Development and Evaluation of a Student Cashiering and Account Management System (SCAMS) for the Abra State Institute of Sciences and Technology

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Abstract

Higher education institutions with manual enrolment systems face the same dilemma of bottleneck usually at the assessment and payment stages during enrolment periods. The study aimed to develop and evaluate the Student Cashiering and Account Management System (SCAMS) for the Abra State Institute of Sciences and Technology in Lagangilang, Abra, Philippines. The development phase of this study included the design of the SCAMS, used the Incremental Model, together with Unified Modeling Language or UML. Specifically, the Use Case Diagram (UCD) was used to model the interaction between the system and its users. On the other hand, the evaluation phase utilized two methods: technical evaluation with system testing and humanistic evaluation with acceptability of the system. A total enumeration of eight Cashiering and Accounting staff and five IT experts served as respondents of the study. The respondents highly accepted the accuracy, efficiency, reliability, and security features of the SCAMS. Across all features, the SCAMS was consistently rated as "highly acceptable." This information confirmed the need to automate the process used to perform transactions in the Cashiering and Accounting Offices as well as keeping the students’ account information. It is recommended that the developed system will be implemented to improve the quality of the existing student cashiering and account management system of the College and eventually, managing its students’ personal information.

Keywords

Student Cashiering and Account Management, Incremental Model, System Testing, Acceptability, Philippines.

I. Introduction

Computerization is a control system that manages processes in industrial workplace. It reduces human errors and processing time, thus it can boost productivity and results into high quality of products produced. In Information Systems, computerization is concerned about interrelating different but interdependent transactions. This can result in a system with well-integrated processes that can perform much faster and more accurate than a manual system.

Transaction Processing System (TPS) is one type of an information system that collects, modifies, stores, and retrieves information on the transactions of an organization. A transaction is an event that generates or modifies data that is eventually stored in an information system. TPS can reduce workload and supply accurate information needed. A popular example of a TPS that is common in educational institutions is an enrolment system.

Enrolment serves as a vital part in the life of every student upon entering schools or universities, either public or private. It gives students the impression on how the whole institute manages and manipulates the entire body. Moreover, enrolment serves as the first experience of all students by which he or she takes part either individually or with the company of a parent or some relatives. Good enrolment procedure is always an asset in a university, pertaining to fast payment, assessment procedures, and easy transactions with a high rate of accuracy. Therefore, good enrolment within the university, if present, can be described as civilized, organized, accurate, and professional.

According to Husari (2013), today, admission and registration processes in most universities and higher educational institutions continue to be manually processed using a variety of forms and applications and paperwork. Only a small number of institutions have opted to use technology to partially automate admission and registration functions. Unfortunately, when Information and Communications Technology (ICT) has provided many applications to support business applications and automate business processes, education had only small share of the technology application and have missed out on its benefits. The potential gains that higher education can realize from automated admission registration system justify the need to design and implement a Computerized Automated Student Admission and Registration System. The need for such automated registration and admission system in today’s universities will speed up the admission and registration process, attract national and international students, save lots of time and efforts that are usually needed from both universities and students, give the higher educational institutions opportunity to grow rapidly locally and globally, and compete effectively in the education industry.

Sentina and Luna (2009) reinforce that an automated enrolment system is a system in which the computer plays a major role and this kind of system is needed by every company and institution nowadays. This is the best way of storing and retrieving data on a server or hard disk rather than using papers and file cabinets. This will help the institute generate quick and efficient data that they need.

Austin and Vaughan (1997) described the requirements, development and implementation of the Edith Cowan University in Churchlands, WA, USA, Web Enrolment System (ECUWES), a Web database application. This project began late in 1996 and has already generated great interest from both students and staff. Historically, re-enrolling students completed their unit enrolment forms, journeyed to the university, stood in line, and waited to be served by Student Administration staff. These processes were time consuming for both staff and students. Online enrolment has allowed ECU to re-engineer its business processes. Having the students enter their own data has reduced the bottleneck of data processing, and as a result the staff workload peaks have been flattened out. As the online enrolment can be faster, these students will have received better service.

