

Evaluation of Warehouse Management System Information System of PT ABC

Muhammad Wardani¹, Prihandoko²

^{1,2}Computer Science, University of Gunadarma, Depok, Indonesia, 16424

Abstract— This research is to compare information system evaluation methods between End User Computing (EUC) Satisfaction and Task Technology Fit. For this research which is the object of research is the Warehouse Management System PT ABC application developed by PT XYZ. While PT XYZ is a company providing computer application manufacturing services specializing in applications for logistics purposes. The purpose of this study is to compare the results of data processing using the End User Computing (EUC) Satisfaction and Task Technology Fit methods, so that it can be an evaluation material for PT ABC and PT XYZ management in improving both the Warehouse Management System application infrastructure and itself.

Keywords — Warehouse Management, End User Computing (EUC) Satisfaction and Task Technology Fit.

I. INTRODUCTION

This study is to compare the information system evaluation method between the End User Computing Satisfaction (EUCS) method and Task Technology Fit.

To meet the software needs of PT ABC, using the services of PT XYZ as a software consulting company in the development of Warehouse Management System software. Warehouse management system (WMS) is a system that helps stakeholders related to the management of the movement of goods from / into the warehouse so that it can speed up the process of lead time automatically, find out all inventory transactions and stock quantities faster and more accurately in real time, can set locations for storing goods in a way optimal, and can do a good distribution of goods.

The Warehouse Management System is part of the supply chain management which is part of the Enterprise Resource Planning (ERP) modules.

The selection of End User Computing Satisfaction (EUCS) and Task Technology Fit (TTF) research methods, refers to research on Enterprise Resource Planning, namely in a journal entitled Statistical Analysis on Enterprise Resource Planning Systems (ERP) On End User Satisfaction written by S.Damayanthi Edirisinghe and LMDRoshantha in 2018 [12] using the End User Computing Satisfaction (EUCS) method and in a journal entitled The Effect of Task-Erp Fit and Utilization of Erp on Employee Performance was written by Fridma Dityawarman, Kertahadi and Riyadi in 2016[11] about Task Technology Fit (TTF).

II. LITERATURE REVIEW

A. End User Computing Satisfaction

End User Computing (EUC) is a computer-based information system that directly supports operational and

managerial applications by end users. In EUC systems, end users use microcomputer work stations and various software to retrieve information, support decision, and develop applications. For example, users can send e-mail, drive analytic models, or build new business applications.

End User Computing (EUC) is a concept in software engineering that refers to the abstraction of a group of people who will eventually operate the software (i.e. the expected user or target-user).

Research variables (construct) on End User Computing Satisfaction, namely: content, accuracy, format, ease of use and timelessness.

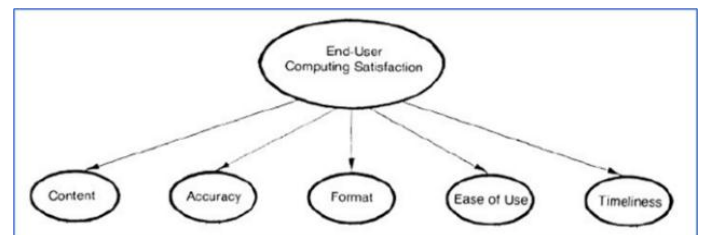


Fig. 1. Construct End User Computing Satisfaction

Construct Content where the construct is a construct that is used to measure user satisfaction in terms of the contents of an application system. Next is the Accuracy construct is a satisfaction construct that is measured in terms of the accuracy of the data displayed by an application. In the End User Computing (EUC) Satisfaction model there is also a construct that is used to measure user satisfaction in terms of appearance and aesthetics of the system interface called construct format. Next is the construct Ease of Use which is a construct to measure the ease of application to be studied and can be used effectively. And the last is construct timeliness is a variable used to measure user satisfaction in terms of timeliness of the application in displaying information needed by the user[1].

B. Task Technology Fit

The core of the Fit Technology Task Model is a formal construct known as Task-Technology Fit (TTF), which is the suitability of technological capabilities for the needs of work assignments, namely the ability of information technology to provide support for work [2]. The TTF model has 4 key constructs namely Task Characteristics, Technology Characteristics, which together influence the third TTF construct which influences the outcome variable, namely Performance or Utilization.

