ICSCCD 2018 p-ISSN 2716-1919 e-ISSN 2716-2907
Volume 1, January 2020 doi:10.31327/icusn-adri.v1i0.1143

Link and Match Model in Vocational Middle School

H Hanafi1[1*] and E solihatin[2]

[1,2]Jakarta State University Jl. Rawamangun Muka, Jakarta Timur
[1]STKIP Yapis Dompu Jl. Sori Sakolo Bali I Kabupaten Dompu

*E-mail : hasdar.ilmiah@gmail.com, etinsolihatin@yahoo.com

Abstract. The Education System currently processes the Vocational School of Electric Power Engineering in DUDI. Produce a model of implementation of apprenticeship between Vocational School majoring in Electric Power and DUDI with work readiness of Vocational students after implementing internship. This research applies development focusing on the model *link and match* through apprenticeship. The development model modifies the development of Borg and Gall, ADDIE, and Dick and Carey. Development is carried out by stages, namely; *need assignment*, design, *development*, evaluation; and dissemination. The results showed that the development of the model *link and match* validation was declared valid. Products in the form of industrial manuals are declared feasible to be used by all aspects of learning in the good category. Based on the results of the research obtained, it was concluded that the development of the model *link and match* through the apprenticeship developed had met the categories of validity, practicality and interest so that it was feasible to be developed.

1. Introduction

Education holds an important role in a country to ensure the survival of a country and nation. There are several definitions regarding the meaning of education according to [1] including: 1) Education is all the efforts of adults in their association with children to lead their physical and spiritual development toward maturity; 2) Education is all leadership that is given intentionally by adults to children - children, in its growth to be useful for themselves and for the community.

National education goals according to Law No. 20 of 2003 (Ministry of National Education, 2003) concerning the National Education System concerning education which prepares students to be able to work in certain fields. Learning in the world of work directs students to improve their competence through the world of work. In learning in the world of work, students must carry out learning activities in accordance with the competency requirements needed by the world of work. The learning process is carried out in the form of industrial work practices (internship) in DUDI that are suitable for each student's expertise program. This program is very important for the success of students after graduating later.

The internship program is a work activity carried out in DUDI in an effort to approach or to improve the quality of Vocational School students and also add provisions for the future to enter the workforce. Implementation of internship will indirectly provide knowledge and experience in work. Experience gained during implementing internship, in addition to learning how to get a job also learn how to have a job that is relevant to the talents and interests possessed by these students.

One problem in the field of education that has long been a public discourse is the gap between the quality of human resources produced by educational institutions and the quality of human resources

ICSCCD 2018 p-ISSN 2716-1919 e-ISSN 2716-2907
Volume 1, January 2020 doi:10.31327/icusn-adri.v1i0.1143

needed by DUDI. Some industry criticisms about the quality of vocational school graduates are: (1) not relevant to the needs of the industry, covering the topics / eyes of the training being studied, very few relevant topics; (2) incomplete, covering the amount of material taught is not complete, so that the amount of material that should be completed becomes incomplete; and (3) graduates are not ready to work in the industrial world. According to [2] facts on the ground today indicate that the implementation of vocational education and training runs on its own program. In the world of work / industry and professional associations often complain that the quality of staff (graduates) has not met the expected competency expertise requirements. The symptom of "*mismatch*" between educational institutions and vocational training with the business world / industry, eventually gave birth to graduates who were below average. In the data, it is known that the implementation of internship has not yet fulfilled the demands of work expected by the Business and Industry World (DUDI).

Based on observations made by researchers at the apprenticeship program the problems that arise in the internship program are facilities and infrastructure for student practice activities are still lacking, the practical equipment used is not in accordance with the number of students who use it. The school also regretted that there are still a number of places for internship that provide jobs to students that are not in accordance with the vocational competencies in the school. Reports on apprenticeship made by schools are still general in all departments. The making of the MoU for industrial cooperation has never been made before by the school so that there is no agreement on cooperation agreements between the school and DUDI partners. The timing of apprenticeship has not been determined by the school curriculum so that problems often occur between students' learning time at school and the internship time. According to students, the socialization at the time of debriefing of the industry internship on Occupational Safety and Health (K3) was still lacking.

