Development and Evaluation of G-Class Record

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Abstract *–The Guimaras State College G-Class Record was produced and analyzed using the Input-Process-Output framework. The study included all faculty from three campuses. They were either respondents or results' viewers. The Guimaras State College G-Class Record was evaluated for usability using the USE Questionnaire (Usefulness, Satisfaction, and Ease). These were usefulness, contentment, usability, and learnability. The researcher created a four-part questionnaire based on ISO 25010:2015 to assess the new system's grades. Its grade quality is discussed in Part I. The tool investigates the system's consistency, verifiability, accuracy, and objectivity. The research tool also includes the built-in system's published grades. The USE Questionnaire measures the study's four quality factors. Faculty members deemed the G-Class Record a highly effective class management tool. The study found that faculty computer literacy affects tracking in general. This may help everyone. Visual support in G-Class Record is difficult for non-computer teachers. Everyone enjoys the visual aid. For non-computer literate faculty, the paper suggests simplifying the graphical user interface and offering lessons and training.*

Keywords *–education, program, student, system*

INTRODUCTION

Educational institutions are geared to enabling upward socioeconomic mobility and provides opportunities in escaping poverty [1]. Thus, it has been its mission to increase access to quality education and school enrolment rates. The current study aims to provide faculty members of Guimaras State College an e-class record in which teachers will records and manage students' performance easier.

The preparation of the class record is critical to classroom management. Most teachers devote a significant amount of time to calculating students' grades. Unfortunately, some teachers continue to use the old, traditional, and manual class record – the one that can be purchased at any school supply and bookstore. Using this manual computation occasionally caused stress, and the teachers' heavy workload resulted in inaccurate grade computations. However, from the perspective of the faculty, an electronic class record is a highly desirable addition to the educational toolkit, especially when it can provide less effort and a more effective and timelier outcome [2-5]. It is also necessary to avoid conflict with students and parents.

Students' grades must be accurate because they provide information for advancing to the next year's level. Furthermore, the grading system encourages achievement and aids in identifying a student's problem areas. It is also used to assess the performance of students.

Many teachers believe that the time they spend recording and computing their students' grades could be better spent elsewhere, such as preparing lessons, researching, or meeting with their students. With the advancement of computer technology, an increasing number of schools are utilizing a variety of grading systems, both off-line and online, to help save time on administrative tasks and give teachers more time to attend to other important functions. However, most schools, particularly small schools, government schools, and schools in remote areas, continue to use the manual method of recording and computing students' grades.

With the introduction of different technologies, the classroom management and class are becoming more adaptable. Thus, in this research Class Performance Tracker (CPT) is introduced, a technology deviation, to propose a new standard for student grading.

Students' performance can be assessed, evaluated, and reported using the GSC's grading system and policies, represented visually and functionally by the Class Performance Tracker (CPT), which looks and functions like a spreadsheet in appearance and functionality. The use of CPT technology would set a new standard for student grading processes by making them more convenient, dependable, and efficient and encouraging positive washback and washback feedback. As a result, this research was conducted.

According to the PPT (People-Process-Technology) Framework, organizations can be defined by the key components that make them up. According to the PPT

(People-Process-Technology) Framework: their people, processes, and technology. It is necessary to have a standard to achieve consistency among people performing the same process at different times [6].

Standardization of a process, in turn, motivates the use of tools or technology to optimize the processor's performance and result in quality. This is a cycle defined by the PPT Framework in which the three components of an organization interact while remaining balanced. A deviation occurs depending on the requirement, and the cycle repeats, requiring standardization to achieve uniformity [7].

Although deviations can originate from any component, most deviations in recent years have been driven by technology. Indeed, information technology management frequently uses the PPT Framework when deciding whether to implement new technology to improve a business process. Additionally, technological deviation affects processes and people and initiates a developmental cycle [8].

OBJECTIVES OF THE STUDY

This study developed and evaluated a G-Class Record of the Guimaras State College, Buenavista, Guimaras, Philippines.

More precisely, the study described the development process of G-Class Record and determined the level of assessment of G-Class Record designed based on the USE (Usefulness, Satisfaction, and Ease) [9-10] Questionnaire as evaluated by the respondents in terms of usefulness, satisfaction, ease of use, and ease of learning. Lastly, the study identified the level of assessment of G-Class Record designed for the Guimaras State College as evaluated by the IT experts in terms of functional suitability, performance efficiency, compatibility, usability, reliability, security, maintainability, and portability.