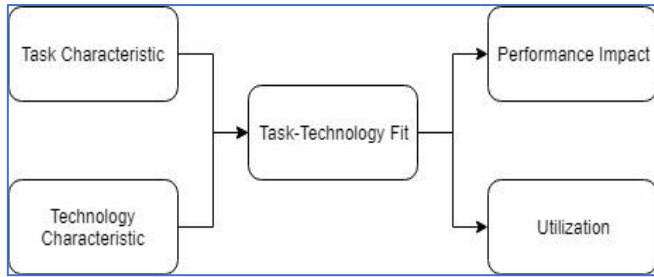


Fig. 2. Performance

Based on the picture above (Fig. 2), TTF is influenced by two main constructs, namely the task characteristics (Task Characteristics) and the technology characteristics (Technology Characteristics). Goodhue and Thompson (1995) [2] states that in the theory of Task-Technology Fit (TTF), IT is very likely to have a positive impact on one's performance (Performance Impacts) and use (Utilization) if the ability of IT (Technology Characteristics) is in accordance with the tasks that must be performed (Task Characteristics) by the users. Components (constructs) tasks (tasks) can be translated as actions carried out by someone to change the input into output. Technology Fit suggests that the adoption of a technology depends very much on how far the technology can be used to meet the requirements of a task. According to TTF theory, construct characteristics of tasks, technology and users are important components that contribute a lot to the successful implementation of an information system [2].

C. Validity and Reliability Test

Validity test is a test used to show the extent to which the measuring instrument used in measuring what is measured. Validity test is used to measure the validity or validity of a questionnaire. A questionnaire is said to be valid if the questions on the questionnaire are able to reveal something that will be measured by the questionnaire.

To do this validity test use the Microsoft Excel program. The testing technique that is often used by researchers to test validity is to use Bivariate Pearson correlation (Pearson Moment Product). This analysis is by correlating each item's score with the total score. The total score is the sum of all items. Question items that correlate significantly with the total score indicate that these items are able to provide support in uncovering what you want revealed à Valid. If $r_{arithmetic} \geq r_{table}$ (2-sided test with sig. 0.05) then the instrument or question items correlate significantly to the total score (declared valid)[6].

Reliability comes from the word reliability. Understanding the reliability (reliability) is the constancy of measurement. Reliability refers to an understanding that the instruments used in research to obtain information used can be trusted as data collection tools and are able to reveal the real information in the field. Reliability is a tool to measure a questionnaire which is an indicator of variables or constructs. A questionnaire is said to be reliable or reliable if a person's answer to a statement is consistent or stable from time to time. Reliability of a test refers to the degree of stability, consistency, predictive power, and accuracy. Measurements that have high reliability are measurements that can produce reliable data [6].

High and low reliability, empirically shown by a number called the value of the reliability coefficient. High reliability is indicated by the value of rxx close to number 1. The general agreement of reliability is considered to be satisfactory if ≥ 0.700 [6].

The instrument reliability was tested using the Cronbach Alpha formula because the research instrument was in the form of a questionnaire and multilevel scale. The Cronbach Alpha formula is as follows:

$$r_{11} = \left(\frac{n}{n-1}\right) \left(1 - \left(\frac{\sum \sigma_t^2}{\sigma_t^2}\right)\right)$$

r_{11} = reliability

n = number of question items

$\sum \sigma_t^2$ = number of score variants per item

σ_t^2 = total variant

If the value of alpha > 0.7 means that reliability is sufficient (sufficient reliability) while if alpha > 0.80 suggests all items are reliable and all tests consistently have strong reliability. Or, some interpret it as follows:

1. If alpha > 0.90 then reliability is perfect. If alpha is between 0.70 - 0.90 then reliability is high.
2. If alpha is 0.50 - 0.70, the reliability is moderate. If alpha < 0.50 then reliability is low,
3. If alpha is low, chances are one or more items are not reliable.

III. METHODS

The following are the stages of research elaborated through the following stages of research:

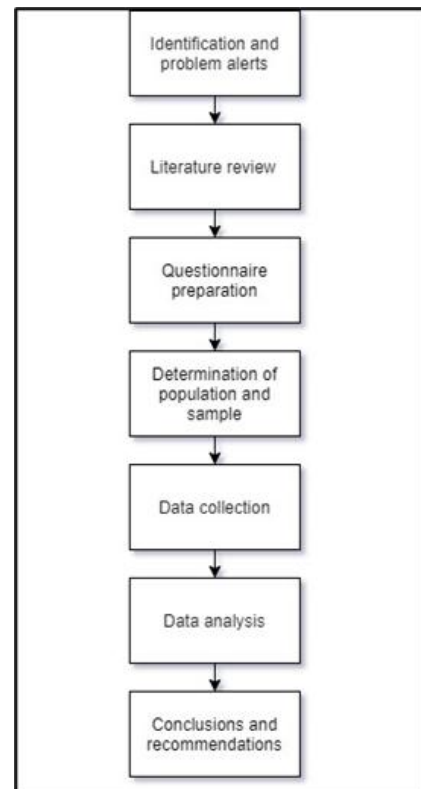


Fig. 3. Stages of research

A. Identification and Problem Alerts

Input on problem identification and problem formulation was obtained from interviews with staff and leaders of PTABC and PT XYZ. The purpose of the identification and formulation of the problem is to find out the background and problems found in PT ABC related to the implementation of PT XYZ's Warehouse Management System. The results of the problem identification and formulation stage are chapter 1 of this study, the preliminary chapter.