In the Philippines, Colegio de San Juan de Letran has upgraded its new enrollment system. The updated system is now developed...
into a one-stop enrollment process. The system easily operates on to as students may opt to get their list of pre-enrolled subjects by just tapping their student identification cards to the assessment counter. The student will get his or her list and can already proceed straight to the cashier for their payment.

Being at the forefront of the digital race prompted the University of the East to launch, in summer of 2008, its new Web-based enrollment system, allowing students, upperclassmen specifically, to enroll anytime anywhere, regardless of their location, thanks to the Internet. Because of its accessibility and convenience, the new Web-based enrollment system will surely bolster the marketing efforts of the University to attract students, locally or internationally.

The Information and Communications Technology Center (ICTC) of the Mindanao State University-Iligan Institute of Technology (MSU-IIT) has developed an innovative computer-based solution for tertiary schools that integrates key activities from admission, course scheduling, registration/enrollment, assessment, billing, cashiering, and student records management. This system, called e.SMS (electronic-School Management System), has been used in MSU-IIT since 2001. Some of the features of the e.SMS, an integrated student records management system include a Cashiering Module that enables the cashier to accept payment of the student based on the assessed fees. Official receipt for payment received is also printed and the Financial Reports Module that prepares all cashiering-related reports and student billings, income details per cost/profit center, and summarized financial data, e.g., year-to-date income reports.

PSU-Lingayen campus rolled out during the first semester of SY 2013-2014 the automated enrolment system for the incoming first year students. Now, the new students need not suffer long queue under the scorching heat of the sun nor lengthen their patience over those who cut through the line nor wait for days before finally getting enrolled because the automated system named X-System2007 ensures that a student gets enrolled within a day. In the previous manual system, the bottleneck is usually at the assessment stage wherein all the subjects an enrollee wishes to take and the applicable fees are written one by one on the pre-enrollment form. After which, the enrollee proceeds to join the queue leading to the Cashier for payment. The Cashier then writes down all the items to be paid one by one again on the Official Receipt before accepting payment.

The Benguet State University in its endeavor to improve its operation in line with the government’s cost cutting aims to address the challenges in using information technology. One major concern of the university is its enrolment system besides several priority information systems. This project discussed the solution in developing the enrollees by having an alternative online enrolment that can be used by the students. The Online enrolment system was integrated heavily in the existing enrolment system. The online enrolment system enhances the university’s capability to serve its major clientele and improved efficiency in the enrolment process (Abenoja, n.d.).

Cashiering or billing and account management are integral sub-systems of an enrolment system. The new well-enhanced automated enrolment and cashiering system of Liberty Christian School in Poblacion, Villanueva, Misamis Oriental has begun during the second semester of A.Y. 2007-2008. It has improved the unsatisfactory performance of the old system. Students can promptly ask for an assessment of their accounts. Student accounting data are sufficient with minimal accounting errors and it enhances cashiering productivity (Abe-Abe, et al., 2012). The electronic School Management System (e.SMS) developed by the ICT Center of MSU-IIT includes a Cashiering Module which enables the cashier to accept payment of the student based on the assessed fees. Official receipt for payment received will also be printed and the financial reports which prepares all cashiering-related reports and student billings.

Student’s Statement of Account and Balance envisioned the extended services offered by the office of the registrar, accounting, and cashier to address the student’s need in viewing statement of account, balance, and student’s assessment online.

To date, the Abra State Institute of Sciences and Technology faces the same dilemma as what other higher education institutions experience during enrolment periods, thrice, two semesters and one summer, at most. Being a part of the organization who have witnessed the perennial problems during enrolment in the College, the researchers were challenged to develop the SCAMS for the ASIST to impart and extend their knowledge, technical skills, and expertise in information technology towards a better alternative to the existing student cashiering and account management of the more complex enrolment system.

