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# Cooperative assessment information system implementation and adaptability among cooperative development authority Calabarzon employees

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## Abstract

The study used the descriptive correlational research approach. In this study, the proponent employed research made questionnaires as a research tool utilizing a four-point Likert scale and mean. Pearson Product-Moment Correlation (Pearson r) to determine the significant relationship and outcome was utilized. The findings presented the level of implementation of Cooperative Assessment Information System as assessed by employees in Cooperative Development Authority Region IV-A Extension Office in terms of System Quality, Information Quality, and User Satisfaction were implemented and the level of adaptability among employees in Cooperative Development Authority Region IV-A Extension Office in terms of Perceived Ease of Use (PEOU), Perceived Usefulness (PU), and Technology Adoption (TA) were adapted. It can be concluded that Level of Implementation of Cooperative Assessment Information System (CAIS) had a highly positive significant relationship with Level of Adaptability among employees in Cooperative Development Authority Region IV-A Extension Office. As a result, the proposed enhanced information system applies to all the employees of Cooperative Development Authority that will improve employee productivity, job satisfaction and engagement. The REDHUT systems may be utilized through the Cooperative Development Authority. If successful, widespread use of this will be encouraged.

**Keywords:** Implementation; Adaptability; Cooperative; Information System

## 1. Introduction

Good operations are ensured when information system is implemented properly in any institution as agency. An agency that will benefit from this is the Cooperative Development Authority. Moreover, an improved business operation would result from meticulous maintenance, knowledgeable strategic planning, and systematic execution to be successful. By creating excellent strategies and implementing them relentlessly, success can be attained. However, failure is generally the result of either poor implementation or poor strategy. In addition, the organization's employees are adaptable when it could adjust and flexible enough to shift into highly different conditions or circumstances that led from a closed-world environment to a more adaptive open-world and evolution that will support into the realm of digital transformation. Cooperative Assessment Information System (CAIS) was created to improve the current system to promote the growth and viability of cooperatives. Previously, employees were exhausted to the usual complex manual reportorial and numerous requirements that are attributed to low compliance rates of cooperatives which created a burden to cooperatives and evaluators. Even though staff members are increasingly adjusting to this new system, they continue to experience difficulties implementing and adapting to this new information system in the Authority.

The Enhanced Cooperative Assessment Information System intends to make the process of granting cooperatives a certificate of compliance easier and to monitor cooperative performance. The information system's operation supposedly will shorten turnaround times by enabling more effective, simple, hassle-free, and user-friendly document processing. However, there are some dilemmas encountered which leads to dissatisfaction among users such as lacking

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tailored dynamic interactive features, vendors support mechanism, operation standard and management support on their experience of information system used to realize the adaptation, ease work process and satisfaction.

According to Chaudhry [1], employees often had unfavorable attitudes toward change, their adaptation was typically difficult. Organization must recognize and shape employees' attitude to achieve long-term returns. The readiness, openness and commitment to change were the three main employee attitudes that can impact implementation. Also, some of the challenges discovered according to Lallan et al. [2], the obstacles to e-government were due to the bureaucratic culture, failure to spend adequately in public infrastructure services. Another, as revealed by Urbina and Abe [3], in the Philippines, the e- governments were still in the improvement stage for its public services and the citizens still had challenges adapting it. Mostly they were unfamiliar and unequal access to information services available to internet. Even though the citizens were aware of the e-government portals, still there were no guarantee that it would be adapted.

Furthermore, according to Khalid and Lavilles [4] the websites in the Philippines were still in early stage. Moreover, in the research of Nurdany and Prajasari [5] cooperatives had minimal use of digital media. Certainly, there will be some hurdles but with dedication to improving services, challenges will be handled. According to Kholiavco et al. [6], digitalization necessitated the widespread implementation of modern information and communication technologies and formulated an integrated strategy to adapt the changing circumstances. Once it is adapted, it will lessen the causes of psychological distress, techno - invasion, techno overload and limit techno-strain. With this study, it will help the Government to improve its developmental efforts in the upcoming changes, especially in the implementation and adoption of the Cooperative Assessment Information System in the Cooperative Development Authority Region IV-A Extension Office.