Some research results indicate that the importance of the development of internship is carried out through evaluation of the implementation of internship carried out by perfecting journal and apprenticeship reports, curriculum competency determination carried out by SMK and DUDI [3]. Thesis research by Annisa Ayu Sholata in 2014 who developed a training model *on the job training internship* in and the making of an MoU between Singosari State Vocational School 1 and DUDI partners. This is in line with the results of research conducted by Yulianto regarding the management of cooperation between SMK and DUDI in SMK Negeri 2 Kendal. The results of this study are the potential empowerment of cooperation between SMK and DUDI, empowerment of alumni in the school job market, implementation of cooperation in the form of MoU, and validation of competency standards that are in sync with DUDI. Because of these thoughts, as well as through in-depth studies, researchers are interested in researching about developing the Model *Link and Match* through the Prakerin of the Electric Power Engineering Department.

2. Methods

This research is research *and development (R & D),* which aims to develop a model *link and match* between SMK and DUDI through the Prakerin program. Theory regarding development research according to [4] is a research method used to produce certain products and test the effectiveness of a product produced. The development model in this study modifies several research models *Research and Development (R & D),* namely sorting and selecting stages in the Borg and Gall development model, ADDIE, and Dick and Carey. The selected stages consist of *Need Assignment,* Design, *Development,* Evaluation, and Desimination

3. Results and Discussion

3.1 The Process of Implementing Vocational School Engineering in the Department of Electric Power Engineering at DUDI The

Research on the process of implementing Vocational School of Electrical Engineering Department is done through filling out questionnaires by students, schools and DUDI partners, also through direct observation, interviews, and documentation. Implementation of internship is divided into several indicators, namely based on objectives, socialization and debriefing, placement of internship, patterns

ICSCCD 2018 p-ISSN 2716-1919 e-ISSN 2716-2907
Volume 1, January 2020 doi:10.31327/icusn-adri.v1i0.1143

(time of internship), activities, operations, methods, school monitoring and DUDI, guidance, and implementation of work. The results of respondents' assessment of 10 (ten) questionnaire indicators of the apprenticeship implementation process are presented through the following tables 1.

Table 1. Results of the recapitulation of the objectives indicators of apprenticeship by students, schools, and

No	Aspect Of	Mean	Conclusion
1.	**Student**		
	a. Carry out practical activities at school in accordance with vocational competencies in school	4,16	In Accordance
	b. Vocational competencies obtained at school are relevant to those needed DUDI	3,8	Relevant
2.	**Schools**		
	a. Preparation of school internship and DUDI in accordance with the objectives of *link and match.*	4	According
	b. Vocational competencies obtained at school are relevant to those required by DUDI	4	Relevant
	c. Vocational competency in school is in accordance with work competency needs in DUDI	4	According
3.	**DUDI**		
	a. Preparation of school internship and DUDI in accordance with the objectives of *link and match*	4	According
	b. Vocational competencies obtained in schools are relevant to what industry needs	4	Relevant
	c. Vocational competencies in schools are in accordance with work competency requirements in DUDI	3,5	sometimes

Source; The result of the question students,school and DUDI

Summary of assessment results is shown in Table 1. The average results of student assessment for the purpose of internship, namely conducting practical activities in accordance with vocational competence in school are 4.16. The average results of school assessment for the purpose of apprenticeship, namely preparation of internship in schools in accordance with the objectives of the *link and match* in DUDI are 4, namely or in accordance with the criteria.

