

PAPER • OPEN ACCESS

## Performance of management information system of engineering faculty internship office UNNES 2018 evaluation with HOT fit models

To cite this article: Astrilia Damayanti *et al* 2020 *J. Phys.: Conf. Ser.* **1444** 012038

View the [article online](#) for updates and enhancements.



**IOP | ebooks™**

Bringing together innovative digital publishing with leading authors from the global scientific community.

Start exploring the collection—download the first chapter of every title for free.

# Performance of management information system of engineering faculty internship office UNNES 2018 evaluation with HOT fit models

**Astrilia Damayanti\***, Arie Taveriyanto, Suwahyo, Octavianti Paramita, Henry Ananta, Naufal Alif Ganisha, Raihan Mukti Ramadhan

Engineering Faculty, Universitas Negeri Semarang

\*Corresponding author email E-mail: astrilia.damayanti@mail.unnes.ac.id

**Abstract.** Management information system (MIS) of Engineering Faculty (EF) Internship Office (IO) Universitas Negeri Semarang (UNNES) 2018 is an efficient and effective information system in colleges. The purpose of this study is the learning outcomes of MIS IO EF UNNES 2018 through users and systems. This research method was conducted using a questionnaire with HOT (Human, Organization, and Technology) fit model. This questionnaire was filled by 64 respondents consisting of students, supervisors, study program coordinator, administrative both departments and faculties. The results show that the user's response to human instruments was a good average (54%) but the assessment of the department and faculty administration by all respondents was only 3% and 1.5%. Meanwhile, the average organizational instrument was good (53.86%), but the climate factor or organizational culture (55.40%) was the best from the organizational existence (55.01%) and the quality of organizational work (50.22%). Finally, it was good (54%) with the system quality factor (55.28%) was better than the information quality factor (53.15%). Improvements to the website consist of the front view and the contents of the system. This questionnaire can help the performance of MIS IO EF UNNES 2018.

## 1. Introduction

Internship Office (IO) courses is a course that is designed to gain experience, knowledge, attitudes, and skills in accordance with the competencies of each study program apply the knowledge gained while in college into an institution, institutions and or industries so that they play a role in resolving the existing problems in the place.

MIS IO EF UNNES online in 2018 was a development from 2017. It need based on the development of UNNES which has been based on Information Technology (IT) and the increasing problems of IO administration. However, MIS IO EF 2018 still has shortcomings, including the unavailability of delivering news columns in the system.

The limited amount of human resources (HR) in managing correspondence for all students of the Faculty of Engineering and its fairly complex administration mechanism. This evaluation report came from respondent, namely students, coordinators, study programs, supervisors, and IO administration in departments and faculties. So, it is hoped that the IO administration managed by the administration in the department and or study program, the IO cluster, and the Faculty can be overcome. This study aims to evaluate the performance of MIS IO 2018 based on the perception of MIS IO users to contribute to the improvement of governance and IO EF UNNES administration.



## 2. Research Method

This type of research was described with a quantitative approach. The variables were human factors (personal and service factors), organization (existence, climate / culture, and quality of work), technology (quality of information and systems) in the performance of management information systems for EF IO UNNES 2018. Total respondents were 64 people (table 1). While the instrument used in this research was a questionnaire.

**Table 1.** Respondent

No	Respondent	People
1	Study Program Coordinator	13
2	Faculty Administration	5
3	Department Administration	3
4	Supervisors	13
5	Students	30

The types of questions used in the questionnaire were closed ended questions. The sampling technique used in this research was a random sampling, which was measured using a five-point Likert scale ranging from 1 (poor) to 5 (best). This research uses the Hot-Fit model developed by Yosuf et al (2006) [1] with several modifications to assess the successful implementation of management information systems of IO. The definition and concept of HOT-Fit variables used in this research can be explained as follows:

### 2.1 Human Instrument

Human instrument assessed the information system from the personal side [2], includes several factors, namely knowledge of management information system of IO [3], personal skills/dexterity in carrying out tasks [6], obedience/consistency in carrying out tasks, attitudes to accepting tasks/jobs, and carrying out tasks according to procedures. This component also assesses the system from the service aspect of the person. Services from personal include excellent service quality, social value/familiarity, ease of communication/meeting, personal personality, and opportunity to ask/consult.

### 2.2 Organization Instrument

Organization instrument assessed the system from aspects of organizational existence, organization climate/culture, and the quality of the work of the organization. The existence of an organization consists of leadership spirit [4], activity planning, division of tasks/work, administration of letter/value administration, controlling/controlling activities, socialization of MIS IO. Climate/culture consists of responsibility for work, teamwork, interpersonal communication [7], accepting criticism/suggestions, and student guidance. While the quality of work consist of the speed of service provider response, service guarantees in case of system errors, follow-up on interruptions, and communication with MIS developers [8].