## 2. Material and methods

This section includes research design, the research locale, the population sampling, respondents of the study, research instruments, validation of instruments, data gathering procedure, ethical consideration, and the statistical treatments that are used on the data gathered from the survey questionnaire.

### 2.1. Research Design

To determine the relationship between the Cooperative Assessment Information System implementation and employee adaptation, the study used the descriptive correlational research approach. Descriptive research gathers information to answer inquiries regarding the current state of the study's subject. The quantitative research method was used to gather measurable data for statistical analysis of a population sample.

According to Atmowardoyo [7], a study strategy known as descriptive research aims to provide the most precise description of the phenomena that already exist, determined how often it occurred, and categorized the data. The researcher observed, described, and recorded different facets of a phenomenon. There was no manipulation of variables or investigation of the phenomenon's action and reaction.

### 2.2. Research Locale

The study was conducted in the Cooperative Development Authority extension office, specifically with its technical employees. This office is one of the busiest and best- performing Regional Extension Offices of the Cooperative Development Authority in the Philippines, and it is situated in Chipeco Avenue, Calamba City, Laguna.

### 2.3. Population and Sampling

Descriptive correlational was utilized in this study. The study's target respondents included all 42 technical employees in Cooperative Development Authority Extension Office Region IV-A because there were not enough of them. The total enumeration was used. Total enumeration sampling is a type of purposive sampling technique where the researcher chooses to examine the entire population that has a particular set of characteristics. In sampling, units are the things that make up the population. When using total enumeration sampling, it is most likely that these units will be people.

### 2.4. Respondents of the Study

All 42 technical employees of Cooperative Development Authority Extension Office Region IV-A were included in the study's target respondents.

**Table 1** Distribution of Respondents

| Respondents | Population | Percent |
|---|---|---|
| CDA-R4A Employees | 42 | 100% |

The distribution of respondents in the CDA R4A is shown in Table A. Forty-two (42) or 100%, which is the total population of CDA-R4A Extension Office, have been chosen.

### 2.5. Research Instrument

In this study, the proponent employed research-made questionnaire as a research tool and subject for validation. A questionnaire is a research tool that consists of a set of questions designed to collect data and information from respondents that is judged necessary for the study. The questionnaire utilized in this study has two parts. The first determined the Cooperative Assessment Information System's implementation based on three variables: (a) information quality, (b) system quality, and (c) user satisfaction. The second section of the survey assessed employee adaptation in the Cooperative Development Authority Region IV-A extension office in terms of (a) perceived ease of use (PEOU), (b) perceived usefulness (PU), and (c) technology adoption (TA).

**Table 2** Level of implementation in Cooperative Assessment Information System

| Scale | Range | Categorical Response | Verbal Interpretation |
|---|---|---|---|
| 4 | 3.25-4.00 | Strongly Agree | Fully Implemented |
| 3 | 2.50- 3.24 | Agree | Implemented |
| 2 | 1.75- 2.49 | Disagree | Partially Implemented |
| 1 | 1.00 – 1.74 | Strongly Disagree | Not Implemented |

**Table 3** The Employees' Level of Adoption to Level of Adaptability

| Scale | Range | Categorical Response | Verbal Interpretation |
|---|---|---|---|
| 4 | 3.25-4.00 | Strongly Agree | Fully Adapted |
| 3 | 2.50- 3.24 | Agree | Adapted |
| 2 | 1.75- 2.49 | Disagree | Partially Adapted |
| 1 | 1.00 – 1.74 | Strongly Disagree | Not Adapted |

### 2.6. Validation of Instrument

Two business experts, one professor from the graduate school faculty, including the adviser, and the institution's statistician examined and approved the survey's accuracy because it forms the basis of the study. The Score-Content Validity Index (S-CVI) was calculated, and the outcome equated to 100%. A questionnaire which was researcher-made consisted of a sequence of carefully crafted written questions with spaces for indicating responses, was used to collect information regarding the assessment objectives. The study utilized pilot testing and Cronbach Alpha, the reliability of the researcher-made instrument was evaluated prior to the actual data collection. The independent variable tests showed (.952) excellent results and dependent variables showed (.974).

