

### Short Paper

# Enhancing Administrative Efficiency Through the DepEd Caraga Regional Office Information Systems Portal

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## Abstract

**Purpose** – The DepEd Caraga Regional Office Information Systems Portal stands as a modern digital platform, reshaping how administrative processes operate within the regional office. This paper conducts a thorough evaluation of the portal's significant impact, with a strong focus on its main modules. The portal's collection of modules promotes not just operational excellence and smooth workflows but also enables well-informed decision-making.

**Method** – The proponent made use of a descriptive research design that covers both quantitative and qualitative research methods in collecting and analyzing data. Using a sampling technique, the respondents to this study are the regional office personnel of DepEd Caraga region who are the main users of the portal.

**Results** – The study shows that the respondents recognized the existence of the portal as they have been using it every day since its deployment in the office. The document tracking system, ISO portal, and human resource information system topped the most used features that were very useful to the users.



*Conclusions* – Overall, the DepEd Caraga information systems portal provides a satisfactory rating relating to enhancing the office’s administrative efficiency in terms of the portal’s accessibility, usability, work efficiency performance, organization of work, systematization of processes, references of records, and satisfaction with support services, which emphasizes increased collaboration and operational efficiency.

*Recommendations* – The proponent of this study recommends its users to explore the other features of the portal to appreciate more its existence, the ICT unit, to enhance the system by adding more features and integrating information technology into the operational processes for work automation and systematization and encourage other DepEd offices to utilize this initiative given a full support from the management.

*Practical Implications* – The application of information systems is the new trend in every workforce. Information systems provide an ease of doing business through the organization of work and systematized processes.

*Keywords* – information systems, operational efficiency, decision-making, collaboration

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## **INTRODUCTION**

The DepEd Caraga Regional Office is responsible for the management of public education in the Caraga region of the Philippines. The office faces various problems in terms of managerial productivity, including a vast and scattered workforce, a complex and paper-driven system of administration, and a lack of centralized database management systems. To tackle these problems, the DepEd Caraga Regional Office devised a portal that comprises several modules that can be accessed using a single account through a single sign-on feature. This has streamlined procedures, enhanced productivity, and lessened the necessity for manual paperwork. It has some important features, and one of the most important is its strong Access Control system. This feature allows you to control exactly who can access specific parts of the portal, making sure that only authorized people can get into those areas.

## **LITERATURE REVIEW**

### ***Portal Modules and Impact***

In the beginning, the regional office had lots of separate information systems, each with its own way of logging in and doing different things. This meant that employees had to remember many usernames and passwords, which caused problems like getting the logins wrong and forgetting passwords. Some personnel even wrote down their usernames and passwords on paper which is very insecure if others could see.

To solve this problem, the office's Information and Communications Technology Unit (ICTU) created the DepEd Caraga Regional Office Information Systems Portal. This portal turned those different systems into just modules, making it easier for them to work together (DepEd Caraga Region, 2022).

### ***Single Sign-On: Streamlining Access***

The portal's single sign-on feature makes it easy for users to access all the portal's modules with just one login. This eliminates the need to remember multiple passwords and reduces the risk of security breaches. Microsoft Build (2023) defines and explains the importance of having single sign-on option as the use of multiple independent software systems using one set of credentials as an authentication method. In this way, software systems accessed simultaneously without requiring different credentials for authentication.

Anieka (2021) points out the importance of re-evaluating the administrative system of an agency to find the right tune of increasing and improving the administrative efficiency through using the right resources that suits the needs of the company.

### ***Document Tracking System***

The Document Tracking System is a centralized repository for document management. It helps to streamline document flow and collaboration by eliminating bottlenecks and improving transparency. The system can also track the total time a document spends in a particular office, as well as the overall time it takes to travel from one office to another. It can also record who created the document and who received and forwarded it to other offices. Additionally, digital copies of documents can be uploaded to the system and retrieved by users anytime. The DTS utilizes a mechanism that restricts access to specific documents, ensuring that only authorized users can open, and view documents labeled as 'pending' or 'incoming' within their respective offices.

Kuligowski (2023) in his article about the document tracking system highlighted that it add additional benefits to the company or organization by having security to documents, increased productivity, audit trails, accessibility, low environmental footprint due to paperless tracing, and third-party integrations. DTS optimizes daily operations by increasing efficiency and effectivity at work.