MATERIALS AND METHODS

The conduct of this study was guided by the following set of developmental evaluation research methods, which entail framing concepts and then implementing them using a prototype model.

Prior to the prototype implementation of the G-Class Record there was a consultation classified as planning stage to determine the grade requirements for each subject with the deans and the Vice President for Academic Affairs of Guimaras State College. A prototype is the sample implementation of the system that shows limited and main functional capabilities of the proposed system. After a prototype is built, it will be submitted for evaluation and determined how the feature will function in the final software [11]. To manage this level of complexity, an SDLC or System Development Life Cycle model known as prototyping approach [12] was used. Particularly, prototyping is a modeling technique that can speed up and improve new product development. Manufacturers, component suppliers and product designers use computer-aided design tools and rapid prototyping techniques such as three-dimensional printing or stereo lithography to create physical scale models of products for analysis and production forecasting [13].

Additionally, the designed software for the Guimaras State College's G-Class Record was evaluated using the USE (Usefulness, Satisfaction, and Ease) Questionnaire. The USE Tool [9] is a software quality model that identifies four (4) quality characteristics of software programs created or used: usefulness, satisfaction, ease of use, and ease of learning (learnability). The developed G-Class Record was tested and evaluated by a jury composed of all IT experts in terms of its system development. The areas or features of the developed system that fall below the compliance mean or rate will be improved to comply with the standards set. The instrument used in determining the effectiveness of the G-Class Record was the local IT experts and the tertiary faculty members of the Guimaras State College as the users of the developed system.

Research Locale and Respondents

The faculty members from three distinct campuses, Salvador, Mosqueda, and Baterna, took part in the study as respondents or evaluators of the findings. The usability of the G-Class Record was evaluated using the four (4) quality characteristics of usefulness, satisfaction, ease of use, and ease of learning (learnability) to ascertain the developed G-Class Record's compliance with the USE Questionnaire (Usefulness, Satisfaction, and Ease) to accomplish the study's objectives. The developed system was evaluated and tested by a jury comprised of at least seven (7) prominent local information technology experts. On a scale of 1.0 to 5.0, the mean score of the developed system was used to determine whether the developed G-Class Record complied with the USE Tools standard. It was decided to use the researcher's questionnaire. The developed G-Class Record's mean score was calculated using a variety of factors, including its usefulness, satisfaction, ease of use, and ease of learning (learnability) [10].

Data Gathering Instruments

The questionnaire was made by the researcher and had four parts. It was used to figure out how good the grades were for the new system. Part I of the research instrument talks about the Quality of Grade, which means that the system gives a real grade. It's part two of the research instrument, and it looks at the reliability of grades in terms of consistency, verifiability, timeliness, and objectivity of the system that was made. This is the third part of the research instrument. It includes the published grades of the system that was built. For the study, Part IV of the instrument is the USE Questionnaire (Usefulness, Satisfaction, and Ease) to measure the four (4) quality characteristics that are important to the study. This is the standard USE Questionnaire.

Validity of the Instrument

A five-member jury comprised of a faculty member who is preferably an IT expert, a statistician, an education expert who is preferably the Dean of the College of Science and Technology, and a researcher-generalist who is preferably the Vice President for Academic Affairs and the Vice President for Research and Extension, validated the researcher-created instrument. The Good and Scates [14] evaluation criteria were used in this study.

Data Processing

The data gathered in this developmental evaluation research method with a support algorithm was used suitable for the evaluation system of the G-Class Record System, and the data gathered was processed using the Statistical Package for Social Sciences or SPSS. The results were interpreted using descriptive statistics. The mean performances of the developed G-Class Record in terms of the jury evaluation composed of IT experts of the four (4) main quality characteristics the usefulness, satisfaction, ease of use and ease of learning was analyzed in determining the effectiveness of the G-Class Record in attaining the set objectives of this study. Further, the mean of the results of the IT experts and users of the developed G-Class Record was determined based on the standardized questionnaire using USE instrument.

Method of Data Analysis

Using descriptive statistics, the information was tallied, analyzed, and interpreted, with a particular emphasis on the evaluation of the newly developed G-Class Record. When it came to the validity, reliability, and publication of the grade, it was either a yes or a no decision. For the purposes of usefulness, satisfaction, ease of use, and ease of learning, the software usability test was divided into five categories: 1.00-1.80-Strongly Disagree; 1.81-2.60-Disagree; 2.61-3.40-Neutral; 3.41-4.20- Agree; 4.21-5.00-Strongly Agree. Then for its performance the scale used were 1.00-1.80-Poor; 1.81-2.60-Fair; 2.61-3.40-Average; 3.41-4.20-Good; 4.21-5.00-Very Good.