### 2.7. Data Gathering Procedure

After reviewing the survey, the researcher got in touch with the regional director for permission to conduct the study and provided him with a copy of the survey. He was granted permission to distribute the questionnaires to the respondents and ascertained the employees' perceptions on the extension office. For the study to be dependable and authentic, the researcher interacted with the respondents to emphasize the importance of providing accurate data and

answering all questions. The gathered data were statistically processed. The study was undertaken by classifying the subject, areas of interest, and the study's focus. After that, the data was collected and analyzed, then met with the thesis adviser for guidance and developed the research framework and study direction.

### 2.8. Treatment of Quantitative Data

Using SPSS, the following statistical treatments were applied to the data:

- The four-point Likert scale, and mean was utilized to determine the level of implementation of the cooperative assessment information system and the extent of staff adaptation in the regional extension office.
- Pearson Product-Moment Correlation (Pearson r) was used to determine the significant relationship between the level of implementation of Cooperative Assessment Information System and employee adaptation in the Cooperative Development Authority Extension Office Region IV-A.

## 3. Results and discussion

This section deals with the presentation, analysis, and interpretation of the data gathered. The study aimed to describe and assess implementation of Cooperative Assessment Information System in Cooperative Development Authority in CALABARZON and the adaptability among employees. The research also sought to answer the following questions:

### 3.1. What is the level of implementation of Cooperative Assessment Information System as assessed by employees in Cooperative Development Authority Region IV-A Extension Office in terms of:

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*3.1.1. System Quality*

**Table 4** Level of Implementation of Cooperative Assessment Information System as Assessed by Employees in Cooperative Development Authority Region IV-A Extension Office in terms of System Quality

| **Indicators in terms of System Quality** | **X** | **VI** |
|---|---|---|
| 1. The CAIS system is easy to use when prescribing. (Ease of use) | 2.60 | I |
| 2. The response time of the CAIS system is speedy. (Response time) | 2.35 | PI |
| 3. The CAIS system is stable with no downtime. (reliability) | 1.79 | PI |
| 4. The response time for login is satisfactory. | 2.40 | PI |
| 5. CAIS responds rapidly and satisfactorily when shifting between screens | 2.44 | PI |
| 6. The CAIS is flexible to interact with. | 2.51 | I |
| 7. CAIS interface is simple to navigate. | 2.67 | I |
| **GENERAL ASSESSMENT** | **2.40** | **PI** |

Legend: 3.25 – 4.00 Fully Implemented (FI) 1.75 – 2.49 Partially Implemented (PI)2.50 – 3.24 Implemented (I) 1.00 – 1.74 Not Implemented (NI)

The level of implementation of Cooperative Assessment Information System as assessed by employees in Cooperative Development Authority Region IV-A Extension Office in terms of System Quality had a general assessment of 2.40 which was verbally interpreted as Partially Implemented as shown in Table 1.1. Furthermore, the indicator “CAIS interface is simple to navigate” had the highest computed mean of 2.67 verbally interpreted as Implemented. Meanwhile, the indicator “The CAIS system is stable with no downtime.” had the lowest computed mean of 1.79 interpreted as Partially Implemented. It can be concluded that the CAIS System Quality is partially implemented.

Although its interface is simple to navigate, its system is low or stable with no downtime.

In support, according to Yadav et al. [8] the respondents who used the e-services were more aware and satisfied. Hence, they discovered its user-friendly, easy to navigate, easily accessible and reliable customer support system. In addition, as cited by Nugroho [9], the design of integrated database of coffee SME management was developed and used for further finance loan with the use of relational database concept. Also, according to Broeder and Gkogka [10], it showed in their analysis that the preferences in its navigation design had affected their culture and influence the consumer attitude and behavioral intentions. There are two types of navigation that should be considered to avoid un-intended effects on the targeted audience. They were static designs which were less useful and on the other hand dynamic navigation design. Lastly, as mentioned by Chen [11] the creation of platform design environment must be easy and more concise to operate.