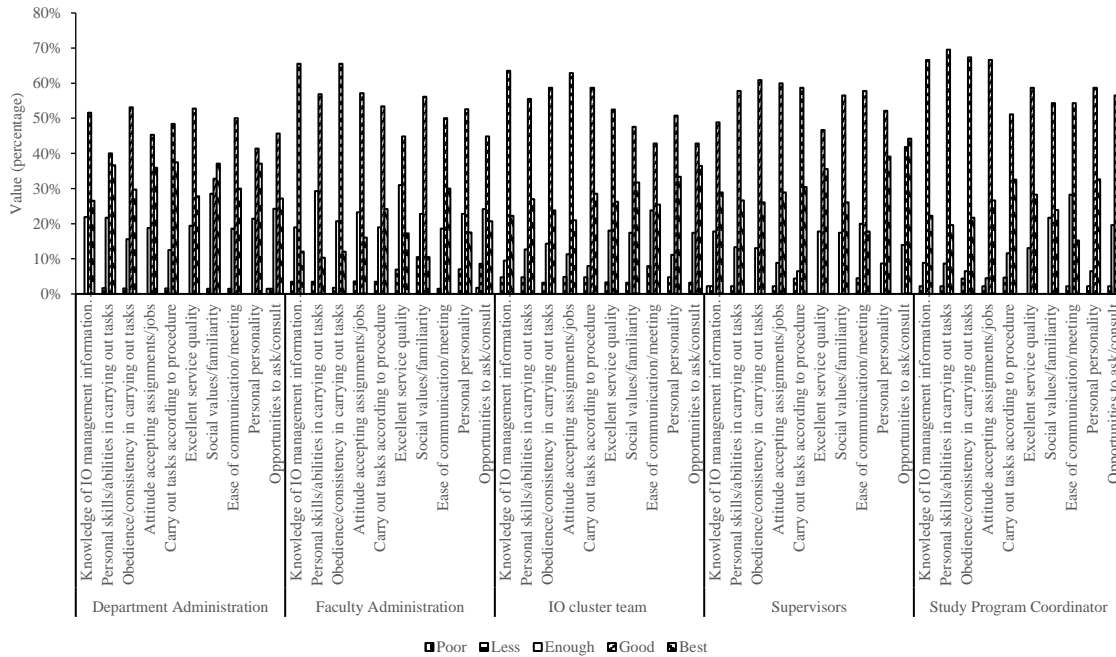
### 2.3 Technology Instrument

Technology instrument consists of system quality and information quality [5]. The quality of the system in the information system had related features in the system including system performance. System performance includes ease of access on the system, ease of study/operation, display features on the home page, ease of data input and/or value, speed/timeliness of access, availability/adequacy of information and system flexibility to other systems [9]. Information quality focuses on information produced by information systems [10]. Criteria to assess the quality of information were student data records, supervisor lecturer data records, correspondence and/or editing, information accuracy/clarity, timeliness of information, announcement/socialization of MIS IO, and company/industry information. All instruments have 5 categories assessment i.e best, good, enough, less, and poor.

### 3. Results And Discussion

#### User Perceptions Description of the Performance of MIS IO EF UNNES 2018 for Human Instruments

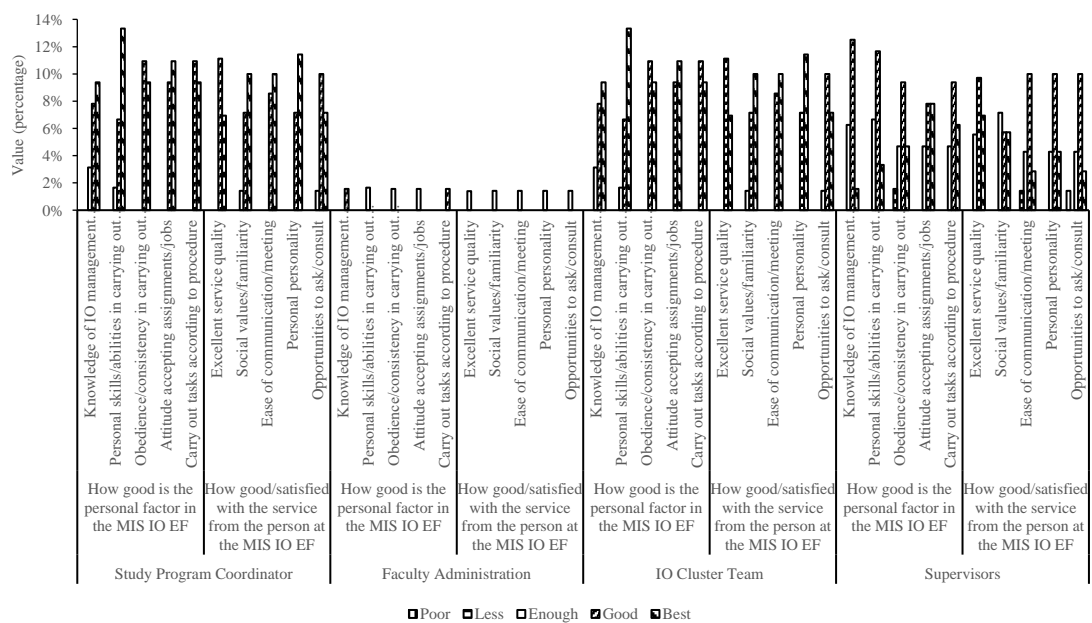
The total score of respondents' answers for human instruments was shown in figure 1.