The study aimed to develop and evaluate the SCAMS for the Abra State Institute of Sciences and Technology. Specifically, it achieved the following objectives:

1. Determined the features of the SCAMS in terms of the following software criteria used in system testing:
   - Accuracy,
   - Efficiency,
   - Reliability, and
   - Security.

2. Determined the perception of the respondents on the SCAMS with respect to the software criteria used in system testing.

3. Determined if there is a significant difference in the perception of the IT experts and the Cashiering and Accounting staff on the SCAMS with respect to the software criteria used in system testing.

**Conceptual Framework**

The paradigm in figure 1 shows the interaction of the Input-Process-Output (IPO) variables that were used in the development and determination of the perceived features of the Student Cashiering and Account Management System. The mentioned input was processed by way of validating in terms of acceptability to produce an accurate, efficient, reliable, and secure student cashiering and account management system.
II. Methodology

The study used a two-phase process method, the development of a system (first phase) and its consequent evaluation (second phase).

A. Development Phase

Developmental Model

Canonigo, et al. (2013) used the broad and generic SDLC process model as a guide to their development of the Computer-Based Enrollment of Advance Tutorial Center (ATC). Whereas, Castillo and Mujer (2011) employed the Iterative Model in designing and developing a proposed network-based college enrolment system for Paete Science and Business College in Laguna, Philippines. The analysis and design of the project Benguet State University Online Enrolment System, on the other hand, used a combination of functional prototyping and major phases of the system development methodology mentioned were followed with some alterations to fit the university needs (Abenoja, n.d.).

This study, however, chose to employ the Incremental Model because the researchers considered it too risky to develop the whole system at once since there are two modules to be developed, the Student Cashiering and Account Management modules. The Incremental Model is a method of software development where the model is analyzed, designed, tested, and implemented incrementally. The analysis phase is all about making a research and thinking of how to solve a problem; it is very significant to study the current system before you can start working on major changes. The design usually focuses on what programs are needed and a detailed plan of software components. Then lastly coding and testing are when the project is completed and the software is installed at the customer site.

The advantages of the Incremental Model are: a) it handles large projects, b) it has the functionality of the Waterfall and the prototyping model, c) it is easier to manage the project as it is broken down into smaller pieces, d) changes can be done through the development stages, and e) errors are easy to be identified.

The different phases of the Incremental Model are illustrated in Figure 1.

![Fig. 1: Research Paradigm](image)

Fig. 1: Research Paradigm

![Fig. 2: The Incremental Model of the SCAMS](image)

Fig. 2: The Incremental Model of the SCAMS

The development process is discussed below:

**Analysis**

In the analysis stage, before the researchers thought of solving the problem, they studied the current system before they started working on major changes. When software is developed, the developers need to understand the problem for which the software is to solve. The development team met the Cashiering and Accounting staff to study the existing system. For the program to be successful, the researchers as analyst understood the features, functions, behavior, and performance of the system. The main task of the analysis stage is to identify the expected needs from the system. Analysis in the incremental model focuses on finding...
out the influences that make the organization to develop a new system or modify the existing system.

This involved gathering of information about the needs of the Cashiering and Accounting staff in student cashiering and account management and defining, in the clearest possible terms, the problem that the system is expected to solve. It also included the flow of the cashiering and account management and the manual keeping of students’ personal and account information with context and constraints, the functions that the system must perform, and the performance levels it must adhere to. Techniques used to obtain this understanding included interviews, use cases, and identifying the system features. The results of the analysis were typically captured in a formal requirements’ specification, which served as input to the next step.

Design
The design phase actually describes how the solution will work. Once the structure of the software is confirmed by the management, the architecture of the program is now created. Incremental design has a new process of processing design in a structured way that will allow the user to reuse the other part of the design which is unchanged. This can save time for the designer or the processing of each iterative. Since the increment model is divided into functional units, the result that is done got from the first design of the first functional unit is used as the input of the next design of the second functional unit. Incremental Design flows for new and existing designs. Before running any Incremental Design flow, the design should meet the requirements without using Incremental Design. For Incremental Design to significantly reduce runtime and maintain performance for unchanged portions of the design, Incremental provides few benefits to the design.

