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Evaluation of Competency Test and Work Competency Certification Implementations at Professional Certification Institute - First Party (LSP P1)

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Abstract

The challenge of vocational education is to produce competent and competitive prospective workers. Competency certification is a strategic step to improve the quality of Vocational High School graduates. For Vocational High School LSP P1 implementing the work competency certification, its function is not optimal and its independence is questionable. Vocational High School LSP P1 is only 4% compared to the number of Vocational High Schools and the graduates. Evaluation for Vocational High School LSP P1 was conducted to find out how the implementation of competency tests and work competency certification. This research aims to evaluate the implementation of competency test and work competency certification at LSP P1, in terms of the component variables of Context, Input, Process, and Product. This research is a descriptive evaluative research using the CIPP evaluation model approach. The research population was Vocational High School LSP P1 assessors from 9 Vocational High Schools in Pekalongan Regency and its surroundings. The sample was the research population who served as competency test assessors at LSP P1. Data collection methods in this research were questionnaire, interview, and document study. The content validity testing was by expert judgment, while the construct validity testing was by correlation analysis. The reliability test used Alpha Cronbach. The data analysis technique was quantitative descriptive analysis. Furthermore, it was analyzed by changing the scores for the context, input, process, and product components into a T-Score and then categorized them by the Glickman Quadrant. The research results were as follows; (1) in the context component, the percentage was F + = 66% and F - = 34% meaning that the implementation of competency test in terms of context variables is categorized as effective, (2) for the input component, the percentage was F + = 61% and F - = 39%, indicating that the implementation of competency test in terms of input variable is categorized as effective, (3) for the process component, the percentage was F + = 66% and F - = 34%, meaning that the implementation of competency test in terms of process variable is categorized as effective, (4) for the product component, the percentage was F + = 59% and F - = 41%, indicating that the implementation of competency test in terms of the product variable is categorized as effective, (5) T-score analysis of the four CIPP components, namely context, input, process, and product were (+ + + +) in the criteria of the Glickman Quadrant that were included in quadrant I, meaning that evaluation of the implementation of competency tests and work competency certification at LSP P1 in terms of all CIPP components is in the very effective or excellent category.

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INTRODUCTION

By the Presidential Instruction Number 9 of 2016 on Vocational High School Revitalization, Vocational High School education is addressed in the context of Improving the Quality and Competitiveness of Indonesian Human Resources. One of the points for implementing the Presidential Instruction is the policy to accelerate the access to vocational competency certification for vocational graduates in several ministries and institutions (Cabinet Secretariat, 2016). The National Professional Certification Agency (BNSP) as an independent institution that carries out work competency certification, has the task to accelerate the granting of licenses for Vocational High Schools as an LSP (Professional Certification Institute) P1 (Ministry of State Secretariat of the Republic of Indonesia, 2018).

The enhancement of access to work competency certification is followed by efforts to accelerate the completion of the Indonesian National Work Competency Standards (SKKNI) in each sector or business sector by the relevant ministries. The SKKNI is prepared by industry associations, professional associations, government and other stakeholders, and is a reference for certification schemes. The completion of SKKNI in various sectors or business fields followed by the establishment of certification schemes that are suitable for vocational competency skills will facilitate the access to certification for Vocational High School graduates.

Work competency certification is the process of granting competency certificates which are carried out systematically and objectively by means of competency tests according to the Indonesian National Work Competency Standard, International Standard, and/or Specific Standard (State Secretariat, 2012). Competency Certification is one of the three pillars of human resource development that is recognized for its competence nationally and even globally (BNSP, 2017).

The Industrial Revolution 4.0 and the enactment of the ASEAN Economic Community led to increased mobility and labor competition among the ASEAN members. The advancement of technology in the industrial era 4.0 which is based on cyber physical systems has radically changed humans' work and life, how humans work, and how to communicate, resulting in the loss of 35% of basic skills at work (Ministry of Education and Culture, 2016). The effort to improve competitiveness of the workforce is opening access to competency certification for Vocational High School graduates. Access to the new certification has reached 4,083 out of 14,500 Vocational High Schools, through their LSP P1 and Vocational High School networks in Indonesia (Directorate of Vocational High School, 2019). The licensed LSP P1 of Vocational Schools are only 3% of the total number of schools. This fact shows that the majority of Vocational High School graduates do not have a nationally recognized work competency certificate.

According to Leigh et al. (2007), Competency Assessment is an approach that has been developed to fit programmatic, licensure, and post-licensure expectations for competence at the professional development stage (Leigh, Smith, Bebeau, Lichtenberg, Nelson, Portnoy, Rubin, 2007). Regulation of the National Professional Certification Agency 305 states that a competency test is an assessment both technical and non-technical through the collection of relevant evidence to determine whether a person is competent or not in a certain competency or qualification unit National Professional Certification Agency, 2013). For competency test participants who are declared Competent will be granted recognition by the Professional Certification Institute in the form of a Competency Certificate with the logo of Garuda or the National Professional Certification Agency. The competency certification system to achieve the goal of producing competent human resources is described in the following chart.

