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Development of Evaluation Instrument Context, Input, Process, Product (CIPP) Learning Program in Politeknik Negeri Bali Environment

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Abstract. The study aimed to get valid and reliable CIPP model program evaluation instrument to measure effectiveness level of learning implementation in Politeknik Negeri Bali, in terms of component: context, Input, Process, and product. This study is a research and development (R & D) using nine from 10 steps Borg and Gall models. The evaluation model used is the Stufflebeam evaluation model CIPP. Data were collected using questionnaires, interviews, observations, and document studies. Number of questionnaire test subjects for 45 students, 20 lecturer questionnaires, questionnaire for Head of Study program 4 peoples, and admin questionnaire 6 peoples. The validity of the contents of the instrument is determined using the Aiken's suggested (V) agreement index, involving 5 validators. Item instrument validity was analyzed by using bivariate correlation between each score indicator with total score, instrument reliability was analyzed *formula alfa cronbach* formula using SPSS 23.00 for windows. The results showed: content validity using expert judgement with Aiken's index coefficient for 0.78 mean input component is classified as very good and feasible to use, the coefficient for average context component of 0.79 classification is very good and feasible to use, and for flat process components 0.76 classification is very good and feasible to use. The grain validity of all instrument grains has a correlation coefficient $r > 0.232$ and satisfies the reliability coefficient $\alpha > 0.70$. The result of evaluation of learning program of total contex component is at least good enough 93%. The total input component is at least 85% good enough. The total process component is at least quite good at 79.4%. Head of departement and head of study program from each department through UP2AI can use this instrument to evaluate the implementation of the learning process in Politeknik Negeri Bali.

1. Preliminary

Law No. 12 of 2012 on Higher Education article 59 paragraph (5) mentioned, Polytechnic is a Higher Education that organizes vocational education in various clusters of Science and / or Technology and if eligible, polytechnic can hold professional education. The third part of paragraph 2 of articles 16 paragraph (1) mentioned Vocational Education is a Higher Education diploma program that prepares students for jobs with particular applied skills to applied undergraduate programs (2012 Higher Education Act, 2012: 17 and 46). Polytechnic is one form of higher education that holds vocational education.

To be a graduate of the Polytechnic, it is necessary to have an education with a learning system that is designed properly in accordance with the times. So that should not think and act partially in

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implementing education and learning. Instead, it is necessary to think and act holistically, integratively, in an integrated way to achieve goals.

To build a future oriented program of learning required tools that support both hardware and software. It is necessary to evaluate these tools concerning pedagogic and academic competence of teachers / lecturers, supporting facilities, motivation of learners, academic culture of campus, subject matter, related to the success of learning program. To know the success of learning program in college, need a suitable evaluation system or model so that it can provide accurate information for stakeholders, especially high education leaders and beneficial to improve the learning program.

Based on the background of the above problems, there needs to be a systematic and comprehensive evaluation of the implementation of learning programs in PNB, with a standard program evaluation model. One of the most popular and dominant models in relation to the evaluation of learning implementation is the CIPP (context-Input-process-product) model developed by Stufflebean et al 1971 (Suharsimi, 2009)

PNB is one of vocational education institution in Bali. In its operation, PNB has vision and mission. The current vision of GNP is: to become a vocational higher education institution leading professional graduates of international competitiveness in the year 2025. While one of its mission is to print a reliable power oriented to market needs in the Field of Engineering and Trade with Tourism as the flagship.

Vocational education is a combination of theory and practice in a balanced manner with an orientation to the readiness of graduates. The lessons are concentrated on the apprenticenship of learning in special vocations. Therefore, in the learning process must be able to show the balance between aspects, theory, practice and social.personal.

Every program including a program of learning in PNB, must have advantages and disadvantages in the implementation. Therefore, this research is conducted to be able to know the weakness, then do the improvement and refinement, so hopefully will be able to improve the quality of education for the future. A number of universities can not implement the curriculum well. This is influenced by several aspects, namely the curriculum concept planning that is less appropriate to the condition of the school and learners, school stakeholders who do not understand the method of implementation, unprofessional management, and limitations of capabilities

College as a system composed of components context, input, process, output, and outcome. The success of the objectives of the education program (output), is determined by its implementation (process), and its implementation is strongly influenced by the level of readiness of all things (input) required for the implementation (Slamet, 2005: 1).

According to the CIPP model, evaluation is a process of delineation, the acquisition and selection of meaningful information that can be used as a basis for decision-making and selection of alternative decisions. The CIPP evaluation model uses the word context, Input, process, and product as the evaluation target. This model considers that the program is evaluated as a system (Suharsimi, 2004: 29). The CIPP model is a standard evaluation model.

