

Work Ethics as Sub-component Forming of Basic Competency of the Electrical Energy Engineering Skill Program in Vocational High School Students

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Abstract—The purpose of this study is to identify the work ethic as a sub-component forming basic competencies Vocational High School (SMK) on the competencies of Power Transmission Engineering skill. This study employed the method of DACUM analysis and Delphi technique. The subject of research is the labour operators and technicians PT PLN (Persero) as a source to obtain data on as a source to obtain data on the technical competence of the electricity sector work force. The research object was the engineering competencies in the field of electrical energy in the Transmission Service Unit in Yogyakarta Special Territory. The results of the study were as follows. There are thirty eight work ethic as sub component forming the basic competency of vocational high school

Keywords—basic competency; work ethic; electrical power engineering skills competency

I. INTRODUCTION

The 21st-century world of work demands the highest ethical conduct among organizational leadership in the workplace because high-profile corporate scandals speedily unfold in social media’s instantaneous global propagation [1]. Work ethics is defined as a set of values based on hard work and diligence. It is also defined as a cultural norm that advocates being personally accountable and responsible for the work that one does and is based on a belief that work has intrinsic value. Because of its connections to culture, work ethics are different all around the globe. The many characteristics of work ethics can be summarized using three terms: interpersonal skills, being dependable and initiative [2].

A competency model is a collection of competencies that together define successful performance in a particular work setting. Competency models are the foundation for important human resource functions such as recruitment and hiring, training and development, and performance management because they specify what is essential to select for or to train and develop. Competency models can be developed for specific jobs, job groups, organizations, occupations or industries [3].

A competency model describes the combination of knowledge, skills and characteristics needed to effectively perform a role in an organization and is used as a human

resource tool for selecting, training and development, appraisal and succession planning. Identifying and mapping these competencies is rather complex. Skills can range from highly concrete proficiency like the ability to operate a particular machine or to write a sentence, to far less tangible capabilities such as the ability to think strategically or to influence others [4].

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Definition of a competency model above can be interpreted that a competency model is a group of competencies that consist of components of knowledge, skills, ethics, behaviour and characteristics required to perform a role or activity on one specific working group or a certain type of industry.

Multidimensional Work Ethic Profile, has seven Weber-associated dimensions: Leisure, Wasted Time, Self-Reliance, Work Centrality, Delay of Gratification, Belief in Hard Work, and Morality/Ethics [5].

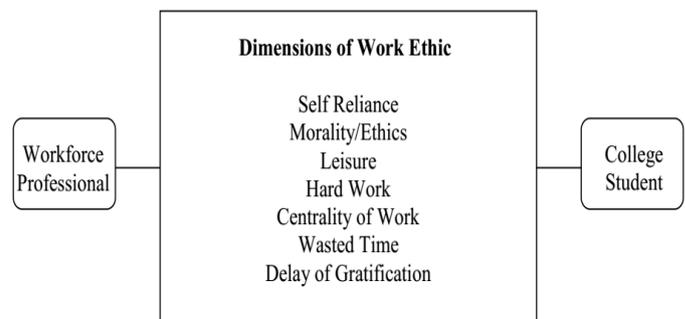


Fig. 1. Dimensions of work ethic [5,6].

Based on the explanation above, it required an identification of the work ethic as sub-component forming of basic competency of the students in vocational high schools.

II. MATERIAL AND METHOD

Petty and Petty identified 50 descriptors developed work ethic of Occupational Work Ethic Inventory (OWEI). There are four factors to construct a work ethic or skills employee that are; interpersonal skills, initiative, reliable and reversed items. the meaning is that there are four factors to measure work ethic of industry employees they are: interpersonal skills, initiative work, follow the rules and things that should be avoided in the work. The work ethic of employees applying the 50 descriptors they are: 17 descriptors for interpersonal skills, 16 descriptors for the initiative, 7 descriptors for reliable and 10 descriptors for the reversed items [7,8].

