Impact of Electronic Class Records on Faculty Productivity at the School of Engineering and Information Communication Technology

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Abstracts: This study aimed to determine whether the School of Engineering and Information Communication Technology (SEICT) faculty at Universidad de Zamboanga is more effective when using the Electronic Grading System. Additionally, this was done to ascertain the drawbacks and benefits of using the Electronic Grading System (EGS) for students. This study used a survey questionnaire with self-assessment questions about efficiency (time, accuracy, and effort), user difficulties, and benefits of the tool. Sixteen professors took part in the investigation. The results of using frequency and % were as follows: Efficiency in terms of time, accuracy, and effort was demonstrated. Regarding time management, around 75.00% of people gave themselves extremely efficient ratings, 12.50% gave themselves efficient ratings, and 12.50% gave themselves ordinary ratings. Regarding accuracy, 18.75% of respondents gave themselves highly accurate ratings (no errors), 75% gave themselves accurate ratings (few errors), and 6.25% gave themselves an average grade (few more errors). 25% judged their effort levels as very efficient (no effort/at ease). The typical person reported being efficient (requiring less effort) at 6.25%. (with effort). Users using the Electronic Class Record (ECR) identified two issues: power outages (31.25%) and difficulty retrieving unsaved data (6.25%). The following are some benefits of using the electronic class record: accuracy (75%), less effort (100%), education (56.25%), increased systematicity (56.25%), and increased efficiency (81.25%) are all positives. The faculty's adoption of the Electronic Grading System is encouraged for efficiency. The faculty must be educated on the program's features to address users' issues when using the electronic grading system. A seminar workshop could be planned for in-depth talks on using the electronic grading system. Researchers are encouraged to do a comparative study utilizing additional factors that affect how effectively people operate the computerized grading system.

Keywords: Electronic Grading System, Electronic Class Record, ICT.

1. INTRODUCTION

Technology has experienced great success in the twenty-first century. The world has become more automated thanks to the technological system, which has implications for efficiency and accuracy. A fast finger snap can complete a financial system or transaction thanks to the invention of the automated teller machine (ATM). Credit cards were developed to facilitate online buying and other distant activities. The electronic device for recording daily time in offices has taken the role of the Bundy clock.

These days, libraries are very computerized. Utilizing the Online Public Access Catalogue (OPAC), items can be easily identified for usage by students. People can now easily access information in one sitting from any location in the world thanks to the Internet and other electronic communication tools like Pro-quests.

The Universidad de Zamboanga (UZ) has recently undergone a high-tech academic transformation. The faculty employs an ATM card to disburse cash, an electronic Bundy clock to keep track of daily time, and a computer system to encode grades. These are unmistakable indicators of success in the electronics technology sector.

Electronics, it has been noted, are the solution to the inefficiency caused by manual operation owing to manual computation. One of the main reasons why instructors' tasks are delayed is the inefficiency of manual grade computations. As a result, the faculty's delay in submitting the grade sheet eventually impacts the teacher's productivity. An instructor needs days to complete the grading. Utilizing an electronic class record will speed up tasks that will take a few days or hours to complete.

Although the University of Zamboanga encodes grades after each semester, this electronic grading system will require teachers to encode grades every term (pre-mid, mid-term, pre-final, and final).

The electronic grading system for the School of Engineering and Information Communication Technology (SEICT) alone, which will function as the college's electronic class record, is what this study is trying to implement. When the staff and students need this crucial information, the system will allow the college to examine and print paper copies of grades from the system.

This is why a study on the impact of electronic class records on faculty productivity is being done at the School of Engineering and Information Communication Technology (SEICT).

1.1. Objectives of the study

This study aimed to determine whether the School of Engineering and Information Communication Technology (SEICT) faculty at Universidad de Zamboanga is more effective when using the Electronic Grading System (EGS). Also, to develop and evaluate an electronic class record (ECR).

1.2. Significance of the study

The teachers, administrators, students, and other colleges of the SEICT of the Universidad de Zamboanga and other schools find this study very important. This will let teachers calculate grades more quickly for the pupils with easy access.

It will be simple for the dean and administrators to compile the grades whenever required. Additionally, this will make issues with time restrictions easier. The electronic grading system might increase the SEICT faculty's effectiveness in ensuring that paper obligations are completed on time.

The students can receive their grades immediately and as soon as possible. Students now have simple access to their academic performance in the courses they are registered for due to the installation of electronic grading systems. Other institutions can use this approach at Universidad de Zamboanga to ensure that grades are encoded efficiently while also improving the professors' ability to use the computer as a tool for recording and computing.