Furthermore, it was discovered by Elsharif [12] that there were schemes that made a complete information system, such as replacing components of the hardware system, upgrading, replacing and safeguarding. Also, there should be a plan to get rid of outdated and inefficient hardware. In addition, according to Bourgeois [13] to ensure to stay longer online, an alternative power source such as battery to provide backup for critical components on its system and shut down to prevent data loss. An alternative site was chosen for the replication of critical data to ensure little or no downtime occurred. Moreover, a helpdesk or support analysts were that the users can contact which were the first line of support to give assistance for users having problems and provide needed information.

**Table 5** Level of Implementation of Cooperative Assessment Information System as Assessed by Employees in Cooperative Development Authority Region IV-A Extension Office in terms of Information Quality

| **Indicators in terms of Information Quality** | **X** | **VI** |
|---|---|---|
| 1. The information of the CAIS system is easy to understand. (understandability) | 2.95 | I |
| 2. The information of the CAIS system is accurate. (accuracy) | 2.77 | I |
| 3. The information of the CAIS system is timely. (timeliness) | 2.60 | I |
| 4. It is easy to find information in the CAIS. | 2.84 | I |
| 5. The information generated by the CAIS is useful for its purpose. | 3.02 | I |
| 6. Information in the CAIS appears orderly and easy to read. | 2.79 | I |
| 7. The information output of the CAIS can be trusted. | 2.88 | I |
| **GENERAL ASSESSMENT** | **2.84** | **I** |

Legend: 3.25 – 4.00 Fully Implemented (FI) 1.75 – 2.49 Partially Implemented (PI)2.50 – 3.24 Implemented (I) 1.00 – 1.74 Not Implemented (NI)

The level of implementation of Cooperative Assessment Information System as assessed by employees in Cooperative Development Authority Region IV-A Extension Office in terms of Information Quality had a general assessment of 2.84 verbally interpreted as **Implemented** as shown in Table 1.2. Moreover, the indicator "The information of the CAIS is easy to understand" had the highest computed mean of 2.95 verbally interpreted as **Implemented**. Meanwhile, the indicator "The information of the CAIS system is timely (timeliness)" had the lowest computed mean of **2.60** interpreted as **Implemented**.

It can be concluded that the CAIS Information Quality is implemented. This implies that its interface, which is the information of the CAIS system, is easy to understand and the information received is on time.

In support of this, according to Romney and Steinbart [14], information system that reduced uncertainty had improved ability of the decision-makers. The user can retrieve the data that fulfills the specific need for all the data and completely no error. Also, Relevant, trustworthy, thorough, timely, easy to understand and apply, verifiable, and accessible were just a few qualities of high-quality information.

**Table 6** Level of Implementation of Cooperative Assessment Information System as Assessed by Employees in Cooperative Development Authority Region IV-A Extension Office in terms of User Satisfaction

| Indicators in terms of User Satisfaction | X | VI |
|---|---|---|
| 1. Generally, the CAIS has made my work easier. | 2.49 | PI |
| 2. The CAIS system is user-friendly. (user friendliness) | 2.53 | I |
| 3. The CAIS increases my computer fluency. | 2.72 | I |
| 4. I am satisfied with the functions of the CAIS. | 2.40 | PI |
| 5. The CAIS has ease work process. | 2.33 | PI |
| 6. The CAIS help and support interface is simple to find. | 2.47 | PI |
| **GENERAL ASSESSMENT** | **2.49** | **PI** |

Legend: 3.25 – 4.00 Fully Implemented (FI) 1.75 – 2.49 Partially Implemented (PI)2.50 – 3.24 Implemented (I) 1.00 – 1.74 Not Implemented (NI)

The level of implementation of Cooperative Assessment Information System as assessed by employees in Cooperative Development Authority Region IV-A Extension Office in terms of User Satisfaction had a general assessment of 2.49 verbally interpreted as Partially Implemented as shown Table 1.3. In addition, the indicator "The CAIS increases my computer fluency" had the highest computed mean of 2.72 verbally interpreted as Implemented. The indicator "The CAIS has ease work process" had the lowest computed mean of 2.33 and interpreted as Partially Implemented.