Statistical Tools

The data collected on the usability of the G-Class Record developed for the Guimaras State College was presented and analyzed using a straightforward descriptive statistics approach, which was used to present and analyze the data.

The total number of respondents was determined by the frequency with which they responded to the quality of grades in terms of their validity, reliability, and published grades.

For a sense of scale and proportion in terms of its validity, reliability, and published grades, this study used percentages to represent scale and proportion. When all respondents were taken into consideration, the mean was used to determine the usability of the G-Class Record developed for the Guimaras State College as a whole, as well as the usefulness, satisfaction, ease of use, and ease of learning of the software program created or used.

RESULTS AND DISCUSSION

Software Development

During his investigation, the researcher used the Iterative Software Development Model [15-16] to complete his work. The iterative approach begins with a small portion of the system requirements and then continues to iteratively improve upon it until the entire system is implemented. In each iteration, a design modification was made, and new functional capabilities were implemented across the board to improve the overall performance of the system. The underlying concept of this method was to develop a system through repeated cycles (iterative development) and in smaller portions at a time, rather than in one large chunk at a time, as opposed to one large chunk all at once (incremental).

The Iterative Model was used to complete the phases of software development, which included requirements analysis, system design, system coding, system testing, and system implementation.

The requirement analysis phase was determined and analyzed based on the documents such as Term Grades (Prelim, Midterm, Prefinal and Final) and Grade Components (Class Standing, Quizzes, Projects /Laboratories, and Exams) provided by the Vice President for Academic Affairs of the Guimaras State College. The researcher inquired with the VPAA, members of the faculty of the Guimaras State College of what requirements or components to be included in the G-Class Record.

The first phase entailed identifying and analyzing the input data provided by the Vice President for Academic Affairs and faculty members, which included a list of faculty members and their subjects, as well as class schedules, grade components, and the grade sheet.

The second phase, following the identification of data from the various available requirements, was the design of the system that will utilize the data, including the creation of a graphic user interface for the system based on the data available.

Additionally, the third phase of system coding provided answers to the reports required by the academic department for the system to function properly and meet the user's requirements. The system was developed using Java as the programming language and Structured Query Language (SQL) as the back end. SQL will be used to manage data storage, querying, and manipulation. It was used to manage data in a relational database, a type of database that is also widely used by large organizations nowadays.

The fourth phase of system development was system testing, during which the system is evaluated using the standardized USE Questionnaire and ISO IEC 25010:2015.

The final phase was to fine-tune the system for use by the Guimaras State College and all its campuses. The system could be implemented via the web.

The G-Class Record

The G-Class Record used a login form, which utilizes the credentials of a user, to authenticate their access. It generally consists of the typical username or email and password. Figure 4 shows the login form of the G-Class Record. The main application interface includes the classroom schedule, grading system, class statistics, and general class policies.

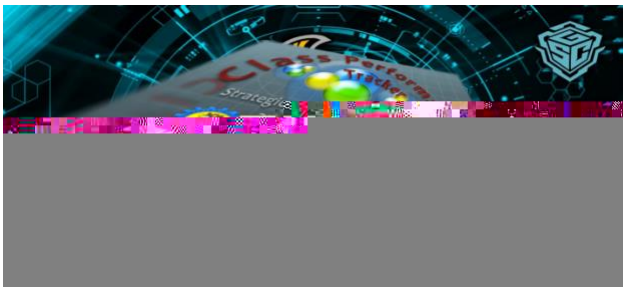

Figure 4. *Log-in Form*

The main application interface, which consists of three major panels: a header, an input panel, and a control panel. The header panel contains information that identifies a specific class. To identify a specific, distinct class, the faculty position, faculty name, program, current academic year, section, adviser, college, dean, department chair, course code, descriptive title, lab hours, and course credit must all be provided collectively.

Users are required to input class information beforehand to input performance data and click on CREATE CLASS RECORD button located in the header panel. Upon clicking on the CREATE CLASS RECORD button at the header panel, the input panel provides students list for the specific class where users can input the results of students' performance.