B. Literature Review

Input on literature review was obtained from various books, research journals, these and other related literature. The literature includes topics on the Warehouse Management System, End User Computing Satisfaction, Task Technology Fit and validity and reliability tests. The purpose of the literature review is to find an appropriate model for analyzing technology acceptance. The results of the literature review stage are found in chapter 2 of this study.

C. Questionnaire Preparation

At this stage the authors compile a questionnaire that is used to collect research data. The questionnaire includes the components of the proposed acceptance model, for example, for the End User Computing (EUC) Satisfaction method there are 5 components, namely:

- Content,
- Accuracy,
- Format,
- Ease of Use,
- Timelines

then for the Task Technology Fit (TTF) method there are 3 components this is

- Technology Characteristic,
- Task Characteristic,
- Impact Performance

Total questions are 35 questions consisting of 4 questions for the Content component, 4 questions for the Accuracy component, 4 questions for the Format component, 4 questions for the Ease of Use component, 4 questions for the timelines component, 6 questions for the Technology Characteristic component, 4 questions for Task Characteristic component, 5 questions for the Impact Performance component.

D. Determination of Population and Sample

The population of this study was all Warehouse Management System users in 2018, the total respondents in this study were 38 people. This number is representative of users who use the warehouse management system software.

E. Data Collection

At this stage the researcher collected data from the research sample. Data collection was carried out using questionnaires via electronic mail and telephone. The purpose of data collection is to obtain the desired data related to this research. The results of this study are research data that is ready to be analyzed.

F. Data Analysis

At this stage the researcher conducted a validity and reliability test then a descriptive statistical analysis of each research variable and each research constructs. After that an analysis based on the results of the questionnaire.

G. Conclusions and Recommendations

In this stage the authors describe the results of his research that will be useful for the management of PT XYZ and PT ABC.

IV. RESULTS AND DISCUSSION

A. Validity and Reliability Test

Validity Test

Validity Test related to the reliability of the questionnaire in which a questionnaire is expected to be able to measure the construct, or variables in accordance with the indicators compiled, if it turns out that the variable / construct cannot be measured then the questionnaire / statement of the questionnaire is invalid. Test this validity by comparing the calculated R value with the table value. If the value of $r_{count} > r_{table}$ from the r table then the item items in the questionnaire are valid, whereas if the value of $r_{count} < r_{table}$ from the r table eating the item items in the questionnaire are invalid and must be dropped. Following are the results of loading values for each question with table R values (38):

TABLE 1. Validity Test

	Correlation Value R	R(38)	Correlation with total
D.1.1	0.632785738	0.2638	VALID
D.1.2	0.632193353		VALID
D.1.3	0.480920816		VALID
D.1.4	0.705101123		VALID
D.2.1	0.342150764		VALID
D.2.2	0.738112896		VALID
D.2.3	0.585297085		VALID
D.2.4	0.571931749		VALID
D.3.1	0.734951116		VALID
D.3.2	0.743909324		VALID
D.3.3	0.634573208		VALID
D.3.4	0.490717524		VALID
D.4.1	0.554196311		VALID
D.4.2	0.707561853		VALID
D.4.3	0.424871154		VALID
D.4.4	0.574816569		VALID
D.5.1	0.679872098		VALID
D.5.2	0.581313795		VALID
D.5.3	0.543462875		VALID
D.5.4	0.666177219		VALID
T.1.1	0.406783662		VALID
T.1.2	0.701801388		VALID
T.1.3	0.487388089		VALID
T.1.4	0.335758769		VALID
T.1.5	0.619491834		VALID
T.1.6	0.57925323		VALID
T.2.1	0.7002231		VALID
T.2.2	0.766703519		VALID
T.2.3	0.805185437		VALID
T.2.4	0.678379612		VALID
T.3.1	0.737263907		VALID
T.3.2	0.443506765		VALID
T.3.3	0.662632374		VALID
T.3.4	0.597549414		VALID
T.3.5	0.524311731		VALID

Based on the validity test (Table 1) that has been done, it can be concluded that each question made is valid according to the conditions in PTABC. Then the reliability test will be conducted.

Reliability Test

Reliability Test is done by comparing the alpha Cronbach number with the minimum Cronbach value requirement is 0.6. This means that if the Cronbach value obtained from the calculation results is greater than 0.6, it can be concluded that the questionnaire is reliable, conversely if the Cronbach value is smaller than 0.6 then it is concluded that it is not Reliable.