Table 2. Recapitulation Results on Indicators of Dissemination and Debriefing by Student

No	Aspect	Average	Conclusion
1.	Participate in job training in schools during socialization and debriefing	3.8	Often
2.	Able to remember vocational competencies obtained at school during preparation for internship	4.4	Often
3.	competence is given in schools according to the needs of work competence inDUDI	4.2	accordance

Source: student questionnaire

Conclusions for the assessment of socialization indicator and debriefing prakerin by students that students often follow schools of vocational training socialization and debriefing with the average of 3.8.

ICSCCD 2018 p-ISSN 2716-1919 e-ISSN 2716-2907
Volume 1, January 2020 doi:10.31327/icusn-adri.v1i0.1143

During the preparation of internship in schools, students can remember vocational competencies obtained at school with an average of 4.4 in the frequent category. Whereas in the vocational competence of electric power techniques according to students it is in accordance with the work competency requirements in DUDI with an average of 4.2.

Table 3. Recapitulation of Indicators of Employee Placement by Students, Schools and DUDI

No	Aspects	Average	Conclusions
1.	**Students**		
	a. Placement of industrial workshops in accordance with the Department of Engineering Electric Power	4,2	According
	b. The placement of internship is based on the choice of students who take part in the internship	4,24	Often
2.	**School**		
	a. Placement of machinery in accordance with the Department of Electric Power Engineering	4	According
	b. The Placement of internship is based on the choice of students who take internship	4	Often
3.	**DUDI**		
	a. Placement of Machinery in accordance with the department of electric power engineering	4	According
	b. The Placement of internship is based on the choice of students who follow internship	4	Often

Source: Students, School, and DUDI Questionaire Results.

Based on the results of the recapitulation in table 3 for the indicator of apprenticeship placement, the conclusion is that according to students, schools, and DUDI the placement of internship is in accordance with the Department of Electric Power with a mean value of 4.2 in the appropriate category.

Table 4. Results of Recapitulation of Prakerin Time Indicators by Students, Schools and DUDI

No	Aspects	Average	Conclusion
1.	**Student**		
	Implementation of Internship is based on *block* release	4,52	Often
2.	**School**		
	Implementation of Internship based on the block release	4,5	Often
3.	**DUDI**		
	Implementation of internship is based on block release	5	Always

Source; students, school and DUDI Question Results

In table 4, it can be concluded that the implementation of apprenticeship is based on a *block release* or carried out for several months in DUDI. Student and school assessments in frequent categories with an average of 4.52 and 4.5. In DUDI the implementation of apprenticeship is always done with a *block release* with an average of 5. The implementation of internship is carried out 3-6 months by students according to the agreement between the school and DUDI partners.

Table 5. Results of recapitulation of indicators of internship activities by students

No	Aspek	Rerata	Kesimpulan
1.	Doing work diligently and independently	4,12	Often
2.	Perfom tasks according to the internship program	4,36	Often
3.	Can build cooperation in the works team	4,16	Often

ICSCCD 2018 p-ISSN 2716-1919 e-ISSN 2716-2907
Volume 1, January 2020 doi:10.31327/icusn-adri.v1i0.1143

4.	Integrating competencies obtained from school and DUDI	4,08	Often
5.	Mastering competencies obtained from school and DUDI	3,68	Often
6.	Developing competencies possessed in the world of word	3,8	Often
7.	Implementing competencies obtained in school into the world of work	4,24	Often
8.	Growing a high perfomance attitude	4,16	Often
	Average	**4,1**	**Often**

Source : Students Question Result

Based on the assessment of student questionnaires in table 5, the conclusion is that students often do work diligently and independently with a mean of 4.12. Students perform tasks according to the apprenticeship program at DUDI with an average of 4.36 and can build cooperation in the work team with an average gain of 4.16. When working they can integrate the competencies obtained in school and DUDI so that they master the competencies needed by the world of work.

