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Comparative Study of Desktop-Based Antivirus Application Adoption Rate

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Abstract

Antivirus is a type of software that is used to secure, detect, and remove computer viruses from computer systems. Antivirus can be an application program that functions to detect and clean malicious programs. The purpose of this study was to measure the level of acceptance of antivirus programs running on desktop devices. In addition, it is expected to be able to apply and distinguish the performance of the 2 antiviruses for the identification, cleaning and deletion of a virus-infected file. The method used to determine the level of acceptance of an anti-virus is using the TAM acceptance model. The results of this study indicate that the majority of users have been able to use antivirus properly and will continue to use it in the future. The results of this study recommend that for desktop-based computer security processes it is better to use a trusted antivirus so that the computer security process becomes more effectively guaranteed.

Keyword : *antivirus, desktop, TAM, security, comparison*

Introduction

The development of computer security in the world is very rapid. and Computer Security are risks associated with the use of computers according to the computer science officer on duty. Antivirus can be an application program that functions to detect and clean malicious programs, called malicious code on computer devices. If the antivirus database is not able to clean a malicious code, then usually the antivirus will quarantine the malicious program. The duration of the quarantine will be determined until the antivirus finds a formula to clean the malicious code. Users can also directly delete data that is attacked by malicious code stored in the quarantine folder.

Along with developments, perceptions of computer security in Indonesia in the use of antivirus where 10.53% consider antivirus not important, 30.94% consider it normal while 58.52% consider antivirus very important Through the development of computer security the number of internet users in Indonesia further increased to reach 132.7 million internet users.

Through the description of the background above that has been found, in this case the research tries to formulate the problems faced. The formulation of the problem in this study is as follows: 1) Is the antivirus performance able to identify, clean and delete files correctly and accurately? 2). Is the antivirus easy to operate by anyone? 3). Is antivirus useful?

The purpose of this study is to determine an antivirus program that can identify viruses and perform the function of cleaning and removing viruses. Meanwhile, the goal is to apply and reduce the performance of 2 antiviruses for the identification, cleaning and deletion of a virus-infected file.

Method

The method used in this study is the TAM acceptance method. TAM is used as the basis for various information systems technology studies (Pavlou, 2003). TAM uses two variables for technology acceptance, namely perceived ease of use and perceived usefulness. Perceived usefulness describes the user's perception that the system will improve workplace performance, perceived ease of use explains the user's perception of the effort required to master the system or user confidence that using the system does not require much effort. Figure I is the TAM model introduced by Davis et al (1989).

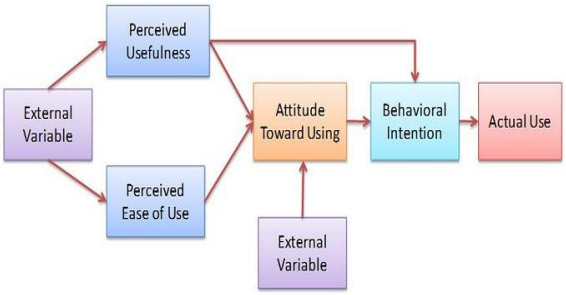


Figure 1. TAM

The TAM variables studied are as follows:
1. Perceived Ease of Use, Ensuring that information technology will be easy to use.
2. Perceived Usefulness, Ensuring that the information technology used will provide benefits.
3. Atitude Toward Using, Ensuring the attitude of users to use information technology.
4. Behavioral Intention of Use, Improving user behavior to continue to use information technology.
5. Actual System Usage, Stating that the user has fully used information technology based on the benefits obtained.