TABLE 2. Standard Deviation

Questions	Standard Deviation	Square of Standard Deviation
D.1.1	0.612807823	0.375533428
D.1.2	0.589741607	0.347795164
D.1.3	0.587324624	0.344950213
D.1.4	0.577555549	0.333570413
D.2.1	0.664588986	0.441678521
D.2.2	0.492475386	0.242532006
D.2.3	0.605804075	0.366998578
D.2.4	0.677309547	0.458748222
D.3.1	0.745302978	0.555476529
D.3.2	0.601089575	0.361308677
D.3.3	0.57693949	0.332859175
D.3.4	0.794719414	0.631578947
D.4.1	0.85174075	0.725462304
D.4.2	0.78435992	0.615220484
D.4.3	0.760418392	0.578236131
D.4.4	0.708111909	0.501422475
D.5.1	0.993936095	0.987908962
D.5.2	0.855490177	0.731863442
D.5.3	0.685658824	0.470128023
D.5.4	0.691854662	0.478662873
T.1.1	0.494636956	0.244665718
T.1.2	0.577555549	0.333570413
T.1.3	0.648885685	0.421052632
T.1.4	0.769252653	0.591749644
T.1.5	0.752898619	0.56685633
T.1.6	0.729874597	0.532716927
T.2.1	0.636155773	0.404694168
T.2.2	0.673096072	0.453058321
T.2.3	0.803619125	0.645803698
T.2.4	0.593947663	0.352773826
T.3.1	0.587324624	0.344950213
T.3.2	0.544597154	0.29658606
T.3.3	0.587324624	0.344950213
T.3.4	0.605804075	0.366998578
T.3.5	0.717590404	0.514935989
Standard Deviation of Total value	14.18161011	201.1180654
Total of all questions	23.57979335	16.2972973

Furthermore, from the above table entered into the alpha Cronbach formula.

n = 35

$$\sum \sigma^2 = 16.2972973$$

$$\sigma^2 = 201.1180654$$

Then it is entered into Cronbach's alpha formula so that the results are 0.945994944.

Based on the results of Alpha Cronbach, the authors conclude that the questionnaire is reliable and can be used for

future research purposes. This is because the reliability test results of 0.945994944 are already greater than 0.6.

B. Analysis of Questionnaire Results

End User Computing Satisfaction

1. Content

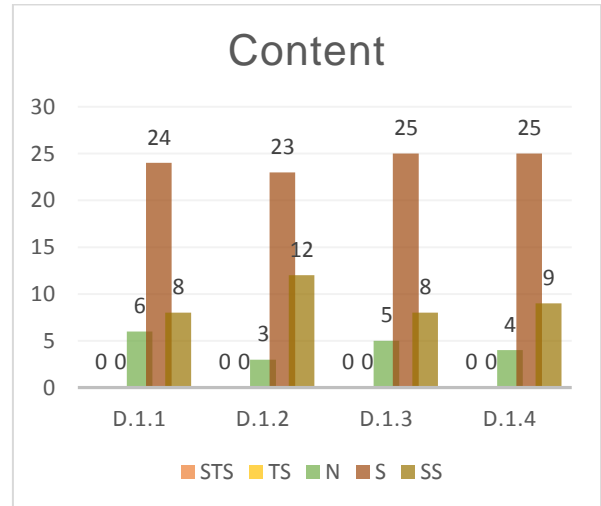


Fig. 4. Content

Explanation:

D.1.1 : WMS PT XYZ provides information needed by PT ABC correctly and correctly!

D.1.2 : WMS PT XYZ provides information that suits PT ABC's needs!

D.1.3 : WMS PT XTZ has features that support PT ABC!

D.1.4 : WMS XYZ has uniformity of information according to the needs of PT ABC!

STS : Strongly Disagree

TS : Disagree

N : Neutral

S : Agree

SS : Strongly agree

Based on the graph (Fig. 4) above it can be seen that 24.34% of respondents stated SS (Strongly Agree), 63.82% stated S (Agree), 11.84% of respondents stated N (Neutral) and 0% stated TS (Disagree) and STS (Sting Disagree). So that the Content (content) Warehouse Management System of PT XYZ has met the expectations of respondents because the percentage of respondents who strongly agree and agree is greater than respondents who disagree and strongly disagree that is strongly agree (SS) 24.34% and agree (S) 63.82 % whereas there were no respondents who disagreed and strongly disagreed (0%).

2. Accuracy

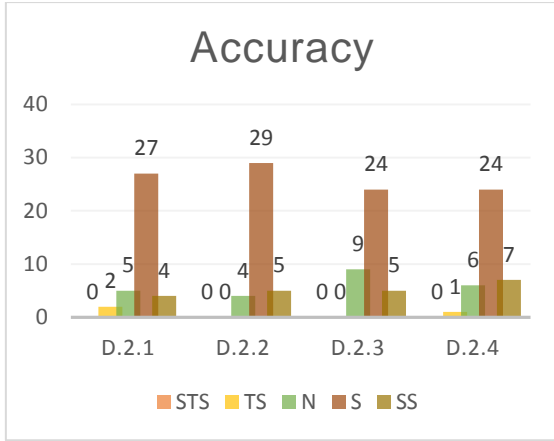


Fig. 5. Accuracy

Explanation:

D.2.1 : WMS PT XYZ provides accurate information according to PT ABC needs!

D.2.2 : WMS XYZ provides information and features according to the access rights of users who need it!