The results of CIPP model evaluation can be used as the basis for the decision-making of four kinds of decisions: (1) planning that influences the selection of the objectives and objectives of the activity), (2) the structuring that determines the optimal strategy and the procedure design in achieving the objectives), (3) Implementations that provide tools for program implementation and improvements to existing programs); and (4) recycling whether an activity needs to be continued, altered or discontinued.

CIPP model evaluation results provide the right results as a basis for decision making, required the existence of valid and reliable instruments. The instruments used should be able to provide a consistent and consistent picture of what to measure. The purpose of this study (1 of 2 years) to obtain valid and reliable instruments measure the effectiveness of the learning implementation in PNB in terms of components: 1) context, 2) inputs, 3) processes, and 4) products.

2. Research methods

This type of research is research and development (Research and Development Model), the development is done by testing model or product. Model or product testing is a very important part of

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development research, which is done after the product design is completed. The model or product trial aims to determine whether the product made is feasible to use or not. Model or product trials also look at the extent to which the product being created can achieve goals and objectives. Trials were performed 3 times: (1) expert test, (2) limited testing conducted on small groups and (3) field testing. This is so that the quality of the model or product developed is completely valid construct empirically. The steps in analyzing the research and development include: (1) preliminary study, (2) planning, (3) hypothetical model development, (4) hypothetical model review, (5) revision, (6)) Limited trials, (7) revision of trial results, (8) broader trials, (9) final model revisions

3. Results and Discussion

First, the needs analysis phase obtained information that there is no evaluation instrument of the learning process program that comprehensively covers students, lecturers, and administrators. Second, the planning stage is done by arranging the instrument details, the step taken is to make the grating instrument evaluation program learning process. Refers to the CIPP model by Stufflebeam (from Ward Mitchell Cates, 1990) looks at four dimensions: context dimension, input dimension, process dimension and product dimension.

Third, is the preparation of the prototype of the program evaluation instrument of the learning process, in accordance with the instrument grille. Next done assembly in accordance with the intended response.

Fourth, the review of the hypothetical model is to validate the instrument by five validators. In his research, the researchers chose five experts from different perspectives with different criteria based on the goal but homogeneous by importance and its relation with the variables to be validated. Validator1 and 2 are experts in the field of evaluation, validator 3 and 4 educational experts, experts 5 vocational practitioners (Polytechnic lecturer). Expert revision obtained input in the form of variable sentences research, addition and reduction of the number of variables, data processing. Fifth, the revision of the hypothetical product of the initial design of the program evaluation instrument of the learning process was then revised and became a new design.

Sixth, is a limited trial phase, begins with instrument dissemination activities, then program evaluation instrument of learning process, in a limited trial on the process of learning process of stage I in the field of engineering of Politeknik Negeri Bali, consist of 25 students, 6 lecturers, and Administration 2 people. Seventh, the revision of the limited test of the design of the evaluation instrument of the program implementation of the learning process is improved and becomes the evaluation instrument of the implementation of the learning program II.

Eighth, extensive testing on learning activities in the field of engineering Polytechnic Negeri Bali, a number of 75 people consisting of students 45 people, the chairman of Prodi 4 people, 20 lecturers, and administration of 6 people. Furthermore, the revision of the broader test of the instrument design of the evaluation of the program implementation of the learning process is improved and becomes the evaluation instrument of the implementation of the learning program III.

Ninth, the revision of the extensive test of the design of the evaluation instrument of the implementation of the learning program III is improved and becomes the final evaluation instrument, shown in table 1. as follows.

Table 1. The subjects of extensive experimental research on the development of learning program evaluation instruments in PNB

No	Subject	Total
1	PNB Student	45
2	Head of study program	4
2	Lecturer	20
3	Administrasion	6
	Total	75

Validity in the test instrument using the content and validity of the item. Content validity is obtained by developing the instrument through a grid compiled based on theoretical studies. The

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verification of the validity of the items is done on the research variables whose data are collected through a closed questionnaire. In this research, the validity test is done on the research instrument items by correlation bivariate between each score indicator with total score for student questionnaire, lecturer, head of program and administration of department. The reliability test is done with the cronbach's alpha formula, with the help of SPSS version 23.0 for Windows.

Extensive trials resulted in 34 valid grains for student respondents, 15 for 10 lecturer respondents for the department administration respondents, then compiled the items into an instrument of learning program evaluation instrument in PNB. After the effectiveness test, the evaluation instrument design of the learning program implementation becomes a model of evaluation instrument of the implementation of the final learning program in PNB.