Table 6. Recapitulation of Method Indicators, School Monitoring, Industrial Guidance, and Implementation of Employee Work by Students

No	Aspect	Average	Conclusion
1.	**Method**		
	a. Able to solve problems when getting damage / obstacles when doing apprenticeship.	4,4	Often
	b. Obtain knowledge and skills in completing work at DUDI.	3,6	Always
2.	**School Monitoring**		
	a. School advisers always monitor the internship activities.	3,5	Sometimes
	b. School advisers check what work is done by students in DUDI.	4,68	Always
3.	**Industrial Guidance**		
	a. DUDI advisors always monitor the internship activities.	4,24	Often
	b. DUDI counselors direct and guide each work activity well.	4,28	Often
4.	**Implementation of Work**		Often
	a. Prepare before doing work at DUDI.	3,68	Often
	b. Use equipment and clothing in accordance with K3 procedures.	4,32	Often
	c. The work done does not take long to complete.	4	Often
	d. Work is carried out in accordance with work procedures.	4,4	Often
	e. Job results are always satisfying.	4,2	Often
	f. The results of the work are clean, neat and correct.	3,6	Often
	g. Doing work independently.	3,5	Sometimes
	h. Able to work with workers in DUDI.	4,04	Often
	i. Do industrial work in accordance with work time	4,12	Often
	j. Take a break when resting at DUDI.	4,2	Often

Sources: Student Questionnaire Results

Based on the work program at DUDI, students obtain knowledge and skills in the completion of work and are able to solve problems when getting damage / obstacles when working with the average gain of 3.6 and 4.4 in the frequent category. In school monitoring, school counselors sometimes monitor students in DUDI with an average of 3.5 of these done. DUDI instructors often monitor the work of

ICSCCD 2018 p-ISSN 2716-1919 e-ISSN 2716-2907
Volume 1, January 2020 doi:10.31327/icusn-adri.v1i0.1143

students and can guide and guide each work well done by students with the acquisition of 4.24 and 4.28 in the frequent category. Preparation of students when going to do work and use equipment in accordance with K3 procedures is at an average of 3.68 and 4.32 with frequent categories.

3.2 Model of Implementation Vocational High School at DUDI

The process of developing the model *link and match* throught internship has the following stages of research:

a. *Need Assignment*

Phase *Need Assignment* consists of several steps, namely: (a) the potential and problems prakerin, (b) Identify the purpose, (c) Analysis of instructional, (d) Analysis of learners and the environment, and (e) *planning*, *a*t the stage of potential and problems an assessment of what problems arise in the apprenticeship program is carried out. The stage of identification of objectives, research is carried out by formulating the objectives to be achieved. At the instructional analysis stage, research is conducted by classifying the implementation of internship into four parts, namely based on: (1) Pattern (working time), (2) Activities, (3) Operations; and (4) Working methods. The stages of analysis of students and their environment can be seen from the context of place of apprenticeship in accordance with vocational competencies majoring in electric power engineering, skills possessed by students and attitudes designed for the development strategy of industrial engineering models. Planning is done to provide an overview of what you want to get when doing research, including the development of industrial engineering models, as well as the making of manuals for internship which include reports on internship and MoU.

b. Design

Design is a stage that aims to design the initial product, namely the development of an engineering model and the making of an industrial manual. In this step begins with preparing the vocational competency of Electric Power Engineering, reports on school internship, making MoU, and the process of cooperation between Vocational and DUDI through apprenticeship.