D.2.3 : WMS PT XYZ generates calculations according to the right formula based on access rights (user)!

D.2.4 : WMS PT XYZ provides results according to the information needed by PT ABC!

Based on the graph above (Fig. 5), it can be seen in 13.82% of respondents stated SS (Strongly Agree), 68.42% stated S (Agree), 15.79% of respondents stated N (Neutral), 1.97% stated TS (Disagree) and 0% STS (Sting Disagree). Related to the Accuracy of PT XYZ’s Warehouse Management System has met the expectations of respondents because the percentage of respondents who strongly agree and agree is greater than respondents who disagree and strongly disagree strongly agree (SS) 13.82% and agree (S) 68.42% only 1.97% of respondents disagreed (TS) and there were no respondents who strongly disagreed (STS) 0%.

3. Format

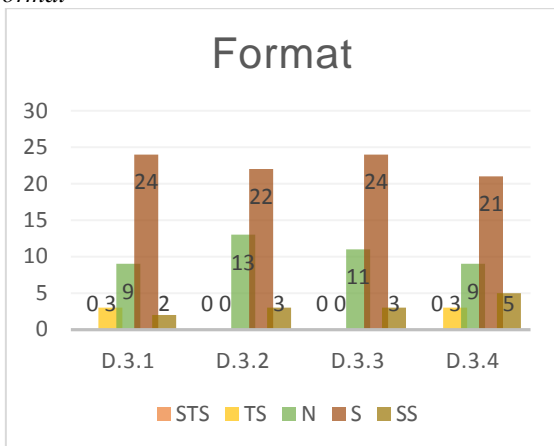


Fig. 6. Format

Explanation:

D.3.1 : Does WMS PT XYZ cover all business processes in PT ABC’s Warehouse!

D.3.2 : Are the services available at WMS PT XYZ already representing the needs of PT ABC!

D.3.3 : Do you think PT XYZ’s WMS content layout has met the requirements!

D.3.4 : Is the color matching WMS PT XYZ right and interesting!

Based on the graph above (Fig. 6) it can be seen that 8.55% of respondents stated SS (Strongly Agree), 59.87% stated S (Agree), 27.63% of respondents stated N (Neutral), 3.95% stated TS (Disagree) and 0% STS (Sting Disagree). So that the PT XYZ Warehouse Management System Format has met the expectations of respondents because the percentage of respondents who strongly agree and agree is greater than respondents who disagree and strongly disagree that is strongly agree (SS) 8.55% and agree (S) 59.87% while only 3.95% of respondents who disagree (TS) and no respondents who strongly disagree (STS) 0%.

4. Ease of Use

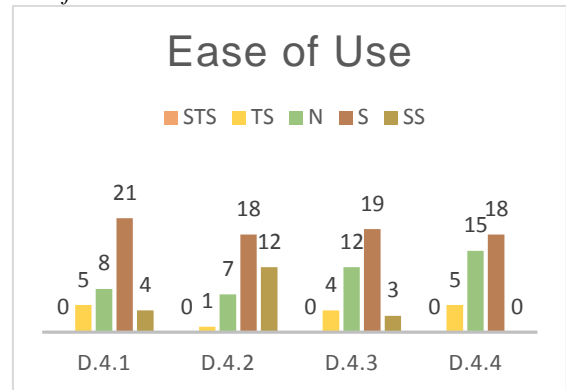


Fig. 7. Ease of Use

Explanation:

D.4.1 : Does WMS PT XYZ provide instructions for use or flow of activities!

D.4.2 : The ease of use of the application is needed by PT ABC users!

D.4.3 : Is each button provided information about the button to be pressed (tool tips)!

D.4.4 : Does WMS PT XYZ provide / have a clear navigation button on using it!

Based on the graph above (Fig. 7), the Ease of Use Warehouse Management System application of PT XYZ is quite easy to use. It can be seen from the questionnaire that most users of PT ABC strongly agree and agree with a percentage of 12.50% SS (Strongly Agree) and 50.00% S (Agree). But there are still some respondents who disagree. It should be noted by PT XYZ to make improvements so that users can better understand the use of the Warehouse Management System application.

5. Timelines

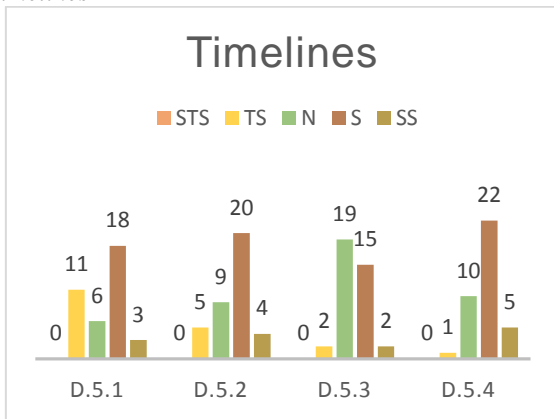


Fig. 8. Timelines

Explanation:

