concern for every country as described in Law no. 20 of 2003 article 3 that the purpose of activities is to educate the nation's life and develop humans. Educational activities must also meet national education standards described in government regulation no. 19 of 2005. The scope of national education standards is described in article 2 paragraph 1 which

includes content standards, process standards, competency standards for graduates, standards for education and educational staff, standards for facilities and infrastructure, financing standards, and educational assessment standards. Educational facilities and infrastructure cannot be separated from educational activities, in every educational activity, tools are needed that can help the smooth running of educational activities. Educational goals will run well if they are supported by adequate equipment, so that these goals can be achieved properly. Therefore, the government has prepared a standard for educational facilities and infrastructure as stipulated in the Government Regulation of the Republic of Indonesia Number 19 of 2005 Article 42 which reads [1, 2]:

1. Every educational unit is obliged to have facilities which include furniture, educational equipment, educational media, books and other learning resources, consumables and other equipment necessary to support an orderly and continuous learning process.
2. Every education unit is obliged to have infrastructure which includes land, classrooms, education unit leadership room, teacher room, administration room, library room, laboratory room, workshop room, production unit room, canteen room, power and service installation. a place to exercise, a place of worship, a place to play, a place for recreation, and other spaces / places needed to support an orderly and sustainable learning process.

## 2.2. Kinds of Learning Facilities and Infrastructure

According to Government Regulation Number 19 of 2005 concerning National Education standards, article 1 paragraph (8) states the national education standards, Article 1 paragraph (8) states that the standard of facilities and infrastructure is a national education standard relating to minimum criteria regarding study spaces, sports venues, libraries, laboratories, workshops, playgrounds, creative places and other learning resources needed to support the learning process, including the use of information and communication technology [2].

## 2.3. Early Childhood Activeness

Children have the urge to do something, have their own abilities and aspirations. Likewise with learning, learning cannot be imposed by others and also cannot be delegated to others. Learning is only possible when children are active in their own

experiences. Learning is about what students have to do for themselves, so the initiative must come from within the students themselves. Teachers are only guides and directors [14]. Student learning activeness according to Sudjana [15], is “The process of teaching and learning activities where the subject of students is involved intellectually and emotionally so that they really have an active role and participation in carrying out learning activities.”

From this understanding, it shows that active student learning places students as the core in teaching and learning activities, students here are seen as objects and as subjects. According to cognitive theory, learning shows a very active soul, the soul processes the information we receive, not just storing it without transforming, but processing and transforming the information we receive [14].

Furthermore, Gage and Barliner [14] reveal that: Students as learning subjects have an active, constructive nature and are able to plan something. Students are able to seek, find, and use the knowledge they have acquired. In the teaching-learning process students are able to identify, formulate problems, seek and draw conclusions [14, 15].

### 3. Material & Methodology

#### 3.1. Data

The data sources in this study were formal Early Childhood Education teachers (Kindergarten) and non-formal Early Childhood Education teachers (Playgroups, Child Care Parks), and formal and non-formal Early Childhood Education school principals. The number of respondents who filled out the questionnaire instrument of this study was 352 people. the distribution of respondent data is scattered in regencies and cities of South Sulawesi Province. data collection This survey was conducted from February to March 2020.

#### 3.2. Method

This study uses a quantitative survey method. Survey method is a study in which the main source of data and information is obtained by respondents as a survey sample using a questionnaire as a data collection tool. In this study the data collection of the questionnaire instrument used was based on google form. In general, the sample used as the unit of analysis is an individual.

