

# TATO Model : A Concept for a Better Assessment at the Competency Certification Institute

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**Abstract.** The educational institution, both formal and informal, is aimed at highly competent graduates. One of the tools for quality improvement is the creation of an assessment model. This research identifies and analyses the model of assessment carried out by the certification bodies, namely the TATO model. The research used bibliography and qualitative research models in which qualitative data was obtained through group discussion forums within the competence certification body and the course and training directorate, while the documents were obtained and analysed under the rubric of each competence certification body. The result shows that the TATO model could provide more comprehensive skills for participants in the field of skills. The model could also provide a better understanding for the assessors of the score participants during the test. The result of the model-based competency test would be openness, fairness, measurable and objective. This result could be a great assessment model to maintain the quality of the company and would give confidence to businesses and industries that use staff graduated from training and training institutions. The model would enhance the use of non-formal graduates to meet their human resources needs for technical positions. This model is a model that has never existed so far so that this model will later become a reference for educational institutions both formal and non-formal in making instruments for measuring the competence of the resulting graduates.

**Key words:** competency; assessment, TATO Model; assessors.

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## INTRODUCTION

Today, competency has always been the keyword for every unit of education (Ayranci & Başkan, 2021; Thipatdee, 2020a). In formal education, the term competency is always at the top of the list of high-quality graduates (Payne & Siow, 2003; Sadler, 2017). Government Regulation 19/2005 puts the Graduate Competence Standards first in the quality assessment process for educational units (Kemendikbud, 2003). This means that out of the 8 national education standards (SNP), 7 of them support the achievement of a single standard, namely the standard of graduate competence. Education has played a crucial role in improving the quality of the labour workforce. (Latchem, 2014; Oberländer et al., 2020). After basic education, higher advanced skills are learnt at the vocational level—skills that are necessary for a country's development (Chalapati & Chalapati, 2020).

The same applies to non-formal education, such as education and training institutions. (Khasanzyanova, 2014; Manuel et al., 2015; Souto-Otero & Villalba-Garcia, 2015; Tudor, 2013). It is also the responsibility of the Course and Training Institutes, as part of the national education system, to guarantee quality education (Kemendikbud, 2003;

Mulyadi et al., 2020). With such a large number of Indonesians unable to continue their studies, the training institutions have a very important role to play (Manuel et al., 2015; Nygren et al., 2019; Villalba-García, 2021).

The Course and Training Institutes is also an alternative education for adults, especially those who can not afford to continue higher education (Mayombe, 2017; Mulyadi et al., 2019; Wright et al., 2022). Non-formal and informal educational institutions have various means of assessing the quality of graduates, including internal assessment and external assessment through the Competency Certification Institutions (LSK) (Kaminskienė & Stasiūnaitienė, 2013; Khasanzyanova, 2014; Mulyadi et al., 2019; Rhoton & Bowers, 2011). There are still several obstacles in the implementation of the competency test carried out by the Competency Certification Institute, where graduates still have certificates, such as certificates issued by formal educational institutions (Heras-Saizarbitoria, 2018). Even though the output of non-formal education institutions is how capable students are (Latchem, 2014; Pfeffer, 2015).

The purpose of competency testing is to draw inferences about the ability of examinees that goes beyond the particular sample of items, raters, tasks, or problems presented (Madaus, 2010; Thipatdee,

2020b). Presumably, decisions about competency follow the assessment process. This requires that the competency tests be valid and reliable (Ferrari et al., 2018; Foster et al., 2007).