Results and Discussion

Each antivirus has different features according to its capabilities
1. McCafee Antivirus Display on Desktop

Avast

No	Statement	Description
1	The antivirus interface is good in terms of design	15 out of 25 agree

2	The appearance of the antivirus makes it easy to operate	15 out of 25 agree
3	The display on the antivirus menu is easy and understandable	14 out of 25 agree

Mcafee

No	Statement	Description
1	The antivirus interface is good in terms of design	9 out of 25 declare neutral
2	Antivirus display makes it easy to operate	17 out of 25 agree
3	The display on the antivirus menu is easy and understandable	12 out of 25 agree

2. Usefulness of McCafee Antivirus on Desktop

Avast

No	Statement	Description
1	Save time in using it	14 out of 25 agree
2	This app is useful	13 out of 25 agree
3	Meet user needs	17 out of 25 agree
4	This app does everything I expect it to do	11 out of 25 declare neutral
5	This application is effective and efficient	11 out of 25 agree

Mcafee

No	Statement	Description
1	Save time	14 out of 25 agree
2	This app is useful	12 out of 25 strongly agree
3	Meet user needs	11 out of 25 agree

4	This app does everything I expect it to do	9 out of 25 declare neutral
5	This application is effective and efficient	15 out of 25 agree

3. Easy to Use McCafee Antivirus on Desktop

Avast

No	Statement	Description
1	Easy to use	14 out of 25 agree
2	User friendly	15 out of 25 agree
3	Flexible	11 out of 25 agree
4	It takes the least number of steps to achieve what I want to do in this application	10 out of 25 agree
5	Always success when using it	15 out of 25 agree
6	Can be used without written instructions	8 out of 25 agree

Mcafee

No	Statement	Description
1	Easy to use	10 out of 25 agree
2	User friendly	11 out of 25 agree
3	Flexible	10 out of 25 agree
4	It takes the least number of steps to achieve what I want to do in this application	9 out of 25 menyatakan setuju
5	Always success when using it	11 out of 25 agree
6	Can be used without written instructions	11 out of 25 agree

4. Ease of learning to use McCafee Antivirus on the Desktop

Avast

No	Statement	Description
1	Fast in learning to use this application	12 out of 25 agree
2	Easy to remember how to use	14 out of 25 agree
3	Easy to learn to use	16 out of 25 agree
4	Quickly become skilled at using the app	11 out of 25 agree

Mcafee

No	Statement	Description
1	Fast in learning to use this application	8 out of 25 agree
2	Easy to remember how to use	8 out of 25 agree
3	Easy to learn to use	10 out of 25 agree
4	Quickly become skilled at using the app	11 out of 25 agree

5. Satisfaction in using McCafee Antivirus on Desktop

Avast

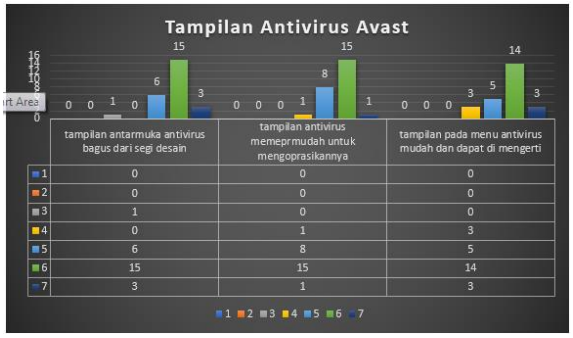
No	Statement	Description
1	Satisfied with the app	11 out of 25 agree
2	Recommended to others	11 out of 25 agree
3	Fun to use	12 out of 25 agree
4	Work as desired	11 out of 25 agree

Mcafee

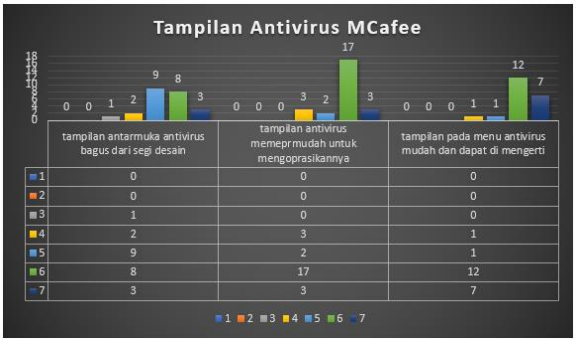
No	Statement	Description
1	Satisfied with the app	9 out of 25 agree
2	Recommended to others	9 out of 25 declare neutral
3	Fun to use	10 out of 25 agree
4	Work as desired	11 out of 25 agree

