

# Socialization Of The Potential Integration Of Green Building Concept In The Curriculum Of The Building Sector Vocational High School

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## Abstract

*The objectives of this research activity are To provide an understanding of the GB concept to SMK Building teachers, to provide an understanding of how to integrate the GB concept into the Building Sector Vocational School Curriculum, to instill environmental awareness in students through the building sector to increase public awareness about environmentally friendly buildings. The methods used in the implementation of this science and technology application program are as follows Planning outreach activities, Implementation of socialization, Evaluation of socialization and, Designing follow-up activities based on the evaluation results of Green Integration socialization activities. Construction Concepts (GB) in the Curriculum of Vocational High Schools in the Building Sector.*

**Keywords**— Green Building, Curriculum, Vocational High School Building Sector

## INTRODUCTION

The results of empirical observations conducted by Dikmenjur (2004) indicate that most of the graduates of Vocational High Schools (SMK) are less able to adjust themselves with changes in science and technology, difficult to be retrained, and less able to develop themselves. The findings state that learning in SMK has not touched or developed the adaptability of students

Vocational High School is education at the secondary education level that prioritizes the development of students' abilities to carry out certain types of work (Government of the Republic of Indonesia, 1990). Vocational High Schools prioritize skills to prepare students to enter the world of work and develop professional attitudes and independence. Therefore, Vocational High Schools have various majors that are tailored to the work in the field. Vocational High School study period is between 3 to 4 years. This is expected to meet the needs of employment.

Vocational education is education that is used to prepare students to be able to work in certain fields. Various vocational fields are currently held in Vocational High Schools. According to the Ministry of Education and Culture, the Directorate General of Primary and Secondary Education (2018) the areas of expertise in Vocational High Schools/Vocational Madrasah Aliyah consist of 9 areas of expertise. One of these areas of expertise is Technology and Engineering. Technology and Engineering expertise is divided into 13 skill programs, one of which is Construction and Property Technology. One of the competencies of Construction and Property Technology expertise is Modeling Design and Building Information. Building Modeling and Information Design has building subjects, namely: Software Applications and

Building Interior Design, Road and Bridge Construction, Construction Cost Estimation, Building Construction and Utilities, Creative Products and Entrepreneurship.

## RESEARCH METHODS

The current Vocational High School curriculum uses the 2013 Curriculum. The 2013 curriculum is a curriculum that emphasizes competency-based skills, attitudes, and knowledge. The purpose of the Vocational High School curriculum/Vocational Education is to increase knowledge, intelligence, noble character, personality, and skills of students to take further education in accordance with their respective majors/expertise and have an independent attitude, this opinion is not much different from the goal which has been stated in the Law of the Republic of Indonesia Number 20 concerning the National Education System in 2003.

The quality of educational products is closely related with the learning implementation process which is influenced by many factors, including: curriculum, education staff, learning process, infrastructure, materials, school management, work environment (climate) and industrial cooperation. Some notes on the implementation of the 1999 edition of the Vocational High School Curriculum include academic obstacles in implementing the broad-based curriculum, especially in determining the content of adaptive programs for very different areas of expertise, even in the same vocational group.

Building Modeling and Information Design Expertise Competencies have the scope of graduates, namely being able to become building implementers, building supervisors, building contractors, building consultants, drawing technicians, and exterior and interior building designs (SMK Ganesha Tama, 2019). Therefore, as a printer ready to work in the building sector, Vocational High Schools need to equip their students with knowledge and understanding related to the concept of green building. Green buildings or environmentally friendly buildings are buildings that pay attention to aspects of appropriate land use, are wise and efficient in the use of energy and water, pay attention to conservation in the use of materials and resources and carry out proper environmental management (Green Building Council Indonesia, 2019). The implementation of green building is at the programming stage, technical planning, construction implementation, utilization, and demolition (Regulation of the Minister of Public Works and Public Housing concerning Green Buildings Number 02 of 2015).