The implementation of the competency test is intended as a means to obtain valid, current, current and authentic evidence as a basis for whether the test participants are competent or incompetent to the competency unit being tested. (Chohan & Hu, 2022). In its implementation, the competency test must pay attention to the competency test equipment in the form of questions that are in accordance with the material taught, testing instruments, in this case it is a rubric and also people involved in the process of implementing education. Education Implementers must ensure that the curriculum used meets the minimum criteria to be tested and also that competency test questions are the result of the learning process. Finally, the examiner must use a standardized rubric and sufficient knowledge regarding what will be tested. (Thipatdee, 2020b)

The implementation of the test competency test is sometimes seen only as a formality process that must be carried out, which of course will make the results of the competency test biased. In fact, the competency test is a measuring tool that must be used to measure the success rate of the learning process as evidenced by the skills possessed to be ready in the world of work. (Ganiem, 2016; Madaus, 2010; Niriella, 2014)

Competence has been long understood as a person's ability or capacity to do a job (Jumani & Bibi, 2011; Oberländer et al., 2020). It was devised in the 1970s by the US Company McBer (2013) said that competency is to identify the specific personal characteristics which resulted in effective and/or superior performance (Hitt et al., 2010; Jumani & Bibi, 2011; Schechner & Lucie, 2020). Every job has a requirement of specific set of competencies to undertake it efficiently, and the individuals who would perform the job need to be laced with those competencies (Bartolo, 2017; Kelly et al., 2019; Moran, 2008). One of the interesting and worth mentioning aspect of this term is that it focuses not on what a person can do but on what a person can learn. This forward looking approach makes it quite popular amongst training providers and recruitment experts (Cai, 2020; Pfeffer, 2015).

Competencies with their specific behavioral indicators facilitate the demonstration of appropriate skills and behaviors, it is not a set of tasks performed like a robot neither it is an underlying capacity which is never demonstrated (Brown, 2018; Tudor, 2013). Yamazaki said that (2018) Competency also includes motivation and self-knowledge, a desire and

willingness to demonstrate effective performance (Norqvist & Leffler, 2017).

So, with this information we can proceed to defining Competency: 1) A set of individual performance behaviors which are observable, measurable and critical to successful individual and company performance; 2) Individual characteristics of a person which result in an effective and superior performance in a job (Smith, 2021; Sumalee, 2018).

Professional associations and employer associations have been encouraged to take part in the skills assessments and certification program (Ivanova, 2016). Technical experts, supervisors and managers from industry with expertise in practical work processes ensure that certification schemes meet industry needs and conform to social, ethical, health and safety standards. Industry representatives can chair committees or sub-sectoral committees and serve as assessors, inspectors or owners of assessment centres. Assessment centres were established to test employees' skills (Toom et al., 2021).

They use a recognition of prior learning (RPL) approach, which gives workers, who have learned their skills through non-formal or informal training or hands-on experience, the chance to obtain certificates without having to go through formal education or training. The centers are accredited by the Assessment and Certification Committee (ACC) in order to professionalize and standardize the assessment of skills as stipulated in Myanmar's Employment and Skills Development Law (Reiff & Phuong, 2020).

From the background of the above thoughts and the current rubric models where it is still possible to occur the subjectivity of the examiner / assessor, the authors try to conduct literature review-based research to see a concept of the TATO rubric. The novelty of this research, apart from the fact that this concept is relatively new and no one has implemented it, this concept is used in course and training institutions where the output of the training program must be truly measurable in competence. This can only be done if the competency test measuring instrument can accurately assess what it is testing. And that's aada in this concept of TATTOOS.

## METHOD

### Research Design

The study uses a qualitative model. The data was obtained through documents, FGDs and interviews conducted with research participants during the FGD. (Geofry E Mills and Lorraine R Gay, 2016; Miles B Matthew, Hubberman A Michael, Saldana, 2014; Stake, 2010),

### **Research Participants**

Research participants are a very important part of the data collection process because without participants, the required data will not be fulfilled (Bogdan & Bilken, 1992) The participants of this research involving 33 competence certification bodies with different skills. The majority of participants in this study are chairmen and secretaries at each competency certification body so that they understand the target graduates of the programs they create. In addition to them, the directorate is also an active participant in directing and discussing the competence of graduates so that the programs created by the directorate can achieve the right targets.

