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Study of Basic Concept Formulation in The Design of Vocational Training Center in Gresik Regency

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ABSTRACT

Gresik Regency, as a rapidly developing industrial area, requires a workforce with skills that meet industrial demands. However, job training facilities that can effectively bridge the gap between the education sector and the industrial sector are still not optimal. The Job Training Center (BLK) plays an important role in improving workforce competence; therefore, a design approach is needed to comprehensively accommodate these needs. This study aims to formulate the basic design concept of a Job Training Center in Gresik Regency by considering user characteristics, object characteristics (functional), and site characteristics. The method used is a descriptive qualitative approach through literature studies and regional condition analysis. The results show that the proposed basic concept is "A Space for Synergy," which integrates people, training activities, and the industrial environment into a mutually supportive system. This concept is implemented through flexible, open, and integrated spaces, enabling an effective training process that is relevant to industrial needs.

Keywords: *Job Training Center, Gresik, Synergy, Job Training*

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INTRODUCTION

Gresik Regency is recognized as one of the rapidly developing industrial regions in Indonesia, supported by the presence of large, medium, and small-scale industries. This rapid industrial growth significantly increases the demand for a skilled workforce that is aligned with industrial needs. However, the availability of job training facilities capable of bridging the gap between the education sector and industry remains limited, resulting in a mismatch between workforce competencies and labor market demands (Pemerintah Kabupaten Gresik, 2021; World Bank, 2019).

The Job Training Center (Balai Latihan Kerja/BLK) plays a strategic role in improving workforce quality by providing competency-based training programs. BLK functions not only as an educational facility but also as a platform for enhancing employability, productivity, and competitiveness of human resources in accordance with national labor standards (Undang-Undang No. 13 Tahun 2003; PP No. 31 Tahun 2006). Furthermore, vocational education and training systems are globally recognized as key drivers in workforce development and economic growth (UNESCO, 2016).

However, existing BLK facilities often fail to accommodate rapid technological advancements, modern training systems, and evolving industrial demands. Many facilities still apply conventional spatial approaches that are not integrated with real industrial environments. Therefore, a more comprehensive architectural approach is needed, one that integrates spatial design, user behavior, and environmental context (Ching, 2014; Lawson, 2001).

Based on these issues, this study aims to formulate a basic architectural concept for the design of a Job Training Center in Gresik Regency. The concept is expected to create an adaptive, flexible, and contextual training environment that supports synergy between users, activities, and the industrial ecosystem (Syahdan et al., 2025; Habraken, 1998).

METHOD

This study employs a descriptive qualitative method with a conceptual analysis approach. Data were collected through literature studies, including architectural theories, vocational training policies, and regional planning documents such as the RPJMD of Gresik Regency (Pemerintah Kabupaten Gresik, 2021).

The analysis focuses on three primary aspects: user characteristics, object characteristics (functional aspects), and site characteristics. These aspects are examined to identify relationships that influence the formation of the design concept. This approach aligns with architectural design methodologies that emphasize user-centered and context-responsive solutions (Ching, 2014; Lawson, 2001).

The results of the analysis are synthesized to develop a basic design concept that integrates human activities, spatial systems, and environmental conditions into a cohesive framework. This ensures that the design is not only functional but also adaptable to future changes and industrial developments (Habraken, 1998).

FINDING AND DISCUSSION

Definition of Basic Concept

In architecture, the basic concept serves as a fundamental guideline that directs the design process, encompassing aspects of function, form, space, and context. A strong conceptual foundation ensures that the design outcome is coherent, efficient, and responsive to both user needs and environmental conditions (Ching, 2014; Syahdan et al., 2025).

Perpetrator's Character

Figure 1 . Perpetrator's
Source : Google

The users of the Job Training Center consist of trainees and instructors who play central roles in the learning process. Their characteristics significantly influence spatial requirements and the overall design strategy (Kementerian Ketenagakerjaan RI, 2020).

