

Technical Guidance For Implementation Cloud Computing Technology For Support Learning Network Computers At Cipta Insani Vocational School Independent

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Abstract .

The purpose of community service is give guidance technical about implementation cloud computing technology in support learning network computers at Cipta Insani Vocational School Independent . Activities This covering socialization , training practical , and study designed case For increase teacher and student understanding about cloud computing. The results of activity This show improvement significant in understanding participant about cloud computing concepts and applications , as well as integration a number of module learning with technology In addition , students show improvement skills practical in using cloud platforms to project network computer . Feed come back Participants also reflected mark positive from activity this , which is expected can contribute to the improvement quality education in the digital age. 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 Cloud Computing.

Keywords: *Cloud computing, technology , training and students.*

I. INTRODUCTION

Development technology information and communication (ICT) has bring significant changes in world education . Wrong One increasingly advanced technology Lots adopted is cloud computing . Cloud computing offer various convenience and benefits , such as flexibility , efficiency costs , and convenience data access . In context learning , cloud computing can utilized For support process learning , especially in subjects network Computers in School Intermediate Vocational (SMK) [1].SMK Cipta Human Independent , as Wrong One institution education vocational , aware importance utilization technology cloud computing in learning network computer . By Because that , it is necessary done guidance technical for teachers and students For understand implementation technology cloud computing and how integrate it into learning network computer . Through guidance technical this , it is expected can increase understanding and skills participant educate in field network computer , and push utilization technology cloud effective and efficient computing [2] .

There is a number of reason Why required guidance technical implementation technology cloud computing For support learning network computers at Cipta Vocational School Human Independent , namely :

1. Needs increase quality learning network computer :
 - Learning network computers in vocational schools are needed support modern and effective technology For increase understanding and skills student .
 - Implementation cloud computing can give greater flexibility , efficiency and access wide in learning network computer .
2. Level understanding teachers and students who are still limited :
 - Teachers and students at Cipta Vocational School Human Independent possibility Not yet fully understand potential and how to apply technology cloud computing in learning .

- Guidance technical required For give deep understanding and skills practical in utilise cloud computing .
- 3. Needs limited infrastructure and resources :
 - School Possible own limitations in provide adequate ICT infrastructure For learning network computer .
 - Cloud computing can become more solutions affordable and easy accessed compared to with build infrastructure Alone .
- 4. Encourage innovation and utilization technology latest :
 - Implementation cloud computing in learning network computer can push innovation and creativity teachers and students .
 - Guidance technical can help identify opportunities and benefits use cloud computing optimally .

With existence guidance comprehensive technical , expected teachers and students of Cipta Vocational School Human Independent can understand , apply , and utilize technology cloud computing effectively For support learning network computer .Based on background behind said , for operate Wrong one Tri Dharma of Education Tall that is devotion to society , then we propose For stage Guidance Technical Implementation Cloud Computing Technology for Support Learning Network Computers at Cipta Vocational School Human 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 floor 3. Creative Human 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 materials offered is [4]

1. Understand The Concept and Benefits of Cloud Computing in Learning Network Computer
 - Introduction base cloud computing concept
 - Potential benefits of cloud computing for learning network computer
 - Identification cloud computing features that can utilized
2. Develop Teacher and Student Competencies in Leveraging Cloud Computing
 - Training use of cloud computing platforms and services
 - Practice cloud computing integration into in activity learning computer network
 - Learning strategies independent and collaborative using cloud computing
3. Prepare Cloud Computing Infrastructure and Access in Schools
 - Analysis need cloud computing infrastructure
 - Platform and provider selection appropriate cloud computing services
 - Procurement and configuration cloud infrastructure in schools

4. Integrating Cloud Computing into in Curriculum and Learning
 - Compilation syllabus and plan learning network computer cloud based
 - Design activities and scenarios cloud - based learning
 - Development content and materials learning in cloud format
5. Building Collaboration and Support Stakeholders
 - Identification stakeholders interests and forms Work The same
 - Communication and socialization strategies implementation of cloud computing in schools
 - Mobilization source power and support from stakeholders interests [5]

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 [6].

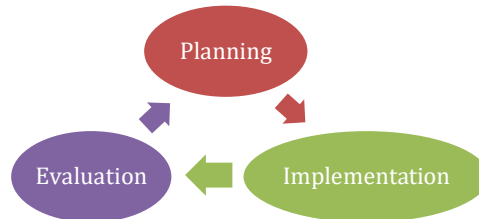


Fig 2. Method of Community Service To the Community

Explanation from stages program launch as following :

1. Stage Preparation :

a. Analysis Need :

- Identification need training and competencies required by teachers and students .
- Mapping infrastructure and resources power available at school .
- Analysis curriculum and plans learning network computer .

b. Planning Technical Guidance :

- Determine objectives , materials and methods guidance technical .
- Compile relevant modules and teaching materials .
- Identifying competent resource persons and facilitators .
- Set schedule , duration and place implementation [7].

c. Coordination and Socialization :

- Coordinate with party school For prepare facilities and logistics .
- Inform and invite teachers and students who will follow guidance technical .
- Ensure commitment and support from leader schools and stakeholders interest related .