**Figure 1.** Percentage of user perceptions about the performance of MIS IO in terms of human instruments at EF UNNES 2018

Figure 1 shows that the user's perception of the performance of MIS IO EF UNNES 2018 in terms of Human instruments with an average of all respondents gave a good rating (54%).

The total score of respondents' answers of human instruments for the performance majors administration was shown in figure 2.



**Figure 2.** Percentage of performert department administration

Figure 2 shows that the department administration of the other respondents with the best value for the study program coordinator and IO cluster team of 9%, which is influenced by the Obedience/consistency factor in carrying out the task in carrying out the tasks according to procedures, Excellent service quality. While the faculty administration was 0.3% because assessment of the factors of personal skills/abilities in carrying out tasks, social values/intimacy, and personal personality were low.

The total score of respondents' answers of human instruments for major administration performance was shown in figure 3.

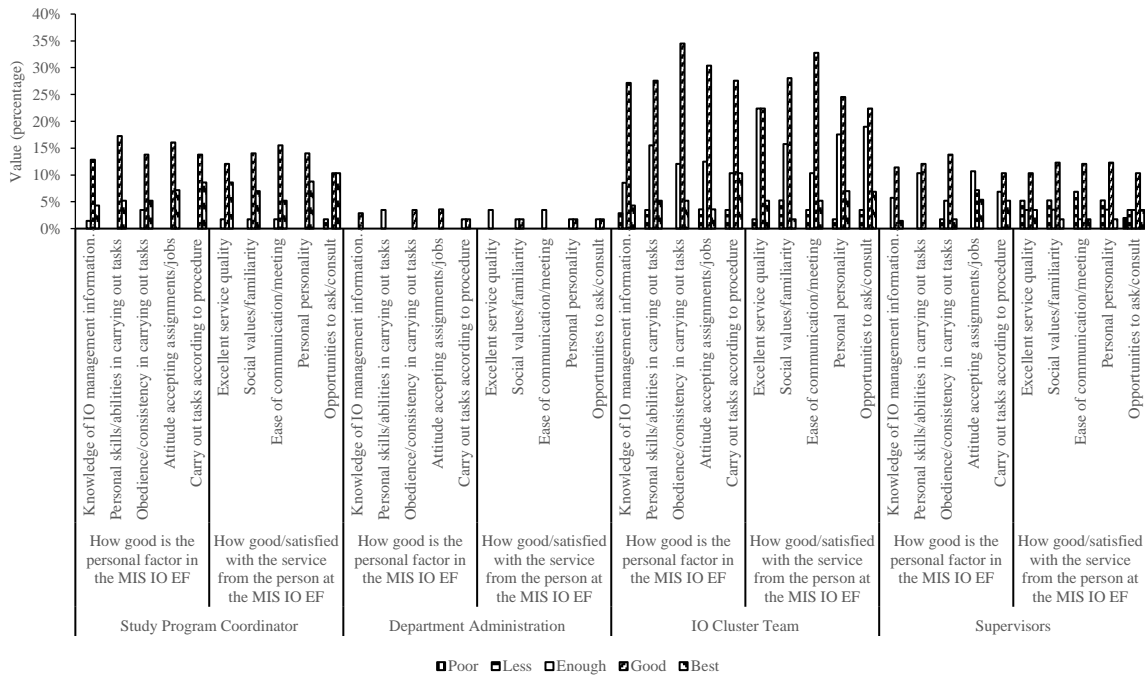


Figure 3. Percentage of performance faculty administration

Figure 3 shows that the faculty administration assessment of other respondents with the best assessment of the IO cluster team was 28% due to obedience/consistency in carrying out the tasks but the department administration was 2%. It was caused by assessment of the factors of carrying out the task according to procedure, social value/familiarity, personal personality, and opportunity to ask/consult were low.

The total score of respondents' answers of human instruments for student performance was shown in figure 4. Figure 4 shows that the student's assessment of other respondents with the best assessment of the IO cluster team was 27% due to the knowledge factor of the management information system of IO, carrying out tasks according to procedures, and personal personality. Whereas the department administration was 2%. It was caused by assessment of the factors of Knowledge of management information system IO, attitude to accept tasks/work, Carry out tasks according to procedures, Excellent service quality, Social value/familiarity, and Opportunities to ask/consult were low.