Trainees are required to follow structured and competency-based training systems, emphasizing discipline and organization. Therefore, spatial planning must support systematic and orderly activities. Additionally, collaboration is an essential aspect of vocational training, requiring spaces that facilitate interaction, teamwork, and communication (PP No. 31 Tahun 2006).

Motivation and creativity are also key characteristics of trainees, as they are expected to develop innovative skills relevant to industry needs. Consequently, the training environment must be flexible, stimulating, and supportive of active learning. Furthermore, professionalism is fostered through environments that simulate real workplace conditions, preparing trainees for actual industrial settings (Undang-Undang No. 13 Tahun 2003; UNESCO, 2016).

Objet Character

As a vocational training facility, the BLK is functionally oriented toward practical and applied skill development. The spatial design must integrate theoretical learning and hands-on practice to ensure an effective training process (Neufert, 2002).

a. **Training Activities**
   Training activities within the BLK include classroom instruction, workshop practice, laboratory simulations, and evaluation processes. Therefore, spatial organization must be flexible and adaptable to accommodate various training scenarios and technological developments (Kementerian Ketenagakerjaan RI, 2020).
b. **Training Environment**
   In addition, the training environment must be safe, comfortable, and conducive to learning. It should reflect real industrial conditions to enhance trainees' readiness for employment. This aligns with the concept of experiential learning, where knowledge is gained through direct practice and interaction with realistic environments (Duffy, 1997; PP No. 31 Tahun 2006).

Location Character

Figure 2 . Kabupaten Gresik
Source : Google

Gresik Regency has specific characteristics that influence the design approach. As a predominantly lowland area, the site offers advantages in terms of accessibility and flexibility in building mass arrangement (Pemerintah Kabupaten Gresik, 2021).

The tropical climate requires climate-responsive design strategies, such as natural ventilation, shading systems, and daylight optimization, to ensure thermal comfort and energy efficiency (Ching, 2014).

Furthermore, Gresik's rapid industrial growth positions it as a strategic location for workforce development. The BLK must therefore be integrated with the industrial ecosystem, ensuring that training programs are aligned with local labor market demands (World Bank, 2019).

Formulation of Basic Concepts

The formulation of the basic concept in the design of the Job Training Center in Gresik Regency is carried out through a synthesis process of three main aspects, namely user characteristics, object characteristics (functional), and site characteristics. These three aspects are analyzed to identify interrelationships that can shape the overall direction of the design. (Ching, 2014; Syahdan et al., 2025).

1. **Interrelationship Between Aspects**
   a. **User Characteristics ↔ Object Characteristics (Functional)**
   Trainees who possess discipline, collaboration, creativity, and professionalism require a facility that can optimally support training activities. This demands spaces that function not only as learning areas but also as spaces for practice, interaction, and real work simulation. (Kementerian Ketenagakerjaan RI, 2020; PP No. 31 Tahun 2006).
   b. **User Characteristics ↔ Site Characteristics**
   The condition of the Gresik community, which is located within an industrial area, encourages the formation of users who are adaptive to the working environment. Therefore, the training environment must be able to align with the characteristics of the industrial area and support the development of professional work attitudes. (Pemerintah Kabupaten Gresik, 2021; World Bank, 2019).
   c. **Object Characteristics ↔ Site Characteristics**
   The function of the BLK as a training facility must be aligned with the potential of the industrial area in Gresik. This means that the types of training, facilities, and spatial systems must support industrial needs and regional development. (UNESCO, 2016; Kementerian Ketenagakerjaan RI, 2020).

   From these relationships, it can be seen that there is an interconnection that is mutually influential and inseparable. Therefore, a concept is required that can integrate all of these aspects.

2. **Concept Synthesis**

The synthesis of these three aspects results in a main idea in the form of integration between:

a. Humans (trainees and instructors)
b. Activities (training processes)

c. Environment (Gresik industrial area)

This integration is not only physical but also includes functional, social, and contextual relationships. The training process does not occur solely within spaces but is also influenced by the surrounding environment and the demands of the working world.