In this section, it can be seen that the results of data collection by distributing questionnaires to 50 respondents will show the feasibility of each use used in antivirus.
Characteristics of respondents can be seen as follows:

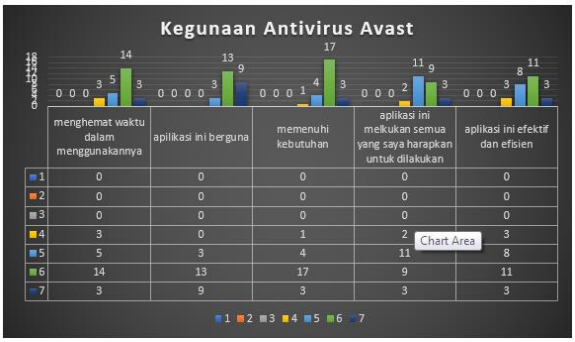
Respondent: Avast Antivirus Display



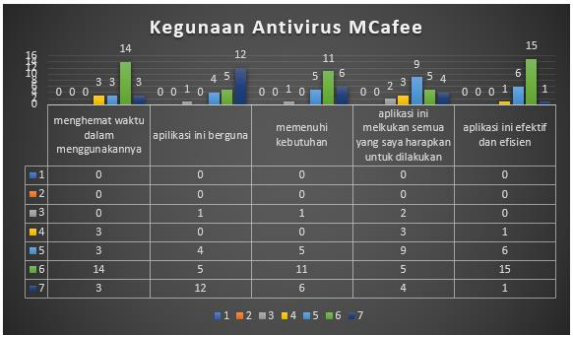
Respondent: MCafee Antivirus Display



Respondent: Use of Avast Antivirus

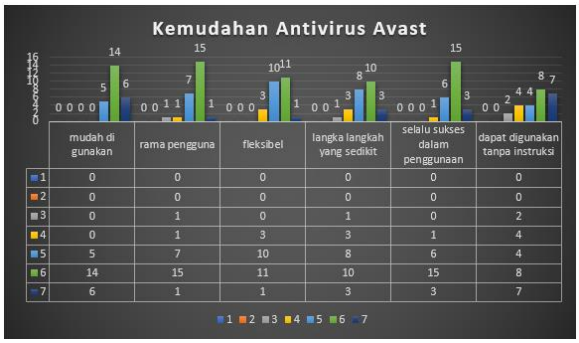


Respondent: Uses of McCafee Antivirus



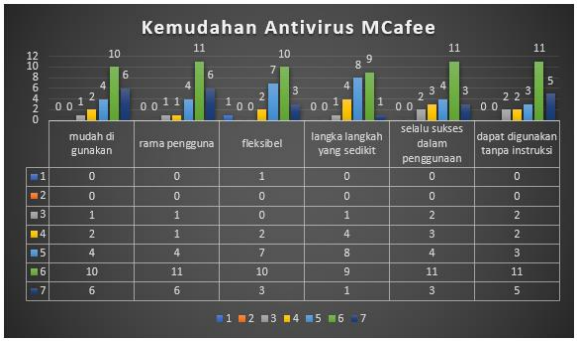
	menghemat waktu dalam menggunakannya	apilikasi ini berguna	memenuhi kebutuhan	aplikasi ini melkukan semua yang saya harapkan untuk dilakukan	aplikasi ini efektif dan efisien
1	0	0	0	0	0
2	0	0	0	0	0
3	0	1	1	2	0
4	3	0	0	3	1
5	3	4	5	9	6
6	14	5	11	5	15
7	3	12	6	4	1