The class diagram was used to find out the probable functions, features, and relationship of these functions and features of the study. This was also used for user interface design, including issues relating to navigation and accessibility in which design was based on the requirements and set-up of the college.

Code
The system was implemented using HTML and CSS as the scripting language, PHP as the server-side scripting language and in generating the student’s personal information and the statement of accounts. Databases were created using MySQL and sample data were entered to facilitate testing and debugging process. Thereafter, the programming process was initiated with the writing of codes based on the requirements. The standard programming practices of data validation and error trapping were coded into the system. As a final step, publishing of the documents was done to create pages viewable on a Web browser. To make the development of the Computer-Based Enrollment of Advance Tutorial Center (ATC) possible, Canonigo, et al. (2013) used the C# .Net Version 2005 programming language. The database management system used for the centralized data storage was Microsoft SQL Server 2000. Meanwhile, Caipang (2013) used Visual Basic, an object-oriented programming visualization tool, to develop a computerized enrolment system for PurificacionDolarMonfort College, a rural-based higher education institution in Iloilo City, Philippines. In the Aklan State University (ASU) Web Monitoring of Student’s Statement of Account and Balance, a web content management system, MySQL and Microsoft Access technology served as the portal of all the information needed by the users (Rosales, 2012).

Test
Testing is one of the important stages of the software development lifecycle. The main task is to detect errors in the software. A quality produced work needs to be tested regularly. Testing is an activity that needs to be done throughout the life cycle. It is also used as a major source of feedback. Testing should not be done at the end of the software as it can be dangerous. Rather it has to be done timely throughout the stage. Programs in the incremental model are coded in various functional units, these subjects to separate and detailed test. After the first functional unit gets completed, it is taken to the customer to have a review on it. Feedback provided by the customer concerning the unit is used to improve or modified to the next unit (output of the first unit is used as the input of the next functional unit). This process is going to take place until customers are satisfied. The reasons why this system was tested is to check if the interfaces between functional units work together (integration testing), check if the system works on the specified platform and with the required volume of data (volume testing), and checks if the system meets the users requirements (acceptance or beta testing). An evaluation was done if the system fully satisfies the requirements outlined and to ensure that they are error-free. Prior to the pilot test of the study, the system was presented for trial run and demonstration to the campus where the audience consisted of the Cashiering and Accounting staff and the IT experts. This included system testing of the integrated system to verify if the system meets the specified requirements in which suggestions (e.g., user’s manual) were integrated into the system. The SCAMS was pilot tested to the ASIST-Department of Information and Communications Technology (DICT) and the IT experts including the Cashiering and Accounting staff in which the researchers floated the questionnaire after the live or actual demonstration and use of the SCAMS. The system was tested and certified as fit for use by the respondents. This was reflected in the results of the study that evaluated the output of the system as to its congruence to its intended use as well as to its acceptability by its intended or potential users. The system was then prepared for installation and readily available for use in student cashiering and account management and in keeping student’s personal information. The user’s manual was written for documentation as user’s reference that includes explanation of the system on how to install and how to use the system. Once testing was finished and the software was proven good for implementation, it shall be released to the Cashiering and Accounting Offices.