- D.5.1 : Speed in accessing WMS PT XYZ!
- D.5.2 : Response time in accessing the PT XYZ's WMS feature!
- D.5.3 : Does WMS PT XYZ's provide a Sitemap to speed up navigation!
- D.5.4 : Provision of WMS PT XTZ information is always up to date

Based on the graph above (Fig. 8) PT XYZ's Warehouse Management System Timelines application is quite timely. This is evident from the questionnaire most users strongly agree and agree with the percentage of 9.21% SS (Strongly Agree) and 49.34% S (Agree). But in questions D.5.1 (Speed in accessing WMS PT XYZ's!) and D.5.2 (Response time in accessing WMS Infolog features!) There are 11 (28.95%) (D.5.1) and 5 (13.16%) (D.5.2) respondents who disagree. This can be caused by several regions often experiencing slowdowns in accessing Warehouse Management System applications. Furthermore, it is necessary to investigate whether the problem lies in the internet network built by PT ABC or if there is a lack of data loading applied to the Warehouse Management System.

Task Technology Fit

1. Technology Characteristic

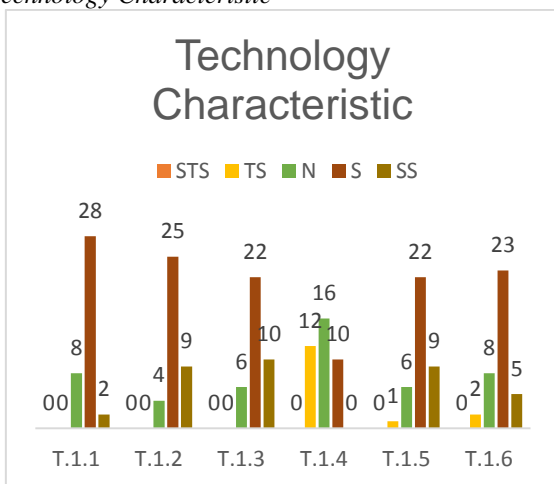


Fig. 9. Technology Characteristic

Explanation:

- T.1.1 : WMS PT XYZ is able to provide reliable data validation
- T.1.2 : WMS PT XYZ is able to present data that can be understood by PT ABC Users
- T.1.3 : WMS PT XYZ can operate on all computer hardware
- T.1.4 : WMS PT XYZ's rarely experience jams when used
- T.1.5 : There is training / socialization on the PT XYZ WMS system before use
- T.1.6 : WMS PT XYZ has features that are easy to understand

Based on the graph above (Fig. 9), it can be seen that 15.35% of respondents stated SS (Strongly Agree), 57.02% stated S (Agree), 21.05% of respondents stated N (Neutral), 6.58% stated TS (Disagree) and 0% STS (Sting Disagree). Based on the results of the questionnaire, it can be seen that the majority of respondents strongly agree 15.35% agree that is 57.02% compared to those who disagree only 6.58% and no one states strongly disagree (0%), so that the Technology Characteristic Warehouse Management System of PT XYZ has meet respondent expectations. However, in statement T.1.4 (WMS XYZ rarely experiences traffic jams when used) the number of respondents who agree is smaller compared to users who disagree and are neutral.

2. Task Characteristic

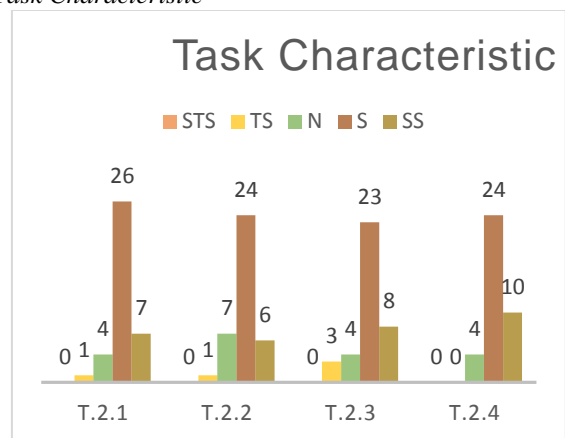


Fig. 10. Task Characteristic

Explanation:

- T.2.1 : I can use all the features on WMS PT XYZ to complete my work in the warehouse
- T.2.2 : WMS PT XYZ provides a sense of comfort for its users in its function as a means of information retrieval
- T.2.3 : he steps of WMS PT XYZ work are easily understood by User PT ABC
- T.2.4 : WMS PT XYZ is able to present detailed data according to the needs of PT ABC users

Based on the chart above (Fig. 10), PT XYZ's Warehouse Management System Task Characteristic application is in accordance with PT ABC's requirements. This can be seen from the results of the questionnaire where the percentage of respondents who strongly agree and agree more than respondents who disagree and strongly disagree namely for those who strongly agree 20.39%, agree 63.82% while those who strongly disagree 0%, disagree 3.29%. But there are still a

few users who disagree (3.29%) or neutral (12.50%), it needs to be a concern of PT XYZ to prepare a user guide that is better understood by users of PT ABC and make application improvements Warehouse Management System to be easier to use (user friendly).

