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## Architectural Conditions of a Jakarta State Vocational School: A Child-friendly School Design Perspective

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### ABSTRACT

*This research aims to explain the design principles of child-friendly vocational schools, describe the architectural conditions of the facilities and infrastructure in Jakarta 1 State Vocational School, and explain their suitability based on the design principles of child-friendly vocational schools. This research uses a qualitative approach with a descriptive method. Data collection techniques in this research use observation and documentation. The object of this research is the facilities and infrastructure of Jakarta 1 State Vocational School in the scope of a general learning room, a supporting learning room, and a specific learning room for construction and property engineering expertise. The final result explains that the architectural conditions of the facilities and infrastructure in Jakarta 1 State Vocational School are very suitable following the design principles of a child-friendly vocational school, including safety, health, comfort, easiness, and security requirements. The final suitability score is 74.5%. The most suitable assessment is on the Safety criteria, while the lowest is on the Comfort criteria.*

**Keywords:** *Child-friendly School, Child-friendly Vocational School, School Facilities, Infrastructure, Vocational High School.*

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### INTRODUCTION

Vocational secondary education will be attended by students aged 16-18 years who categorized as a school-age children who are classified as teenagers (Kesehatan, 2014). Hasselt and Hersen argued that "*adolescence is also known as the period "in between period", which is a period when individuals can no longer*

*be classified as children but are immature when classified as adults"* (Priatini, Latifah, & Guhardja, 2008). At this time, children will continue to make adjustments to the environment around them. One type of superior development in adolescents is the existence of "social cognition". In this development, adolescents have the ability to understand the people around them. This ability to recognize, can support adolescents to be able to seek and relate socially with their peers (Fatmawaty, 2017).

Therefore, as one of the environments that will influence the student's social development, the school must be created into an adequate environment. An effective school is a school that can affect the development of children as their students, both psychologically, in thought, and in the heart, providing knowledge that is national and meets the standards of educational policies, and the school is accredited (Irwanto, 2020). Regarding how schools are effective, eight educational standards must be appropriately met through the Government Regulation of the Republic of Indonesia Number 19 of 2005 concerning National Education Standards (SNP) (Pusat, 2005). However, in reality, the average SNP achievement for 2016 – 2018 on Vocational High Schools in Central Jakarta City itself has not complied with two weak points SNP, where one of them being Standard of Educational Facilities and Infrastructure, with a score of 3.14 out of 5.

Educational facilities are all facilities, including; equipment, accessories, materials, and furnishings, used directly in the learning process. Meanwhile, educational infrastructure means facilities that indirectly support the course of educational activities (Indrawan, 2015). It can be concluded that facilities and infrastructure are in the form of a mass of buildings and furniture inside, which can be related to the school's architecture as an educational building. Regarding the architectural scope, facilities and infrastructure should be adapted to the needs of their use, which can be seen through the habits and daily activities of children at school.

The architectural condition of the school can be defined as a description of the

architectural condition of the school building. According to Ching (2000) regarding architectural elements, the architectural conditions of the school can be explained through how the masses, floor plans, appearance, structural systems used, building sites, spatial organization, circulation, and materials used in school buildings .

Related to how schools should be conditioned for children as students, this ultimately becomes a demand for rights that must be fulfilled by students who can be associated through the implementation of the Child-Friendly School (CFS) Concept. In Indonesia, CFS is a policy issued in 2015 by the Ministry of Women's Empowerment and Child Protection (Anak, 2015).

The CFS concept was put forward globally by UNICEF in 2009. The application of CFS will be different in each region because there are adjustments to different problems, which are seen from the reality of the situation and the demands of society. Examples of differences in the application of CFS are; the application to buildings, which includes facilities and infrastructure in schools, the application to the implementation of education, which includes teaching methods and curricula, and the applications to utilize alternative resources (Cinta, 2017). The implementation of the CFS refers to six components, and one of them is facilities and infrastructure. However, regarding the implementation of SRA in vocational schools, there needs to be a specific explanation regarding the facilities and infrastructure for a child-friendly skills program.