2. Stage Implementation :

Opening and Introduction :

- Convey purpose , space scope , and guidance agenda technical .
- Motivating participant For active and enthusiastic follow activity .

Delivery of Material:

- Give understanding base about cloud computing and its benefits .
- Explain method access and utilize cloud computing services .
- Practice use of cloud computing in learning network computer .
- Discuss cloud computing integration strategies to in curriculum and learning [8]

Practice and Discussion :

- Give chance participant For train using cloud computing.
- Facilitate discussion and questions answer related challenge as well as solution implementation .
- Give guidance and feedback back individual or group .

3. Stage Evaluation :

Assessment of Learning Outcomes :

- Evaluate understanding and skills participant through test or task .
- Analyze impact guidance technical to teacher and student readiness [9].

Feedback and Reflection :

- Request participant give bait come back to Material and implementation guidance technical [10].

2.4 Definition and Concept of Cloud Computing

Cloud computing is a delivery model service technology information that allows user For access and use source Power computers (such as servers, storage , and applications) via the internet. With cloud computing, users No need own infrastructure expensive physical , but can utilise services provided by cloud providers on a per - month basis flexible and scalable .

Cloud Computing Concept

- On-Demand Self-Service: Users can access and manage source appropriate IT power need without need interaction man with provider service .
- Broad Network Access: Cloud services can accessed through a wide network (such as the internet) using various devices , including computers , tablets, and smartphones.
- Resource Pooling: Providers cloud services manage source centralized power and sharing it to Lots user with a dynamic way , allowing efficiency and optimal use .
- Rapid Elasticity: Users can with fast add or reduce source Power in accordance request , give flexibility For fulfil changing needs .
- Measured Service: Cloud computing uses a measured service model , where usage is source Power can monitored , managed , and reported , so that user only pay For what they use .

Cloud Computing Service Model

- Infrastructure as a Service (IaaS): Providing virtual IT infrastructure such as servers, storage , and networks . Examples : Amazon EC2, Google Compute Engine.
- Platform as a Service (PaaS): Provides a platform for development , testing , and implementation application without must manage infrastructure . Examples : Google App Engine, Microsoft Azure.
- Software as a Service (SaaS): Provides application device software accessed via the internet without need installation local . Examples : Google Workspace, Microsoft 365.

2.5 Documentation Activity

In the section This explain about results activity devotion to society entitled Technical Guidance for Implementation Cloud Computing Technology for Support Learning Network Computers at Cipta Insan 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 increasing the understanding of Cloud Computing technology. Participants, both teachers and students, showed a significant increase in understanding of cloud computing concepts and applications. Through training and discussion sessions, they were able to identify various cloud services and their benefits in the context of learning. Use modern technology in the learning process has push student For more innovate . Students start put forward new ideas about how cloud computing can used in development project they . which is shown in Figure 3.



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

2. Results reviewed from the benefits

With new understanding and skills in cloud computing, the quality of learning at SMK Cipta Insan Mandiri has increased. Students are better prepared to face the challenges of an increasingly digital work world. Cloud technology allows more collaboration Good between students and teachers. The cloud -based platform makes it easy access materials , assignments , and discussions online is 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 target achieved by SMK Cipta Insani Mandiri students is that with this training, teachers have succeeded in gaining better knowledge about cloud technology and how to integrate it into teaching. They are now able to design more interactive and technology-based teaching materials. Students become more confident in using cloud technology for their learning and projects. They are also more motivated to learn, considering the relevance of technology in their future careers. shown in Figure 5.



Fig 5. Presentation of Material III 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 cloud computing technology	38.1%	57.1%	4.8%	0%	0%	100%

4	This material make it easier I For use cloud computing technology	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%

Survey results show that guidance technical about cloud computing technology at Cipta Insan Vocational School Independent succeed reach Lots the purpose . Average approval participant is at 50%, with part big Respondent agree that material organized with good , relevant , and delivered by competent speakers . Although the result positive , there is some areas that show potential For improvements , such as allocation time delivery materials and discussions . Improve aspect This can more strengthen understanding participants and effectiveness training in the future . In overall , activities This get good response from participants and can considered as step positive going to mastery cloud computing technology in the environment education .

III. CONCLUSION

Based on results questionnaire conducted after activity Technical Guidance for Implementation Cloud Computing Technology at Cipta Insan Vocational School Independent , can concluded that this program succeed reach the purpose with good . Mostly participant show level high satisfaction to the material presented , with 97.6% of participants feel that material the relevant and easy understood . The speaker was also considered very competent , with 100% of respondents agree that they understand the material presented . In addition , the activities This succeed increase understanding participant about cloud computing and its applications in learning network computer . However , there are some areas that need be noticed For future improvements , such as allocation time delivery material and time discussion , in which some participant feel Still There is room For increase effectiveness interaction .In general overall , guidance technical This give benefit significant for teachers and students , improve skills practical as well as understanding about cloud computing technology , which is very relevant in context education and the world of work moment This . Activities This expected can become step beginning For integration technology more carry on in the learning process at Cipta Insan Vocational School Independent .

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