### 3.3. Table and Figure

Assessment Scale Table	
Scale	Description Value
1	Not Fulfilled (No Evidence)
2	Partially Fulfilled (There Is Evidence)
3	Fully Fulfilled (There is Complete Evidence)
4	Fulfilled and Implemented (Complete Evidence)

TABLE 1: Quality of play areas in early childhood education units

Number	Assessment Aspect	Amount	Percentage	
1	Not Fulfilled (No Evidence)	4	1,78	%
2	Partially Fulfilled (There Is Evidence)	98	43,56	%
3	Fully Fulfilled (There is Complete Evidence)	60	26,67	%
4	Fulfilled and Implemented (Complete Evidence)	63	28,00	%
	summary	225		

TABLE 2: Quality of educator space in early childhood education units

Number	Assessment Aspect	Amount	Percentage	
1	Not Fulfilled (No Evidence)	19	8,44	%
2	Partially Fulfilled (There Is Evidence)	77	34,22	%
3	Fully Fulfilled (There is Complete Evidence)	74	32,89	%
4	Fulfilled and Implemented (Complete Evidence)	55	24,44	%
	summary	225		

TABLE 3: Quality of administrative space in early childhood education units

Number	Assessment Aspect	Amount	Percentage	
1	Not Fulfilled (No Evidence)	12	5,33	%
2	Partially Fulfilled (There Is Evidence)	75	33,33	%
3	Fully Fulfilled (There is Complete Evidence)	79	35,11	%
4	Fulfilled and Implemented (Complete Evidence)	59	26,22	%
	summary	225		

TABLE 4: Quality of the school health unit room in early childhood education units

Number	Assessment Aspect	Amount	Percentage	
1	Not Fulfilled (No Evidence)	78	34,67	%
2	Partially Fulfilled (There Is Evidence)	76	33,78	%
3	Fully Fulfilled (There is Complete Evidence)	37	16,44	%
4	Fulfilled and Implemented (Complete Evidence)	34	15,11	%
	summary	225		

TABLE 5: Bathroom quality in early childhood education units

Number	Assessment Aspect	Amount	Percentage	
1	Not Fulfilled (No Evidence)	20	8,89	%
2	Partially Fulfilled (There Is Evidence)	71	31,56	%
3	Fully Fulfilled (There is Complete Evidence)	60	26,67	%
4	Fulfilled and Implemented (Complete Evidence)	74	32,89	%
	summary	225		

TABLE 6: quality of furniture in early childhood education units

Number	Assessment Aspect	Amount	Percentage	
1	Not Fulfilled (No Evidence)	5	2,22	%
2	Partially Fulfilled (There Is Evidence)	76	33,78	%
3	Fully Fulfilled (There is Complete Evidence)	81	36,00	%
4	Fulfilled and Implemented (Complete Evidence)	63	28,00	%
	summary	225		

TABLE 7: Quality of kitchens in early childhood education units

Number	Assessment Aspect	Amount	Percentage	
1	Not Fulfilled (No Evidence)	70	31,11	%
2	Partially Fulfilled (There Is Evidence)	82	36,44	%
3	Fully Fulfilled (There is Complete Evidence)	39	17,33	%
4	Fulfilled and Implemented (Complete Evidence)	34	15,11	%
	summary	225		

TABLE 8: Quality of worship areas in early childhood education units

Number	Assessment Aspect	Amount	Percentage	
1	Not Fulfilled (No Evidence)	66	29,33	%
2	Partially Fulfilled (There Is Evidence)	79	35,11	%
3	Fully Fulfilled (There is Complete Evidence)	45	20,00	%
4	Fulfilled and Implemented (Complete Evidence)	35	15,56	%
	summary	225		

TABLE 9: Quality of library space in early childhood education units

Number	Assessment Aspect	Amount	Percentage	
1	Not Fulfilled (No Evidence)	82	36,44	%
2	Partially Fulfilled (There Is Evidence)	82	36,44	%
3	Fully Fulfilled (There is Complete Evidence)	36	16,00	%
4	Fulfilled and Implemented (Complete Evidence)	25	11,11	%
	summary	225		

TABLE 10: Quality of consultation rooms in early childhood education units

Number	Assessment Aspect	Amount	Percentage	
1	Not Fulfilled (No Evidence)	52	23,11	%
2	Partially Fulfilled (There Is Evidence)	100	44,44	%
3	Fully Fulfilled (There is Complete Evidence)	46	20,44	%
4	Fulfilled and Implemented (Complete Evidence)	27	12,00	%
	summary	225		