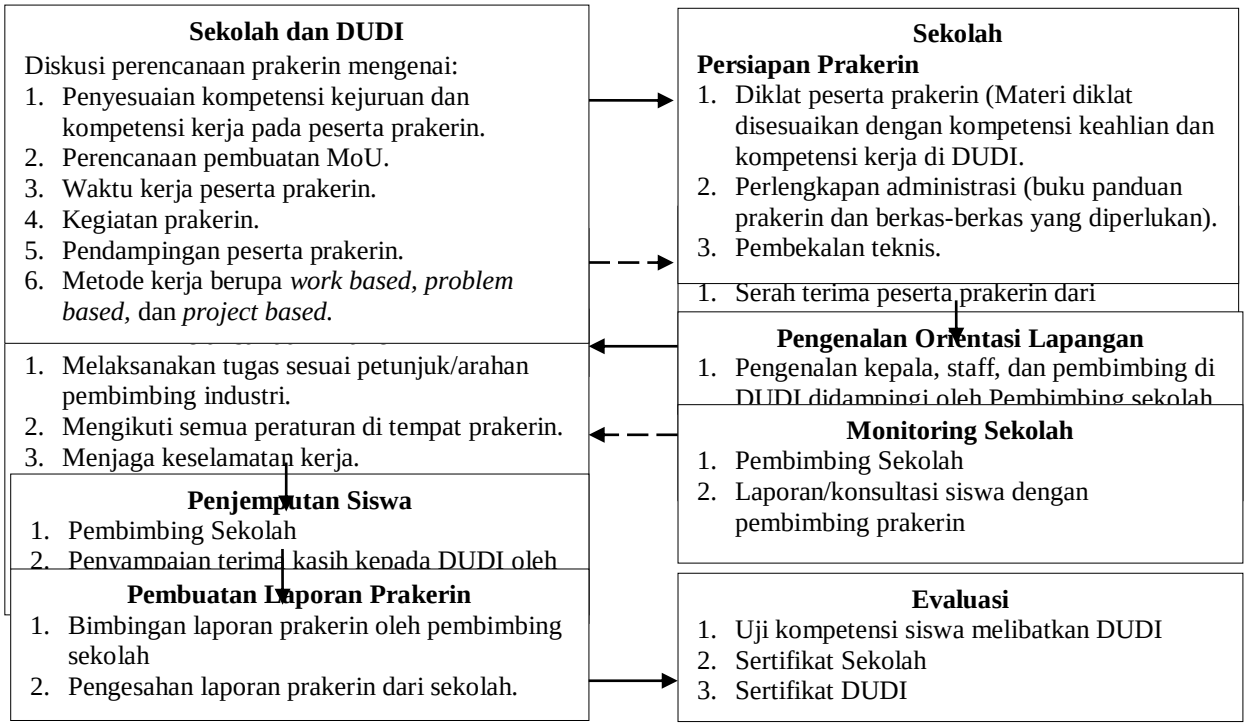

Figure 1. Development of The Industrial Cooperation Implementation Model

ICSCCD 2018 p-ISSN 2716-1919 e-ISSN 2716-2907
Volume 1, January 2020 doi:10.31327/icusn-adri.v1i0.1143

c. *Development*

At the stage *Development* consists of four steps, namely expert validation, Student testing, Vocational High School, and DUDI, instructional revision of the product that has been made, and implementation. *Development* contains the realization of product design activities, namely the manual for the apprenticeship, which includes reports on internship and MoU, then developed as needed.

3.3 Validasi Product

3.3.1 Qualitative Analysis Development of Model Link and Match throught Prakerin Departement of Electric Power Engineering by Experts

a) Validation of Material experts

The results of the evaluation of the material developed are presented in table 7 as follows:

Table 7. Results of agreement between two experts of material experts

		Validator I	
Validator II		**Not Relevant** Score (1-2)	**Relevant** Score (3-4)
	Not Relevant Score (1-2)	2	4
	Relevant Score (3-4)	4	39

From the assessment given by the two validators above, the validity level can be calculated based on Gregory's validation formula.