Figure 1. System of National Professional Competency Certification (BNSP, 2017)

The policy to facilitate the access to competency certification is widely open for Vocational High School graduates to have competency certificates, but LSP P1 of the Vocational High School has not maximally carried out their duties and functions. This research aims to evaluate the implementation of competency test and work competency certification at LSP P1 in terms of each component, namely context, input, process, and product. In addition, it also aims to evaluate the implementation of competency test and work competency certification at LSP P1 in terms of all components collectively.

METHODS

Evaluative research is a design and evaluation procedure in collecting and analyzing data systematically to determine the value or worth of a practice/education (Sukmadinata, 2009). This research used the CIPP (Context, Input, Process, and Product) model, which is an "evaluation model that directs the object of evaluation to the process and input to the results or products" (Arikunto, Suharsimi & Jabar, 2009). The research was conducted at the LSP of Vocational High School of Muhammadiyah Kajen, Pekalongan Regency by applying questionnaires, structured interviews, and documentation. The research framework is described in the following scheme:

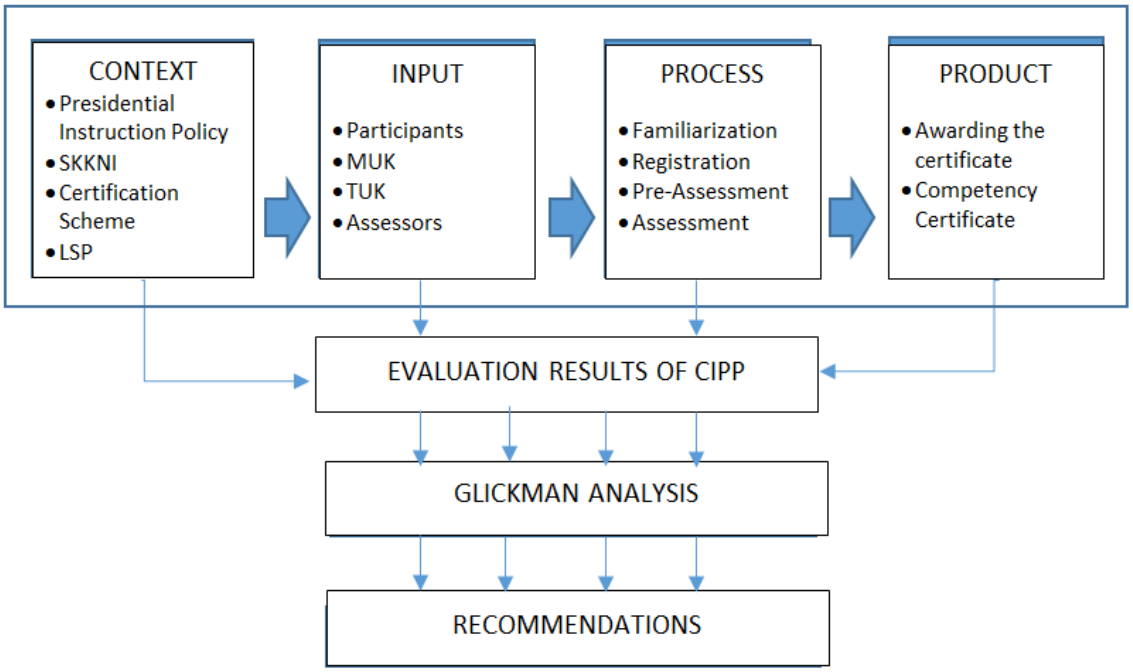

Figure 2. Evaluation of Competency Test and Work Competency Certification at LSP P1

The research population was Competency Assessors, competency examiners assigned to the LSP of Vocational High School of Muhammadiyah Kajen to conduct competency tests and work competency certification on 13 One Time TUK , March - June 2019 period. The research sampling technique was total sampling (Usman, H., & Akbar, 2012). The use of the entire population as the sample applies if the members of the population are relatively small and the number of assessors in each school is not the same, then the research takes all the assessors into the sample. The sample or research respondents were competency assessors from 8 public and private vocational high schools from Pekalongan Regency, Pekalongan City, and Batang Regency.

Research instrument is a tool used by researchers to collect research data by taking measurements (Widoyoko, 2012). The instrument used to explore data on the implementation of competency test and work competency certification at LSP was a questionnaire of 55 statement items consisting of 4 aspects of the CIPP component. The choices for questionnaire answer were Very True, True, False, and Very False, with the highest score for the statement was 4 and the lowest score was 1.