Vocational schools have learning activities that aim to prepare their students to be able to enter the professional world of work. Learning activities in the form of practice are identical to vocational schools. Therefore, in its implementation, it is necessary to have adequate facilities and infrastructure that can support practical learning activities. Through this, some of the basic principles of child-friendly vocational schools can be reflected through the proper fulfilment of facilities and infrastructure according to existing standards. In addition, child-friendly vocational schools must create a safe school environment to protect students from acts of violence from internal or external environmental conditions.

Based on that, this research aims to answer the following research questions.

1. How the design principles of child-friendly vocational schools, especially in the Construction and Property Technology expertise program,
2. Describe the architectural conditions of facilities and infrastructure at Jakarta 1 State Vocational School, and
3. Reviewed their suitability based on the design principles of child-friendly vocational schools.

## RESEARCH METHODOLOGY

This research is located at Jakarta 1 State Vocational School, which is one of the vocational schools in Central Jakarta, Indonesia. The object of this research is facilities and infrastructure of Jakarta 1 State Vocational School on the group of general learning room, supporting learning room, and specific learning

room for construction and property engineering expertise. This research uses a qualitative approach with descriptive method. Data analysis in this research is consisted of Four stages as shown in the following diagram.

Data collection techniques in this research is using observation and documentation. The observation technique aims to obtain an overview of the existing conditions and the suitability of the facilities and infrastructure of Jakarta 1 State Vocational School with the child-friendly vocational school design principles. The implementation of this technique uses an observation sheet that contains an assessment in the form of a score with rating points 0, 1, and 2 for each assessment indicator.

The assessment was carried out based on five requirements of child-friendly vocational school design principles. These requirements are; Safety, Health, Comfort, Easiness and Security. The observation sheet has been prepared based on the results of an analysis of theoretical studies related to child-friendly vocational school, which are taken from the Child-Friendly School Manual (UNICEF, 2009), *Panduan Sekolah Ramah Anak* (Anak, 2015), *Norma & Standar Laboratorium/ Bengkel SMK Kompetensi Keahlian DPIB dan BKP Tahun 2021* (Darmono et al., 2021), and *Peraturan Menteri Pendidikan dan Kebudayaan Republik Indonesia No. 40 Tahun 2008* (Nasional, 2008). All of these sources were analyzed and arranged into observation sheets as shown in Table 1.

At the same time, documentation techniques used for data documentation in the form of

photos or texts as a complement to the observation techniques.

Table 1. Observation Sheet as an Instrument in This Research.

Criteria	Indicator
<b>Safety</b>	1. Location
	2. Building Mass
	3. Accessibility
	4. Electrical Installation
	5. Fire Protection
	6. Disaster Evacuation System
	7. Operational
	8. Furniture
<b>Health</b>	1. Material
	2. ventilation
	3. lighting
	4. CFS Facilities and Infrastructure
	5. sanitation
	6. Medical facility
	7. operational
<b>Comfort</b>	1. Zoning
	2. CFS Facilities and Infrastructure
	3. Flexibility
	4. Building Mass
	5. Space Comfort (Visual, Thermal, Audial)
	6. Spatial Planning (Dimensions and Placement of Furniture/ Learning
<b>Easiness</b>	1. Accessibility
	2. Flexibility
	3. CFS Facilities and Infrastructure
	4. Circulation
	5. Sanitation
	6. Spatial Planning (Placement of Furniture/Study Facilities)
<b>Security</b>	1. Location
	2. Building Mass
	3. Space Transparency
	4. furniture
	5. SRA Facilities and Infrastructure
	6. operational

On the final stage of data analysis, the data will be verified to draw conclusions regarding the architectural conditions of facilities and infrastructure of Jakarta 1 State Vocational School based on the design principles of a child-friendly vocational school. At this stage, the data will be calculated according to the percentage and categorized based on Table 2.