### ***Human Resource Information System***

The Human Resource Information System (HRIS) enhances personnel management by providing a comprehensive platform. It streamlines various tasks, such as encoding and printing personnel's Personal Data Sheets (PDS), a process traditionally handled manually using Microsoft Excel. This system boasts a robust dashboard that visually presents crucial employee statistics, including graphs illustrating the status of

active and inactive personnel, male-to-female ratios, marital status distribution, blood types, age demographics, education levels, and more.

Furthermore, the HRIS automates the complex task of detecting Step Increments and Loyalty Awards schedules for personnel, saving valuable time and effort. Additionally, a key feature of the HRIS enables personnel to easily access and monitor their sick and vacation leave balances, as well as submit leave applications, simplifying the leave management process.

Within the HRIS, the system also records the training sessions attended by personnel, enabling management to readily identify the specific training needs of individual employees for the current year. Moreover, it offers valuable insights into prioritizing and conducting essential training programs. Lastly, Daily Time Records (DTRs) of every employee are accessible also in the HRIS and can be printed by every personnel as part of their monthly obligation to the personnel unit (DepEd Caraga Region, 2023b).

### ***Activity Calendar and Travel Authorities Generation***

The Activity Calendar and Travel Authorities Generation modules have been specifically designed to enhance the efficiency of activity and event planning processes. DepEd Caraga Region (2023a), the Activity Calendar offers a comprehensive view of all regional office events, facilitating the prevention of scheduling conflicts among employees who are expected to attend multiple events. This ensures smoother event coordination. The Travel Authorities (TA) generation module seamlessly integrates with the Activity Calendar, streamlining the rapid and precise generation and printing of Travel Authorities. This feature greatly benefits personnel, as it simplifies the process of accessing their TAs when needed for reimbursement purposes and attaching them to their Daily Time Records (DTRs).

### ***Vehicle Reservation System***

The Vehicle Reservation System enables personnel to reserve vehicles for specific travels during designated timeframes. This system empowers employees to secure a vehicle and driver schedule, ensuring their availability for planned trips without conflicting with other staff members' transportation needs. Reservations are processed on a first-come, first-served basis.

### ***IPCRF Encoding and Monitoring***

The IPCRF Encoding and Monitoring System automates the generation and tracking of Individual Performance Targets. This system simplifies the identification of completed and outstanding targets for employees. It allows them to self-assess their progress, providing valuable guidance on their achievements relative to their goals.

Consequently, employees can readily pinpoint activities or tasks requiring prioritization to meet their targets effectively.

### ***Downloadable Templates for ISO***

The presence of downloadable templates for ISO-related standard forms underscores the portal's dedication to maintaining quality and adhering to international standards. This feature ensures that personnel can readily access the most up-to-date registered standard forms and templates, simplifying compliance with ISO requirements for the use of these forms/templates.

According to Foor (2015), the importance of having a good information system is that it addresses both the creation control and records retention to stabilize the growth of records, it improves efficiency and productivity across the organization, and preserves corporate memory.

### ***Helpdesk System***

The Helpdesk System centralizes support requests, expediting the resolution of issues. It operates as a multi-office helpdesk system, allowing personnel to seek assistance from various functional divisions or units within the regional office.

### ***Conference Halls Reservation System***

Similar to the Vehicle Reservation System, the Conference Halls Reservation System streamlines the process of reserving conference halls, guaranteeing that there are no conflicting events scheduled for the same day in the same conference hall.

### ***Customer Satisfaction Survey***

Deped Caraga Region (2023c) features the online Customer Satisfaction Survey module that facilitates the collection of valuable feedback from both internal and external clients, contributing to the enhancement of the regional office's services. It efficiently saves time by automatically consolidating the results, enabling top management to allocate more time to some other important tasks.

### ***Announcements Module***

The Announcements Module ensures the efficient distribution of information by displaying all announcements prominently at the top of the home page, providing easy access for portal users. Information systems has drastically changed the business and working environment specifically attaining information storage with less cost and papers,

easier decision-making process due to the different channels created, and effective and convenient communication among employees (ECPI University, n.d.).