The total score of respondents' answers of human instruments for the performance Supervising Lecturer was shown in figure 5. Figure 5 shows that the Supervising Lecturer assessment of other respondents with the best assessment of the IO cluster team was 32% due to the factor of Knowledge about the IO management information system, the attitude of accepting assignments/jobs, Ease of communication/meeting, while the faculty administration was 1%. It was caused by assessment of the factors of personal skills/dexterity in carrying out the task, obedience/consistency in the implementation of the task, the attitude of accepting the task/job, carrying out the task according to procedure, social value/familiarity, and personal personality were low.

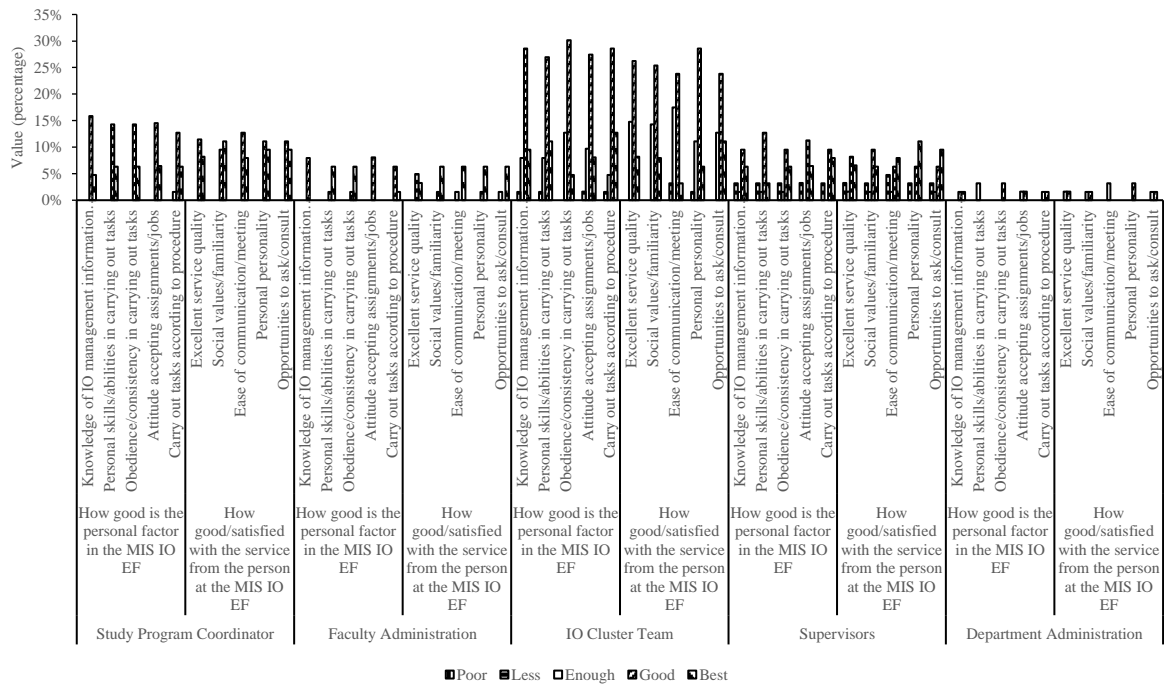


Figure 4. Percentage of performing students

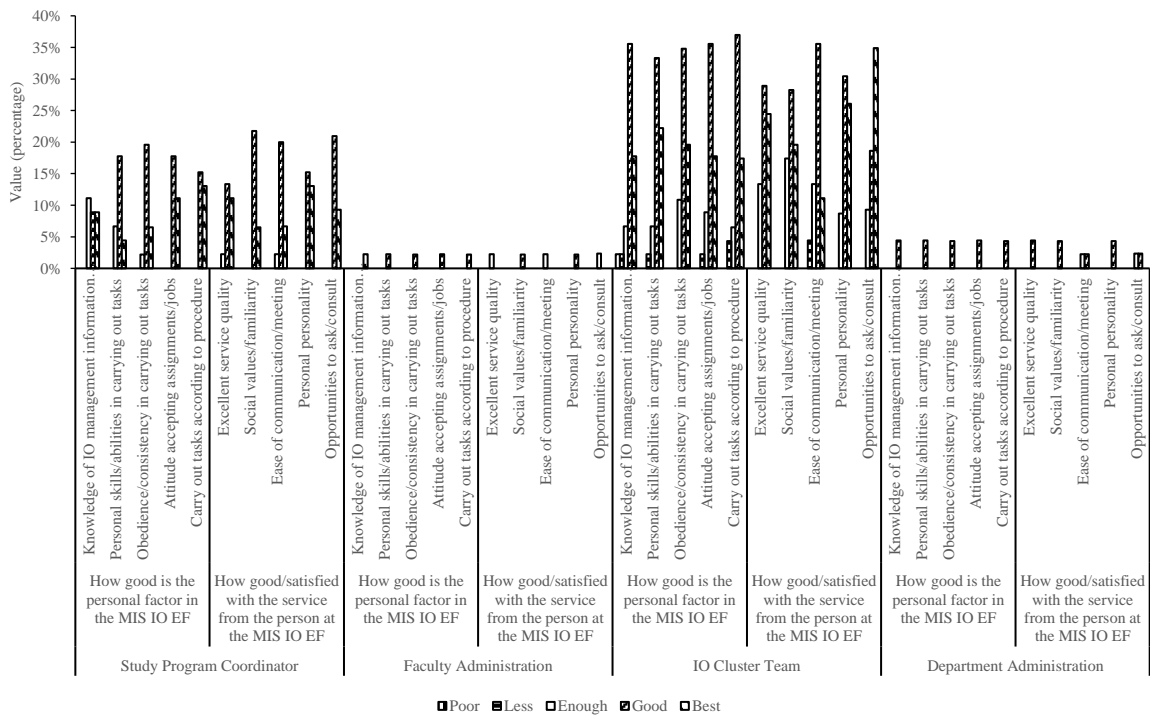


