



## Vocational Psychological Study of Students in Construction and Housing Engineering Vocational Competencies in Vocational Schools

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### Abstract

Vocational psychology is a study or science that is applied in observing behavior in vocational education. The aim of vocational psychology is to determine vocational choices based on students' interests and talents. The Construction and Housing Engineering vocational competency aims to develop competency in the construction sector. Schools have demands to be able to fulfill aspects of providing adequate facilities and education so that Construction and Housing Engineering can carry out learning activities. In fulfilling DU/DI requests, Construction and Housing Engineering graduates must have good competencies. In fulfilling competencies for students, there are several psychological factors, namely internal and external factors. Internal factors in students are the student's personality, knowledge of the student's interests and talents, and aspirations. External factors are influenced by the social environment, family, school and place of residence.

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## INTRODUCTION

Law Number 20 of 2013, Article 18 paragraph 3 Vocational High School (SMK) is a form of educational unit that carries out vocational education at the secondary school level. Vocational education is an investment that has a role in supporting the welfare of the nation, both in terms of advancing the skills and competencies of human resources and the nation's economy. Vocational education is education or training in order to meet the needs of specific work positions in a field of work.

Vocational high schools provide many vocational options or choices based on students' interests and talents. One of them is the Construction and Housing Engineering major. This TKP major focuses on education and training students in skills in the field of building construction.

In the vocational selection process, a person's psychology is a determining factor in determining his choice in the world of vocational education. Someone can fall into a major that does not match their interests in vocational school. In shaping a person's psychology, it can be influenced by internal and external factors.

253 / 5.000

Psychology is a scientific discipline that examines the soul or the behavior of the soul. Starting from thinking patterns, knowledge, and relationships between individuals, theories and information about psychology can be used as a basis for solving problems.

The internal and external psychological factors of a person in the Construction and Housing Engineering department based on general observations/observations can be said to be that a lack of enthusiasm for learning and a lack of student discipline levels that are not strong enough when it comes to theoretical and practical learning activities can be the cause of poor learning outcomes. Mulyana, M, & Puspitasari, R (2014) said that personality factors have a real influence on the formation of interests. These internal factors can be caused by external factors which can come from the social environment, school or family.

The limitations of the problem in this research will prioritize discussion regarding the importance of understanding psychology in students by teachers to improve learning outcomes and good habits (discipline). So this study can provide various descriptions of psychological factors that can increase students' interest in learning and level of discipline.

## THEORETICAL STUDY

### Construction and Housing Engineering Vocational Competency

According to the Minister of Public Works Regulation Number 05/PRT/M/2014 concerning Guidelines for Occupational Safety and Health Management Systems (SMK3) for Construction in the Public Works Sector (Article 1 Paragraph 3) it is stated that, "all or part of construction work starts from planning, implementation to supervision building work, civil buildings, and electrical and mechanical installation activities as well as services in realizing physical buildings are construction work."

In building and housing construction engineering vocational competencies, abbreviated as (TKP), education focuses on increasing students' knowledge and skills in the field of development. Based on the book basics of building construction, page 13 (Winarko. 2022), construction is divided into several areas including:

- a. Civil buildings/infrastructure
- b. Residential building
- c. Building
- d. Industrial building
- e. Special buildings (monumental)

In TKP vocational competency, students will be given basic education in the form of:

1. Introduction to Equipment in Construction Work
2. Understanding Safety, Occupational Health and the Environment (K3LH)
3. Construction drawings. In construction drawings, students will learn about manual drawing equipment, then get to know the basics of drawing through the types of lines in drawings, complete rules regarding

technical drawing information, drawing a plane, as well as drawing 3D isometry and orthogonal projections.1

### **Prosser-Allen Theory Study of Construction and Housing Engineering Vocations.**

Vocational education according to Charles Allen Prosser in the book *Philosophy and Theory of Vocational and Vocational Education* written by Putu Sudira has 16 basic principles. Prosser is of the view that vocationalism is a forum for meeting the employment needs of a country, not for meeting individual needs (Sudira, P. 2012).

These basic principles, if linked to vocational competencies in Construction and Housing Engineering, can be as follows:

1. Vocational and vocational education is economic education. In this case TKP vocational students will be able to contribute to economic development through development.
2. Vocational and vocational education must pay attention to market demand. The vocational education provided must be in accordance with the competency needs in the world of work, so that its relevance will be higher. In the TKP vocational school, students will be given education in accordance with TKP skill competencies and given training to create construction jobs. According to Perdana, NS (2019), market demand for the competency needs of graduates with the workforce qualifications required by DUDI is that graduates have passed the competency certification stage, have skills in computing and can speak foreign languages, and have work experience..
3. Vocational and vocational education is more efficient with a replica of the world of work environment in the construction sector. So students will experience working directly in the construction field.
4. Vocational and vocational education is more effective by providing the same competencies as the workplace. Learning activities given to students must be appropriate to the field of construction in the field. For example, brick masonry practical activities, concrete making practice, construction work drawing practice and so on. This is in accordance with the statement of Perdana, NS (2019), efforts have been made to adapt the competencies of vocational school graduates currently produced to suit the needs of DUDI.
5. Vocational education will be effective by providing job training that prioritizes students' critical thinking abilities. In TKP competency, training that can improve critical thinking skills is by providing practical construction activities starting from drawings to implementation activities.
6. Vocational education will be effective by capitalizing on interests and competencies at the highest level. With this, the conditions for advice and practical workshop infrastructure for crime scene competency are needed. These include a drawing laboratory and building mockups as well as a building construction workshop. Currently, according to research by Perdana, NS (2019), the lack of facilities and infrastructure in schools and the limited capacity of teaching staff is the cause of the lack of interest and competence in graduating students.
7. Vocational and vocational education is effective for someone who has the intention of making a profit. So TKP competency will be more suitable for students with interest and interest in the field of building construction. With strong interest, the effectiveness of competent graduates in the construction sector will be better.
8. Vocational education will be effective with trainers or instructors who are competent in the construction field. In this case, instructors/trainers can be invited from DU/DI in the construction sector. So that it can provide a broad overview of the construction sector to students in the field of construction and housing engineering competencies.
9. Vocational education must have a close relationship with DUDI. A close relationship with DUDI can alleviate the problem of the lack of teaching staff from