Table 2. Suitability Based on Percentage Categories

Interval	Categories
81 – 100 %	Very Suitable
66 – 80 %	Suitable
56 – 65 %	Quite Suitable
41 – 55 %	Not Suitable
<41 %	Very Not Suitable

## RESULT AND DISCUSSION

### Child-Friendly Vocational School Design Principles

The application of child-friendly vocational school design principles refers to the Child-Friendly School guidelines which issued by the Ministry of PPPA in Indonesia and UNICEF. A child-friendly school itself is a school model that uses the child-friendly concept as an ideology by providing safe schools, trained educators, and adequate learning environment resources (UNICEF, 2009). Through this, the principles of vocational school design will be reflected through five requirements include Safety, Health, Comfort, Easiness, and Security requirements, that are adapted to the characteristics of adolescents who are in between period and their learning activities in vocational schools, especially in the

Construction and Property Engineering expertise program.

### 1. Safety Requirement

In this requirement, architectural design principles are implemented through the availability of demarcation of the work area in the learning room specifically for expertise programs as have been provided on SNI 6350:2016 (Batubara, 2016). The standard rules out that organizations supposed to minimize the installation of hanging furniture or in the learning facilities, or maximizing their installation so that they are strong by using anchors (Darmono et al., 2021). The example of standard's implementation is visualized in Figure 2.

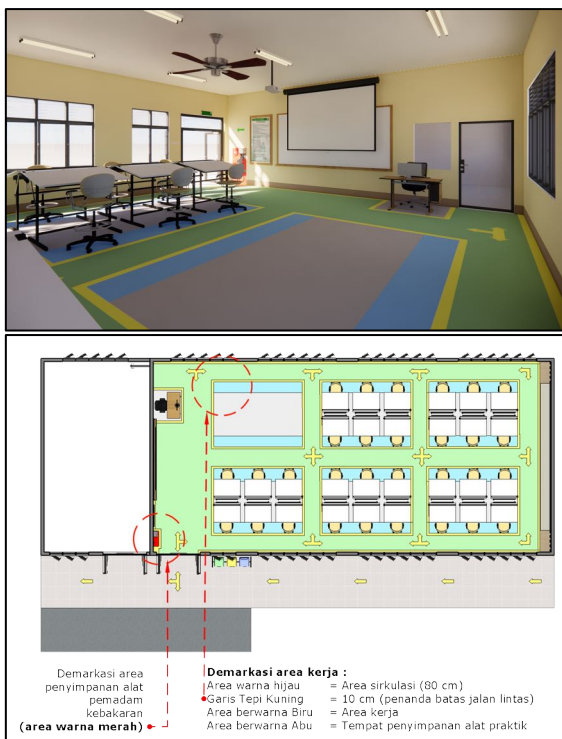


Figure 2. Visualization of Demarcation of The Work Area in The Learning Room.

Another implementation is the availability of active and passive fire protection, signage and similar architectural elements as evacuation instructions and warnings related to

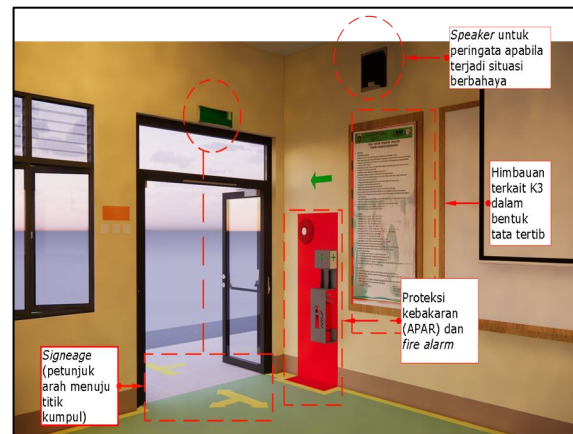


Figure 3. Visualization of Safety Requirement Design Principle.

Occupational Health and Safety (OHS). The safety implementation is depicted in Figure 3.