The item validity test was to obtain content validity and construct validity. The content validity of the research instrument was by asking for expert judgment, Dr. I Made Sudana, M.Pd and Dr. Muhammad Khumaedi, M.Pd. Based on expert judgment, the research questionnaire was utilized to collect field research data. According to Widoyoko, the minimum requirement for item validity is if rxy $\geq$ 0.30. The minimum requirement for item correlation results with a score of r $\geq$ 0.3 is declared valid, while questionnaire items with a correlation score below <0.3 are declared invalid (Widoyoko, 2012). For the results of validity test of the 55 questionnaire items, there were 5 invalid questionnaire items, that were items 1, 4, 6, 8 on the context aspect and item 8 on the input aspect. Questionnaire items with a score of r <0.3 were not used in data analysis.

The test retest method was utilized to test the external reliability. The reliability of this research instrument was calculated using the Alpha Cronbach formula, for the instrument was in the form of a questionnaire and the scale was stratified or using a Likert scale, where the score interval starts from 1 to 4. (Widoyoko, 2012). The calculation results of the Cronbach Alpha formula were in the form of a reliability

coefficient, which was interpreted as the reliability level. The results of the reliability test obtained a reliability coefficient, that was the Context component of 0.842, the Input component of 0.932, the Process component of 0.974, and the Product component of 0.936. The interpretation of the reliability coefficient states that the research instrument has very high reliability.

The data analysis technique in this research was descriptive quantitative analysis techniques by describing and interpreting the data from the variables being evaluated. According to Suryabrata, descriptive research intends to describe particular situations or events (Suryabrata, 2012). Descriptive approach to evaluative research was to describe and interpret the data from the evaluated variables. Descriptive calculation analysis was used to obtain the mean and standard deviation as well as data distribution tables and graphs. According to Suharsimi Arikunto, mode is the value that appears the most in the score distribution; while median is defined as the value in the distribution which is the boundary between 50% of subjects having a greater value and 50% of subjects having a score less than the determined limit; while mean is the average value (Arikunto, 2016).

The further data analysis used the Z-score or standard score. Suharsismi Arikunto explained that the standard score is changing the original score into a Z-score which is defined as the distance between the values from the measured mean. According to Djemari Mardapi, the interpretation for the results of research data can be divided into four category levels (Mardapi, 2008), as follows:

Table 1. Categories of Research Data Results Evaluation of Competency Test Implementation

Respondent Score Range	Category
$\bar{X}$-3.SD ≤ X ≤ $\bar{X}$-1,5.SD	Not good
$\bar{X}$-1,5.SD ≤ $\bar{X}$	Not good
$\bar{X}$ ≤ $\bar{X}$ + 1,5.SD	Good
$\bar{X}$ + 1,5.SD < X < $\bar{X}$ + 3.SD	Excellent

To determine the effectiveness of cumulative competency test implementation, the four aspects of CIPP were analyzed using the Glickman quadrant model, which was comparing the Z-score data to the T-score. T-score data analysis was multiplying the Z-score by 10 plus 50. The data analysis was processed descriptively and a standard score was carried out for each component using the T-score. To determine the score for each evaluation component i.e. context, input, process and product, the provision was that if T ≥ 50 is positive (+) or effective, and T ≤ 50 is negative (-) or ineffective.

The criteria for Glickman quadrant (1980) were divided into 4 quadrants, namely: 1) Quadrant I, if the results of the analysis of all variable components of Context, Input, Process and Product show positive results (+), then the Evaluation of the Competency Test and Work Competency Certification Implementation at LSP P1 reviewed on all components is categorized as Very Effective; 2) Quadrant II, if the results of the analysis show that one of the components of Context, Input, Process and Product variables shows a negative result (-), while other variable components are positive (+), then the Evaluation of the Competency Test and Work Competency Certification Implementation at LSP P1 reviewed on all components is categorized as Fairly Effective; 3) Quadrant III, if the results of data analysis show that one of the components of Context, Input, Process and Product variable shows a positive result (+), while other variable components are negative (-), then the Evaluation of the Competency Test and Work Competency Certification Implementation at LSP P1 reviewed on of all variable components is categorized as Less Effective; 4) Quadrant IV, if the results of data analysis of all components of Context, Input, Process and Product variable show negative results (-), then the Evaluation of the Competency Tests and Work Competency Certification Implementation at LSP P1 reviewed on all variable components is categorized as Very Ineffective.

RESULTS AND DISCUSSION

Evaluation of the competency tests and work competency certification implementation at LSP P1 in terms of context aspects can be categorized through T-Score data analysis. T-score analysis confirms the achievement of the competency tests and competency certification implementation in terms of context variable. The results of T-score analysis on the context variable resulted a percentage of Frequency (+) = 64% and Frequency (-) = 34%, as F (+) > F (-), the Context component shows a positive results. It can be concluded that the Evaluation of the Competency Test and Work Competency Certification Implementation at LSP P1 reviewed on the Context variable, is categorized as Effective.