TABLE 11: Quality of parking areas in early childhood education units

Number	Assessment Aspect	Amount	Percentage	
1	Not Fulfilled (No Evidence)	55	24,44	%
2	Partially Fulfilled (There Is Evidence)	75	33,33	%
3	Fully Fulfilled (There is Complete Evidence)	53	23,56	%
4	Fulfilled and Implemented (Complete Evidence)	42	18,67	%
	summary	225		

TABLE 12: Quality of multipurpose rooms in early childhood education units

Number	Assessment Aspect	Amount	Percentage	
1	Not Fulfilled (No Evidence)	95	42,22	%
2	Partially Fulfilled (There Is Evidence)	67	29,78	%
3	Fully Fulfilled (There is Complete Evidence)	33	14,67	%
4	Fulfilled and Implemented (Complete Evidence)	30	13,33	%
	summary	225		



TABLE 13: Quality of washing area in early childhood education units

Number	Assessment Aspect	Amount	Percentage	
1	Not Fulfilled (No Evidence)	21	9,33	%
2	Partially Fulfilled (There Is Evidence)	106	47,11	%
3	Fully Fulfilled (There is Complete Evidence)	51	22,67	%
4	Fulfilled and Implemented (Complete Evidence)	47	20,89	%
	summary	225		

TABLE 14: Warehouse quality in early childhood education units

Number	Assessment Aspect	Amount	Percentage	
1	Not Fulfilled (No Evidence)	80	35,56	%
2	Partially Fulfilled (There Is Evidence)	73	32,44	%
3	Fully Fulfilled (There is Complete Evidence)	35	15,56	%
4	Fulfilled and Implemented (Complete Evidence)	37	16,44	%
	summary	225		

TABLE 15: Quality of telecommunication networks & IT in early childhood education units

Number	Assessment Aspect	Amount	Percentage	
1	Not Fulfilled (No Evidence)	35	15,56	%
2	Partially Fulfilled (There Is Evidence)	71	31,56	%
3	Fully Fulfilled (There is Complete Evidence)	72	32,00	%
4	Fulfilled and Implemented (Complete Evidence)	47	20,89	%
	summary	225		

TABLE 16: Image quality inventory of transportation tools in early childhood education units

Number	assessment aspect	Amount	Percentage	
1	Not Fulfilled (No Evidence)	170	75,56	%
2	Partially Fulfilled (There Is Evidence)	28	12,44	%
3	Fully Fulfilled (There is Complete Evidence)	15	6,67	%
4	Fulfilled and Implemented (Complete Evidence)	12	5,33	%
	summary	225		

## 4. Results and Discussion

### 4.1. Results

Early childhood education service infrastructure consists of (1) main infrastructure and (2) supporting infrastructure. The main infrastructure for early childhood education services is the main infrastructure that every type of early childhood education service must have.

Based on the results of the research that has been done, data analysis was then carried out. The results of the data analysis per item are described below:

#### 4.1.1. Play ground

Does the early childhood education unit have an activity / play area both indoors and outdoors that can develop various concepts of knowledge. Based on the results of this study, data was found: 97.8% of early childhood education units have a play area, and 2.2% of early childhood education units do not have a play area. Then these results were confirmed again in relation to the quality of the play area in this early childhood education unit. By using an assessment scale, the following data were obtained:

1. 28% fulfilled and implemented (there is complete evidence),
2. 26.7% completely fulfilled (complete evidence),
3. 43, 6% partially fulfilled (there is evidence) and
4. 1.8% are not fulfilled (no evidence).

This indicates that the quality of the play area in each early childhood education unit is not uniform due to the ability of the early childhood education unit to organize and provide this play area from its inception to the development process until now.

#### 4.1.2. Educator room

Does the early childhood education unit have an educator room that functions as a gathering place for educators to exchange ideas in order to compile and evaluate learning programs, as well as improve the internal quality of educators with peers. Based on the results of this study, it was found that data: 87.2% of early childhood education units had teachers' rooms, and 12.8% of early childhood education units had no teachers' rooms. Then these results were confirmed again in relation to the quality of the educator room in this early childhood education unit. By using an assessment scale, the following data were obtained:

1. 24.6% fulfilled and implemented (there is complete evidence);
2. 32.6% completely fulfilled (complete evidence);
3. 34, 4% partially fulfilled (there is evidence); and
4. 8.5% not fulfilled (no evidence).