### 2. Health Requirement

Architecturally, design principles are reflected through the availability of permanent openings and ventilation in the form of jalousie for lighting and ventilation in the space. Another implementation is the use of materials that do not have a negative impact on the user's health, which can be realized by using bright colors and minimal content of harmful substances. The visualization of the compliance to health requirement is depicted in Figure 4. In line with Myers' opinion (in Majidah et al., 2019), color in the classroom will affect the way in which we see and process information, so that we will better memorize words and pictures. Another example of implementations are the availability

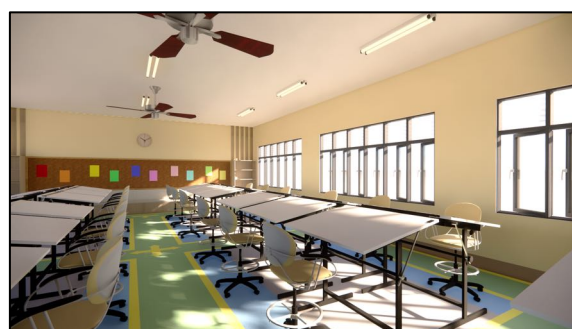


Figure 4. Visualization of Health Requirements Design Principle.

of signage and similar architectural elements related to OSH and the availability of health facilities in the form of first aid.

### 3. Comfort Requirement

The design principle in this requirement is implemented through the availability of creativity space in each learning room (Anak, 2015). This because most of the time they will run out in the learning room, so they need facilities to reduce boredom while participating in learning activities and for facilitate their characteristics who like to seek information and be creative (Fatmawaty, 2017). Figure 5 depicts the creativity space.



Figure 5. Visualisation of Creativity Space in The Form of Wall Magazines, Reading and Sitting Areas.

Another idea for implementations are the availability of space with a minimum area according to the ratio of students for each type of learning space as illustrated in Figure 6. The availability of furniture and learning facilities that are sized according to students and applicable standards according to standard by Panero and Zelnik (1979) and Neufert (1996). The availability of furniture with the layout is in accordance with the space for movement, and about the fulfillment of comfort in space including; (1) thermal comfort with an opening by  $>5\%$  room area, (2) visual comfort with minimum lighting by 250 Lux and avoidance of

sun glare (Indonesia, 2001), and (3) auidal comfort with minimum noise level by  $<55$  dB (Hidup, 1996).

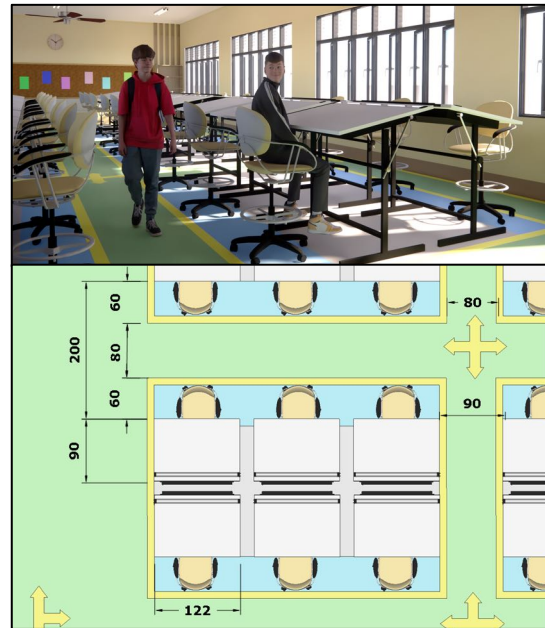


Figure 6. Layout of Learning Facilities in Accordance with The Rules of Space.

### 4. Easiness Requirement

Architecturally, the design principles in this requirement are implemented in several ways, include; (1) Availability of ramps as a means to facilitate users in accessing the room in several conditions, (2) vailability of room doors with a width of 80 – 90 cm that open to the outside, (3) Location of learning rooms that are integrated with outdoor space, (4) Layout of



Figure 7. Visualisation of Easiness Requirement About Availibility of The Ramp and The Door That Open to The Outside.

learning facilities that make it easy for individual and group learning activities (Anak, 2015).