Development activities from design to demolition have economic and social impacts, as well as the natural environment. Therefore, with knowledge about green building, students at Vocational High Schools are able to apply, minimize environmental impacts, and have the understanding ability to be applied in the field of work.

## RESULTS AND DISCUSSION

In order for the concept of green building to be understood in depth in every student, it is necessary to integrate this green building concept into the Vocational High School curriculum. Based on a preliminary study in one of the Vocational High School Buildings through the study of RPP (Learning Implementation Plans) it was found that the concept of green building in several subjects was still little found.

These results are in line with Nataliasari's research (2019) which concludes that the existence of green building in the curriculum of Vocational High Schools in Central Java and the Special Region of Yogyakarta is still lacking. This research shows that the concept of green

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building, especially about green homes, has not been integrated with the Vocational High School curriculum in a comprehensive and sustainable manner.

Based on these conditions, it is deemed necessary to develop a Vocational High School curriculum that integrates the concept of green building in it. This study aims to describe the potential of the Vocational High School curriculum that integrates the concept of green building into the learning of specialization group subjects, especially in the Expertise Competency of Design Modeling and Building Information consisting of Subjects of Engineering Drawing, Engineering Mechanics, Fundamentals of Building Construction and Land Measurement Techniques. , Software Applications and Building Interior Design, Road and Bridge Construction, Construction Cost Estimation, Building Construction and Utilities, and Creative Products and Entrepreneurship (Ministry of Education and Culture, Directorate General of Primary and Secondary Education About KI & KD DPIB 2018).

### **Green Building**

According to the Regulation of the Minister of Public Works and Public Housing concerning Green Buildings Number 02 of 2015 states that: Green buildings are buildings that meet building requirements and have significant measurable performance in saving energy, water, and other resources through the application of building principles. green building in accordance with the function and classification in each stage of its implementation.

Community green residential building is a simple single/group residential building in an administrative/thematic environment that meets the requirements of the Community Green Residential Building Work Plan. According to GBCI (Green Building Council Indonesia, 2019) green buildings are old buildings that have been used and new buildings that are planned by taking into account environmental/ecosystem factors and meeting the criteria for energy saving, water saving, material saving, reducing waste, wise land use, and indoor air quality. In line with the description above, green building is an architecture that does not use many natural resources including energy, water, and materials that do not cause negative impacts on the surrounding environment.

GreenShip is an assessment system issued by GBCI to assess buildings that can be said to be eligible or not to get a green building certificate (Green Building Council Indonesia, 2019).

## **CONCLUSION**

The concept of green building, especially about green homes, has not been integrated with the Vocational High School curriculum as a whole and continuously. Based on these conditions, it is deemed necessary to develop a Vocational High School curriculum that integrates the concept of green building in it

## **REFERENCES**

- Maknun, J. (2012). Pembelajaran Fisika Sekolah Menengah Kejuruan (SMK) Bidang Keahlian Teknik Bangunan Berbasis Program Produktif. *File. Upi. Edu/PENDIKAN\_IPA. Accessed At, 13, 35.*
- Meirawan, D. (2012). Daya Prediksi Hasil Uji Kompetensi Siswa Sekolah Menengah Kejuruan Bidang Keahlian Teknik Bangunan. *Jurnal Cakrawala Pendidikan, (1).*

Handayani, W., Daryati, D., & Murtinugraha, R. E. (2016). Hubungan Hasil Belajar Kewirausahaan Dengan Minat Berwirausaha Pada Siswa Sekolah Menengah Kejuruan (SMK) Negeri 4 Jakarta Bidang Keahlian Teknik Bangunan. *Jurnal Pensil: Pendidikan Teknik Sipil*, 5(2), 70-77.

Prasetyo, T. K., Setyosari, P., & Sihkabuden, S. (2018). Pengembangan Media Augmented Reality Untuk Program Keahlian Teknik Gambar Bangunan Di Sekolah Menengah Kejuruan. *JINOTEP (Jurnal Inovasi Dan Teknologi Pembelajaran): Kajian Dan Riset Dalam Teknologi Pembelajaran*, 4(1), 37-46.