- schools by inviting instructors and increasing student competency in the construction sector because they can share with people who work directly in the construction sector.
10. Vocational education must be responsive and anticipatory to technological advances. The more modern it is, the newer the tools and technology used in the construction sector are now, the easier it is with the existence of new methods such as precast concrete methods, the use of durability analysis using computer software. So that vocational schools must be able to keep up with the times to progress in increasing the competency of TKP students.
  11. Vocational education requires up-to-date facilities for practice. The requirement for vocational schools in carrying out learning activities is to have facilities that support practical learning activities. In the TKP vocational school, at least the school must have a computer laboratory, laboratory/workshop building, laboratory/workshop needs are adjusted to DU/DI requests.
  12. A person's habituation can be achieved effectively if the training is given in real, value-laden work. This habituation is carried out during internships/field work practices to provide real work experience so that later they will get used to it.
  13. The content of the training is based on the experience of experts or professionals. Training activities are carried out by including expert instructors in the construction field who have extensive experience and understanding in the construction field.
  14. Each occupation has content characteristics (body of content) that are different from each other. This provides special differences in each vocational competency. The Construction and Housing Engineering profession has its own characteristics. Namely focusing on developing competence in building design activities and construction work.
  15. Vocational and vocational education will be an efficient social service if it is through competency teaching and performance-based assessment. according to the needs of someone who needs it.
  16. Vocational and vocational education requires investment and operational costs that are greater than general education, if these are not met, they must not be forced to operate.

### Literature Review

Based on the background of the problem in the introduction and explanation in the literature review, below are several studies that have been carried out on Construction and Housing Engineering skills competencies.

Nuraini, AE (2020). Researching the determining factors for selecting building engineering skills for prospective vocational high school students. The research results show that external factors come from the family, school environment, peers, community environment and family economy, while internal factors that influence the interests of prospective students are interests, talents and aspirations. This research proves the existence of vocational psychology problems where a person's internal and external factors can influence a person's vocational choice.

Astuti, K (2015). Based on the data, the research results show that the factors that influence learning difficulties are due to internal psychological factors and student readiness and student talent. Meanwhile, external factors that influence learning difficulties are caused by school environmental factors, namely the teacher's learning methods and the social conditions between students.

Aprilianty, E (2012) researched vocational school students' interest in entrepreneurship, showing the results that student interest was influenced by personality, knowledge and environmental factors surrounding entrepreneurship. This shows psychological factors in response variables and stimulus variables.

Sulistyaningtyas, N (2021). Discusses the factors that cause work accidents where the results of the analysis show that human factors

dominate as factors causing work accidents, then environmental factors and equipment factors. In general, the psychological factor that causes this is the human personality. Someone with a low level of discipline can increase the level of danger in the work area.

From the studies above, it can be concluded that there are psychological factors that influence students' interest in learning and discipline. Where these factors are divided into internal and external factors. Internal factors include: readiness, interest, talent, personality, knowledge and ideals. Meanwhile, external factors come from the school environment on learning methods by teachers and the social environment on relationships between individuals.

## VOCATIONAL PSYCHOLOGY

Vocational psychology is also known as Industrial/Organizational (I/O) Psychology. According to Muchinsky (2000), in the book *Reflections on the Psychology of Vocational Education* (2023:4), I/O Psychology is a science that studies a person's knowledge and skills to increase and expand knowledge about humans in work activities.

Vocational psychology is a branch of psychology that focuses on the application of psychological principles in specific vocational or professional contexts. This field includes the use of psychological theories to understand behavior, motivation, personality, and skills relevant to a particular job or career field.

The main goal of vocational psychology is to assist individuals in understanding themselves, their interests, talents, and tendencies to choose a career that suits their abilities and desires. It involves the use of psychological testing, career counseling, and other psychological assessments to assist individuals in making appropriate career decisions.

Vocational psychology also discusses psychological aspects in the work environment, such as employee motivation, stress management, effective communication, leadership, and adaptation to changes in the work context.

This area is critical in helping individuals better plan their careers, maximize their potential, and increase well-being and satisfaction in the work environment

## CLOSING

### Conclusions

The conclusion from writing this article is that in vocational high school (SMK) education in the Construction and Housing Engineering Vocational competency (TKP) there are vocational psychological factors. Vocational psychology is used to assess and observe student behavior in construction and housing engineering so that factors can be found that can increase student motivation in learning and level of discipline. Among them:

- a. Internal factors: influenced by the student's personality, knowledge of the student's interests and talents, aspirations.
- b. External factors: influenced by the social environment, family, school and place of residence.

The psychological factors above can be used by schools and teachers in preparing curriculum or learning methods and plans.

### Suggestions

To increase learning motivation and discipline in students at school, this can be done by paying attention to students' interests and personalities. By providing stimulus or encouragement to students' interests (interest), it can influence their enthusiasm for learning (motivation).

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