Related to the layout of learning facilities as an implementation, this is in line with workshop management as a strategy to achieve workshop goals through planning, organizing, actuating and controlling (Ali, 2014). In this case, the layout of learning facilities can be positioned according to the workflow of practicum activities so that zoning is formed to separate activities, which will make it easier in terms of controlling. Moreover, another implementation that can support this requirement is the availability of signage as a marker for circulation routes to facilitate evacuation. Figure 7 visualizes the Easiness Requirement.

## 5. Security Requirement

Through the existence of Operational elements in the architectural elements of child-friendly schools put forward by Cinta (2017), and regarding to the criteria for teenagers who

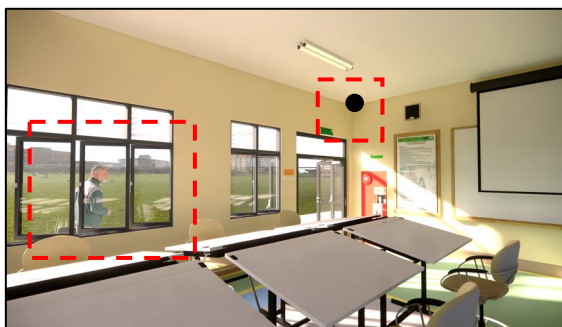


Figure 8. Visualization of Spatial Transparency Indicators on design principles on Security Requirements.

like to find out and have the hope of learning a lot (Fatmawaty, 2017), so the learning room should be used at any time.

To provide these facilities, the design principle in this requirement is carried out through; (1) The use of safe materials that do not contain many hazardous chemicals such as using an epoxy floor with a low VOC content as a material for demarcating the floor area of learning room, (2) The location of the learning room that is not hidden, (3) about Installation of windows, so that activities in the room can be monitored directly from outside the room, (4) availability of the CCTV in learning rooms and other areas in schools that have minimal supervision, and (5) availability of signage or similar architectural elements that contain appeals related to OSH in the form of rules for using the learning room, and prohibitions on things that students are not allowed to do. Figure 8 illustrates the visual transparency concept.

## Architectural Condition of Facility and Infrastructure of Jakarta 1 State Vocational School

Most of the facilities and infrastructure at Jakarta 1 State Vocational School have been fulfilled in accordance with the provisions stipulated by the Ministry of Education (Nasional, 2008), as well as



Figure 9. Heritage Building Facade.

Laboratory/Workshop Standards & Norms for Vocational High School Construction Technology and Property expertise program. This school has a land area of 16,700 m<sup>2</sup> and located on the edge of Jalan Raya Budi Utomo,

with a GSB (*Garis Sempadan Bangunan*) of 550 cm.

Depicted in Figure 9, some of the infrastructure is in the form of General Learning Room, located in a cultural Heritage Buildings. Classrooms in this building have a size of 72 m<sup>2</sup> for 36 students. Figure 10 depicts the interior materials used are white wall paint for wall



Figure 10. Classroom layout in Heritage Building of The Schools.

coverings, grey tiles for floor coverings, and white plywood for ceiling coverings. Regarding room comfort, this room has a lighting level of 210 Lux, while the measured noise in this room is 52 dB, and the temperature in this room is 28.8°C.



Figure 11. Learning Facilities of the School.

This school has various types of learning facilities in the form of study tables and chairs as illustrated in Figure 11. In the classroom, the

types of tables and chairs used are tables and chairs with natural materials in the form of wood and have a connected shape. While in other study rooms, study tables and chairs have separate shapes and use artificial materials in the form of Plywood with HPL finishing. Another learning facility is a bookshelf in the library room. This shelf has a height that matches the height standards of students. With regard to learning facilities in special learning rooms, schools have not used special facilities such as the use of special drawing tables for learning activities in technical drawing and mock-up making subjects.