The input panel contains four tabbed sheets that correspond to the four grade components: class standing (attendance and class participation), quizzes, projects/laboratories, and exams. These sheets are used to track students' performance on the corresponding grade components. On the same sheet, a summary of term records, four grade components, and term grade are displayed, with term grade displayed only when all grade components are available. A term corresponds to a single assessment or tracking period. Records covering a single term can be viewed interchangeably by using the control panel to select a specific term.

The default sheet contains the class's routine transactions for recording attendance and class participation, which together determine the class's standing.

The four sheets for the Preliminary Term of the input panel with a sample class record are depicted the student list and performance data. The default sheet contains the class's routine transactions for recording attendance and class participation, which together determine the class's standing. The Pre-final Term of the input panel for the input panel (i.e., student list and performance data). The default sheet, which contains

the class's regular transaction of recording attendance and class participation, which, when taken together, determines the class's overall standing.

The exam sheet displays and records student exams for four terms. At each exam, both raw and transmuted scores are displayed. The raw scores are entered, and the transmuted equivalents are generated automatically based on the data's transmutation table selection. The Grading Summary contains a breakdown of grades. The Final Grading Sheet contains the summary assessment record submitted by the faculty at the end of grading terms, midterm (prelim and midterm) and finals (prefinal and finals).

Level of Assessment of G-Class Record

Usefulness

Presented in Table 1 is the usability of the G-Class Record in terms of Usefulness Characteristics. The results indicated that the G-Class Record's usability in terms of usefulness characteristics was a mean of 4.07. They unanimously agreed that it is beneficial and meets their requirements. They agreed that the system improves their effectiveness and saves them time by a mean of 4.11, makes them more productive by a mean of 3.85, gives them more control over their activities by a mean of 3.89, makes the tasks they want to accomplish easier to accomplish by a mean of 3.99, and does everything they expect it to do by a mean of 4.01.

Table 1. *Usability as to the Usefulness Characteristics*

Usefulness	Mean	Description
1. The system helps me be more effective.	4.11	Agree
2. Helps me be more productive.	3.85	Agree
3. Useful	4.28	Strongly Agree
4. It gives me more control over the activities.	3.89	Agree
5. It makes the things I want to accomplish easier to get done.	3.99	Agree
6. Saves me time when I use it.	4.11	Agree
7. Meets my needs.	4.36	Strongly Agree
8. Does everything I would expect it to do.	4.01	Agree
Mean	**4.07**	**Agree**

Satisfaction

Presented in Table 2 is the usability of the G-Class Record in terms of Satisfaction Characteristics. The mean for satisfaction characteristics was 3.97. Each of the sub-characteristics within the satisfaction characteristics had an agreed-upon mean value. This demonstrates that respondents concurred that they were satisfied with the G-Class Record.

Table 2. *Usability as to the Satisfaction Characteristics*

Satisfaction	Mean	Description
1. I am satisfied with the system.	3.82	Agree
2. I would recommend it to a friend.	4.04	Agree
3. It is fun to use.	3.86	Agree
4. It works the way I want it to work.	4.10	Agree
5. I feel I need to have it.	4.06	Agree
Mean	**3.97**	**Agree**

This result may have been due the system being easy to use and less time consuming in computing students grade. The system provides teacher a faster-way of recording and computing students grades. Besides the system is found to flexible in terms of teachers making errors in inputting the students grade and they can easily undo their mistake/action using the system.

Ease of Use

Presented in Table 3 is the usability of the G-Class Record in terms of Ease-of-Use Characteristics.

Table 3. *Usability as to the Ease-of-Use Characteristics*

Ease of Use	Mean	Description
1. Easy to use.	4.86	Strongly Agree
2. Simple to use.	4.13	Agree
3. User friendly.	4.00	Agree
4. Requires fewest steps possible to accomplish	4.07	Agree
5. Flexible.	4.07	Agree
6. Using it is effortless.	3.79	Agree
7. Can use it without written instructions.	4.24	Strongly Agree
8. Do not notice any inconsistencies as I use it.	3.94	Agree
9. Both occasional and regular users would like it.	4.28	Strongly Agree
10. Can recover from mistakes quickly and easily.	4.21	Strongly Agree
11. Can use it successfully every time.	4.04	Agree
Mean	**4.15**	**Agree**

In terms of characteristics that make it easy to use, the mean score was 4.15. When it comes to sub-characteristics related to Ease of Use, the respondents strongly agreed that G-Class Record is simple to use, with a mean score of 4.86. Also, they can use it without following written instructions, according to a mean of 4.24; it is liked by both occasional and regular users, according to a mean of 4.28; and they can recover from mistakes quickly and easily, according to a mean of 4.21.