## **Access Control**

As the RO portal serves as the central hub or parent portal for various subsystems/modules, it becomes imperative to implement a robust Access Control system that effectively grants varying levels of access to different users. This feature stands as one of the system's utmost priorities because of the multitude of modules housed within the portal. Ensuring that only authorized users are granted access to specific modules is of paramount importance for maintaining security and data integrity. Permissions can be easily assigned to each user by the System admin on the user's page. If a user attempts to access a specific module without the necessary permissions, they will be automatically redirected to a '403' error page, indicating that access to the requested module is forbidden. Moreover, the portal leverages employee employment details to automate access control. For instance, in the Document Tracking System, if a user belongs to a particular office, they will automatically have access to documents marked as 'incoming' or 'pending' in that specific office. The following is the list of permissions for the RO Portal (Table 1).

Table 1. List of Permissions for the DepEd RO Information Systems Portal

<b>Permission</b>	<b>Module</b>	<b>Description</b>
Create Order of Payment	Accounting	Can View and Create an Order of Payment
Access Announcements	Announcement	Can access all announcements even from other users
Access Assets	Asset Management Unit Systems	Can Access Assets System Modules
Manage Calendar	Calendar of Activities	Can Approve, Disapprove Activity
Access Client Feedback Admin	Client Feedback	Can Access Client Feedback Summaries
Edit DTR	DTR	Can edit DTR Entry
Manage Document Type	DTS	Can Manage document types
Create External Document	DTS	Can create external documents, Can Undone Document

Table 1. List of Permissions for the DepEd RO Information Systems Portal

Permission	Module	Description
Receive All Documents	DTS	Can receive documents from all offices
Manage Settings	General	Allows to manage general settings of the system.
Manage Users	General	Allows user to view and manage other Users.
Manage GS Requests	General Services	Can add, edit, delete General Services Requests
Edit PDS	HRIS	Can Edit PDS information of other personnel
View PDS	HRIS	Can View PDS information of other personnel but cannot edit.
Manage Leave	HRIS	Can add, edit, delete Leave credits
Access All Helpdesk	ICT Help Desk	Can Access All helpdesk of all offices
Access IPCRF	IPCRF	Can access IPCRF of other users
Create ISO Folder	ISO	Can Create ISO Portal Folder, Can Edit any ISO Files
Create ISO File	ISOs	Can Create ISO File

System integration achieves the connectivity of unrelated systems into one. Through integration, data are shared effectively, quickly and easily, it automates and streamlined the business processes, improved the accessibility and synching of data, improved data accuracy, increased in efficiency and revenue, scalability, and is cost effective (Yasar & Ehrens, 2022).

Buchanan Technologies (n.d.) stressed out the importance of leveraging modern technology into the workplace to cultivate a more technology-centric and competitive business model. In addition, technological environment creates a limitless opportunity in the modern world, the business community, and other types of organization, developing lean and efficient administration process (Business Pro Tech Admin., 2023).

## **METHODOLOGY**

### ***The Methodology Design***

In collecting the data used in this study, the proponent used the descriptive research design that covers both quantitative and qualitative research methods.

Under the quantitative method, data are collected through a survey questionnaire. The data collected in the questionnaire involves awareness of the existence of the portal, the commonly used features, usability of the features, and the impact of the portal in the conduct of the administrative functions of the agency.

In the qualitative method, data are also collected utilizing the same questionnaire but with open-ended questions for the respondents to have a detailed analysis and information on their views about the portal.

### ***Sampling Design***

To ensure that the data collected in the conduct of the survey are the necessary information needed, a probability sampling was used in this paper based on the concept of random selection. A sample is identified as a representation of the population.

### ***The Respondents***

The respondents of the survey conducted are the regional office personnel of DepEd Caraga region, who are the main users of the portal. The personnel chosen in the sample as a mere representation of the population includes both a permanent status and a job order status. Currently, the region has a total of 122 permanent employees and a total of 17 job orders, summing an overall total of 139 employees.

Using Slovin's formula in calculating the sample size,  $n = \frac{N}{1 + Ne^2}$ , where  $n$  is the sample number of samples,  $N$  is the total population and  $e$  represents the error tolerance or margin of error, a total of 65 out of 139 employees makes up the sample with a 9% margin of error. In Statistics, Slovin's formula is a random sampling technique formula in estimating a sample size.

### ***The Instrument***

To gather, collect, and analyze the data used in this paper, a survey questionnaire was utilized by the presenter as a research instrument.

The questionnaire contains questions that address awareness of the existence of the portal, features of the portal and its usability, open-ended questions that address challenges faced by the users, and users' comments and suggestions for the



improvement of the portal. On the other hand, part of the questionnaire uses a 5-Likert scale survey which measures the administrative efficiency experienced by the users of the portal since its existence.