### **Data collection**

The process of collecting data is a process of collecting data needed to answer research questions or problems that arise at the beginning of research. (Flick, 2013). The data were obtained through a group discussion forum organized by the Directorate of Courses and Training of the Ministry of Education and Culture. The FGD process has been ongoing for more than 6 months (Yin K, 2011). In the implementation of FGD, each competency certification body verifies graduate competency standards with the curriculum they have and then stated in the form of an assessment rubric. The other data were obtained from the documents taken from the rubric model implemented by each competence certification body to measure the level of competence of the students. Other data were obtained through the assessment of the competency test section of the document. The data collection procedure was carried out by evaluating the category owned by each competency certification institute and comparing it with the model developed, namely the TATO (Terbuka, Adil, Terukur dan Objektif) model (Open, Fair, Measurable and Objective). This model was developed by the Directorate of Course and Training Development and The Certification Competency Forum. (Kemdikbud and Forum LSK, 2021).

### **Data Analysis**

The data obtained from the research participants in the form of results from group discussion forums, documentation and also limited interviews were then analyzed using predetermined instruments by conducting various simulations and measuring each sentence so that there are no longer sentences that are subjective in nature that can result in bias of the results of the competency test carried out.

## **RESULTS AND DISCUSSION**

The results of the research are divided into several parts, namely an explanation of the concept of the

TATO itself and how the concept of the TATO is translated into a heading for assessment by each competent certification body. Comparison of the previous rubric model with the rubric using the TATO model found that there were significant differences so that the assessment using the TATO model would reduce the subjectivity of the testers in the performance of the competency test.

The assessment with the TATO model also allows students to receive the same treatment, whoever the examiner is, after which, if the competent test participant has the right skills to pass, the participant will pass. This TATO model systematically eliminates the feelings or subjectivity of the examiners.

This TATO concept will ultimately provide a balance to the process and results of competency tests conducted by the Competency Certification Body. This model also allows standardization of processes and results throughout Indonesia where almost all Competency Certification Bodies have competency test sites throughout Indonesia. This TATO model also encourages the standardization of assessors who assess the implementation of competency tests.

### **TATO Model: The Concept**

TATO itself is an abbreviation of Indonesia Terbuka /Open, Adil (Fair), Terukur (Measurable), and Objektif (Objective). The TATO model concept is designed to provide other components such as rubric to be based on it. Terbuka (Open) means that the scoring procedures, scoring criteria and competency criteria can be known by all parties having interest with the competency test (Kemdikbud and Forum LSK, 2021). Those are the students participating in competency test, Course and Training Institutions, Assessors, Teachers and training centers. By knowing the competency criteria the parties can actively prepare the competency assessment. The course and training centers, for instance can adjust their training curriculum supporting the passing of the participants in competency test.

The concept developed with the TATO model is a concept that will be able to measure the level of student competence. The measurement concept with the TATO model has been developed from the Indonesian Qualification Framework (IQF)-based Graduate Competence Standards, where students are able to demonstrate the concept of 'what I can do'. With this concept the non formal graduate competence would be very highly respected in the industry and business as they can show how to. The TATO assessment concept would also provide the fair and comprehensive measurement of the standards.

Graduate Competence Standards are further developed into Competence Units, which will later be

reflected in the exam questions that will be presented. It is again lowered from the Competency Unit to the Indicator where it is further developed into an Assessment Component in this indicator. This assessment component should be based on the following: 1. Pursuant to the factual job / competence; 2. Distinguishing key, supporting and complementary indicators; 3. Use of UCRU rules (Urgency, Continuity, Relevance and Usability)

Adil (fair) means students to receive the same treatment, whoever the examiner is and whoever they are and what their position is, after which, if the competent test participant has the right skills to pass, the participant will pass. This TATO model systematically eliminates the feelings or subjectivity of the examiners. Terukur (measurable) means that all competencies are measured using the clear and objective criteria. It means that when the participants are object to having competency certificate, it means that they have already met the whole criteria of the competency in all aspects of the test measured. Objektif (objective) means that the questions provided on the test are specific and clear. The questions used are closed ended questions instead of open ended question which might be possible for the assessors to include his/her own opinions.