### 4.1.3. Administrative room/ leadership room/ principal/ manager

Whether early childhood education units have administrative room / leadership room / principal / manager serves as a place to carry out institutional administrative management activities as well as a meeting room with various elements such as guests from related agencies, school committees, educators and others. Based on the results of this study, it was found that data: 92.5% of early childhood education units have administrative rooms, and 7.5% of early childhood education units do not have administrative rooms. Then these results were confirmed again in relation to the quality of the administration room in this early childhood education unit. By using an assessment scale, the following data were obtained:

1. 26.2% fulfilled and implemented (there is complete evidence);
2. 35.1% completely fulfilled (complete evidence);
3. 33, 3% partially fulfilled (there is evidence); and
4. 5.3% not fulfilled (no evidence).

### 4.1.4. School Health Unit

Does your early childhood education unit have a school health unit, which functions as a place for early treatment for children or educators / education staff who experience health problems? Based on the results of this study found data: 53.1% of early childhood education units have school health unit, and 46.9% of early childhood education units do not have school health unit. Then this result was confirmed again regarding the quality of medical examination room in this early childhood education unit. By using an assessment scale, the following data were obtained:

1. 14.7% fulfilled and implemented (there is complete evidence);
2. 16.5% completely fulfilled (complete evidence);
3. 33, 9% partially fulfilled (there is evidence); and
4. 34.8% not fulfilled (no evidence).

### 4.1.5. Bathrooms for children and adults

Whether early childhood education units have bathrooms for children and adults that function for self-cleaning (washing hands / feet, tub, chapters) and the bathroom door

should not be easily locked. Based on the results of this study, it was found that data: 95% of early childhood education units have bathrooms, and 5% of early childhood education units do not have bathrooms. Then these results were confirmed again in relation to the quality of km in this early childhood education unit. By using an assessment scale, the following data were obtained:

1. 32.9% fulfilled and implemented (there is complete evidence);
2. 26.7% completely fulfilled (complete evidence);
3. 31, 6% partially fulfilled (there is evidence); and
4. 8.9% not fulfilled (no evidence).

#### **4.1.6. Furniture**

Does the early childhood education unit have furniture that functions as equipment inside and outside the learning room, such as tables, chairs, cabinets, lockers, places of work, etc. to facilitate the continuity of learning activities and the number of furniture provided is adjusted to the needs of the institution. Based on the results of this study, data was found: 95% of early childhood education units have furniture, and 5% of early childhood education units do not have furniture. Then these results were confirmed again related to the quality of the furniture in this early childhood education unit. By using an assessment scale, the following data were obtained:

1. 28% fulfilled and implemented (there is complete evidence),
2. 36% fully fulfilled (complete evidence),
3. 33, 8% partially fulfilled (there is evidence) and
4. 2,2% not fulfilled (no evidence).

#### **4.1.7. Supporting infrastructure**

Supporting infrastructure is the infrastructure suggested for each type of early childhood education service. Based on the results of the survey that was conducted, data analysis was then carried out. The results of the data analysis by item are described below:

## Kitchen

Does the early childhood education unit have a kitchen that functions as a place to process food and store cooking utensils, foodstuffs, a refrigerator or a breast milk cooler? All equipment arranged and grouped according to function / use. Based on the results of this study, data was found: 50% of early childhood education units have kitchens, and 50% of early childhood education units do not have kitchens. Then these results were confirmed again related to the quality of the kitchen in this early childhood education unit. By using an assessment scale, the following data were obtained:

1. 14.3% fulfilled and implemented (there is complete evidence)
2. 17.5% fully fulfilled (complete evidence);
3. 36, 8% partially fulfilled (there is evidence); and
4. 31.4% not fulfilled (no evidence).