Figure 5. Percentage of performance supervisors

The total score of respondents' answers of human instruments for the study program coordinator performance was shown in figure 6

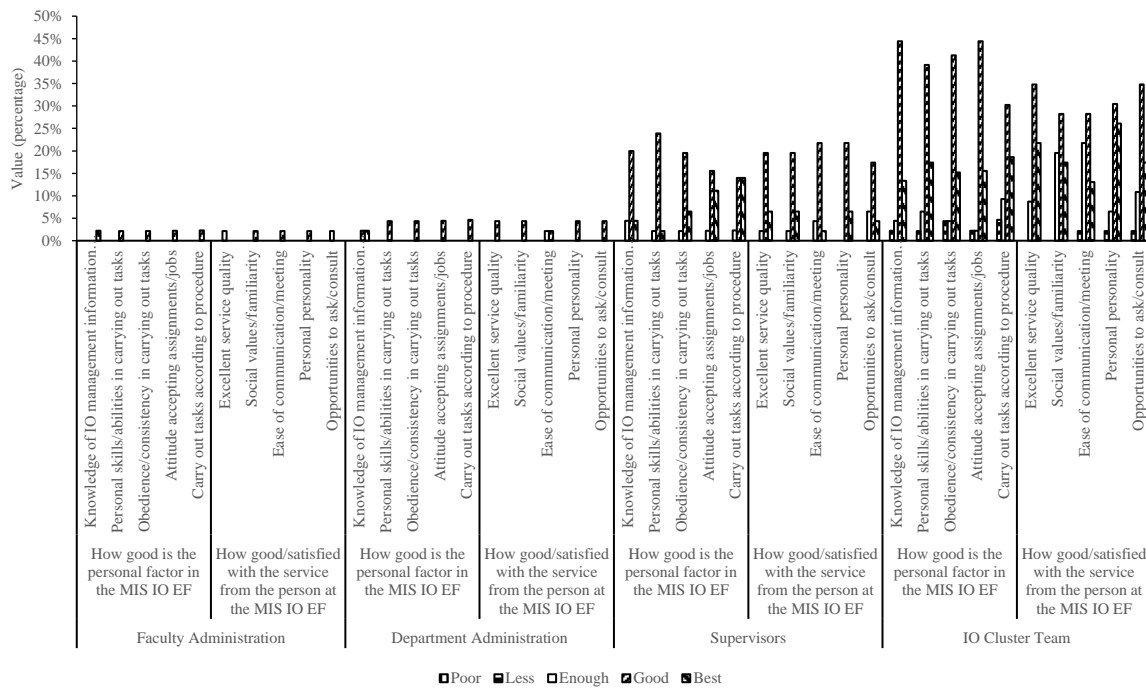


Figure 6. Percentage of study program coordinator performance

Figure 6 shows that the study program coordinator assessment of other respondents with the best assessment of the IO cluster team was 36% due to the Knowledge factor about the IO management information system and the attitude of accepting assignments/jobs, while the faculty administration was 2%. It was caused by assessment of the factors of Skills/personal competence in carrying out the task, Obedience/consistency in carrying out the task, Attitude to accept the task/job, Carrying out tasks according to procedure, Social value/familiarity, Ease of communication/meeting, and Personal personality were low.