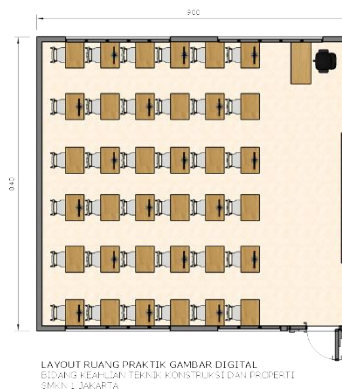


Figure 12. Layout of Specific Learning

Figure 12 exemplifies the layout of facilities and infrastructure in the specific learning room group, the school has manual drawing practice rooms, digital drawing practice



Figure 13. Outdoor Space of The School.



rooms, and practice workshops, with a variety of architectural conditions including room interiors, furniture layout, and visual, audial, and thermal comfort in the rooms. Regarding the furniture layout, most learning rooms use a single desk layout

Meanwhile, with regard to facilities and infrastructure that must be owned by schools in the support group, this school has an outdoor space in the form of a playground with two types of fields that can be used for playing activities, sports, ceremonies, extracurricular activities, and others that are easy to access, from their classroom, as it is illustrated in Figure 13. In addition, the school also has a hall that can be used for activities both internally and externally by parties outside the school. To accommodate the needs of adolescent students with their various problems, the school also provides a counseling room designed to protect student's privacy.

### Conformity Results Based on Child-Friendly Vocational School Design Principles

Through the observation activities that have been carried out, the suitability of the facilities and infrastructure of Jakarta 1st State Vocational School based on child-friendly vocational school design principles is in the suitable category, with an assessment percentage of 74.5%. Table 3 is the ranking of the ratings based on the difference of the score for each

requirement in child-friendly vocational school design principles.

Table 3. The results of The Suitability Assessment Ranking are Based on The Lowest Difference Score

Requirement	Score Obtained	Maximum Score	Difference Score
Security	71	92	21
Safety	48	70	22
Health	93	116	23
Easiness	128	164	36
Comfort	211	302	91
<b>Total</b>	<b>551</b>	<b>744</b>	<b>193</b>

$$P = \frac{x}{y} \times 100 \%$$

$$P = \frac{551}{744} \times 100 \%$$

**P = 74,5 %**

Based on observations and calculations, the facilities and infrastructure of Jakarta 1 State Vocational School are suitable with the design principles of a child-friendly vocational school consisting of Security, Safety, Health, Easiness, and Comfort requirements. However, there are still some deficiencies to qualify maximally about child-friendly vocational schools. The following are the deficiencies in the facilities and infrastructure of Jakarta 1 State Vocational School based on child-friendly vocational school design principles.

#### 1. Security Requirement

In this requirement, the lowest assessment is on Operational indicators including OHS (Occupational Health and Safety), Building Mass, and Spatial

Transparency. The condition of Operational indicators, architectural elements in the form of signage which contain rules for using room have not been installed properly in each practice room. Then, on the spatial transparency indicator, there is a hidden specific learning room which available without any supervision in the form of CCTV cameras. Meanwhile, indicators which on highest assessment are; Location, Furniture, and Child-Friendly School Facilities and Infrastructure.

## **2. Safety Requirement**

In terms of safety, the lowest assessment is on Circulation indicator within the scope of the expertise program because demarcation with good conditions is not yet available on their learning room. Another lowest assessment is on the Disaster Evacuation System indicator, because there is no evacuation signage in good condition. Meanwhile, indicators which on highest assessment in this requirement are Location, Electrical Installation, School Circulation, Building Mass, Fire Protection, Furniture, and Operations on Occupational Health and Safety (OHS).

## **3. Health Requirement**

In this requirement, the indicators with the highest ratings are Lighting, CFS Facilities and Infrastructure, Sanitation, and Air Conditioning. Meanwhile, indicators with low ratings are; Space Material, because there is dark color which use for the interior of learning room. Another low rating is on Operational indicators including Occupational Health and Safety, as well as Health Facilities indicators due to the

unavailability of First Aid in each specific learning room of construction and property engineering expertise.