In addition, the results obtained are also easier to measure and there will be no misunderstanding between all parties involved, especially in cases where competency test participants are declared not to have passed the implementation of the competency test.

FAIR (Adil): applied to all participants, no gains or losses. The examiners guarantee the test takers for not influenced by other factors instead of the competency held by the participants. It means that even though the test taker is a part of the family of the parties, it will not guarantee to pass easily without any competency. This concept also ensures that the interests that accompany the implementation of the competency test can be minimized so that the results can be easily accepted by all parties.

MEASURED (Terukur): determination of score according to clear rules or criteria. This means that the scoring criteria has been made and the rules of scoring is also measurable known by the parties involved. This concept ensures that the assessor will not carry out many initiatives that are not in accordance with the rubric that has been provided so that there will be no more instances where what has been taught is not in the testing process. That way, all related parties know the size that will be asked with a value that is also measured based on a rubric.

OBJECTIVE (Objektif): specific, clear, not open statement that opens up space for the subjective consideration of the examiner so that multiple interpretations can be made. This concept ensures that qualitative sentences in the rubric can become more straightforward which will not cause different understandings between the parties involved.

However, since learning and instruction are increasingly competency-based, this alignment is endangered because the development of adequate assessment methods appears to be lagging behind. If instruction and learning are based on acquiring competencies, then constructive alignment implies that assessment must also be competency-based. A problem here is that the development of assessment methods to adequately assess the acquisition of competencies is hindered, because it is not clear what the requirements for these kinds of assessment are.

#### COMPETENCY BASED RUBRICS WITH TATO MODEL

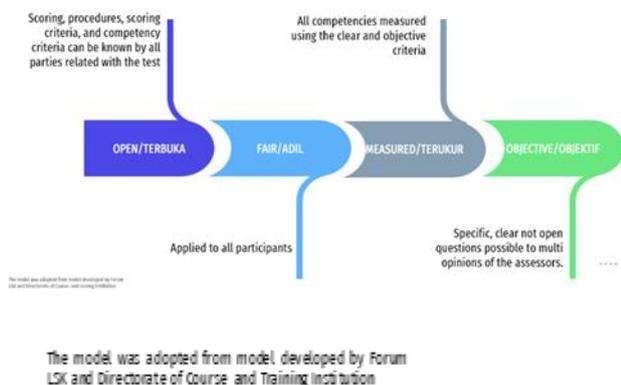


Figure 1. TATO Model : The Concept\*

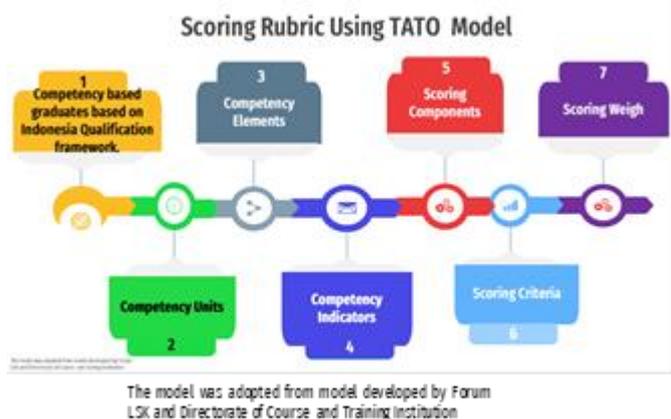
#### TATO Model :The model was adopted from model developed by Forum LSK and Directorate of Course and raining Institution

The concept in the TATO section of the measure: OPEN (Terbuka): assessment procedures, score criteria and passing criteria may be known to the parties concerned. This concept provides the understanding among parties involved in the competency based test such as test competency venues, instructors, course managers and participants. With an open concept, all parties involved can prepare themselves to face the competency test that will be carried out.

