

# Standard Level of Vocational Education Skills in Indonesia

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**Abstract**—Qualification of graduates of vocational teacher candidates is a major issue in increasing graduates who are ready to work. Vocational teacher education is expected to have core skills: learning, writing, communication, and numeracy. For vocational education each core skill has leveling, from level 1 to level 5. Each competency level has a variable support, context, text complexity, and complexity task. Graduates of vocational education must also have the ability to communicate their skills in society, work environment and educational environment. Vocational education in high education in Indonesia generally does not have a clear standard level of skills of graduates and vocational education graduates do not describe the level of skills acquired during college, each graduate is considered the same skill level, whereas in fact graduates with the same study program are not necessarily the same abilities. Other problems in the employment field vary greatly in the workforce needs, as a result graduates are not absorbed entirely and graduates who are not absorbed are considered incompetent in entering the workforce. These conditions illustrate that there is still a disparity in vocational education in Indonesia and there is still an educational gap with the need for labor in the industry to overcome this problem, this paper propose a framework or concept of standard skill levels for graduates in vocational education. This framework or concept of this skill standard can be used as a reference to determine the skills of each prospective graduate, and graduates do not have to always have the same level of skill, and the complexity task can be different.

**Keywords**—core skill; level; variables

## I. INTRODUCTION

Higher education generally has a goal to producing graduates to be ready to enter employment field, and all graduates have the same degree (social, engineering, education etc.). Graduates are considered to have the same competency qualifications. On the other side employment field requires a very diverse graduate competence qualification, meanwhile the number of labor needs is limited. So graduates with the same competencies have to compete for an employment field with certain competencies [1]. As a result, graduates are only absorbed in small numbers, and the majority haven't jobs.

The low quality of higher education is compared to industrial's needs is still haven't solution, *Kemenristekdikti* notes that the number of graduates have received in employment field: universities in the industry 17.5%, graduates

of Vocational High School / Senior High School 82%, and elementary school graduates 60%. this condition shows that college graduates contribute the largest unemployment and become the dependents of the state, the deployment of labor in 2015 is still dominated by 71.5 million elementary and junior high school graduates, meanwhile the absorption of high and diploma graduates is 12.6 million [2].

The Government has set Indonesian National Work Qualifications (KKNI) starting from elementary school level to doctoral level, both academic and vocational education. To achieve the KKNI, standard competencies have been formulated is called the Indonesian National Work Competency Standards (SKKNI). But the Government and Educational minister have not been done yet validation level of competencies for the graduates.

For teacher competencies have been established four competency standards namely Pedagogic, Personality, Social, and Professional. But in the process of education the achievement of these competency levels is still unclear, so the graduation size can't be measured well.

Unclear level of education of vocational teachers, has an impact on education in Vocational Schools (Vocational High Schools), teachers graduate with unclear qualification levels, become unmeasured in quality when working in Vocational Schools, as a result many Vocational High School graduates are not absorbed in the world of work.

Looking at this phenomenon, then UPI (Universitas Pendidikan Indonesia) as an education institution for education personnel (LPTK) must immediately formulate a standard level for its education process so that its graduates can be measured explicitly.

## II. CORE FRAMEWORK OF WORK

In the theory of adult learning, that the core skills that are relevant is an important component in learning [3-8]. The process of constructive individuals in the study should include a variable learning, reading, and writing, speaking, listening and counting as an interactive view of learning [9, 10].

The task component and complexity of these variables are interconnected and determine the level of difficulty in processing information tasks [11-13]. ACSF (Australian Core

Skill Frame work) has a core LLN (Learning Literacy and Numeracy) skill framework, and three communication domain standards (personal and community, workplace and employment, Education and Training)

These core skills have (5) five levels from low level (1) to high level (5). Each level has four performance variables (Support, context, text complexity, task complexity). In addition, core skills are also supported by three communication domain standards (personal and community, workplace and employment, education and training). A person who will enter the workforce must be built on a skill framework that includes:

- Performance variables which include: Text Complexity, Task Complexity (job skills, task management skills, contingency management skills) Context, Support.
- Core Skills and Employability Skills: Learning, Reading, Writing, Oral Communication, Numeracy, Navigate the World of Work, Interact with Others, Get the Work Done [1].

Overall the relationship between LLN (Learning, Writing, Reading, and Numeracy), performance variables, performance descriptors, and domain of communication can be briefly shown in Figure 1 [1].