Content Validity $= \frac{D}{A+B+C+D}$

$= \frac{39}{2+4+4+39}$

$= 0{,}795$

$V = 79{,}5\%$

So it can be concluded that the validity obtained is 0.795 or V = 79.5%. Means the results of the assessment of the two validators have strong relevance with a coefficient greater than 75% or V> 0.75. Then it can be said that the results of the measurements taken are valid.

b) Media Expert Validation

The result of the media expert validation evaluation presented in tabel 8 as follow;

Tabel 8. Result of Agreement Between Twoi Expert Media Experts

		Validator I	
Validator II		**Not Relevant** Score (1-2)	**Relevant** Score (3-4)
	Not Relevamt Score (1-2)	2	4
	Relevant Scorer (3-4)	4	36

From the assessment given by the two validators above, the validity level can be calculated based on Gregory's validity formula.

ICSCCD 2018 p-ISSN 2716-1919 e-ISSN 2716-2907
Volume 1, January 2020 doi:10.31327/icusn-adri.v1i0.1143

Content Validity $= \frac{D}{A+B+C+D}$

$= \frac{32}{2+4+4+32}$

$= \frac{32}{42}$

$= 0{,}761$

$V = 76{,}1\%$

So it can be concluded that the validity obtained is equal to 0.761 or V = 76.1%. This means that the results of the evaluations of the two validators have "strong relevance". Then it can be said that the results of the measurements taken are valid.

c. Assessment of Prakerin Guidebook

1) Evaluation of Guidance Book for Prakerin by Students, Schools, and DUDI

Assessment of apprenticeship guidebook includes (a) the purpose of the guidebook; (b) the purpose of apprenticeship; (c) filling in reports; (d) the purpose of vocational competence; (e) language selection; (f) sequence of contents of the guide; (g) images and symbols; (h) color selection; (i) withdrawal of guidebooks; and (j) manual display.

Table 9. Guidance Book Assessment of Student Practices

No	Statement	Meaning	Remarks
1.	Explanation of instructions for Guidebook for Prakerin	4,08	Good
2.	Explanation of the objective of internship	4	Good
3.	Instructions for filling in the Prakerin report	3,8	Good
4.	Clarity of purpose of vocational competence	4,08	Good
5.	Language selection in the Prakerin Handbook	4,64	Very Good
6.	Sequence of content in a consistent and systematic Prakerin Guide	3,72	Good
7.	Clarity Of Image and symbols used in the apparatus manual	4,36	Good
8.	Accuracy in color selection	4,6	Very Good
9.	Kemenarikan of Guidebook for Prakerin	3,96	Good
10.	Display of Prakerin Handbook	4,12	Good

Source: Data assessment of apprenticeship guidebooks by students

Referring to the table above, the average for aspects of the guidebook objective 4.08 is obtained; mean goals of internship 4; average report filling 3.8; mean goal of vocational competence 4.08; average language selection 4.64; average order of contents of the guide 3.72; average image clarity and symbol 4.36; average color selection 4.6; average attractiveness of guidebook 3.96.

Table 10. Assessment of manuals for internship by schools

No	Statement	Average	Information
1.	Explanation of instruction for the guidebook for Prakerin	4	Good
2.	Explanation of The Objectives of internhip	4	Good
3.	Instructions for filling in the Prakerin report.	4,5	Good
4.	Clarity of purpose of Vocational Competence.	4	Good
5.	Language Selection in the Prakerin Handbook.	5	Very Good
6.	Sequence of contents in a consistent and systematic Prakerin Guide	4,5	Good
7.	Clarity of images and symbols used in the apparatus manual.	4	Good

ICSCCD 2018 p-ISSN 2716-1919 e-ISSN 2716-2907
Volume 1, January 2020 doi:10.31327/icusn-adri.v1i0.1143

8.	Accuracy in color selection.	4,5	Good
9.	Kemenarikan of Guidebook for Prakerin.	4	Good
10.	Display of Prakerin Handbook..	5	Very Good

Source: Data on appraisal manuals for industrial workshops by schools

Referring to the table above, the average for the objective aspects of the guidebook 4 is obtained; mean goals of internship 4; average report filling 4.5; mean goals of vocational competence 4; average language selection 5; average order of contents of the guide 4.5; average picture and symbol clarity 4; average color selection 4.5; average attractiveness of guidebook 4; and average display of guidebook 5.