2. METHODOLOGY

This study is descriptive because its primary goal is to determine whether or not using an electronic class record would increase productivity. When the main goal is to determine the status or condition of a group of variables being researched, descriptive research is used.

In total, sixteen (16) faculty members from the School of Engineering and Information Communication Technology (SEICT) who teach professional topics and employ computers to calculate grades were consulted for this article. These academics are encoding grades following the standards. The entire enumeration was the sampling strategy employed in this investigation. Sixteen SEICT's teaching staff members were part of this.

The system that the researcher created served as the study's instrument. To collect further information, a questionnaire was created. Datasheet, including age, completed degrees, and disciplines under consideration, made up Part I. The items in Part II focus on the difficulties respondents had using the system, and the assessment in Part III evaluated how effectively teachers used the system. The advantages of using the Electronic Class Record (ECR) were covered in Part IV.

2.1. Development of the System

Electronic Class Record (ECR) is a workbook designed specifically for the School of Engineering and Information Communication Technology of Universidad de Zamboanga using Microsoft Excel 2000 and above. It is meant to take the place of the record notebook, calculator, and pen as the teacher's instruments for keeping track of the class's work and calculating grades. Computers with Microsoft Office 2000 installed will be able to execute ECR. However, a Pentium machine running Windows 98 at 1.2 GHz with 256MB of memory and Microsoft Office 2000 is advised for the best performance. Microsoft Office 97 cannot execute ECR.

Installation

It is easy to install. The user copied the Electronic Class Record folder onto the computer's hard drive from the one floppy disk. PureLec, PureLab, and LecLab were the three files in the folder. Each file has six sheets, including a cover page, a pre-midterm, a midterm, a pre-final term, and a final grade.

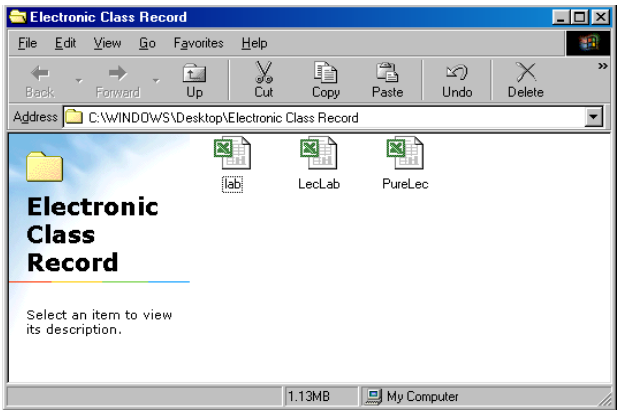

Figure 1. Shows the Electronic Class Record folder is open from the computer's hard disk.

Start the Program

The user will access the computer's hard drive and enter the Electronic Class Record folder, as depicted in Figure 1. The following files are available for selection:

1. PureLec - Select this option if the course is entirely lectures.

2. PureLab - Select this option if the course is solely laboratory-based.

3. LecLab - Select this option if the course combines lecture and laboratory

To prevent the original file from being altered after opening, one must immediately Save As in the file with a different filename.

Data Entry for Subject(s) and Students

The following information must be entered on the sheet PM after the program has been run:

a. Subject

b. Number of units

c. Name of instructor

d. Subject Code

e. Days, Time, and Room

f. Semester and School Year

g. Student name

h. Student number

i. Course and Year

The entered data will be automatically copied to sheets MT, PF, F, and Final Grade.

Component Scores Entry

The component scores vary depending on the type of subject. The procedures for entering student component scores are listed below.

A. For purely lecture-based subjects (those without laboratory component(s))

1. Indicate how many questions are on the major exam, the quizzes, the requirements, and the class participation.

2. Add up each student's raw score for the major exam, the quizzes, the requirements, and the class participation.

3. Only input grades between 50 and 100 for the student's value grade. Note: Grades without items with numbers are valued.

B. For a subject that is purely laboratory-based (without any lecture units)

1. Indicate how many things are required for class participation.

2. Add the students' unadjusted Class Participation score.

3. Only input grades between 50 and 100 for the students' Values and Laboratory Works grades.

(Note: Grade for Values and Laboratory Works without Items.)