### 3.2. What is the level of adaptability among employees in Cooperative Development Authority Region IV-A Extension Office in terms of:

*3.2.1. Perceived Ease of Use (PEOU)*

**Table 7** Level of Adaptability among Employees in Cooperative Development Authority Region IV-A Extension Office in terms of Perceived Ease of Use (PEOU)

| Indicators in terms of Perceived Ease of Use (PEOU) | X | VI |
|---|---|---|
| 1. Operating CAIS technology is easy for me. | 2.72 | A |
| 2. It is simple to update information in the CAIS system. | 2.72 | A |
| 3. It is fast to learn the CAIS technology. | 2.81 | A |
| 4. Utilizing CAIS technology doesn't cause stress. | 2.16 | PA |
| 5. Interacting with CAIS system does not require much effort. | 2.40 | PA |
| 6. CAIS technology enable to improve user capabilities. | 2.60 | A |
| 7. The CAIS technology makes information editing easier. | 2.58 | A |
| **GENERAL ASSESSMENT** | **2.57** | **A** |

Legend: 3.25 – 4.00 Fully Adapted (FA) 1.75 – 2.49 Partially Adapted (PI) 2.50 – 3.24 Adapted (A) 1.00 – 1.74 Not Adapted (NA)

The level of adaptability among employees in Cooperative Development Authority Region IV-A Extension Office in terms of Perceived Ease of Use (PEOU) had a general assessment of 2.57 verbally interpreted as Adapted as shown in Table 2.1. Furthermore, the indicator "It is fast to learn the CAIS technology" had the highest computed mean of 2.81 verbally interpreted as Adapted. Meanwhile, the indicator "Utilizing CAIS technology doesn't cause stress" had the lowest computed mean of 2.16 interpreted as Partially Adapted.

It connotes that the employees adapted to the CAIS System and are fast in learning the technology. Although its interface is new to the employees, they can partially adapt to it in terms of utilizing the CAIS Technology doesn't cause stress.

*3.2.2. Perceived Usefulness (PU)*

**Table 8** Level of Adaptability among Employees in Cooperative Development Authority Region IV-A Extension Office in terms of Perceived Usefulness (PU)

| **Indicators in terms of Perceived Usefulness (PU)** | **X** | **VI** |
|---|---|---|
| 1. Using CAIS enable to accomplish tasks more quickly | 2.47 | PA |
| 2. Using CAIS technology improves data communication. | 2.72 | A |
| 3. Using CAIS will increase my productivity. | 2.53 | A |
| 4. Using CAIS technology enhances my effectiveness in locating data & information faster | 2.60 | A |
| 5. Using CAIS technology helps me to store more data. | 2.63 | A |
| 6. CAIS helps me with task processing more efficiently. | 2.51 | A |
| **GENERAL ASSESSMENT** | **2.58** | **A** |

Legend: 3.25 – 4.00 Fully Adapted (FA) 1.75 – 2.49 Partially Adapted (PA) 2.50 – 3.24 Adapted (A) 1.00 – 1.74 Not Adapted (NA)

The level of adaptability among employees in Cooperative Development Authority Region IV-A Extension Office in terms of Perceived Usefulness (PU) had a general assessment of 2.58 verbally interpreted as Adapted as shown in Table 2.2. Moreover, the indicator "Using CAIS technology improves data communication" had the highest computed mean of 2.72 verbally interpreted as Adapted. On the other hand, the indicator "Utilizing CAIS enable to accomplish tasks more quickly" had the lowest computed mean of 2.47 interpreted as Partially Adapted.