Table 11. Assessment of Guidance Book for Guidance by DUDI

No	Statement	Average	Information
1.	Explanation of instructions for Guidebook for Prakerin.	4,5	Good
2.	Explanation of the objectives of internship.	5	Very Good
3.	Instructions for filling in the Prakerin report	4,5	Good
4.	Clarity of purpose of Vocational Competence	4	Good
5.	Language Selection in the Prakerin Handbook.	4	Good
6.	Sequence of contents in a consistent and systematic Prakerin Guide	4	Good
7.	Clarity of images and symbols used in the apparatus manual.	4	Good
8.	Accuracy in color selection.	4,5	Good
9.	Kemenarikan of Guidebook for Prakerin.	5	Very Good
10.	Display of Prakerin Handbook.	4	Good

Source: Data on appraisal of apparatus manual by DUDI

Referring to the table above, the mean for the purpose of the guidebook 4.5; average goals of internship 5; average report filling 4.5; mean goals of vocational competence 4; average language selection 4; average order of contents of guide 4; average picture and symbol clarity 4; average color selection 4.5; average attractiveness of guidebook 5; and average display of guidebook 4.

d. Validation of the Questionnaire

- Validation of student questionnaires Validation of student

Questionnaires include: (a) aspects of the instructions; (b) aspects of coverage; and (c) aspects of language. The results of the validator assessment can be seen in the following table 12:

A general assessment of the student questionnaire sheet is B with a mean of 3.78 or a questionnaire can be used with a small revision.

- Validation of school questionnaires

The results of the validator's assessment of the school questionnaire in table 12 below:

A general assessment of the school questionnaire sheet is B with a mean of 3.57 or a questionnaire can be used with a small revision.

- DUDI questionnaire validation

The results of the validator's assessment of the DUDI questionnaire can be seen in the following table:

The general assessment of the student questionnaire is B with a mean of 3.64 or a questionnaire can be used with small revisions.

3.4 Quantitative Analysis of Model Development Link and Match Through Engineering Department of Electric Power Engineering

Based on the results of the item analysis of the total score for the student questionnaire instruments using predetermined criteria, the item correlation coefficient on the score is greater than the r-table which is 0.361 low with a significant level of $\alpha = 0.05$. This the r coefficient values for items 1 to 17, 19 to 27, 29 to 32, and 34 to 43 are greater than 0.361, while items 18, 28, and 33 are smaller than 0.396.

ICSCCD 2018 p-ISSN 2716-1919 e-ISSN 2716-2907
Volume 1, January 2020 doi:10.31327/icusn-adri.v1i0.1143

It can be concluded that the level of item validation obtained quantitatively there are 3 items that are declared invalid and 40 questions that are declared valid. To find out the criteria used as a reference for the reliability test is $r_{11} \geq 0.70$ means that it has a high level of reliability, whereas if $r_{11} < 0.70$ states it does not have a high level of reliability. The results of the analysis are as follows:

Table 12. Reliability Results of theStudent Instrument

Reliability Statistics	
Cronbach's Alpha	N of Items
.883	40

Source: Student instrument reliability data

Conclusions on the results of the analysis for testing the reliability coefficient show r = 0.883 thus it can be said that the components in the development of themodel *link and match* are reliable.

a) Trial Phase

1. Test One to One

Trials are conducted to see the response of students to the development of the model *link and match* through apprenticeship. The student questionnaire concerns the preparation of the implementation of internship, the process of implementing the apprenticeship, as well as the results and impact of the internship.