C. For subjects that have a lecture unit or units plus a laboratory unit (s)

1. Indicate how many questions are on the major exam, the quizzes, the requirements, and the class participation.

2. Add up each student's raw score for the major exam, the quizzes, the requirements, and the class participation.

3. Only input grades between 50 and 100 for the students' Values and Laboratory Works grades.

(Note: Grade for Values and Laboratory Works without Items.)

Calculating the final grade and term grade

Once the component scores are input and updated, the student's term grade and the final grade will be automatically computed and updated. That is all there is to it. By clicking the sheet name, one can return to other sheets.

Save Your Work

All the data you have entered is instantly saved when you click the "Save" button. Most of the time, when a file is closed, ECR prompts the "save confirmation dialog box."

Reporting Printing

The current sheet will be printed when you click the printer button on the toolbar. Click "File" in the menu bar and then "Print" to change the printer's settings. This will open the dialog box for the printer. Pre-midterm Report, Midterm Report, Pre-Final Term Report, Final Term Report, and Final Grade Report is the five reports that can be printed inside ECR.

3. RESULTS AND DISCUSSION

The study produced the following results:

Efficiency in terms of time, accuracy, and effort was demonstrated. Regarding time management, around 75.00% of people gave themselves extremely efficient ratings, 12.50% gave themselves efficient ratings, and 12.50% gave themselves ordinary ratings. Regarding accuracy, 18.75% of respondents gave themselves highly accurate ratings (no errors), 75% gave themselves accurate ratings (few errors), and 6.25% gave themselves an average grade (few more errors). 25% judged their effort levels as very efficient (no effort/at ease). The typical person reported being efficient (requiring less effort) at 6.25%. (with effort).

Two issues were raised by ECR users: power outages (31.25%) and difficulty recovering unsaved data (6.25%).

Accuracy (75%), Less work expended (100%), Education (56.25%), More Systematic (56.25%), and Increased Efficiency (81.25%) are among the benefits of using the Electronic Class Record.

The brains of the modern corporation are the electronic systems. Today's office has been transformed into an in-house publishing facility for business documents thanks to electronic publishing systems. Electronics are employed in practically all industries for automation, computation, and control.

Results indicated that using the electronic class record improved the traditional methods of recording, storing, and computing student records used to track each student's class performance (Alamo et al., 2014). Accessing and updating subject assignments and class registration, maintaining student records, and calculating students' marks have become less of a hassle thanks to the system created for the SEICT faculty of Universidad de Zamboanga.

The class record is a written record of the student's performance. It includes numerical numbers that illustrate the kids' development and advancement. Due to the overwhelming information, the teachers need help managing these documents. According to Francisco (2018), this system uses a spreadsheet application to methodically record, maintain, and update student class records. Schools will also use technology extensively to track students' progress and growth.

The purpose of the qualitative research study's design is to compile the descriptive analysis claims made from the respondents' perspective, as well as how they have been evaluated and satisfied by their personal experiences using the Electronic Class Record (ECR) successfully and effectively.

Electronic Class Records (ERC) is a Microsoft Access-based electronic class record database tailored for the University of the Philippines System. There are two versions of the program, one for Microsoft Access 2000 and the other for 2002 (also known as the XP version). According to a 2004 article at http://www.upv.edu.ph/ecr/ecr.htm, MS Access 2002's version cannot be used with MS Access 2000.

The ECR, formatted as a Microsoft Excel spreadsheet document, provides teachers with crucial grading information and assessments on making class grade recording more accurate and effective (Lee, 2020). According to the assessment, teachers spend less time computing grades using electronic class records. Additionally, they believed that the electronic class record simplified their calculations. Every professor supported the advantages of adopting an electronic student record. According to Gutierrez (2022), Electronic class records also inform students about their academic strengths and limitations.

The management respondents said that by making academic class records easier to access, they are all satisfied with using the Electronic Class Record (ECR). Because of this, they are using the information system in the institution advised.

4. CONCLUSION

An electronic grading system reduces faculty difficulty in encoding grades, boosting productivity. It also benefits education, is more systematic, takes less time, and requires less effort. The faculty's inability to back up and recover data suggests they need more computer experience. This new technology can simplify grade computation for

faculty members significantly.

5. RECOMMENDATIONS

The faculty's adoption of the Electronic Grading System is encouraged for efficiency. The faculty must be educated on the program's features to address users' issues when using the electronic grading system. A seminar workshop could be planned for in-depth talks on using the electronic grading system. Other researchers are encouraged to do comparative research using different factors that affect how effectively people use the electronic grading system.

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