## Worship area

Does the early childhood education unit have an area of worship that functions as a place to carry out worship activities in accordance with the religion of each child in order to stimulate all aspects of development, especially aspects of moral and religious values. Based on the results of this study, it is found that data: 58% of early childhood education units have worship areas, and 42% of early childhood education units do not have worship areas. Then this result was confirmed again in relation to the quality of the worship area in this early childhood education unit. By using an assessment scale, the following data were obtained:

1. 14.8% fulfilled and implemented (there is complete evidence);
2. 20.2% fully fulfilled (complete evidence);
3. 35, 4% partially fulfilled (there is evidence); and
4. 29.6% not fulfilled (no evidence).

## Library room

Does the early childhood education unit have a library room that functions as a place to increase knowledge of various fields of science and as a forum for exchanging

information between children, teachers and children, especially in encouraging children to enjoy reading. Based on the results of this study, it was found that: 45.1% of early childhood education units have library rooms, and 54.9% of early childhood education units do not have library rooms. Then these results were confirmed again related to the quality of the library space in this early childhood education unit. By using an assessment scale, the following data were obtained:

1. 11.1% fulfilled and implemented (there is complete evidence);
2. 16% completely fulfilled (there is complete evidence);
3. 36, 4% partially fulfilled (there is evidence); and
4. 36.4% not fulfilled (no evidence).

### Consultation room

Does the early childhood education unit have a consultation room that functions as a place for discussion and consultation in solving problems related to children, parents, educators. Based on the results of this study, it was found that data: 61.3% of early childhood education units had consultation rooms, and 38.7% of early childhood education units did not have consultation rooms.

Then these results were confirmed again in relation to the quality of the consultation room in this early childhood education unit. By using an assessment scale, the following data were obtained:

1. 12% fulfilled and implemented (there is complete evidence),
2. 20.4% completely fulfilled (complete evidence),
3. 44, 4% partially fulfilled (there is evidence) and
4. 23.1% were not fulfilled (no evidence).

### Parking area

Does the early childhood education unit have a parking area to function as a place to store vehicles belonging to all people with an interest in the institution (in a safe place, under supervision, and not to disturb learning traffic). Based on the results of this survey, data was found: 66.5% of early childhood education units have parking areas, and 33.5% of early childhood education units do not have parking areas.

Then this result was confirmed again in relation to the quality of the parking area in this early childhood education unit. By using an assessment scale, the following data were obtained:

1. 18.3% fulfilled and implemented (there is complete evidence);
2. 23.7% are fulfilled entirely (there is complete evidence);
3. 33, 5% partially fulfilled (there is evidence); and
4. 24.6% are not fulfilled (no evidence).

### **Multipurpose room**

Does the early childhood education unit have a multipurpose room that functions as a multipurpose place for conducting activities and meetings held by the institution. Based on the results of this study, it was found that the data: 43.1% of early childhood education units have multipurpose rooms, and 56.9% of early childhood education units do not have multipurpose rooms.

Then this result was confirmed again in relation to the quality of the multipurpose room in this early childhood education unit. By using an assessment scale, the following data were obtained:

1. 13.3% fulfilled and implemented (there is complete evidence),
2. 14.7% completely fulfilled (complete evidence),
3. 29, 8% partially fulfilled (there is evidence) and
4. 42.2% not fulfilled (no evidence).

### **Washing area**

Does the early childhood education unit have a washing area that functions as a place to clean all devices related to children and the needs of the institution in learning activities. Based on the results of this study, it was found that data: 81.8% of early childhood education units already have a washing area, and 18.2% of early childhood education units do not have a washing area.

Then these results were confirmed again regarding the quality of the washing area in this early childhood education unit. By using an assessment scale, the following data were obtained:

1. 20.9% fulfilled and implemented (there is complete evidence),
2. 22.7% completely fulfilled (complete evidence),
3. 47.1% partially fulfilled (there is evidence) and
4. 9.3% not fulfilled (no evidence).

## Warehouse

Does the early childhood education unit have a warehouse that functions as a place to store learning equipment outside of activities, a place to temporarily store non-functioning/ non-functioning equipment and a place to store archives that are more than 5 years old. Based on the results of this study, data was found: 53.1% of early childhood education units have warehouses, and 46.9% of early childhood education units do not have warehouses.