It implies that the employees adapted the Perceived usefulness of the CAIS System which helps improves data communication. However, the employees have partially adapted the utilization of CAIS to be able to accomplish tasks more quickly.

*3.2.3. Technology Adaption (TA)*

**Table 9** Level of Adaptability among Employees in Cooperative Development Authority Region IV- A Extension Office in terms of Technology Adoption (TA)

| **Indicators in terms of Technology Adaptation (TA)** | **X** | **VI** |
|---|---|---|
| 1. Adopting CAIS technology enable to reduce my computer anxiety. | 2.42 | PA |
| 2. Adopting CAIS technology enhances my satisfaction with computers. | 2.44 | PA |
| 3. Adopting CAIS technology increases my productivity. | 2.53 | A |
| 4. Adopting CAIS technology builds my competencies more competitive. | 2.58 | A |
| 5. Adopting CAIS improve the quality of my work | 2.56 | A |
| 6. Using CAIS improves my job performance. | 2.53 | A |
| 7. Adopting CAIS enhances effectiveness in my job. | 2.56 | A |
| **GENERAL ASSESSMENT** | **2.57** | **A** |

Legend: 3.25 – 4.00 Fully Adapted (FA) 1.75 – 2.49 Partially Adapted (PA) 2.50 – 3.24 Adapted (A) 1.00 – 1.74 Not Adapted (NA)

The level of adaptability among employees in Cooperative Development Authority Region IV-A Extension Office in terms of Technology Adoption (TA) had a general assessment of 2.52 verbally interpreted as Adapted as shown in Table 2.3. Furthermore, the indicator "Adopting CAIS technology builds my competencies more competitive" had the highest computed mean of 2.58 verbally interpreted as Adapted. Meanwhile, the indicator "Adopting CAIS technology enable to reduce my computer anxiety" had the lowest computed mean of 2.42 interpreted as Partially Adapted.

It implies that the employees adapted the Technology Adoption (TA) which builds their competencies more competitive. However, the employees partially adapted CAIS technology to be able to reduce their computer anxiety.

### 3.3. Is there a significant relationship between the level of implementation of Cooperative Assessment Information System (CAIS) and its adaptability among employees in Cooperative Development Authority Region IV-A Extension Office?

**Table 10** Test of Significant Relationship between the Level of Implementation of Cooperative Assessment Information System (CAIS) and Level of Adaptability among Employees in Cooperative Development Authority Region IV-A Extension Office

| Level of Implementation of Cooperative Assessment Information System (CAIS) | Level of Adaptability among employees in Cooperative Development Authority Region IV-A Extension Office | r value | P value | Remarks | Decision |
|---|---|---|---|---|---|
| System Quality | Perceived Ease of Use | 0.712** | 0.000 | Significant | Reject $H_o$ |
| | Perceived Usefulness | 0.721** | 0.000 | Significant | Reject $H_o$ |
| | Technology Adoption | 0.668** | 0.000 | Significant | Reject $H_o$ |
| Information Quality | Perceived Ease of Use | 0.728** | 0.000 | Significant | Reject $H_o$ |
| | Perceived Usefulness | 0.765** | 0.000 | Significant | Reject $H_o$ |
| | Technology Adoption | 0.693** | 0.000 | Significant | Reject $H_o$ |
| User Satisfaction | Perceived Ease of Use | 0.753** | 0.000 | Significant | Reject $H_o$ |
| | Perceived Usefulness | 0.721** | 0.000 | Significant | Reject $H_o$ |
| | Technology Adoption | 0.773** | 0.000 | Significant | Reject $H_o$ |

**Correlational at the level 0.01 *Correlational at the level 0.05(Two-tailed)

There was a significant relationship between the level of implementation of Cooperative Assessment Information System (CAIS) and level of adaptability among employees in Cooperative Development Authority Region IV-A Extension Office as shown in Table 3. The r values ranging from 0.668 to 0.773 were interpreted as with moderate positive to high positive correlation as to correlate level of implementation of Cooperative Assessment Information System (CAIS) and level of adaptability among employees in Cooperative Development Authority Region IV-A Extension Office. The computed probability values of .000 were less than the level of significant ($P<0.05$); thus, rejecting the null hypothesis.