Respondent: Ease of Use of Avast Antivirus



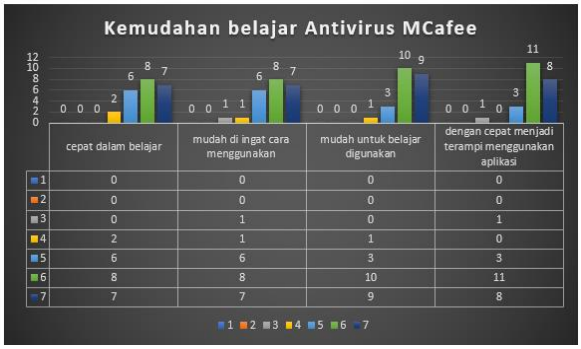
	mudah di gunakan	rama pengguna	fleksibel	langka langkah yang sedikit	selalu sukses dalam penggunaan	dapat digunakan tanpa instruksi
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	1	0	1	0	2
4	0	1	3	3	1	4
5	5	7	10	8	6	4
6	14	15	11	10	15	8
7	6	1	1	3	3	7

Respondent: Ease of Use of MCafee Antivirus

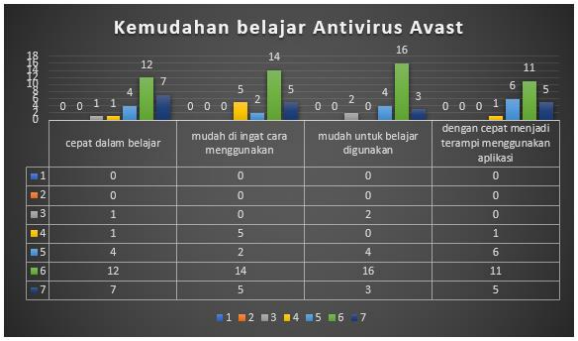


	mudah di gunakan	rama pengguna	fleksibel	langka langkah yang sedikit	selalu sukses dalam penggunaan	dapat digunakan tanpa instruksi
1	0	0	1	0	0	0
2	0	0	0	0	0	0
3	1	1	0	1	2	2
4	2	1	2	4	3	2
5	4	4	7	8	4	3
6	10	11	10	9	11	11
7	6	6	3	1	3	5

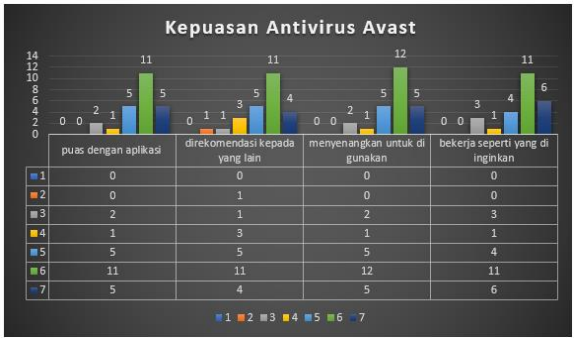
Respondents:Ease of Learning MCafee Antivirus



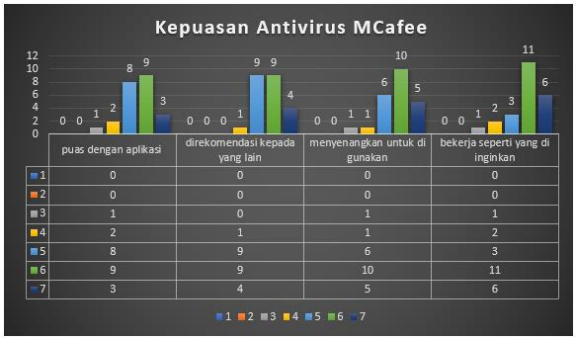
Respondent: Ease of Learning Avast Antivirus



Respondents: Satisfaction of Using Avast Antivirus



Respondents: Satisfaction of Using MCafee Antivirus



The results obtained above have shown that in appearance, desktop-based antivirus has a good appearance and is quite liked by many respondents. In terms of usability, desktop-based antivirus has been sufficient to meet user security needs, although it is still not significant. On the convenience side, some functions of desktop-based antivirus have been able to function according to their purpose, but there are still certain functions that have not been used by users according to their designation so that they are still not useful enough. While the level of satisfaction, the majority of users have expressed satisfaction with desktop-based antivirus so that it can continue to be used properly and is expected to continue to be used in the future.

Conclusion

The results of this study indicate that the majority of students have been able to use desktop-based antivirus well and will continue to use it in the future. The results of this study recommend that the desktop computer security process is better to use a desktop-based antivirus so that the security assurance process becomes more effective.

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