The survey was conducted online through a Google form.

### **Scoring Procedure**

The presenter used the scoring procedure with interpretation as shown in Table 2 below.

Table 2. 5-Point Likert Scale on the Level of Satisfaction of DepEd Caraga Employees on Enhancing Administrative Efficiency Through the DepEd Caraga Regional Office Information Systems Portal

<b>Scale</b>	<b>Range of Means</b>	<b>Description</b>	<b>Interpretation</b>
5	4.21 – 5.00	Strongly Agree	Very Satisfied
4	3.41 – 4.20	Agree	Satisfied
3	2.61 – 3.40	Neutral	Neutral/Uncertain
2	1.81 – 2.60	Disagree	Not Satisfied
1	1.00 – 1.80	Strongly Disagree	Very Not Satisfied

### **Statistical Treatment of Data**

The statistical treatment of data provides the presenter an analysis of data collected through statistical methods. This will allow the presenter to interpret data reliably and accurately, provide in-depth analysis and formulate conclusions and recommendations.

From the sample of respondents drawn from the total population, the data collected for this paper were analyzed statistically as follows:

For questions 1,2, 3, and 4, frequency count and percentage for the awareness of employees on the existence of the RO Portal, frequency of use of the portal, the frequency of use of the features/modules of the RO Portal, and the rate of usefulness for the features/modules frequently used.

For questions 5 to 11, mean and average were used to analyze the Level of Satisfaction of DepEd Caraga employees on enhancing administrative efficiency through the DepEd Caraga regional office Information Systems Portal.

Lastly, for questions 12 and 13, a qualitative analysis of data was used to analyze the difficulties/challenges encountered by the users and the

suggestions/recommendations of the users for the improvement of the Information Systems Portal.

## RESULTS

### **Problem 1**

The DepEd information system portal was an initiative by the Information and Communications Technology (ICT) unit of DepEd Caraga regional office. The portal was created to improve the efficiency in performing the work functions and organizing personnel information effectively.

Awareness of the system (Figure 1) by the personnel for which the portal was created is important to ensure that its creation was communicated by the management and users are aware of its purpose and on how to use it.

For problem 1, from a sample of 65 employees in the DepEd Caraga regional office, all of them or 100% of them answered that they are aware of the existence of the portal.

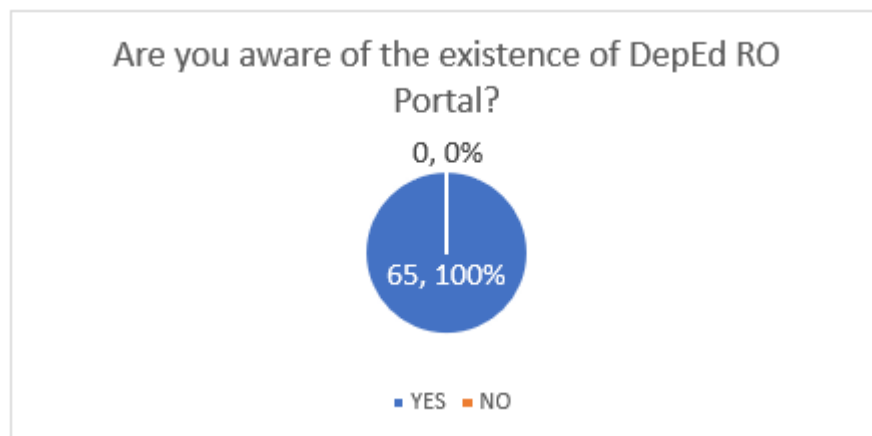


Figure 1. Awareness of the existence of the information system

### **Problem 2**

Problem number 2 of the survey describes the frequency of use of the portal (Figure 2) in the workplace. From the result, 56 of the respondents or 86% of them have always been using the portal since its deployment in the office. While others responded often times (8%) and sometimes (6%).