B. Evaluation Phase

System Testing
To evaluate the system developed, the technical evaluation using the software criteria used for system testing (IEEE, 2004) was utilized. This evaluation focused on the accuracy, efficiency, security, and reliability features of the SCAMS. The terms were based on the standard glossary of terms used in software testing produced by the ‘Glossary Working Party,’ an International Software Testing Qualifications Board (ISO 9126). This also involved humanistic evaluation focused on the acceptability of the system with a survey of the perceptions by its intended users and was statistically analyzed using the weighted mean to describe the effectiveness of the SCAMS and the t-test to compare the perception of the IT experts and the Cashiering and Accounting staff on the said system at 0.05 level of significance. The same
Software criteria were used by Guiyab (2010) to evaluate the features of the Computer-Aided Testing and Information (CATI) for the Guidance Office at the Isabela State University and in terms of accuracy, efficiency, reliability, and security, to determine the perception of the respondents in the CATI system with respect to the software criteria used in system testing, and consequently, to determine the significant difference in the perception of the IT experts and students on the CATI system with respect to the software criteria used in system testing. In the study of Caipang (2013), she found the acceptability of the computerized enrolment system for a rural-based higher education institution (PurificacionDolarMonfort College, Iloilo, Philippines) in terms of construction design and functionality. The survey questionnaire adopted from the study of Guiyab (2010) which she formulated based from the IEEE software criteria used in system testing was customized and employed in which the parameters to measure such criteria are requirements-driven based from the requirements needed in the student cashiering and account management system of the college. The scale has five (5)-point ratings which have a corresponding descriptive equivalent as presented below.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Descriptive Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>4</td>
<td>Agree</td>
</tr>
<tr>
<td>3</td>
<td>Undecided</td>
</tr>
<tr>
<td>2</td>
<td>Disagree</td>
</tr>
<tr>
<td>1</td>
<td>Strongly Disagree</td>
</tr>
</tbody>
</table>

The weighted mean rating was used to get the respondents’ general rating on the SCAMS. To describe the perceived features of the SCAMS in terms of accuracy, efficiency, reliability, and security, the following arbitrary intervals and descriptions were used.

<table>
<thead>
<tr>
<th>Point Range</th>
<th>Descriptive Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.21 – 5.00</td>
<td>Highly Acceptable</td>
</tr>
<tr>
<td>3.41 – 4.20</td>
<td>Acceptable</td>
</tr>
<tr>
<td>2.61 – 3.40</td>
<td>Fair</td>
</tr>
<tr>
<td>1.81 – 2.60</td>
<td>Unacceptable</td>
</tr>
<tr>
<td>1.00 – 1.80</td>
<td>Highly Unacceptable</td>
</tr>
</tbody>
</table>

### Respondents

There were two groups of respondents in the study. The first group consists of the Cashiering and Accounting staff and the second group is IT experts of ASIST. The total enumeration method was used to determine both the staff-respondents and the second group of respondents. Eight Cashiering and Accounting staff and five IT experts served as respondents of the study.

### Data Gathering Procedure

Prior to the pilot test of the study, the system was presented for trial run and demonstration to the campus where the audience consisted of the Cashiering and Accounting staff and the IT experts. This included system testing of the integrated system to verify if the system meets the specified requirements. An evaluation was conducted if the system satisfies the requirements outlined and to ensure that they are error-free. The SCAMS was pilot tested to the ASIST-DICT and the IT experts including the Cashiering and Accounting staff. The researchers established close coordination with the heads of the Cashiering and Accounting Offices. The researchers floated the questionnaire after the live or actual demonstration on how to install and use the SCAMS. The researchers personally collected the questionnaire to ensure a one hundred percent (100%) retrieval.

### Data Analysis

All the data gathered were collected, organized, tabulated, and analyzed using the weighted mean. For in depth analysis of data, the t-test was also employed to determine if there is a significant difference between the perception of the IT experts and the Cashiering and Accounting staff.

### III. Results and Discussion

This part presents the evaluation of the Cashiering and Account Management System by getting the perception of the Cashiering and Accounting staff and the IT experts. Their perceptions were elicited after the live or actual demonstration and use of the SCAMS.

#### Perceived Features of the Student Cashiering and Account Management System

The perceived features of the SCAMS with regard to accuracy, efficiency, reliability, and security as perceived by the IT experts and the Cashiering and Accounting staff are summarized in Table 1.

