Training Installation And Configuration Network Computer Simple For Students Of Cipta Insani Vocational School Independent

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Abstract

Training installation and configuration network computer simple for students of Cipta Insani Vocational School Independent aiming For increase understanding and skills student in build as well as manage network computer . The method used in devotion This is approach practical through session theory and practice directly , where students given material about the basics network , device hard used , as well as steps installation and configuration . The results of training This show improvement knowledge student about network computer , which is measured through pre-test and post-test, as well bait come back positive from participant about involvement and implementation material . With training this , it is expected student can implement knowledge gained in projects at school and in the world of work in the future . The success of this program shown with activity all participants and enthusiasts participant do discussion and results questionnaire satisfaction show by 90.50% of participants satisfied with existence training This Because can increase understanding as well as ability practical student about Network Computer

Keywords: *Network ,computer ,configuration ,training and students.*

I. INTRODUCTION

Development technology rapid information has bring change significant in various aspect life , including in world education . In this digital era , networks computer become vital components that support communication and data exchange efficiently . For vocational school students , especially in the field of technology information , good understanding about installation and configuration network computer is a necessity . However , many students who only get theory without existence practice direct , which has the potential hinder ability they For compete in the job market [1] .SMK Cipta Human Independent , as school intermediate vocational own role important in equip student with skills relevant practice . Although curriculum has covers a number of aspect network computer , still there is the gap between the theory taught in class and the application practical in the field .

Things This due to by limitations facilities and lack of structured training , so that student No own chance For to obtain experience direct in installation and configuration network [2] .By Because that , training installation and configuration network computer simple become solution strategic For overcome problem said . Through program training this , students will get knowledge and skills required For understand and manage network computer effectively . With a holistic approach practical , expected student can apply knowledge gained in project real , and prepare self they For enter world Work with believe self and competent [3] .Based on background behind said , for operate Wrong one Tri Dharma of Education Tall that is devotion to society , then we propose For stage Training Installation and Configuration Network Computer Simple for Students of Cipta Insani Vocational School Independent .

II. RESULT AND DISCUSSION

2.1 Place and Time of Implementation

Activity Devotion To this Community held by Lecturers and Students Faculty Knowledge Computer Institute Business and Informatics Kosgoro 1957. Activities This held on the day Friday, October 25, 2024 in

the classroom hall 3rd floor of Cipta Insani Vocational School Mandiri which is located on Jl. Curugan No.49, Tanah Baru, Beji District , Depok City, West Java 16426.

Fig 1. Cipta Insani Vocational School Building Independent , Depok

Activity Devotion To this Community besides in progress offline . Participants who attended totaling 60 people including students class XII of Cipta Insani Vocational School Independent , Lecturers, Students and School Teachers .

2.2 Community Service Material To the Community

Training Installation and Configuration Network Computer Simple for Students of Cipta Insani Vocational School Independent will covers materials following :

1. Introduction Network Computer [4]
   - Definition and function network computer .
   - Types networks : LAN, WAN, MAN, and WLAN.
   - Topology networks : bus, star, ring, and mesh.
2. Component Network [5]
   - Devices hard network : router, switch, hub, and modem.
   - Transmission media : twisted pair cable , fiber optic, and wireless.
   - Devices additional : access point and network interface card (NIC).
   - Installation Network Computer
3. Steps installation device hard network . [6]
   - Arrangement physique Network and placement device .
   - Connection cables and testing connectivity .
4. Configuration Network [7]
   - Arrangement IP addresses and subnetting.
   - Basic router and switch configuration .
   - DHCP and DNS settings .

Implementation Method

The stages carried out are: in this PKM includes 3 stages that is stage preparation , stage implementation and stages evaluation shown in Figure 2. [8]

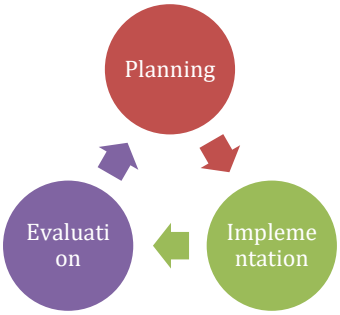

Fig 2. Method of Community Service To the Community

Explanation from stages program launch as following :

1. Preparation

- Stage preparation is step a crucial start For ensure smoothness training . Activities This includes :
- **Identification Needs** : Identify need students and parties school related the material to be taught in training . This is can done through survey or discussion with teachers and students .
- **Material Development** : Compiling materials appropriate training with need students . The material must be covers balanced theory and practice , as well as relevant with level understanding student .
- **Procurement Equipment** : Ensure all device hardware and devices required software For training available . This includes computer , router, switch, cable network , and tools help other .
- **Scheduling** : Making **a schedule** timetable clear training , including time For session theory and practice , as well as time For ask answer and discuss .