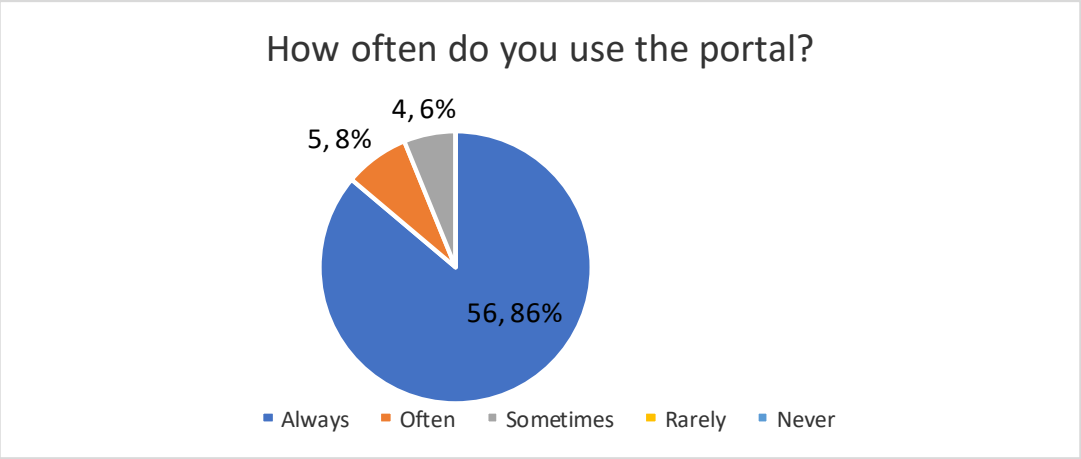


Figure 2. Frequency of Use of the Portal

**Problem 3**

The pie graph on Figure 3 presents the different modules/ features frequently used by the personnel in accessing the portal. From the results, it show that the top 3 frequently used modules were the Document Tracking System (DTS) with a frequency count of 62 responses, followed by the ISO portal with a frequency count of 53 responses, and then followed by the Human Resource Information System (HRIS) with a frequency count of 45 responses.

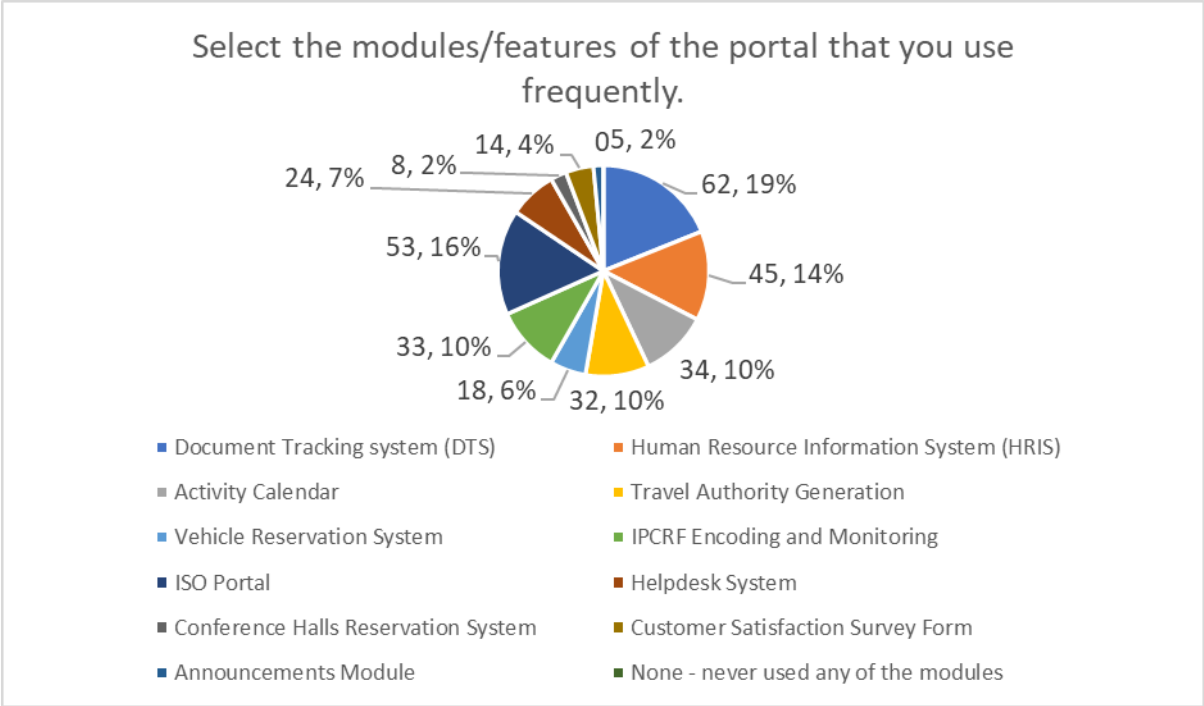


Figure 3. Frequently Used Modules/Features in the Portal

#### **Problem 4**

From the responses in question number 3, the respondents were asked about the usefulness of the modules/features used. As presented in figure 4 above, eighty-eight percent (88%) of the respondents or 57 of them find the modules of the portal very useful in doing their day-to-day work activities.