## **4. Easiness Requirement**

in terms of Ease, indicators which on the lowest assessment are Child-Friendly School Facilities and Infrastructure, Circulation, and Accessibility. On the indicator of child-friendly school facilities and infrastructure, Jakarta 1 State Vocational School has not provided signage in good condition to show assembly points and evacuation routes. Then, on the circulation indicator based on the conditions that have been set regarding the standard size of the stairs, there is a discrepancy in the requirements for the stair width, the size of the steps, and the size of the stair vines. Meanwhile, for accessibility indicators, schools do not yet have a ramp specifically for disabilities on the pathway to the learning room. Meanwhile, the indicators with the highest rating are; Flexibility, Sanitation, and Learning Facilities Layout.

## **5. Comfort Requirement**

In terms of Comfort Requirement as a requirement with the lowest rating, there are good ratings on the indicators of Building Mass, Zoning, and CFS Facilities and Infrastructure. Meanwhile, for indicators with low scores is on Flexibility which there is no available learning area that can be used outside of class hours, because the location of the room is far from the reach of the teacher's direct supervision. Besides that, Jakarta 1 State Vocational School also has not provided CFS facilities and infrastructure

related to the availability of creativity area in each learning room

Another lowest assessment is in the Spatial Planning indicator, because some learning room do not yet have a minimum area that is in accordance with the ratio of students. In addition, the layout of learning facilities is also not in accordance with the space for students to move.

Another low assessment is on the comfort indicators of space and furniture. In this indicator, there are standards based on SNI (*Standar Nasional Indonesia*) that must be met including visual, thermal and audial comfort. However, the existing reality is that there are several rooms that have not met visual and thermal comfort. Whereas in the furniture indicator, there are learning facilities that do not match the size and type with the applicable standards or regulations.

## **CONCLUSION AND RECOMENDATION**

### **Conclusion**

The principle of child-friendly vocational school design, there are five requirement that must be met, include Safety, Health, Comfort, Easiness, and Security requirement. Basically, a child-friendly school is a school model that uses the child-friendly concept as an ideology by providing safe schools, trained educators, and adequate learning environment resources (UNICEF, 2009). However, in this research, because the research object was a secondary education level school followed by teenagers at the 15-18 years old level, the principles of child-friendly school design were adapted to their characteristics and learning activities in the

Construction Technology and Property expertise program.

Through this, it can be illustrated that some of the basic principles of child-friendly vocational schools can be reflected through the fulfillment of facilities and infrastructure properly and in accordance with existing standards, and creating a safe school environment to protect students from acts of violence originating from internal or external environmental conditions. This is a form of responsibility to fulfill children's rights as the main concept of the basic principles of child-friendly schools.

Based on the results of research related to the architectural conditions of facilities and infrastructure at Jakarta 1 State Vocational School, there are several existing findings that the condition of the dimensions of the special learning space is still not up to standard. In addition, the interior materials used in some of the existing infrastructure still use colors that don't create a bright atmosphere. Furthermore, in the condition of the facilities, there are several main learning facilities that are not in accordance with the size and type of standards, and are difficult to condition for use in group learning activities. Also, there is no creative space available in each learning room to accommodate the characteristics of students and some areas in the school are still minimal supervision.

Overall, based on research observation, the suitability of the architectural conditions about the facilities and infrastructure of Jakarta 1 State Vocational School in terms of the child-friendly vocational school design principles is suitable with the percentage assessment score of

74.5%. This shows a **good condition**, with the highest rating is on Safety requirements and the lowest rating are on Easiness and Comfort requirements.

### Recomendation

From this research, it is hoped that future researchers will be able to develop deeper research regarding the design principles of child-friendly vocational schools in construction and property technology expertise programs or in other programs of expertise. In addition, hopes that this research can be reviewed again by the government to be used as a reference in creating child-friendly vocational schools, bearing in mind that there are no child-friendly school design principles specifically for the vocational high school level.