With a mean score of 4.07, the respondents agreed that it requires the fewest steps possible to accomplish what they want to do with it and that it is flexible. Additionally, they agreed that the system is simple to use (4.13), user friendly (4.00), effortless (3.79), they do not notice any inconsistencies as they use it (3.94), and they can use it successfully every time (4.04).

The results indicates that compares to the traditional class recording the system only needs a few steps to compute and managed the students grades. In addition, the system is much more flexible since mistakes can be undo not unlike the usual class record in which it is handwritten and quite messy when mistakes or errors are made.

Ease of Learning (Learnability)

Presented in Table 4 is the usability of the G-Class Record in terms of Ease of Learning Characteristics. Those who agreed that they learned to use the G-Class Record quickly had a mean score of 4.08, agreed that it was easy to learn to use it had a mean score of 4.03, and agreed that they quickly became skilled with it had a mean score of 3.94. Those who agreed on three sub characteristics had a mean score of 4.23 and were described as strongly agree. With a mean score of 4.87, they were unanimous in believing that they could easily recall how to use the system.

The system is easy to learn since a manual was provided for the system. Besides, the system is simple with only three panels in the main application interface: header panel, input panel and control panel. The header has the information for the specific class. The teachers' main concern is the used of the input panel which contains four tabbed sheets corresponding to four grade components class standing, quizzes, projects and exams.

Table 4. *Usability as to the Ease of Learning Characteristics*

Criteria	Mean	Description
1. I learned to use it quickly.	4.08	Agree
2. I easily remember how to use it.	4.87	Strongly Agree
3. It is easy to learn to use it.	4.03	Agree
4. I quickly became skilful with it.	3.94	Agree
Mean	**4.23**	**Strongly Agree**

Effectiveness of the G-Class Record

The functional completeness with a mean score of 4.23, functional correctness with a mean of 4.52 and functional appropriateness with a mean of 4.26. It indicates that the system functions completely, correctly, and appropriately. Table 5shows the characteristics of the G-Class Record in terms of Functional Suitability.

Table 5. *Characteristics of the G-Class Record in terms of Functional Suitability*

Criteria	Mean	Interpretation
Functional completeness	4.23	Very Good
Functional correctness	4.52	Very Good
Functional appropriateness	4.26	Very Good
Average	4.34	Very Good

The system has features that makes the computation of grades much easier. Teachers are only required to input the students' information and scores in the system and the system will automatically compute and provide the students grade. In addition, the system provide security with the information provided since the access for the students' grades will only be available for the teachers' (user) and the system administrator.

Performance Efficiency of the G-Class Record in terms of its behaviour and capacity

In terms of its behaviour and capacity, it had a mean of 4.16 and resource utilization with a mean of 4.19. All are interpreted as good. Table 6shows the performance efficiency of the G-Class Record.

The system is quite efficient because once complete data were encoded in the system, the class record automatically computes the students grades and made it available in just a few clicks.

Table 6. *Characteristics of the G-Class Record in terms of Functional Suitability*

Criteria	Mean	Interpretation
Time behavior	4.16	Good
Resource utilization	4.19	Good
Capacity	4.16	Good
Average	4.17	Good

The results indicate that the developed G-Class record meet the requirement on the degree to which the response and processing times and throughput rates of a product or system, when performing its functions. It also meets the requirements on the degree to which the amounts and types of resources used by a product or system, when performing its functions and lastly the maximum limits of a product or system parameter meet its requirements.

Compatibility Characteristics of the System

A mean score of 4.21 for co-existence interpreted as very good while in its interoperability with a mean of 4.12. Table7 shows the compatibility characteristics of the system.

The result indicates that the G-class record can perform its required functions efficiently while sharing a common environment and resources with other products, without detrimental impact on any other product and can exchange information and use the information that has been exchanged.

Table 7. *Compatibility Characteristics of the System*

Criteria	Mean	Interpretation
Co-existence	4.21	Very Good
Interoperability	4.12	Good
Average	**4.17**	**Good**

Usability of the G-Class Record

The system is very good in its appropriateness recognizability (4.65), learnability (4.51), operability (4.33), and accessibility (4.22) while it is only good in user error protection (4.19) and user interface aesthetics (4.20) Table 8 shows the usability of the G-Class record.