<table>
<thead>
<tr>
<th>Features</th>
<th>Cashiering &amp; Accounting Staff</th>
<th>IT Experts</th>
<th>Weighted Mean</th>
<th>Descriptive Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>4.82</td>
<td>4.88</td>
<td>4.85</td>
<td>Highly Acceptable</td>
</tr>
<tr>
<td>Efficiency</td>
<td>4.96</td>
<td>5.00</td>
<td>4.98</td>
<td>Highly Acceptable</td>
</tr>
<tr>
<td>Reliability</td>
<td>4.92</td>
<td>4.93</td>
<td>4.93</td>
<td>Highly Acceptable</td>
</tr>
<tr>
<td>Security</td>
<td>4.95</td>
<td>5.00</td>
<td>4.98</td>
<td>Highly Acceptable</td>
</tr>
<tr>
<td>OVERALL WEIGHTED MEAN</td>
<td>4.91</td>
<td>4.98</td>
<td>4.95</td>
<td>Highly Acceptable</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>Highly Acceptable</td>
<td>Highly Acceptable</td>
<td>Highly Acceptable</td>
<td></td>
</tr>
</tbody>
</table>
Table 2: Summary of Statistical Values for the Comparison of the Perceived Features of the SCAMS

<table>
<thead>
<tr>
<th>Features</th>
<th>Weighted Mean Perception</th>
<th>Probability Associated with t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cashiering &amp; Accounting Staff</td>
<td>IT Experts</td>
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<td>4.93</td>
</tr>
<tr>
<td>Security</td>
<td>4.95</td>
<td>5.00</td>
</tr>
</tbody>
</table>

As shown in Table 1, the Cashiering and Accounting staff assessed the accuracy of the SCAMS at 4.82 and the IT experts at 4.88, which are both described as “highly acceptable.” This implies that the SCAMS was accurate to provide the right or agreed results or effects with the needed degree of precision. As to the efficiency features of the SCAMS, the Cashiering and Accounting staff assessed the system at 4.96 and the IT experts at 5.00 which are both described as “highly acceptable.” This means that the SCAMS is efficient to provide appropriate performance relative to the amount of resources used under stated conditions. On the other hand, the Cashiering and Accounting staff assessed the reliability of the SCAMS at 4.92 and the IT experts at 4.93 which are both described as “highly acceptable.” This implies that the SCAMS was reliable to perform its required functions under stated conditions for a specified period of time, or for a specified number of operations. Lastly, the Cashiering and Accounting staff assessed the security features of the SCAMS at 4.92 and the IT experts at 5.00 which are both described as “highly acceptable.” This implies that the SCAMS was secure on its ability to prevent unauthorized access, whether accidental or deliberate, to programs and data. In general, the Cashiering and Accounting staff evaluated the SCAMS across all features at 4.91 and the IT experts at 4.98. The combined perception of the two groups of respondents showed that the features of the SCAMS with regard to accuracy, efficiency, reliability, and security are “highly acceptable.”

Castillo and Mujer (2011) found that the proposed network-based college enrolment system for Paete Science and Business College in Laguna, Philippines was acceptable to the users based on the criteria presented in the evaluation of the system in terms of its content, usability, and functionality. The result of the study of Caipang (2013) also revealed that the computerized enrolment system is “Very Acceptable” as evaluated by the selected faculty members and staff of the school. The data in Table 2 shows that there is a significant difference between the perception of the IT experts and the Cashiering and Accounting staff on the accuracy features of the SCAMS as indicated by the probability associated with the computed t-value which is 0.0797. The data in Table 2 further shows that there is no significant difference between the perception of the two groups of respondents on the efficiency features of the SCAMS as indicated by the probability associated with the t-value which is 0.1723. With regard to the reliability features of the SCAMS, Table 2 divulges that there is no significant difference between the perception of the two groups of respondents as indicated by the probability associated with the t-value which is 0.8102. Finally, there is no significant difference between the perception of two groups of respondents on the security features of the SCAMS as indicated by the probability associated with the t-value which is 0.1778. This means that except for the accuracy features of the SCAMS, which yielded a better perception among IT experts than the Cashiering and Accounting staff, they equally perceived the system to be highly acceptable with respect to the efficiency, reliability, and security features of the system.