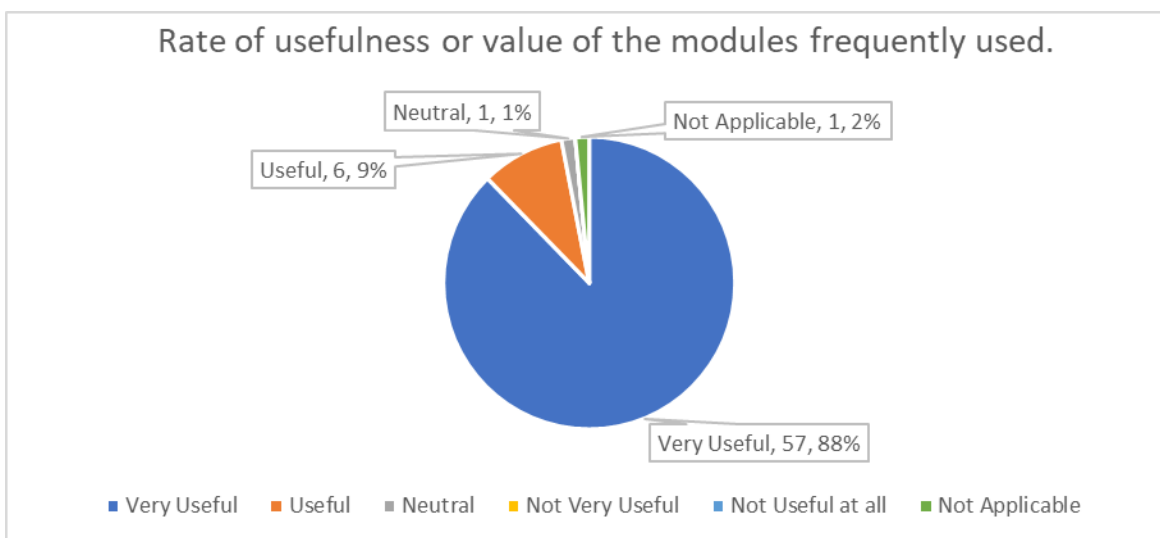


Figure 4. Rate of Usefulness of the Frequently Used Modules/Features

The usability of the system entails that its interfaces were designed to help users access the system easily, how useful is its functionality and how satisfied are they in using the system. The more it is useful and easy for them to use the system, the more they will appreciate its value which will lead to a low possibility of them leaving the system, (Nielsen, 2012).

#### **Problems 5 to 11**

Administrative efficiency in government is a very important aspect of carrying out its policies, procedures, goals, and objectives. The administrative function of the government is required to be effective and efficient to attain the overall purpose of the government operations. Enhancing administrative efficiency saves the time, effort, and financial resources of the government. Given the current situation of this generation, the most effective way that government can enhance efficiency is through adapting to technology.

Table 3. Level of satisfaction of the RO Portal relating to enhancing administrative efficiency in the agency.

	<b>Mean</b>	<b>Description</b>	<b>Interpretation</b>
1. Accessibility of the portal.	4.85	Strongly Agree	Very Satisfied
2. Usability of the portal.	4.85	Strongly Agree	Very Satisfied
3. Work efficiency performance.	4.82	Strongly Agree	Very Satisfied
4. Organization of work.	4.82	Strongly Agree	Very Satisfied
5. Systematization of work processes.	4.80	Strongly Agree	Very Satisfied
6. Reference of Records.	4.69	Strongly Agree	Very Satisfied
7. Level of satisfaction for user support services/assistance.	4.77	Strongly Agree	Very Satisfied
<b>Average</b>	4.80	Strongly Agree	Very Satisfied

For these problems, the respondents were asked to evaluate their level of satisfaction with the agency’s enhanced administrative efficiency through the RO Portal. The respondents were asked in 7 statements that relates to:

Accessibility, with a mean of 4.85, using the 5-Likert scale of analyzing the data through finding its mean and average, is described as strongly agree and interpreted as very satisfied. Therefore, respondents strongly agreed on how accessible the portal was. Accessibility is part of the feature of a system being usable. The more accessible is the system, the more it will serve its purpose to its users.