Table 2 Summary of Results of Extensive Test Reliability Analysis

No	Responder	Alpha Coefficient	Conclusion
1	Student	0,932 > 0, 70	Reliable
2	Head of Study program	0.944> 0,70	Reliable
3	Lecturer	0,95 > 0,70	Reliable
4	Administration	0,963> 0,70	Reliable

Table 2 can be explained that for student respondents with number of 74 point shows the coefficient of 0.932> 0.70, for lecturers/ academic respondents with number of 47 grains shows the coefficient of 0.963> 0.70, For respondents chair Prodi with 25 points indicate the coefficiency of 0.944> 0.70, for administrative respondents with the number of points 6 shows the coefficient of 0.963> 0.70. Thus based on the calculation of statistical reliability of the instrument known that the instrument is reliable.

Evaluation of the evaluation of the developed learning program is conducted to evaluate the overall learning activities that include students, lecturers/ academicians, Head of study program and Administrator. First, the administration of evaluation is a step that is done by designing the instrument form in accordance with the required. The evaluation instrument of the learning program is designed in the form of an evaluation manual. The book is equipped with: (1) Working instructions, (2) Respondent identity, (3)Assessment analysis. Second, the implementation of evaluation is a step Introduction

Assessment analysis. Second, the implementation of evaluation is a step that is done by giving the book evaluation to students, lecturers/ Academic community, and administrator to fill in the questionnaire.

The data were analyzed by three steps, namely: (1) scoring the respondent's answer by likert scale technique with 5 scale, (2) summing the total score of each component and (3) grouping the scores obtained by the respondents based on the trend level. The scoring in this evaluation uses a scale of 5. Data obtained through questionnaires were assessed by looking at the categorization of the trend level. The ideal high score is achieved when all the items on the component or variable are achieved when all the items on the component or variable get a score of 5 and the ideal lowest score is achieved when all the items on the component or variable get a score of 1. The four scores are subsequently substituted into the level of inclination used Criteria in the evaluation based on the above criteria compiled standard score category tendency component and indicator of variable research that is with the category very good, good, good enough, bad, very bad. The score of each item is calculated by the formula. Categorization of program evaluation level of learning process of student input component using criteria like table 3 below

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Tabel 3 Classification of Test Results Scores

Persentase (%)	Kategori
$85 \leq N \leq 100$	Very good (A)
$70 \leq N \leq 84$	good (B)
$55 \leq N \leq 69$	good enough (C)
$40 \leq N \leq 54$	bad (D)
$0 \leq N \leq 39$	very bad (E)

Context analysis shows that according to the students a number of 45 respondents very good category 24, good 18, good enough 2 and bad 1. Lecturer a number of 20 respondent very good category 4, good 12, enough 2 and bad 1. According to admin 14 respondent very good category 4, good 7, and bad 3.

Analyze the input shows, according to the students a number of 12 respondent very good category 3, good 7, good enough 1 and bad 1. Lecturer/ academic civity number of 20 respondents very good category 5, good 8, good enough 5 and bad 2. According to student 6 respondents Very good category 1, good 3, very bad 3. According to Head of study program number of 6 respondents very good category 4, and 2 good.

Process analysis shows that according to the students a number of 45 respondents very good category 15, good 25, good enough 3 and bad 2. According to lecturers a number of 12 respondent very good category 2, good 12, good enough 5, bad 1. According Head of study program number 6 respondents category very good 4, and good 2

The results of the analysis of the test results of the instrument, namely: Aiken index coefficient for the average context component of 0.79 classification is very good and feasible to use, for the input component 0.78 means entry in the classification is very good and feasible to use, and for component process 0, 76 classification is very good and feasible to use. The grain validity of all instrument grains has a correlation coefficient $r > 0.232$ and satisfies the reliability coefficient $\alpha > 0.70$. The result of evaluation of learning program of total context component is quite good 93%. The total input component is at least 85% good enough. The total process component is at least quite good 79.4%

4. Conclusions and suggestion

Conclusion

Development of program evaluation instrument of learning process yields valid prototype and reliability based on content validity using expert judgment with Aiken index coefficient for context component average 0,79 classification is very good and feasible to use, for average input component 0,78 means to enter in Classification is very good and feasible to use, and for average 0.76 process component classification is very good and feasible to use. The grain validity of all instrument grains has a correlation coefficient $r > 0.232$ and satisfies the reliability coefficient $\alpha > 0.70$. The result of the evaluation of the total context component learning program is at least 93% good enough. The total input component is at least 85% good enough. The total process component is at least quite good 79.4%

Suggestion

Head of department and head of study program from each department through UP2AI can use instruction program evaluation manual to evaluate the implementation of learning process in PNB

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