2. Implementation

- Stage implementation is the time when training done . Activities This includes :
- **Opening** : Getting started training with introduction , explaining objective training , and convey the agenda to be passed .
- **Theory Session** : Delivering material theory about network computers , including draft basic , device hard , and security network . Usage presentations and interactive media can increase understanding student .
- **Session Practice** : Giving chance for student For direct do installation and configuration network . Students will shared to in group For Work the same , so that can each other learn and discuss .
- **Discussion and Q&A** : Holding session discussion where students can submit question about material that has been taught . This is also a chance For discuss challenges faced during practice .

3. Evaluation

- Stage evaluation aiming For measure success training and effectiveness methods used . Activities This includes :
- **Exam / Pre-test and Post-test** : Conduct evaluation pre- test before training and evaluation end (post-test) after training For measure improvement knowledge student .
- **Participant Feedback** : Collecting bait come back from participant about materials , methods teaching , and experience during training . This can done through questionnaire or discussion open .
- **Results Analysis** : Analyze pre-test and post-test results , as well as bait return received For determine whether objective training achieved .
- **Final Report** : Prepare a report that includes summary activities , results evaluation , and recommendations For training next . Report this can also become reference for development of future training programs .

2.4 Definition and Concept Network Computer

Network computer is a bunch computers and other devices that are interconnected connected One each other for share source power , such as data, devices hard , and services . Network This allow communication and exchange information between computer in a way efficient , good in scope local (for example , a network within a building) and globally (e.g. , the internet).

2.4.1 Components Network :

- **Devices Hard** : Included computers , servers, routers, switches, hubs, and other devices involved in connection and communication .
- **Transmission Media** : Cables (such as twisted pair, coaxial, and fiber optic) or technology wireless (such as Wi-Fi) used For send data between device .

2.4.2 Topology Network :

- **Bus Topology** : All device connected to One cable main . Easy implemented , but If cable main break up , all network disturbed .
- **Star Topology** : All device connected to One device center (eg , switch). More easy managed , but If device center experience problem , network will disconnected .

- **Ring Topology** : Every device connected to two devices others , forming circle . Data flow in One direction . If one device failed , can influence all over network .
- **Mesh Topology** : Every device connected with other devices . Provide redundancy , but more complex and expensive to implemented .

2.4.3 Protocol Network :

Protocol is gathering the rules that govern how data is sent and received in network . Example protocol common network used are TCP/IP, HTTP, FTP, and DHCP.

2.4.4 Network Type :

- **Network Local Area Network (LAN)** : A network that covers a geographical area . small , like building or campus .
- **Wide Area Network (WAN)** : A network that covers a larger area . wide , such as between city or country.
- **Network (MAN)** : A network that covers a larger area . big from LAN but more small from WAN, such as network inside One city .

2.5 Documentation Activity

In the section This explain about results activity devotion to society entitled Training Installation and Configuration Network Computer Simple for Students of Cipta Insani Vocational School Independent reviewed from achievement goals , benefits and targets . The discussion is as follows between other :

1. Results are reviewed in terms of achieving goals

The results obtained are that students gain a better understanding of the basic concepts of computer networks, the devices used, and installation and configuration techniques. Students can carry out the installation and configuration of computer networks directly, which are important skills in the world of work. shown in Figure 3.

Fig 3. Presentation of Material for Activity I Devotion To the Community

2. Results reviewed from the benefits

This training contributes to improving the quality of education at SMK Cipta Insani Mandiri by increasing students' competencies in the field of computer networks. After completing the training, students feel more confident in their ability to work with computer networks, which can increase learning motivation as shown in Figure 4.

Fig 4. Presentation of Material Activity II Devotion To the Community

3. Results reviewed against targets

In the implementation of this PKM, the targets achieved by SMK Cipta Insani Mandiri students get direct benefits from the training. Through this training, teachers can gain new insights into teaching computer networks and how to apply practical methods in learning. With more skilled students, the industry will get a more prepared and competent workforce. shown in Figure 5.