3. Impact Performance

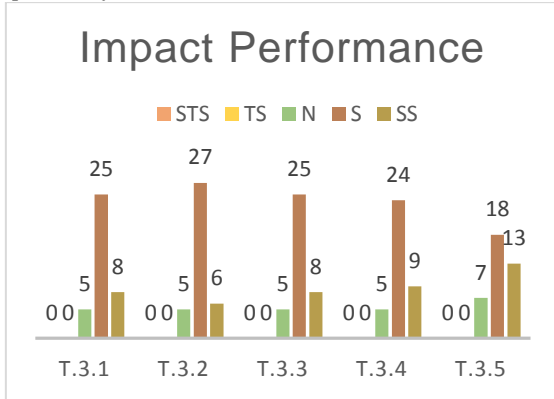


Fig. 11. Impact Performance

Explanation:

- T.3.1 : WMS PT XYZ can increase effectiveness in completing work in the PT ABC warehouse
- T.3.2 : With the help of WMS PT XYZ productivity increases
- T.3.3 : The information technology section provides assistance in terms of technical consultation for WMS PT XYZ
- T.3.4 : WMS PT XYZ can improve the quantity and quality of work completion in the PT ABC warehouse
- T.3.5 : With the help of WMS PT XYZ the work can be completed easily, quickly and on time

Based on the graph above (Fig. 11), it can be seen that 23.16% of respondents stated SS (Strongly Agree), 62.63% stated S (Agree), 14.21% of respondents stated N (Neutral), 0% stated TS (Disagree) and 0% STS (Sting Disagree). So that the PT XYZ Warehouse Management System Task Characteristic has fulfilled respondents' expectations because the percentage of respondents who strongly agree and agree is greater than respondents who disagree and strongly disagree that is strongly agree (SS) 23.16% and agree (S) 62.63% while there were no respondents who disagreed and strongly disagreed (0%).

C. Comparison of Research Results

Comparison of research results between research results using the End User Computing Satisfaction (EUCS) and Task Technology Fit (TTF) methods, namely giving the value of each component by multiplying each number of respondents in each statement with a score determined by a Likert scale, following the weighting score of each Statements based on Likert scale:

TABLE 3. Scale Likert

No	Scale	Score
1	Strongly Disagree (STS)	1
2	Disagree (TS)	2
3	Neutral (N)	3
4	Agree (S)	4
5	Strongly Agree (SS)	5

The following are the results of calculations with a Likert scale (Table 3):

TABLE 4. Evaluation of the Results of the Questionnaire with A Likert

	Constructs	STS	TS	N	S	SS	Total
D1	Content	0	0	54	388	185	627
D2	Accuracy	0	6	72	416	105	599
D3	Format	0	12	126	364	65	567
D4	Ease of	0	30	126	304	95	555
D5	Timeliness	0	38	132	300	70	540
T1	Technology Characteristic	0	30	144	520	175	869
T2	Task Characteristic	0	10	57	388	155	610
T3	Impact Performance	0	0	81	476	220	777

Based on the results of the assessment with a Likert scale (Table 4) for the End User Computing Satisfaction method, the greatest value is found in the Content component. So it can be concluded that the PT XYZ Warehouse Management System content is very fulfilling the user's wishes. Then the smallest value is obtained on the Timelines component. So, Timelines need to be improved.

Based on the results of the Likert scale assessment for the Task Technology Fit method, the greatest value is obtained in the Technology Characteristic component. So, it can be concluded that Technology in the Warehouse Management System has fulfilled the needs of users of PT XYZ. Then the smallest value is obtained in the Task Characteristic component. So, it needs to be improved in a system flow so that users are easier to use the Warehouse Management System.

V. CONCLUSION

A. End User Computing Satisfaction

This information system evaluation model emphasizes PT XYZ's Warehouse Management System user satisfaction. Based on a questionnaire that was given to users of PT ABC, the user was very satisfied with the Warehouse Management System application developed by PT XYZ. This can be seen from the results of the questionnaire in which 71.97% of respondents agreed and strongly agreed that the Warehouse Management System application response was fast. But in the case of response time there were respondents who stated that the response time of the Warehouse Management System application was still slow at 21.05%.

B. Task Technology Fit

This information system evaluation model emphasizes the development of Warehouse Management System technology whether it can improve user performance in carrying out daily tasks. Based on the questionnaire given there were 31.58% of respondents who experienced access constraints and the remaining 68.42% did not experience access constraints. That is because the internet connectivity problem is expected by PT ABC to improve internet connectivity.