### 3.1 User Perceptions Description About the Performance of MIS IO EF UNNES 2018 for Instrument Organization

The total score of respondents' answers of organization instruments was shown in figure 7. Figure 7 shows that the user's perception of the performance of MIS IO EF UNNES 2018 as viewed from the Organization instrument with the Climate/Cultural aspects of the FT PKL Organization (55.40%) is better than the Existence aspect of the FT PKL Organization Organization (55.01%) and the Quality aspect SIM PKL SIM work (50.22%). This means that the performance of MIS IO EF UNNES 2018 in terms of organizational instances includes the organization's existence (leadership spirit, planning of activities, division of tasks/work, administration of letters/values, controlling/controlling activities, socialization of the MIS IO) and the quality of the organization's work (speed service provider response, service guarantee if system error, follow-up on interruptions, and communication with the MIS developer) have not been fully met.

Organizational climate or culture was better than the existence of the organization and the quality of work, because interpersonal communication was good. Otherwise, the existence of the organization and socialization of MIS IO was poor. The quality of the organization's work at service guarantee points was poor, because there has been no action continued from the website.

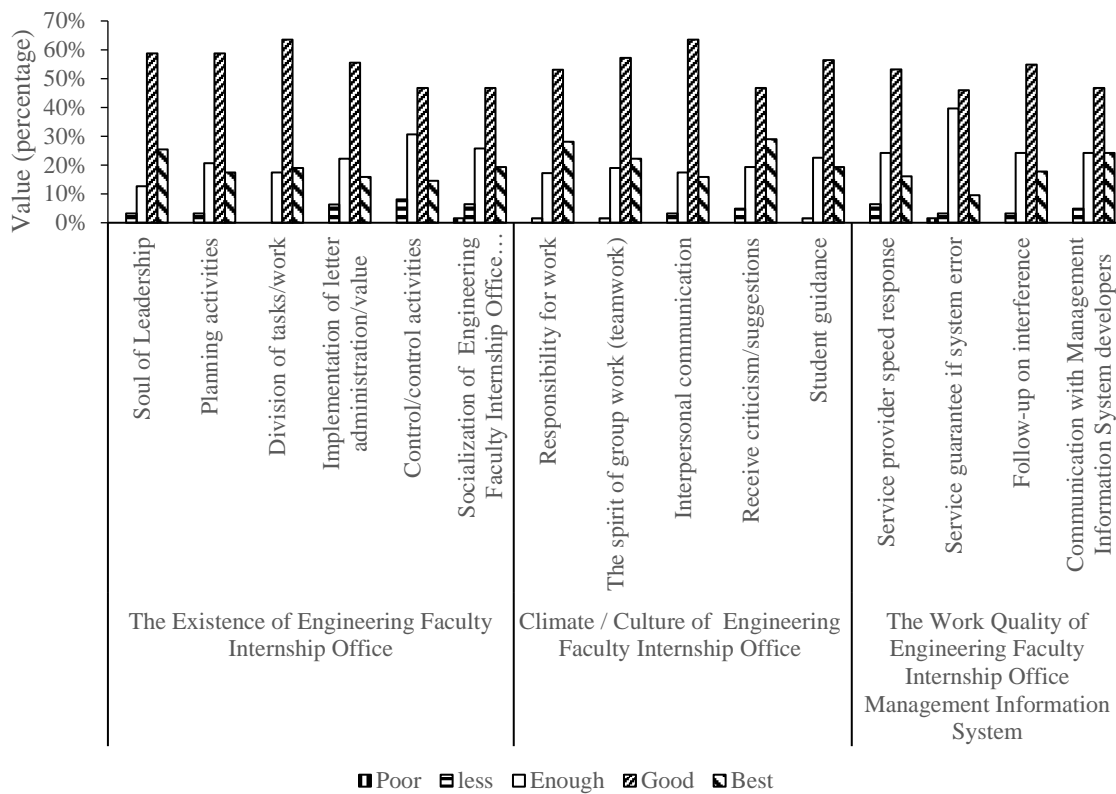


Figure 7. Percentage of user perceptions about the performance of MIS IO EF UNNES 2018 for the instrument organization

3.2 User Perceptions Description About the Performance of MIS IO EF UNNES 2018 for Instrument Technology

The total score of respondents' answers of technology instruments was shown in figure 8