Fig 5. Presentation of Material III-IV on Activity Devotion To the Community

2.6 Evaluation Questionnaire

At the end activity training , participants get questionnaire evaluation activity training This covering ten questions completed by 60 participants in accordance table following

Table 1. Evaluation PKM Questionnaire

No	Question	SS	S	N	TS	STS	Total
1	Organized material with good and easy understood	42.9%	54.8%	2.4%	0%	0%	100%
2	The material is very relevant and appropriate with what I expect	52.4%	45.2%	2.4%	0%	0%	100%
3	The material is already sufficient for I For capable know network computer	38.1%	57.1%	4.8%	0%	0%	100%
4	This material make it easier I For to practice installation computer network and its configuration	40.5%	50%	9.5%	0%	0%	100%
5	The speaker is very understanding the material presented	69%	31%	0%	0%	0%	100%
6	Allocation time delivery material sufficient	21.4%	54.8%	19%	4.8%	0%	100%
7	Speaker presenting Contents material with good , easy understood and implemented	38.1%	61.9%	0%	0%	0%	100%
8	Allocation time For discussion sufficient For add knowledge I	31%	61.9%	7.1%	0%	0%	100%
9	Speaker give answer question participant with Good	40.5%	59.5%	0%	0%	0%	100%
10	In general overall discussion or ask answer has help increase understanding I	40.5%	57.1%	2.4%	0%	0%	100%
	Average	50%	40.50%	4.75%	0.00%	0%	100%

The table above show results survey about effectiveness training Installation and Configuration Network Computer Simple . Evaluation This covers ten questions that measure various aspect from training , including organization material , relevance , understanding speakers , allocation time , and interaction with participants . The following is analysis from results the survey :

1. Material and Delivery

- **Organization of Material** : With 42.9% of respondents give assessment strongly agree (SS) and 54.8% agree (S), indicating that majority participant feel material organized with good and easy understood . Only 2.4% were neutral (N), and not There is respondents who gave evaluation negative (TS and STS).
- **Relevance of Material** : Percentage of those who strongly agree (52.4%) and agree (45.2%) with the question This show that participant feel very relevant material with hope they .
- **Adequacy of Material** : As many as 38.1% strongly agree and 57.1% agree that material Enough For know network computer . This shows that part big participant feel the material taught fulfil need they .

2. Practice and Implementation

- **Convenience Practice** : Results show that 40.5% of respondents strongly agree and 50% agree that material make it easier they For to practice installation network . However , 9.5% felt neutral , which indicates There is a number of participants who feel not enough Certain .
- **Understanding Speaker** : Height percentage (69%) in the strongly agree category show that participant feel the speaker is very understanding the material presented , which is factor important in effectiveness training .

3. Time Allocation and Interaction

- **Delivery Time Allocation** : Results show 21.4% strongly agree and 54.8% agree. that allocation time enough . However , there are 19% who are neutral and 4.8% who do not. agree , which shows that a number of participant feel time delivery Possible not enough adequate For cover all material .
- **Discussion and Q&A** : Assessment positive on the question This (31% strongly agree and 61.9% agree) shows that participant feel allocation time For discussion Already enough , the important thing is For deepen understanding they .

4. Overall Discussion

- **Help Discussion** : The results showed that 40.5% strongly agreed and 57.1% agreed. that session ask answer help increase understanding . This shows that interaction between speakers and participants walk with Good .

5. Average Results

- **Average** : With an average of 50% for strongly agree and 40.5% for disagree. agree , result This reflect satisfaction participant in a way overall to training . Sufficient neutral level low (4.75%) and not existence evaluation negative show that training considered effective and useful .

III. CONCLUSION

Training Installation and Configuration Network Computer Simple at Cipta Insani Vocational School Independent succeed reach part big the purpose . Participants generally feel satisfied with quality material , relevance , and capability speaker in convey information . Although There is some areas that can improved , especially related allocation time and practice , results survey show that training This in a way overall give significant benefits for student .

Recommendation For training upcoming includes :

- **Adjustment Time Allocation** : Ensure enough time For every sessions , especially For practice and discussion , so that participants can more understand material .
- **Improvement Session Practice** : Providing more Lots support and guidance during session practice so that all participant feel comfortable and capable apply what has been studied .

IV. ACKNOWLEDGMENTS

Accept love For the parties who have give information so that activity Devotion To this Community implemented among others the Chancellor Institute Business and Informatics Kosgoro 1957, Head Cipta Insani Vocational School and Teachers Mandiri Depok, Lecturers and Students Faculty Knowledge IBI-K57 computer .

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