Table 8. *Usability of the G-Class Record*

Criteria	Mean	Interpretation
Appropriateness recognizability	4.65	Very Good
Learnability	4.51	Very Good
Operability	4.33	Very Good
User error protection	4.19	Good
User interface aesthetics	4.20	Good
Accessibility	4.22	Very Good
Average	**4.35**	**Very Good**

Based from the result, the G-class record is usable since its operation, learnability and accessibility for the users are very good. In addition, in terms of its design and interface the users agreed that it is quite good. Another feature that makes it usable is the system user error protection in which mistakes can be undo in just a few clicks.

Reliability Characteristics of the System

The maturity and availability of the system is very good while it is good only in fault tolerance and recoverability. Table 9 shows the reliability characteristics of the system.

Table 9. Reliability Characteristics of the System

Criteria	Mean	Interpretation
Maturity	4.27	Very Good
Availability	4.25	Very Good
Fault tolerance	4.16	Good
Recoverability	4.20	Good
Average	**4.22**	**Very Good**

The result indicates that the G-Class Record is very good in meeting the needs for reliability under normal operation and is operational and accessible when required for use. Meanwhile, it can operates as intended despite the presence of hardware or software faults and in the event of an interruption or a failure, a product or system can recover the data directly affected and re-establish the desired state of the system.

Security Characteristics of the System

The G-Class Record is good in terms to confidentiality, integrity, non-repudiation, accountability, and authenticity as shown in Table 10.

Table 10. *Security Characteristics of the System*

Criteria	Mean	Interpretation
Confidentiality	3.96	Good
Integrity	3.89	Good
Non-repudiation	4.12	Good
Accountability	4.05	Good
Authenticity	4.10	Good
Average	**4.02**	**Good**

The G-class record ensures that data are accessible only to those who have authorized access; prevents unauthorized access to, or modification of, computer programs or data; actions or events can be proven to have taken place, so that the events or actions cannot be repudiated later; actions of an entity can be traced uniquely to the entity and the identity of a subject or resource can be proved to be the one claimed.

Maintainability Characteristics of the System

The system is very good when in terms to reusability, analysability, modifiability, and testability. It is also good in terms to modularity as shown in Table 12.

The G-Class Record is composed of discrete components such that a change to one component has minimal impact on other components and can be used in more than one system, or in building other assets. In addition, the developed system is effective and efficient with which it is possible to assess the impact on a product or system of an intended change to one or more of its parts, or to diagnose a product for deficiencies or causes of failures, or to identify parts to be modified.

Table 12. *Maintainability Characteristics of the System*

Criteria	Mean	Interpretation
Modularity	3.90	Good
Reusability	4.25	Very Good
Analysability	4.33	Very Good
Modifiability	4.50	Very Good
Testability	4.25	Very Good
Average	**4.25**	**Very Good**

Portability characteristics of the G-Class Record

It is very good in terms of installability and good in adaptability and replaceability. Table 13 shows the portability characteristics of the G-Class Record.

Table 13. *Portability characteristics of the G-Class Record*

Criteria	Mean	Interpretation
Adaptability	4.05	Good
Installability	4.80	Very Good
Replaceability	4.20	Good
Average	4.35	Very Good

The results indicate that the developed G-Class Record can effectively and efficiently be adapted for different or evolving hardware, software or other operational or usage environments; can be successfully installed and/or uninstalled in a specified environment and can replace another specified software product for the same purpose in the same environment. The results on the evaluation revealed that the G-Class record developed is widely accepted by the teachers' who evaluated the said software.

CONCLUSION AND RECOMMENDATION

The faculty members of the Guimaras State College have determined that the G-Class Record is a highly effective method of increasing the efficiency of their class management after conducting tests and evaluating the results However, the level of computer literacy among faculty members has an impact on the overall effectiveness of the tracking concept, according to the study. The use of real-time computed values is advantageous to all the respondents. Teachers with only rudimentary computer literacy will have difficulty using the visual support feature that has been incorporated into the G-Class Record design. The visual support feature functionality, on the other hand, is deemed useful by 100% of those who have responded. The study recommends that the graphical user interface be redesigned to be more user-friendly and less complicated, so that it can be used by faculty with only rudimentary computer literacy. In addition, to help faculty members who are not computer literate become more familiar with the system, the researcher recommends that tutorials and training sessions be held for them on a regular basis.

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