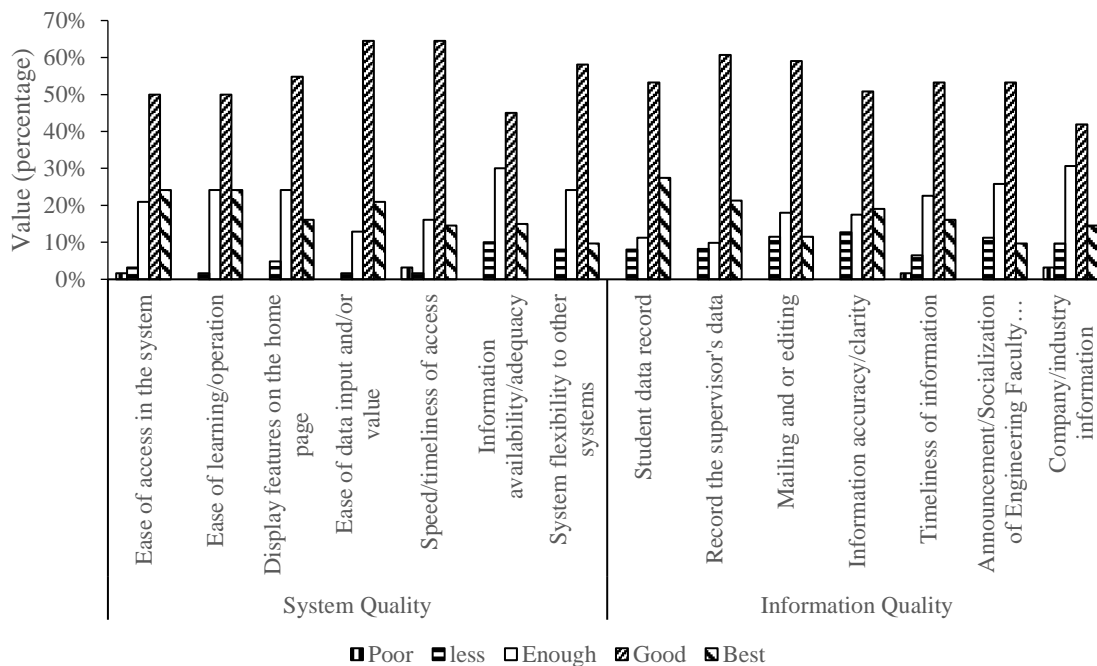


Figure 8. Percentage of user perceptions about the performance of MIS IO EF UNNES for the instrument technology



Figure 8 shows that the user's perception of the performance of MIS IO EF UNNES 2018 in terms of technology instruments is seen from the quality of the system in the good category (55.28%) better than the aspect of information quality (53.15%). It means that the performance of MIS IO EF UNNES 2018 in terms of technology instruments includes information quality (student data record, supervisor lecturer data record, correspondence and know of editing, accuracy/clarity of information, timeliness of information, announcement/dissemination of MIS IO, and company/industry information) have not been fully met.

The observations made by researchers on the information generated by the MIS IO EF related to the performance of the MIS IO EF from the technological aspect found that in the technology instrument the system quality is better than the information quality allegedly in the quality of information there are still deficiencies such as company/industry information and accuracy information time.

Research on quality was often associated with system performance. Measuring the quality of information can be subjective, because quality assessors come from the user's perspective. Criteria that can be used to measure the quality of information are student data records, supervisor lecturer data records, correspondence and editing, accuracy / clarity of information, timeliness of information, announcements / information dissemination of driver's license, and company / industry information. The ease of use of information generated by information systems will facilitate management in decision making.

Problems and solutions for technology instruments, especially for MIS was shown in table 2.

**Table 2.** Problems and solutions in the development of MIS IO EF UNNES 2018 for technology instruments

Technology Instrument	
Problem	Solution
<ul style="list-style-type: none"> <li>• Numbering on MIS IO EF UNNES 2018 is not automatic.</li> </ul>	MIS IO EF was made by integration with Siradi.
<ul style="list-style-type: none"> <li>• In uploading IO reports on the system the information does not appear inputted/not yet and sometimes students have difficulty uploading the report because the file is too big.</li> </ul>	The photos in the report should be compressed first because the system already provides a capacity of 10 MB.
<ul style="list-style-type: none"> <li>• The system has increased flexibility with other systems.</li> </ul>	MIS IO EF integrated with sikadu (Integrated Academic Information System) and siradi (Official Letter Information System).
<ul style="list-style-type: none"> <li>• The system is still confusing, there must be tutors to students.</li> </ul>	MIS IO EF added user manual.
<ul style="list-style-type: none"> <li>• There is no information on the front display.</li> </ul>	MIS IO EF repaired front view.
<ul style="list-style-type: none"> <li>• paperless, input data through the system.</li> </ul>	All input data in the system does not use paper unless there is a correspondence to the company.
<ul style="list-style-type: none"> <li>• Improved in the field guide's biodata.</li> </ul>	MIS IO EF does not need to be added field guide biodata.
<ul style="list-style-type: none"> <li>• For the quality of the system itself, for initial data entry when it has been validated, it cannot be replaced on its own, it must be through the department admin first.</li> </ul>	The edit menu must be in the student menu.
<ul style="list-style-type: none"> <li>• Many problems with input IO start date – IO end.</li> </ul>	MIS IO EF need to be repaired manually and simpler.
<ul style="list-style-type: none"> <li>• It needs a path of IO from the beginning to students and socialization about IO system. If there are improvements /</li> </ul>	MIS IO EF added IO flow.

additions to the new system, please provide socialization to the coordinator, supervisors and students.