### REFERENCES

- Ali, M. (2014). *Manajemen Laboratoium / Bengkel*. Fakultas Teknik Universitas Negeri Yogyakarta.
- Anak, D. T. K. (2015), *Panduan Sekolah Ramah Anak Deputi Tumbuh Kembang Anak. Kementerian Pemberdayaan Perempuan dan Perlindungan Anak*.
- Batubara, K. K. K. P. M (2016). *Demarkasi di area pertambangan (SNI 6350:2016)*
- Ching, F.D.K. (2000). *Arsitektur: Bentuk, Ruang dan Tatanan*. Jakarta: Penerbit Erlangga.
- Cinta, A. S. (2017). *Felksibilitas Ruang Perancangan Sekolah Ramah Anak*. Desain Thesis.
- Darmono, D., Surjono, H. D., Khairudin, M., Nugraheni, M., Ismara, K., Fitrihana, N., ... & Sunardi, S. (2021). *Norma dan standar laboratorium/bengkel SMK: kompetensi keahlian desain pemodelan & informasi bangunan*.
- Fatmawaty, R. (2017). *Memahami Psikologi Remaja. Reforma: Jurnal Pendidikan Dan Pembelajaran*, 6(2). <https://doi.org/10.30736/rfma.v6i2.33>
- Hidup, M. N. L. H. (1996). *Keputusan Menteri Negara Lingkungan Hidup Nomor: KEP-48/MENLH/11/1996 tentang Baku Tingkat Kebisingan*.
- Indonesia, B. S. N. (2001). *SNI 03-6575-2001 Tentang Tata Cara Perancangan Sistem Pencahayaan Buatan Pada Bangunan Gedung*, 1–32.
- Indrawan, I. (2015). *Pengantar manajemen sarana dan prasarana sekolah*. Deepublish.
- Irwanto, I. (2020). *Model pembelajaran pendidikan vokasional yang efektif di era revolusi industri 4.0. Taman Vokasi*, 8(1), 58. <https://doi.org/10.30738/jtv.v8i1.7265>.
- Kesehatan, K. (2014). *Peraturan Menteri Kesehatan Nomor 25 tahun 2014 tentang Upaya Kesehatan Anak*.
- Majidah, M., Hasfera, D., & M. Fadli, M. F. (2019). *Penggunaan Warna Dalam Disain Interior Perpustakaan Terhadap Psikologis Pemustaka. RISTEKDIK : Jurnal Bimbingan Dan Konseling*, 4(2), 95. <https://doi.org/10.31604/ristekdik.2019.v4i2.95-106>
- Nasional, K. P (2008). *Peraturan Menteri Pendidikan Nasional Republik Indonesia Nomor 40 Tahun 2008 tentang Standar Sarana dan Prasarana untuk Sekolah Menengah Kejuruan/Masrasah Aliyah Kejuruan (SMK/MAK)*
- Neufert, E. (1996). *Data Arsitek Jl. 33*. Erlangga.
- Panero, J., & Zelnik, M. (1979). *Human dimension & interior space: a source book of design reference standards*. Watson-Guption.
- Priatini, W., Latifah, M., & Guhardja, S. (2008). *Pengaruh tipe pengasuhan, lingkungan sekolah, dan peran teman sebaya terhadap kecerdasan emosional remaja. Jurnal Ilmu Keluarga & Konsumen*, 1(1), 43-53.

<https://doi.org/10.24156/jikk/2008.1.1.43>

Pusat, P. (2005). Peraturan Pemerintah (PP) Nomor 19 tahun 2005 tentang Standar Nasional Pendidikan

UNICEF (2009). Child-friendly Schools Manual,

Utami, A. R. (2022). *Kondisi Arsitektural Sekolah Menengah Kejuruan Negeri 1 Jakarta Ditinjau Dari Prinsip Desain Sekolah Ramah Anak* (Thesis, Universitas Pendidikan Indonesia).