Usability refers to how useful is the portal to its users. This encompasses the portal’s functions, features/modules, and how efficiently it can process the work. According to the respondents, they strongly agree that the portal has increased their level of efficiency in doing their work through the usefulness of the portal. The result was interpreted as respondents were very satisfied with the usability of the portal, this was evident through a mean of 4.85.

Work efficiency performance refers to how well the performance of the respondents has improved in terms of efficiency by using the portal. It is one of the goals of administrative efficiency to improve the performance of its workforce by creating more outputs at a given time and a given resource. Through the portal, the respondents strongly agree that they have become more efficient because of the automation of some processes in the office like systematic reservation of conference hall and use of vehicles, processing the incoming and outgoing documents, creating PDS, filing, and real-time updates of leave, travel authority generation, help desk system and real-time viewing of office announcements. With the result, the mean of 4.82 was interpreted as very satisfied.

Organization of work refers to the productivity and efficiency of work at a faster pace than manual processing. This also refers to how work processes were in place when

the portal was implemented in the office. For the respondents, strongly believed that through the portal, there is an increase in productivity because of the different modules/features in the portal that were timely to prepare or organize during the manual process. This is mostly true for all the modules found in the portal. With a mean of 4.82, the respondents' rates were interpreted as very satisfied.

Systematization of work process, the most common benefit that technology can guarantee to its users is systematization. Compared to manual, data and information are easier to organize, work processes are understandable and work processes are traceable. In this aspect, respondents' ratings resulted in a mean of 4.80 as they strongly agree that the portal has increased the administrative efficiency of the office through this aspect. The mean was also interpreted as very satisfied.

In reference to records, because some work processes are automated through the portal, it is expected that data and information are stored accurately. Technology provides traceability of records which means that employees can track their previous transactions, view previous records, and store important records. This feature is common to all modules of the portal, especially on DTs, HRIS, travel authority generation, vehicle and conference hall reservation system, and ISO portal. These respondents rated this aspect as strongly and interpreted it as very satisfied with a mean of 4.69.

Level of satisfaction for user support services, it will be more effective for a newly installed system or process in the administrative work if it has after-service support. After-service support ensures that users are guided and assisted because errors are unavoidable. For the respondents, they are very satisfied with the level of support services that the ICT has been giving them. In a case where users encounter problems and find difficulty in using some of its features, the ICT unit is very active in assisting. With a mean of 4.77, the respondents' rates were interpreted as very satisfied.

Overall, with a mean average of 4.80, it can be interpreted that the respondents as users of the portal strongly agree with the level of satisfaction of RO Portal in enhancing administrative efficiency and is very satisfied with all its features.

## **DISCUSSION**

The DepEd Caraga RO Portal was created by the ICT unit of the agency in response to the changing workplace environment in adaptation to information technology. It is an initiative to improve the administrative efficiency of the agency and slowly leave the manual procedures of doing business.

The portal has several features/modules that facilitate different work procedures in the office. The DTS for tracking incoming and receiving documents in the office; HRIS for encoding and printing PDS, updating of seminars and trainings attended, and HR updating of profiles of personnel; activity calendar and travel authority generation for logging all the activities in the office with added feature of automatically generating and

printing of travel authority; vehicle and conference hall reservation system for easy scheduling and tracking of transactions; ISO portal that stores internal and external templates and forms used in the office; IPCRF encoding and monitoring that updates and stores IPCRF data; Helpdesk system that sends real-time requests to the concerned office and displays the status of the requests until completed; and lastly, the customer satisfaction survey where external as well as internal clients can make feedbacks on the office that they have visited or has provided them a service, it also display survey results to every users of the portal and the public affairs unit can generate a report.

An online survey was conducted through a Google form to determine user awareness, portal awareness, information system portal accessibility, usability, work organization, systematization, and after-service support. The survey was designed to reflect how the users view the portal as a tool for enhancing administrative efficiency in the workplace. As a result, quantitatively, the sample of the population of 65 respondents from the personnel of DepEd Caraga, generally and averagely strongly agrees to all these aspects of the portal as a tool. The respondents were very satisfied with the advantages that the portal had brought in performing their work, specifically being more efficient. All of them are aware of the portal, which has always been used, and its features/modules, and the most frequently used feature was the DTS. Qualitatively, the common difficulty encountered by the respondents to the portal was the removal of the “All Documents” tab in the DTS and suggested bringing it back to the portal for traceability and tracking of documents processed. Some respondents commend the effort of the ICT unit for this excellent initiative and innovation.