Evaluation of the Competency Tests and Work Competency Certification Implementation at LSP P1 in terms of the Input component variable is categorized through T-Score data analysis. T-score analysis resulted a score of Frequency (+) = 25 or 61% and a score of Frequency (-) = 16 or 39%, the frequency of positive values is greater than the negative frequency scores, meaning that the Input component shows a positive result. It can be concluded that the Evaluation of the Competency Test and Work Competency Certification Implementation at LSP P1 reviewed from the aspect of Input is categorized as Effective.

Evaluation of the Competency Tests and Work Competency Certification Implementation at LSP P1 in terms of the Process component variable is analyzed with a T-score. The T-score analysis obtained a percentage of Frequency (+) = 66% and Frequency (-) = 34%, as F (+)> F (-), meaning that the Process component shows a positive result. It can be concluded that the Evaluation of the Competency Test and Work Competency Certification Implementation at LSP P1 reviewed on the Process component variable is categorized as Effective.

Through the T-score analysis, Evaluation of the Competency Test and Work Competency Certification Implementation at LSP P1 is reviewed on the Product component. It resulted in a percentage of Frequency (+) = 59% and Frequency (-) = 41%, as F (+) > F (-), meaning that the Product component shows a Positive result. Based on the results of the T-Score analysis, it is concluded that the Evaluation of the Competency Test and Work Competency Certification Implementation at LSP P1 reviewed on the Product component variable is categorized as Effective.

Based on the fifth research objective, which is to evaluate the implementation of the competency test and work competency certification at LSP P1, all CIPP components are reviewed together, that are Context, Input, Process and Product. The results of T-Score analysis of the evaluation research on the implementation of the competency test and the work competency certification at LSP P1 in terms of each CIPP component obtained the following percentages: Context F + = 66%, Input F + = 61%, Process F + = 66%, and Product F + = 59%. Based on the results of the T-score analysis of the four variables in the CIPP formula, it is included in the category = + + + +.

The results of T-score analysis compared to the Glickman Quadrant criteria showed that the CIPP component category + + + + is in quadrant I. It can be concluded that the Evaluation of the Competency Test and Work Competency Certification Implementation at LSP P1 is in the Very Effective or Very Good category, see the following figure:

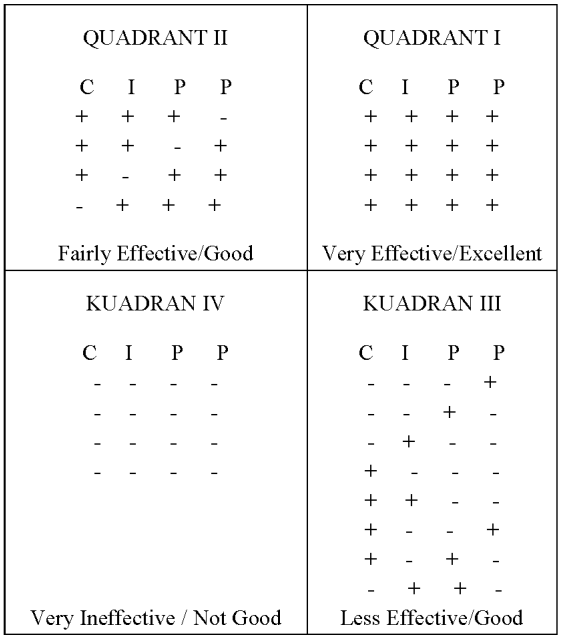

Figure 3. Prototype of Evaluation of the Competency Tests and Work Competency Certification Implementation at LSP P1 - Adaptation of the Glickman Theory (1981) (Parmadi et al., 2013)

CONCLUSION

Based on the research results on the Evaluation of the Competency Testing and Work Competency Certification Implementation at the First Party LSP, the following conclusions were drawn; 1) The Implementation of Competency Test and Work Competency Certification at LSP P1 in terms of the Context component was Effective, included in the Good category with an F + percentage of 66%, 2) The Implementation of Competency Test and Work Competency Certification at LSP P1 in terms of the Input component was Effective, included in the Good category with an F + percentage of 61%, 3) The Implementation of Competency Test and Work Competency Certification at LSP P1 in terms of the Process component was Effective, included in the Good category with an F + percentage of 66%, 4) The Implementation of Competency Test and Work Competency Certification at LSP P1 in terms of the Product component was Effective, included in the Good category with an F + percentage of 59%, and 5) The Implementation of Competency Test and Work Competency Certification at LSP P1 in terms of all components of the CIPP cumulatively was Very Effective, included in the Excellent category. The results of the T-score analysis compared to the Glickman Quadrant criteria showed that the CIPP component was in the category (+ + + +) and was in quadrant I.

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