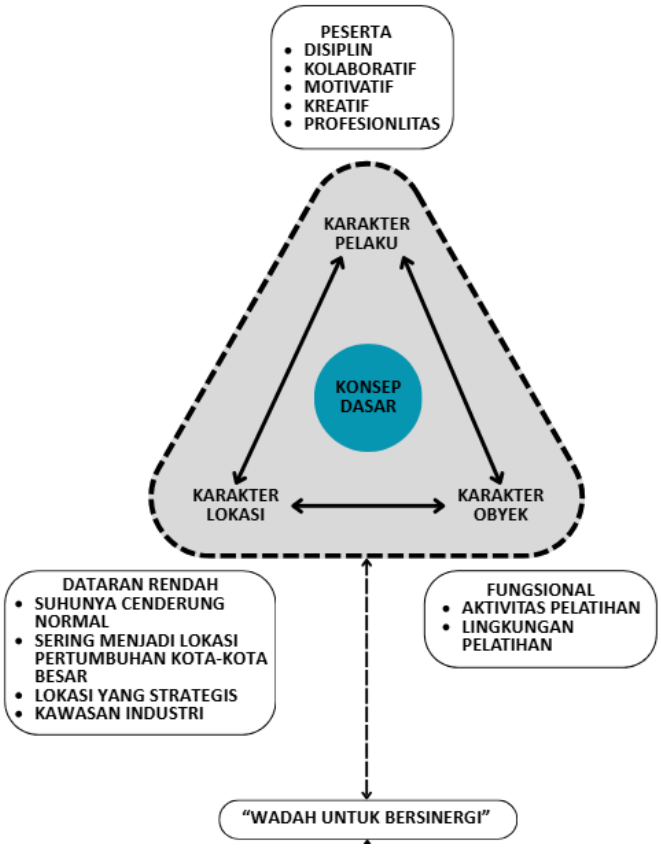

Figure 3 . Charts Formulation of Basic Concepts
Source : Personal analysis

Based on the results of the synthesis formulation, the basic concept that emerges can be explained as follows:

The basic concept of **"A Space for Synergy"** is the main idea in the design of the Job Training Center in Gresik Regency, derived from the need to integrate various essential elements in the job training process. These elements include users (trainees and instructors), objects (functional training activities), and the site (the industrial area of Gresik). These three aspects cannot be separated; instead, they must be interconnected and work together to create an effective and sustainable training system. Conceptually, "space" refers to a place that accommodates various activities, while "synergy" refers to a collaborative process that strengthens the interaction among the involved elements. Thus, this concept emphasizes that the Job Training Center functions not only as a physical training facility but also as a space that connects, brings together, and optimizes interactions between people, activities, and the environment.

values of Pandalungan-a blend of Javanese and Madurese cultures-rich in tradition yet open to change. Thus, Lahbako Pesisiran is designed as a cultural space that functions as a forum for artistic expression, education, and community interaction, while also being in harmony with the social and environmental character of the Jember coast.

1) Synergy Among Users

In the context of the BLK, users consist of trainees, instructors, and supporting parties such as management and industry partners. The concept of synergy emphasizes active and collaborative relationships among these users. Trainees are not only recipients of knowledge but also active participants in the learning process through practice, discussion, and group work. Meanwhile, instructors act as facilitators who guide, direct, and transfer knowledge and skills. This relationship forms a dynamic two-way interaction.

In spatial design, synergy among users is realized through:

a. Provision of training spaces that support group work
b. Discussion and collaboration areas
c. Open spaces that encourage informal interaction
d. Visual connectivity between spaces

Thus, the training environment is not rigid or one-directional but becomes an active and participatory learning space.

2) Synergy Between Function and Activities

The Job Training Center has a primary function as a facility for practical and applied skills training. Therefore, the concept of synergy is also applied in the relationship between spatial functions and the activities that take place within them. Each space in the BLK must be designed based on training activity requirements, such as:

a. Classrooms for theoretical learning
b. Workshops for hands-on practice
c. Laboratories for work simulation
d. Spaces for evaluation and presentation

Synergy in this aspect means that there is no rigid separation between theory and practice; instead, both are integrated within a single learning system. Trainees can easily move between theoretical and practical spaces, making the learning process more effective.