## **CONCLUSIONS AND RECOMMENDATIONS**

The DepEd Caraga Regional Office Information Systems Portal is a testament to the power of innovation to transform administrative processes. Its modules, such as Single Sign-On and Document Tracking, make it easier for employees to access the information and resources they need to do their jobs. This has led to a significant improvement in efficiency and productivity and has helped the regional office to better serve its clients and stakeholders. The portal has been receiving good comments from users and personnel. From the results of the survey and the personal feedback received by the ICT unit, truly the portal has brought a big change in doing office work, especially the automation of some processes which resulted in increased efficiency in doing their job, organization, and systematization of work, and portal as a reference of records due to its ability to store different information encoded by the users to the different features/modules.

Finally, it can be concluded that adaptation to information technology can help in increasing and enhancing administrative efficiency in the workplace.

After careful review and survey conducted of the RO Portal, the presenter recommends:

1. The ICT unit to consider adding back the “All Documents” button of the DTS and conduct random interviews with the users to understand their concerns and help the ICT unit in addressing this matter.

2. The ICT unit to enhance the system by adding more features/modules that will lessen the manual processes in the system and include resolving the internet connection problems for a more convenient and accessible portal to users.

3. To encourage more of the users of the portal to utilize its other important features.

4. The ICT unit to research and explore more about incorporating information technology into administrative and operational processes in the office to increase efficiency, and to become updated on trends in the profession in developing web-based systems, work process automation, integration of systems, and discovering unique features of the system that will address data and system security, maintenance and back-up, and some others.

5. To DepEd's top management to give its full support in this initiative and to future technology innovations at the office that will help in obtaining its goals and objectives efficiently and effectively.

6. To other DepEd offices, government agencies, and private companies, to consider this innovation at their office. They may benchmark at the DepEd Caraga Regional office for DepEd's and the other agency's growth in developing the system portal.

7. To other IT professionals to recommend and suggest improvement of the portal, and other techniques in systems development and to provide additional and helpful inputs.

## **IMPLICATIONS**

As the world sees the importance of technology in conducting business, many companies and organizations have transformed their manual work process into computerized systems.

The research shows that the presence of information systems in the organization increases the work efficiency and effectiveness of the workforce providing them with ease of doing business through organization of work and systematized processes. Further, it can also be inferred that information systems are effective in storing data and information for future reference and archiving purposes. According to Dave and David Bourgeois (2014) in their publication about Information Systems for Business and Beyond,



the role of an information system is to transform data and information into organizational knowledge that will increase the organization's productivity and attain its targets.

Research also shows that, for information systems to become effective, it should be known to the organization and its personnel, it should be accessible and easy to use. Accessibility of the information system makes it more usable and appreciated by the users effectively.

Therefore, the application of information systems is the new trend in every workforce be it private companies or government organizations. It makes work easier, provides a reference of records, systematizes work processes, and increases administrative efficiency, as the study shows.

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## **DECLARATIONS**

### ***Conflict of Interest***

The author has no conflict of interest to declare.

### ***Informed Consent***

To ensure that respondents are protected and guided in participating in the study, the researcher made sure that they were informed of the confidentiality of their responses and their personal information, that their participation are voluntary, and that the questions being asked apply to them and are done competently.

## **Ethics Approval**

Ethics approval is not applied to this research due to the unavailability of a research ethics board or committee. However, the researcher made sure that the study conducted, and the respondents involved were not in conflict in terms of beliefs, culture, race, morals, and values.

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## **Author's Biography**

Nerison S. Pitogo has been the Computer Programmer of the Department of Education Caraga Region for 7 years from 2016 until now. He graduated with a bachelor's degree in information technology at Caraga State University and had his master's degree in Information Systems (MIS) at the University of the Philippines Open University (UPOU). In his years serving the government, he developed multiple information systems such as the DepEd Information Systems Portal, which was initially developed into different systems and now merged into a single information system, the DepEd Computerization Program Monitoring Information System (DCP-MIS), Asset Inventory System, Training Certificate Management System, and have programmed specific-activity-related systems like tabulation system and attendance checker. The author has recently acquired knowledge and skills in Single Page Applications (SPAs), with a focus on React-based technology, as well as proficiency in the TALL stack framework.