Brauchle uses four factors to develop a work ethic OWEI instruments such as: teamwork, dependability, ambition and self-control [9]. The definition of work ethic according OWEI is a cultural norm that supports the work of an individual to be responsible in their work and based on the belief that work is an intrinsic value [10].

Descriptors work ethic according OWEI are as follows: Courteous, friendly, cheerful, considerate, pleasant, cooperative, helpful, likeable, devoted, loyal, well groomed, patient, appreciative, hardworking, modest, emotionally stable, and stubborn [11]. Perceptive, productive, resourceful, initiating, ambitious, efficient, effective, enthusiastic, dedicated, persistent, accurate, conscientious, independent, adaptable, persevering, and orderly. Following directions, following regulations, dependable, reliable, careful, honest, and punctual. Hostile, rude, selfish, devious, careless, irresponsible, negligence, depressed, tardy, and apathetic.

This research applies factors or descriptors and factor items as follows.

Factor	Sample items
Interpersonal skills (17 items)	Courteous, friendly, cheerful, considerate, pleasant, cooperative, helpful, likeable, devoted, loyal, well groomed, patient, appreciative, hard-working, modest, emotionally stable, and stubborn
Initiative (16 items)	Perceptive, productive, resourceful, initiating, ambitious, efficient, effective, enthusiastic, dedicated, persistent, accurate, conscientious, independent, adaptable, persevering, and orderly
Being dependable (7 items)	Following directions, following regulations, dependable, reliable, careful, honest, and punctual
Reversed items (10 items)	Hostile, rude, selfish, devious, careless, irresponsible, negligence, depressed, tardy, and apathetic

Fig. 2. Factors or descriptors and factor items [12].

The research subjects were the workers or operators or technicians of the Transmission Service Unit (UPT) and the Service Area and Network (APJ) of PT PLN (Persero) Special Region of Yogyakarta, the aim was to obtain data on the work ethics of the electricity sector. The object of research is the technical competence in the field of electrical expertise in the Transmission Service Unit and the Service and Network Area of PT PLN (Persero) Special Region of Yogyakarta. Based on

the results of the identification of fields and types of electricity work, apply five occupational fields and each has sub-fields namely; planning, construction, operation and maintenance and inspection. The survey was conducted to 50 employees to get responses on work ethics at work.

DACUM analysis Hill and Norton is job analysis [13,14]. Collection data technique with an expert Panel of DACUM applied four steps as follow: (1) expert worker panel is started by developing the title of work field and definition;(2) place a group of job on organization structure; (3) identify approximately 5-10 main task into work obligation; (4) work task is group or related into each identified obligation: (5) job profile validation done by inviting manager as input supporter. This research uses 5 instruments as a guide in taking the data. The instruments are: (1) participant criteria or expert; (2) duty statement criteria; (3) task statement development guide; (4) task–statement criteria; and (5) work activity criteria.

III. RESULT AND RESEARCH ANALYSIS

Sub components work ethic contains a pattern of behaviour in the form of work ethic which entirely must be owned by employees or the executor work assignments. Overall there were 38 work ethic, the work ethic has been through the test of construct validity and reliability of the instruments. The construct validity through corrected item total correlations ranged from 0.401 to 0.754 of this value for 38 test requirements analysis work ethic can be declared valid according to construct which means it can be used as a tool of measuring instruments in the context of the conceptual meaning of its contents. Reliability of Alpha Cronbach calculation result obtain the value of 0.954, from the value as the requirement analysis test for 28 work ethic it can be declared reliable which means it can be used as a tool in the context of measurement instruments or for other similar situations.

Validation which done on a sub component of the work ethic besides applying the test requirements analysis work ethic also validated the content. Validation of the contents in the form of rational judgment by manager, assistant manager of operations and maintenance, assistant manager of planning and evaluation, as well as one who has experienced in the field of planning and evaluation of PT PLN (Persero) Unit Transmission Services Yogyakarta.

TABLE I. CASE PROCESSING SUMMARY

Cases	N		%
	Valid	50	100.0
Excluded(a)	0	.0	
Total	50	100.0	

a List wise deletion based on all variables in the procedure.