In general, across all features, the SCAMS was consistently adjudged by the respondents as “highly acceptable.” Moreover, even among IT experts, the SCAMS was perceived as highly acceptable. It is noteworthy that while the Cashiering and Accounting staff and the IT experts viewed the system as reliable and secure, experts, who have better skills and qualifications as evaluators, viewed the system much higher than the Cashiering and Accounting staff. While this is so, the difference may be that experts are able to evaluate better the features of the SCAMS than lay staff. This should be positive information as even to the level of experts, the system is perceived as highly acceptable.

IV. Conclusions

In the light of the findings of this study the following conclusions have been drawn.

1. The respondents “highly accepted” the accuracy, efficiency, reliability, and security features of the system. This information confirmed the need to automate the process used to perform transactions in the Cashiering and Accounting Offices as well as keeping the students’ personal information.

2. The implementation of the developed system is more beneficial than maintaining the present system. The developed system possesses the identity of generating information at a favorable speed with accuracy and reliability. It is also secured against unauthorized access hence the Cashiering and Accounting staff will not only be benefited but also the school administrators and the whole student body.

3. Adopting the developed system is designed to cater even to the non-computer literate. The Cashiering and Accounting staff were able to cope with the use of the SCAMS after the live or actual demonstration.

4. The high acceptability of the developed system will motivate the school administrators, the Cashiering and Accounting staff, and other concerned officials to undertake an action to improve the quality of the student cashiering and account management of the college and eventually, managing its student account information.

V. Recommendations

With the conclusions made, the following are the recommendations of the study.

1. That the developed system will be implemented to minimize the time consumed in the manual manipulation of the voluminous information in the student cashiering and account management and eliminates other problems that have been perennially observed which make the existing system left behind in the computer world.

2. That proper information dissemination be conducted to the school administrators, the Cashiering and Accounting staff and other concerned officials.

3. That the Cashiering and Accounting staff should be oriented
with a live or actual demonstration prior to operating the system.

4. That the SCAMS be submitted to the Vice-President for Administration and Finance for an action to improve the quality of the present student cashiering and account management system of the college and eventually, managing its students’ account information.

5. That the users of the system be trained on how to install and use the system.

6. That the IT experts should be tapped to assist the Cashiering and Accounting staff in the initial implementation of the student cashiering and account management system.

7. That the Cashiering and Accounting Offices should be equipped with electronic facilities for the implementation of the SCAMS.

8. That the Cashiering and Accounting staff occasionally update the fees whenever necessary.

9. That the SCAMS will serve as a vehicle for extension project of the department of ICT if ever ASIST Bangued Campus wishes to adopt the said system.

10. That further studies should be conducted to improve or upgrade the SCAMS if ever there are changes in the student cashiering and account management of the college.

VI. Acknowledgement

The researchers wish to express their genuine appreciation to all those who are, in one way or another, instrumental to the successful completion of this work.

Dr. Aurelio V. Laban, President II of the Abra State Institute of Sciences and Technology, for his consistent support to the endeavors of the ASIST faculty researchers.

Mr. Gregorio T. Turqueza Jr., Vice-President for Administration and Finance, and Dr. Noel B. Begналen, Vice-President for Academic Affairs, respectively, for their unconditional provision for research funding and their encouragement.

Prof. Vicente A. Ato, Director for Research and Development, for his unselfish dedication to research undertakings.

Dr. Mary Joan T. Guzman, Dean of the College of Arts and Sciences, for her constant sisterly and motherly counsel.

Ms. Janelyn A. Ambre, ICTSO Adviser, and Prof. Excel Philip B. Guidang, whom they shared laughter and productive thoughts.

References


Authors’ Profile

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