It can be concluded that level of implementation of Cooperative Assessment Information System (CAIS) has a highly positive significant relationship with Level of Adaptability among employees in Cooperative Development Authority Region IV-A Extension Office. The higher the implementation of Cooperative Assessment Information System (CAIS), the higher the adaptability among employees in the Cooperative Development Authority Region IV-A Extension Office.

### 3.4. Based on the findings of the study, what enhanced information system program maybe proposed?

The enhanced information system program is an activity which applies to all employees in Cooperative Development Authority. It is a tool and techniques to strengthen the weak indicator that the statistical result revealed. It is another way where the employees' productivity, job satisfaction and engagement using the system can be enhanced. The REDHUT system is an acronym derived from the following areas of concern:

- R- Reduced anxiety
- E- Ease work process
- D- Doesn't Cause Stress
- H- Help Desk/ Support
- U- Un scheduled downtime
- T- Timeliness

The developed information system program is intended to reinforce the weak indicator that the statistical results highlighted.

General Objective: Enhance implementation of information system program using REDHUT systems for employee productivity, job satisfaction, and engagement.

**Table 11** Proposed Enhanced Information System Program

| **Areas of Concern** | **Objectives** | **Strategies** | **Person Responsible** | **Time Frame** | **Success Indicator** |
|---|---|---|---|---|---|
| Reduced computer anxiety | To engage with staff on the issues they face and the potential opportunities for solving learning problems and improving learning opportunities | Training workshops and technical support, through experimenting with proven learning technology applications. | HR | Quarterly | Feedback: survey/ questionnaires |
| Ease Work Process | To ensure platforms are easy to operate, flexible and interactive | Enhanced Status Notification feature such as SMS for availability of compliance certificates, deferred status and payments. | Virtual Assistant/ IT | Daily | Chatbot interaction rate 35-40% |
| Doesn't Cause Stress | To ensure system will not require any physical or mental exertion. | Develop a Positive Technology approach. An organizational safety culture and work process such as communication management system | HR/Management | Once | Office memorandum of all communication shall be sent during office hours |
| | To reduce techno- invasion, reducing techno-overload, limit techno-strain | Ongoing coping mechanisms, interactive training in digital literacy is necessary. | HR/Management | Semi-annually | Feedback: survey / Questionnaires |
| Help desk / Support | To encourage client loyalty and trust and improve organization | First Response Time and Customer Satisfaction | Virtual Assistant/ I.T./ MIS | Help desk / Chat Bot | Chatbot interaction rate 35-40% |
| Un scheduled downtime | Safeguarding, servicing, upgrading and replacing inefficient and outdated data. | Comprehensive Back- up plan: Full inventory of all information that needs to back-up. Storage of data on bigger servers, off-site storage (to avoid single event such as earthquake, fire, or tornado that would destroy the original data and the backup) cloud and third-party sites. | I.T./ MIS | weekly; Daily -for critical data | 100 % of data are backed up. Testing of restoration of data that had been deleted and restored from back-up. Reduced unplanned downtime by 50% |
| Timeliness | To have an excellent service | Evaluation of system quality in terms of | I.T./ MIS | Weekly | Feedback from internal and |

| | | | | | |
|---|---|---|---|---|---|
| | to access information and real time transactions | availability, accessibility, acceptability, contact and effectiveness | | | external stakeholders (including stakeholder complaints) such as surveys, interviews, questionnaires, and complaint records. |

## 4. Conclusion

The study revealed that the Cooperative Assessment Information System (CAIS) is only partially implemented, yet it already contributes positively to employee performance and technological adaptation. CAIS interface is simple and delivers timely information, the system still lacks full stability. Despite this, it enhances employees' computer fluency and supports smoother work processes. Second, employees have generally adapted well to CAIS—learning it quickly and perceiving it as useful for improving data communication. However, full adaptation in terms of speeding up task completion and reducing computer anxiety remains partial. Third, findings show a high positive significant relationship between CAIS implementation and employee adaptability, indicating that greater system implementation directly increases employee adaptability within CDA Region IV-A. Lastly, the study emphasizes the necessity of implementing the REDHUT systems to further strengthen employee productivity, satisfaction, and engagement.