Then these results were confirmed again in relation to the quality of the warehouse in this early childhood education unit. By using an assessment scale, the following data were obtained:

1. 16.5% fulfilled and implemented (there is complete evidence),
2. 15.6% completely fulfilled (complete evidence),
3. 32.1% partially fulfilled (there is evidence) and
4. 35.7% not fulfilled (no evidence).

## Telecommunication Network & IT

Does the early childhood education unit have a telecommunication network & it which functions to facilitate communication with parents and stakeholders / stakeholders via telephone and internet networks. Based on the results of this study, it was found that data: 79.3% of early childhood education units had telecommunication & IT networks, and 20.7% of early childhood education units did not have telecommunication networks & IT. Then these results were confirmed again related to the quality of the telecommunication & IT network in this early childhood education unit. By using an assessment scale, the following data were obtained:

1. 21% fulfilled and implemented (there is complete evidence),



2. 31.7% fully fulfilled (complete evidence),
3. 31.7% partially fulfilled (there is evidence) and
4. 15.6% not fulfilled (no evidence).

### **Inventory of means of transportation**

Does the early childhood education unit have transportation inventory of means of transportation that serves to support the daily routine of the institution. Based on the results of this study, it is found that data: 18% of early childhood education units have inventory transportation means of transportation, and 82% of early childhood education units do not have inventory transportation means of transportation. Then these results were confirmed again in relation to the quality of the inventory transportation means of transportation in this early childhood education unit. By using an assessment scale, the following data were obtained:

1. 4.9% fulfilled and implemented (there is complete evidence),
2. 6.7% completely fulfilled (complete evidence),
3. 12.5% partially fulfilled (there is evidence) and
4. 75.9% not fulfilled (no evidence).

## **5. Conclusion**

Based on the results of research related to infrastructure standards and infrastructure quality, the conclusions that can be drawn from the analysis of these data are: The infrastructure standards in each early childhood education unit are not uniform, this is because the ability of the early childhood education unit to procure and provide this infrastructure from the time it was founded until the development process has varied. In addition, the provision of infrastructure that meets the standards has not become a priority for early childhood education units, because it is more concerned with early childhood education facilities in early childhood education units and incentives for educators and education personnel. The requirements for managing infrastructure in early childhood education institutions, related to the land for the establishment of early childhood education institutions, include, among other things, the following:

1. The land is in accordance with the location designation stipulated in the local regional spatial plan.

2. The land area is adjusted to the type of service, the number of children, and the age group served, at least 3 m<sup>2</sup> per child.
3. Soil conditions must be stable and have sufficient bearing capacity to accept building loads.
4. The location is not close to the center of environmental pollution, such as: water pollution, noise, air pollution, and high-voltage airways.

The requirements for infrastructure management in early childhood education institutions related to buildings, generally pay attention to the following:

1. Buildings meet construction safety requirements that are sturdy and stable, earthquake resistant, and are equipped with a protection system to prevent and overcome hazards such as fire, flood, lightning, and others.
2. Buildings meet health and comfort requirements, such as having adequate air ventilation and lighting, having water sanitation (clean water channels, sewage / sewage channels, rainwater drains), garbage disposal sites, equipped with electrical installations.
3. Has at least a room that can be used to carry out children's activities consisting of an indoor and outdoor space, a bathroom and / latrine / toilet that can be used for personal hygiene and a tub / chapter with sufficient clean water.
4. The building meets accessibility requirements, including for children with special needs.

Furniture is one part of early childhood education infrastructure that is used in learning activities through play which can be moved and arranged, and provided as needed and can be used directly and indirectly. The edges and surfaces of the wood must be clean from splinters. Rough surfaces can be caused by not being clean cutting or grinding the material. Certain infrastructure sometimes requires metal wires or rods to support its function. Therefore, to maintain the safety of children playing, the wire or metal rod must pass the test that if it is broken it does not cause sharp edges and sharp edges, does not rust/corrosion.

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