C. Recommendations

There are several suggestions that can be given to the management of PT XYZ and PT ABC and for further research:

1. For PT ABC and PT XYZ to pay attention to the results of the questionnaire on construct timeliness in the End User Computing Satisfaction method.
2. For PT XYZ and PT ABC to pay attention to the results of the questionnaire on the Task Characteristic construct on the Task Technology Fit method.
3. For the management of PT XYZ, it is recommended to check and improve the response time of the Warehouse Management System application response. In addition, it is necessary to improve the application so that it is easier to use. And also prepare a user guide (application usage manual) so that users can more easily understand the Warehouse Management System application.
4. For the management of PT ABC, it is recommended to check and improve the internet network infrastructure in branch warehouses in order to increase the response time of Warehouse Management System applications.
5. For further research, it is recommended to conduct a similar study with a larger sample size (samples above 100). The use of larger research samples with different analytical methods is expected to increase the reliability of the results of this study.
6. In addition, the authors also suggest conducting similar research but with questions that are more relevant to the Warehouse Management System. Especially for questions on construct task-technology fit. This is because the questions for construct task-technology fit in this study are more focused on the quality of information systems in general. So, if there is a similar study with questions that are more focused on the Warehouse Management System, it is expected to increase the reliability of the results of this study.

REFERENCES

- [1] W. J. Doll and G. Torkzadeh, 1988, "The Measurement of End-User Computing Satisfaction," MIS Q., vol. 12, no. 2, p. 259.
- [2] Goodhue, Dale L. dan Ronald L., Thompson. (1995) Task-Technology Fit and Individual Performance(19, 2; ABI/INFORM Global pg. 213). MIS Quarterly.
- [3] Tavakol, M., & Dennick, R. 2011. Making sense of Cronbach's alpha. International Journal of Medical Education, 53-55.
- [4] Mohammad Fauzan Bahadjai, Wing Wahyu Winarno, Paulus Insap Santosa. 2015. Evaluasi Kinerja Mahasiswa Berdasarkan Teknologi Smartphone Menggunakan Metode Modified Task-Technology Fit. 2302-3805.Yogyakarta
- [5] Dewa, Radin.2016. Analisis Kepuasan Penggunaan Terhadap Portal Program Studi Informatika Menggunakan Eucs (End User Computing Satisfaction)[Skripsi]. Palembang
- [6] Lu, Dawei. 2011. Fundamental of Supply Management. London(UK).London Bussiness School
- [7] drg. Michael Andreas Leman, MMedEd. 2018. Cara Praktis Melakukan Uji Validitas Alat Ukur Penelitian.Yogyakarta(ID): Gosyen Publishing
- [8] Ida Bagus Gede Adi Permana, Diki Putra Setianto. 2017. Pengaruh Task Technology Fit, System Quality Dan Information Quality Terhadap User Performance: Perceived Usefulness Dan Perceived Ease Of Use Sebagai Pemediasi. Jurnal Manajemen Teori dan Terapan. Vol 10(3): 231-242
- [9] Ramon Adianto Djunanto, Frederik Samuel Papiilaya. 2018. Analisis Kepuasan Penerimaan Pengguna Akhir Sistem Branch Delivery System (BDS) Pada Layanan Teller Cash Recycler (TCR) Menggunakan End User Computing Satisfaction (EUCS) Dan ISO/IEC 12207:2008 Pada Perusahaan Bank di Indonesia. Jurnal Sistem Informasi Indonesia (JSII). Vol 3(1): 1-14
- [10] Asti Shofi Damayanti, Yusi Tyroni Mursityo, Admaja Dwi Herlambang. 2018. Evaluasi Kepuasan Pengguna Aplikasi Tapp Market Menggunakan Metode EUCS (End User Computing Satisfaction). Jurnal Pengembangan Teknologi Informasi dan Ilmu Komputer. Vol 2(11): 4833-4839
- [11] Ahmad Fitriansyah, Ibnu Harris. 2018. Pengukuran Kepuasan Pengguna Situs Web Dengan Metode End User Computing Satisfaction (EUCS). Jurnal Sistem Informasi. Vol 2(1): 1-8
- [12] Anisa Sri Restanti, Endah Yuni Astuti, Munjiati, Utik Nurwijayanti, Sayekti Widianingti. 2017. Analisis End-User Computing Satisfaction pada Online Public Access Catalogue "Izylib" di Lingkungan Universitas Jenderal Soedirman. Journal of Library and Information Science. Vol 1(1): 223 -238.
- [13] Fridma Dityawarman, Kertahadi, Riyadi. 2016. Pengaruh Task-Erp Fit Dan Pemanfaatan Erp Terhadap Kinerja Karyawan (Studi Pada Karyawan PT. PLN (Persero) Distribusi Jawa Timur Area Malang). Jurnal Administrasi Bisnis (JAB). Vol. 35(2): 104 – 113.
- [14] S.Damayanthi Edirisinghe, L.M.D.Roshantha. 2018. Statistical Analysis on Enterprise Resource Planning Systems (ERP) On End User Satisfaction. IOSR Journal of Business and Management (IOSR-JBM). Vol. 20(7): 24-34.