TABLE II. RELIABILITY STATISTICS

Cronbach's Alpha	N of Items
.958	38

The discussion is based on the supporting theory which have been expressed. Based on the Blank theory stated that

there are four stages in describing labour competencies, such as [15]: (1) identify and describe the specific type of job; (2) verification of the job description (job tasks); (3) the analysis of the job description and additional knowledge is needed. Here it seems there is compatibility with the results obtained from the study they are: (1) identify and describe specific work in the form of group work and work obligations; (2) verification of the job description is identical to the job tasks are obtained; (3) analysis of the job description is identical to that obtained by the task activity, as well as additional knowledge is needed synonymous with the knowledge and tools and equipment used in performing work activities including work ethics in shaping the work ethic.

When referring to the theory proposed in the Competency Development Guidebook [12], which revealed that the competence is formed by three elements, that are: (1) skills; (2) knowledge; (3) The personal motivation. It is similar to the results of research in which, these skills can be realized based on the job descriptions of work, knowledge is the supporting knowledge required in implementing the job descriptions of work equipped with the knowledge of tools and equipment used. While personal motivation was formed through the ability to obey or implement what is contained in the work ethic.

When referring to theory competency model proposed by Sanghi, that in order to produce a certain skill competency shaped or formed through the performance behaviour, personal characteristics and ethics as well as knowledge and skills [4]. This fits in with the research results generated that are: (1) the existence of supporting knowledge is used and how the use of equipment and tools in implementing the work; (2) a skill that is formed by the activity of job duties; (3) personal characteristics and ethics are formed through the application of ethical work done by consistent.

When referring to Hill's ethical theory that the work ethic is the ability of personal qualities such as ethics or norms or rules embodied in a pattern of behaviour in any action that is directed by an individual that are responsible for doing any work [10]. Hill also said that the work ethic characteristics include three things; interpersonal skills, initiative and reliable. When referring to the Hill's theory then what is obtained in the results of research there are thirty-eight work ethic it takes to do a job, it can be interpreted that the work ethic had research results include those expressed by the Hill theory.

Work ethics is needed in carrying out an activity or job assignment. This is needed to support the implementation of work activities (hard skills) so that it can be applied to a specific skill and knowledge and the ability to transfer and apply a skills and knowledge into a new environment and environment to be relevant for active participation in their work. Because a competency covers all aspects of performance in the workplace which includes the appearance of individual tasks including managing a different range of tasks, responding to irregularities or disruptions, being responsible at work for the work environment and working with others. Then a work competency ability requires application of performance for skills, knowledge and a consistent attitude is needed all the time to achieve a standard quality in the workplace and the

ability to transfer it to the situation and the new environment. This work attitude is formed through a certain provision that is applied to the work environment which is usually called work ethic. Work ethics as a form of basic competence in the sub-field of maintenance and operations in the competence of electrical transmission engineering expertise and electric power distribution expertise competencies. Work ethics consists of three factors, namely; first, in the form of interpersonal skills; second, in the form of initiative capability and; third, intrapersonal ability in the form of the ability to overcome dependence on a standard provision.

Based on these results it can be stated that, work ethics is an individual ability that is needed both as a vocational high school and preparation for the workplace. Individual cumulative effort to produce a model or characteristic that is appropriate for a work ethic is a need for the importance of ownership of skills to enter the place work with quality.

IV. CONCLUSION

Conclusion from this research is that there are thirty-eight work ethic as the sub-components forming the basic vocational competencies, especially in the competence of electrical power engineering skills they are; courteous, friendly, cheerful, considerate, pleasant, cooperative, helpful, likeable, devoted, loyal, well groomed, patient, appreciative, hardworking, modest, perceptive, productive, resourceful, initiating, ambitious, efficient, effective, enthusiastic, dedicated, persistent, accurate, conscientious, independent, adaptable, persevering, orderly, following directions, following regulations, dependable, reliable, careful, honest, and punctual.

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