2. Test small groups

In a small group trial conducted by involving 10 students majoring in electric power engineering. The discussion on the small group trial is presented as follows:

3. Field trials

The field trial is the main trial to measure whether the development of themodel *link and match* through apprenticeship is to be developed. The discussion on the field trial is presented as follows:

Based on the recapitulation of students' assessment of the development of themodel *link and match* through apprenticeship, it was concluded that a field trial of three aspects had been carried out with the overall results fulfilling the criteria for the development of apprenticeship models. The test subjects gave a very good appreciation of the results of the development.

4. Implementation

At the implementation stage, the apprenticeship guide book is feasible to be used for the internship program. The contents of the guidebook include aspects of the implementation of internship, a system of guidance, order, evaluation and assessment, reports on internship, and the MoU on work agreements.

d. Evaluation

At the evaluation stage the results of the assessment, conclusions of students, schools, and DUDI have been obtained on the implementation of apprenticeship. Evaluation results are used to provide feedback to the school and DUDI to improve industrial work activities that have deficiencies and maintain what factors are the advantages of the implementation of internship.

e. Desimination

Desimination is an activity of disseminating information into a wider area. In the dissemination phase, the products produced in the form of industrial manuals have been distributed to a wider area. Desimination was carried out at SMK Negeri 2 Bima and SMK Negeri 2 Dompu.

3.5 Preparedness of Prakerin Participants

Work readiness of students after implementing internship is a component of results. In the results component shows the increase obtained after the program activities take place. Work readiness of students after implementing internship.

Based on the data, it can be concluded that students after implementing the apprenticeship have been able to do work by paying attention to work safety, paying attention to work quality, work habits in accordance with industry standards, working on tasks with new skills in accordance with competency skills, ready to occupy the job opportunities needed by industry, has the courage to work in the world

ICSCCD 2018 p-ISSN 2716-1919 e-ISSN 2716-2907
Volume 1, January 2020 doi:10.31327/icusn-adri.v1i0.1143

of work, and confidence in entering employment. Assessment for student work readiness is in the high category, namely ≥ 3.5 with an average of 4.1. So that it can be concluded that students are ready to enter the workforce.

4. Conclusion

a. The process of implementing the electrical power engineering department starts from a discussion on industrial engineering planning involving Vocational and Senior High Schools, preparation of internship, socialization and debriefing by vocational schools, handover of apprenticeship participants to DUDI, introduction of field orientation, school monitoring, implementation of internship activities, pick-up, making reports on internship, and giving certificates of Vocational and DUDI.
b. Development of themodel *link and match* through apprenticeship is done through five stages, namely (1) *need assignment* by analyzing the problem and providing the right solution for the implementation of internship; (2) design by designing the development of apprenticeship implementation, the draft guidebook of apprenticeship, reports on internship, and MoU; (3) *development*, namely the development stage of the implementation model of apprenticeship and manuals that have been made. Beginning with expert validation,trials *one to one*, small groups, and field groups, then instructional and implementation revisions are carried out, the results of product evaluation are valid and feasible to use; (4) evaluation, namely conducting an assessment and improvement on the preparation of the apprenticeship, the implementation process, as well as the results and impacts of the apprenticeship implementation; and (5) dissemination, namely the distribution of products to a wider area and analysis of products that are deemed feasible to be used in the internship program.

References

[1] Ngalim Purwanto. 2003. *Psikologi Pendidikan*. Bandung : PT. Remaja Rosdakarya.
[2] Suartika, I. N. (2013). *Studi Evaluasi Program Prakerin dalam Kaitannya dengan Pendidikan Sistem Ganda di SMK Negeri 1 Susut*. e-Journal Program Pascasarjana Universitas Pendidikan Ganesha , 2-4.
[3] Deysnawati, D. (2012). *Evaluasi Impelementasi Praktek Kerja Industri di SMK Negeri 1 Malang*. Jurnal Pendidikan dan Kebudayaan , 1-5.
[4] Sugiyono. (2010). *Metode Penelitian Pendidikan.* Bnadung: Alfa Beta.
[5] Sugiono. (2012). *Statistika untuk Penelitian.* Bandung: Alfabet.