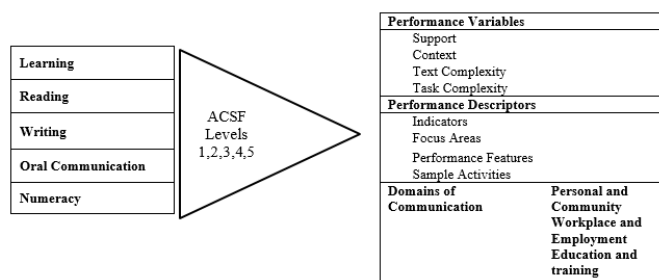


Fig. 1. Overview diagram ACSF [1].

The performance picture, Core LLN skills (learning, literacy and numeracy) in table 1, numbered, the first indicator describes a person's performance in terms of goals.

TABLE I. PERFORMANCE ACSF INDICATORS [1].

ACSF PERFORMANCE INDICATORS		
Core Skill	Indicator Number	Description
Learning	.01	Active awareness of self as a learner, planning and management of learning
	.02	Acquisition and application of practical strategies that facilitate learning
Reading	.03	Audience, purpose and meaning-making
	.04	Reading strategies
Writing	.05	Audience, purpose and meaning-making
	.06	The mechanics of writing
Oral Communication	.07	Speaking
	.08	Listening
Numeracy	.09	Identifying mathematical information and meaning in activities and texts
	.10	Using and applying mathematical knowledge and problem solving processes
	.11	Communicating and representing mathematics

The next step is the second indicator focusing on practical strategies to help achieve the desired results. This indicator numbering corresponds to core skills, using a decimal system in which all numbers refer to the level and decimal components to the core skills. For example, the performance of someone who has achieved learning level 1 at a number corresponding to 1.01 can then be done for the next stage of achievement, which is 1.02. Another example of a person's performance at level 4, and that person has reached learning at indicator 4.01 then that person can exit indicator 4.01 and enter indicator 4.02. The description of performance indicators for each core skill can be seen in table 1 [1].

Based on the core framework of work presented above, this section provides an overview of the level of ability of someone who has reached the LLN stage. The description of the level of achievement of a person's performance can be grouped based on job title, the description of the performance level that refers to the core skill can be seen in table 2.

TABLE II. GENERIC STAGES OF PERFORMANCE [1].

1	2	3	4	5
A Novice performer	An Advanced Beginner	A Capable performer	A Proficient performer	An Expert performer

### III. PROPOSITION

The standard concept proposed in this paper is for prospective vocational teachers, this proposed framework includes work performance and performance variables. A lecturer or teacher before teaching must do the following important things:

- Create a validation matrix
- Establish the teaching material / competence / courses to be taught
- Determine crucial aspect
- Set the type of test
- Sets the work variable level
- Establish work performance

The concept of setting the standard level can be summarized in the validation matrix, this matrix is divided into two parts, namely table 2 and table 3, but these two tables are one unit, and the level description can be seen in the table 3:

TABLE III. MATRIX VALIDATION OF PERFORMANCE VARIABLES

1	Topic		Target	Performance Variables						
			Academic							
2		Critical Aspect	Questions	Text Complexity	Task Complexity			Context	Support	
			TES		Job Skill	Task Management Skill	Contingency Management Skill			
			1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	
3	B	C	D	E	E	E	E	E	E	

Line 3 in the table the lecturer or teacher can determine the topic or material or the competencies then determine the

critical aspects, kind of test, and on the Performance Variables to determine the level 1 to 5 that you want to achieve in the learning process.

TABLE IV. MATRIX VALIDATION OF FOUNDATION SKILL (CORE SKILLS AND EMPLOYABILITY SKILLS)

1	Topic		Target	Foundation Skill (Core Skills and Employability Skills)							
			Academic								
2		Critical Aspect	Questions	Learning	Reading	Writing	Oral Communication	Numeracy	Navigate the World of Work	Interact with Others	Get the Work Done
			TES	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
3	B	C	D	E	E	E	E	E	E	E	E

Table 4 is the same principle as table 3, then sets the Core Skills and Employability Skills level 1 to 5. To determine the Foundation Skill component (learning, reading, writing, oral communication, numeracy, Navigate the World of Work, Interact with Others, Get the Work Done) the level may be different, depending on the learning objectives of the lecturer or teacher.

#### IV. CONCLUSION

A teaching instructor (lecturer, teacher, and instructor) in higher education or university or other educational institution, besides mastering teaching material, it is better to understand the standard skill framework theory to be achieved in the learning process.

Furthermore, the teaching staff must create a validation matrix and set the level standards to be achieved in the learning activities. Preparing test material that is used to test students must refer to the standard level.

Test results are not always students have the same level, it can be in one student class can graduate with different levels. So that graduates can fill employment opportunities according to their level of competence. In this case graduates in one period do not need to compete for job vacancies in one competency.

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