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• There is additional information on IO partners.</li> <li>• Recap of majors for students can only be accessed by the IO Cluster Team.</li> <li>• There is no information on the implementation of the briefing.</li> </ul> | <p>MIS IO EF added display on the front page associated with a list of IO and MoU partners.</p> <p>MIS IO EF needs to display the recapitulation of students in each department.</p> <p>MIS IO EF added information on the implementation of the briefing.</p> |
|--|--|

Table 2 shows that MIS IO EF UNNES 2018 still confuses students with the alleged lack of explanation in the system related to tutors for students, information on the front view, IO licensing flow for students, lack of flexibility, numbering that has not been automated, and no information on the implementation of debriefing. Problem solving can be done by integrating MIS IO EF with Siradi and Sikadu, a system guide is added, the front page of the system is added information, and IO flow is added in the system.

#### 4. Conclusion

The performance of MIS IO EF UNNES 2018 was categorized as good (54%) in terms of human instruments but the assessment of the administration of departments and faculties by all respondents was only 3% and 1.5%, respectively. Meanwhile, the average organization instrument was good (53.86%), but the climate factor or organizational culture (55.40%) was the best from the organizational existence factor (55.01%) and the quality of organizational work (50.22%). The technology instrument with the average of all respondents gave a good rating (54%) with a system quality factor (55.28%) better than the information quality factor (53.15%). Website improvements consist of the front view and the contents of the system.

Evaluation of the performance of MIS IO EF UNNES 2018 makes the website developer know the shortcomings of the system that need to be improved so that the student output is easier to access the MIS IO EF.

#### References

- [1] Yusof MM, Paul RJ, and Stergioulas LK, "Towards a framework for Health Information System Evaluation, School of Information System.," vol. 0, no. C, pp. 1–10, 2006
- [2] Erimalata S, J. Akunt. dan Investasi, "Pendekatan Hot-Fit Framework dalam Generalized Structural Component Analysis pada Sistem Informasi Manajemen Barang Milik Daerah: Sebuah Pengujian Efek Resiprokal," vol. 17, no. 2, pp. 141–157, 2016
- [3] Frincy P, Lumenta Arie, and Sinsuw A, J. Tek. Inform. Univ. Sam Ratulangi, "Evaluasi Implementasi Sistem E-Learning Menggunakan Model Evaluasi Hot Fit Studi Kasus Universitas Sam Ratulangi," vol. 4, no. 2, pp. 1–6, 2015
- [4] Kodarisman R and Nugroho E, JNTETI (Jurnal Nas. Tek. Elektro dan Teknol. Informasi), "Evaluasi Penerapan Sistem Informasi Manajemen Kepegawaian (SIMPEG) di Pemerintah Kota Bogor," vol. 2, no. 2, pp. 24–32, 2013
- [5] Wiyati RK and Sarja Ni Luh Ayu KY, "Evaluasi Penerapan Sistem Informasi," vol. 1, no. 2, pp. 1–9, 2008
- [6] Latifah, "Analisis Pengaruh Kompetensi dan Kemampuan Personal Terhadap Kinerja Kantor Camat Boyan Tanjung Kabupaten Kapuas Hulu," Khatulistiwa Inform., vol. VI, no. 1, pp. 46–57, 2018
- [7] A. Nur Bahri, "Peran Komunikasi Antar Pribadi pada Lingkungan Kerja dalam Perspektif Islam," JISA J. Ilm. Sociol. Agama Prodi Sociol. Agama, vol. 1, no. 1, pp. 128–142, 2018
- [8] F. Roring, "Pengaruh Kepemimpinan, Pembagian Kerja dan Kompensasi terhadap Kinerja Karyawan pada PT Bank Danamon Cabang Manado," JMBI UNSRAT (Jurnal Ilm. Manaj. Bisnis dan Inov. Univ. Sam Ratulangi), vol. 4, no. 3, pp. 144–154, 2017
- [9] P. S.K and S. Pawirosumarto, "Pengaruh Kualitas Sistem, Kualitas Informasi, dan Kualitas Layanan terhadap Penggunaan Sistem E-Learning di Program Pascasarjana Universitas Mercu Buana," J. Manaj., vol. XXI, no. 02, pp. 282–305, 2017

- [10] I. B. G. M. Buana and N. G. P. Wirawati, “Pengaruh Kualitas Sistem Informasi , Kualitas Informasi , dan Perceived Usefulness Pada Kepuasan Pengguna Sistem Informasi Akuntansi,” E-Jurnal Akunt. Univ. Udayana, vol. 22, no. 1, pp. 683–713, 2018

#### **Acknowledgment**

We would like to thank the Semarang State University Faculty of Engineering for giving Community Service Grants for DIPA FUNDS LECTURERS IN UNIVERSITY OF 2018 Number: 79.22.5 / UN37 / PPK.4.5 / 2018.