Overall, this study provides insights that can guide system improvements and adoption strategies, ultimately helping institutions enhance service delivery and societal development.

## Compliance with ethical standards

### *Statement of ethical approval*

The identity and privacy of the respondents were kept in strict confidentiality. The respondents voluntarily agreed and provided their informed consent to the survey. No one was compelled to respond to the instruments. The regional office director gave his full consent for the researcher to carry out the study. All study participants were informed of the study's objectives and the time commitment needed to participate. Respondents were self-assured that their opinions, which they freely shared through the survey and questionnaire, will stay anonymous.

### *Statement of informed consent*

The respondents were not misled about the goal of the study. The researcher made sure that respondents had access to the most recent study material. The final written report was precise and free of plagiarism. The respondents were given the assurance that their answers, viewpoints, and ideas were treated in strict confidence and will not be disclosed.

## References

[1] Chaudhry S. Managing employee attitude for a successful information system implementation: A change management perspective. J Int Technol Inf Manage. 2018;27(1):57–90.

[2] Magno FA. E-government and Philippine development. J Asia Pac Stud. 2018;32.

[3] Urbina AU, Abe N. Citizen centric perspective on the adoption of e-government in the Philippines. Electron J E-Gov. 2017;15(2):63–83.

[4] Khalid SA, Lavilles RQ. Maturity assessment of local e-government websites in the Philippines. Procedia Comput Sci. 2019;161:99–106.

[5] Nurdany A, Prajasari AC. Digitalization in Indonesian cooperatives: is it necessary? J Dev Econ (JDE). 2020;5(2):120–31.

[6] Kholiavko N. Information and Communication Technologies as a Tool of Strategy for Ensuring The Higher Education Adaptability to the Digital Economy Challenges [Internet]. IJCSNS International Journal of Computer

Science and Network Security; 2021 [cited 2023 Feb]. Available from: https://koreascience.kr/article/JAKO202127452890430.pdf

[7] Atmowardoyo H. Research methods in TEFL studies: Descriptive research, case study, error analysis, and R & D. J Lang Teach Res. 2018;9:197. doi:10.17507/jltr.0901.25.

[8] Yadav RK, Bagga T, Johar S. E-governance impact on ease of doing business in India. PalArch J Archaeol Egypt/Egyptology. 2020;17(7):6188–6203.

[9] Nugroho AP, Sutiarso L, Purwantana B, Puttanto BB, Fabianus R, Latif A, et al. Design of integrated database of smart coffee enterprise support system for coffee small medium enterprise. IOP Conf Ser Earth Environ Sci. 2019 Oct;365(1):012022.

[10] Broeder P, Gkogka A. The cultural impact of navigation design in global e-commerce. J Tour Herit Serv Mark. 2020;6(3):46–53.

[11] Chen T, Peng L, Yin X, Rong J, Yang J, Cong G. Analysis of user satisfaction with online education platforms in China during the COVID-19 pandemic. Healthcare. 2020 Jul;8(3):200.

[12] Elsharif TA. The elements of accounting information systems and the impact of their use on the relevance of financial information in Wahda Bank—Benghazi, Libya. Open J Bus Manag. 2019;7(3):1429–50.

[13] Bourgeois DT, Smith JL, Wang S, Mortati J. Information systems for business and beyond. 2019.

[14] Romney BM, Steinbart JP. Accounting information system. 12th ed. Pearson Education Limited; 2012.

## Author's short biography

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His research interests focus on information systems for cooperatives, organizational development, and technology adoption in public service, particularly on how systems like the Cooperative Assessment Information System (CAIS) can improve efficiency, data communication, and employee adaptability in cooperative-related institutions.