#### TATO Rubric Model

A rubric retains its link to the authoritative rule and, in particular, to 'redness.' In fact, professors like us who use rubrics often consider them to be the most effective grading device since the invention of red ink. (Stevens & Levi, 2005). Rubrics can be used for a wide range of assignments and tasks: research papers, book reviews, discussion participation, laboratory reports, portfolios, group work, oral present-

tations, and more.



**Figure 2.** Rubric Model developed using TATO Model

The scoring concept using TATO model was designed based on the following criteria :

Competence based graduates was based on the Indonesian Qualification Framework (KKNI): Graduate competencies are aligned with the Indonesian National Framework so that holders of competency certificates can meet the demands of the workplace.

Competency Unit: According to the framework, graduates' competency standards are translated into multiple competency units that become part of the certificate holder's competency and are adjusted to the level of their individual competency certificates.

Competency Elements; Furthermore, the competency units are divided into many competence elements. To improve the accuracy of the assessment process, one unit of competence can comprise multiple parts of competence.

Competency Indicators; It was then reduced down to create a graduation indicator based on the Elements of Competence. This graduation indicators will then serve as a useful reference point for proceeding on to the next level, which is the assessment component.

Scoring components: The assessment component serves as a guide for the examiner in deciding whether or not the competency test participant possesses the necessary skills. All of the indications that will be evaluated are included as components at this point.

Scoring Criteria; This assessment methods determines whether or not the required competency criteria are definitely necessary. The criteria for 2-0, 2-1-0, and 1-0 scores appear in this context. The importance of each indicator being analyzed is used to determine the value.

While the concept of the heading developed in the TATO model is a concept that must comply with the following elements:

What has been done is appropriate, accurate and correct; What is being done is appropriate, but there are errors that can still be tolerated; What is being done is wrong, inappropriate, inaccurate and incorrect.

While the scoring criteria model used are as follows : Absolute Major score given is 2-0 in which the test takers can not do any mistakes and has high urgency in supporting the tested competency unit. Absolute Minor score given is 2 - 0 in which the test takers can not do any mistakes and has low urgency in supporting the tested competency unit. Relative score given is 2 - 1 - 0 in which the test takers are allowed to do any mistakes as the tested competency unit does not influence the overall test takers competency level. Optional score given is Y (Yes) – N (No) in which the test takers can fill the minimum requirement of the tested competency unit.

In the end, this study explains that the concept of TATO can be a very good model for measuring qualitative competence to be more quantitative.

The concept of competency assessment carried out under the TATO model is a very new concept in the education sector, both formal and informal. In the case of non-formal education, which is mostly managed by the community in the form of courses and training institutions, the concept of assessment with the TATO model shows the seriousness of non-formal education in participating in the national education system, and it is much more important to combine the competencies generated by the training institutions with the world of business and the world of industry.

This concept also reflects the seriousness of the Course and Training Directorate in encouraging courses and training institutions to reach predetermined IQF levels so that they can coexist equally with formal education graduates. With the competence that is owned and measured by the TATO model, the holder of the competency certificate produced by the Competency Certification Institute has a good sense of self-confidence in the face of the growing business and industrial world and increasingly appreciates the skills of prospective employees.

## CONCLUSION

In the end, this TATO model will be able to answer some of the doubts that business owners have about the quality produced by the Course and Training Institute. This TATO model will also be able to

become an ideal measuring tool for the skills of non-formal graduates. The concept of "what can I do" is the answer to the concept of TATO. This TATO model will also provide assurance to all competent stakeholders that the competency certification holder issued by the Competency Certification Institute is an individual with superior competence in their respective fields who will contribute to community development by becoming employees or entrepreneurs. With accurate competency test results, the world of work will trust the quality and competence produced by course and training institutions or other non-formal institutions. With higher confidence, marginalized people who cannot continue to the tertiary level will have the opportunity to work in the formal sector.

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