3) Synergy with the Environment

Gresik Regency, as an industrial area, provides a strong context for the design of the BLK. Therefore, the concept of “A Space for Synergy” also emphasizes the relationship between the building and its surrounding environment. Environmental synergy is realized through:

a. Aligning training types with local industrial needs
b. Providing facilities that simulate real working conditions
c. Ensuring accessibility to the industrial sector (internships, partnerships, etc.)

In addition, physical environmental aspects are also considered, such as:

a. Climate responsiveness (natural ventilation and daylighting)
b. The use of open spaces as part of training activities
c. Building mass arrangement that responds to site conditions

Thus, the BLK does not stand alone but becomes part of a broader system, namely the industrial ecosystem of Gresik.

4) Synergy in Spatial and Mass Organization

The concept of "A Space for Synergy" is also translated into spatial planning and building mass organization. Spaces are not arranged in isolation but are designed to be interconnected to support efficient activity flow. The applied principles include:

a. Connectivity between zones (theory, practice, administration)
b. Clear and directed circulation
c. Transitional spaces as connectors between functions
d. The use of communal spaces as interaction nodes

Building masses may be arranged in a dispersed yet integrated manner, creating dynamic relationships between spaces. This approach allows the training environment to be varied, communicative, and non-monotonous.

5) Synergy as an Enhancer of Spatial Quality

Beyond being a functional concept, synergy also enhances overall spatial quality. Spaces designed with the principle of synergy will have the following characteristics:

a. Open and not restrictive to interaction
b. Flexible for various activities
c. Comfortable and supportive of productivity
d. Adaptive to changing needs

This spatial quality is essential in supporting an effective learning process, as the physical environment significantly influences user behavior and performance.

CONCLUSION

Overall, the concept of **"A Space for Synergy"** positions the Job Training Center as a system that integrates various elements into a unified and mutually supportive whole. The synergy created not only enhances the effectiveness of training but also strengthens the relationship between the education sector and the industrial sector. Through this concept, the BLK is expected to become an adaptive and relevant training facility, a space for interaction and collaboration, and a platform for sustainable skill development. Ultimately, the design of the BLK does not merely result in a physical building but also creates an environment that supports the improvement of human resource quality in Gresik Regency.

REFERENCES

Ching, F. D. K. (2014). *Architecture: Form, Space, and Order* (4th ed.). New Jersey: John Wiley & Sons.

Duffy, F. (1997). *The New Office*. London: Conran Octopus.

Habraken, N. J. (1998). *The Structure of the Ordinary: Form and Control in the Built Environment*. Cambridge: MIT Press.

Kementerian Ketenagakerjaan Republik Indonesia. (2020). *Pedoman Penyelenggaraan Balai Latihan Kerja*. Jakarta: Kementerian Ketenagakerjaan RI.

Lawson, B. (2001). *The Language of Space*. Oxford: Architectural Press.

Neufert, E. (2002). *Data Arsitek*. Jakarta: Erlangga.

Pemerintah Kabupaten Gresik. (2021). *Rencana Pembangunan Jangka Menengah Daerah (RPJMD) Kabupaten Gresik Tahun 2021–2026*. Gresik.

Peraturan Pemerintah Republik Indonesia Nomor 31 Tahun 2006 tentang Sistem Pelatihan Kerja Nasional.

Syahdan, M., Hastijanti, R., & Santoso, J. (2025). Perumusan Konsep Dasar pada Perancangan Fasilitas. *Jurnal Arsitektur*.

UNESCO. (2016). *Strategy for Technical and Vocational Education and Training (TVET) 2016–2021*. Paris: UNESCO Publishing.

Undang-Undang Republik Indonesia Nomor 13 Tahun 2003 tentang Ketenagakerjaan.

World Bank. (2019). *World Development Report 2019: The Changing Nature of Work*. Washington, DC: World Bank.