STUDENTS' PERFORMANCE MONITORING AND EVALUATION SYSTEM OF ST. PAUL UNIVERSITY PHILIPPINES

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ABSTRACT

The descriptive survey design was used to assess the effectiveness of the proposed Systems Development Project of St. Paul University Philippines. The study involved 355 participants consisting of college students and faculty members, selected at random from the different schools of St. Paul University Philippines. Pre-survey and post survey questionnaires were used for data gathering tools. Frequency and Percentage Count and Weighted Mean were employed for data analysis. From the analysis of the data gathered, the following findings were established: (1) Prior to the conduct of the pilot testing, the assessment of the student participants on the current system is "Poor" regarding viewing of grades and passing of requirements. However, after the pilot testing, the same participants assessed the proposed system as "Very Satisfactory." This means the proposed system is more efficient regarding monitoring and evaluation of students' performance. (2) The assessment of the faculty and students after the pilot testing on the proposed system in terms of Students' Performance Monitoring and Evaluation System is "Very High." This finding implies that through the proposed system, supervision and evaluation of students' performance could be better facilitated. (3) Thus, it could produce more reliable and accurate information. From the findings, it was concluded that compared to the current system of monitoring and evaluation transaction of students' performance, the proposed system is more efficient and more reliable in facilitating the control and assessment of operations and processes of students' performance.

INTRODUCTION

Management Information Systems (MIS) are computer systems that direct business and organize operations or files. It takes on the role that a human does by replacing a human with a computer. This means that tasks that need to be done can be done in an easier, faster and a more related matter. These systems are becoming extremely popular in today's businesses and offices. On-line enrollment system, for example, eliminates the burden of students to fall in line to pay their fees and to get their subjects; as likened to the OSIRIS computer system which St. Paul University Philippines is using. It enables the students to have access to the enrollment system in their homes or wherever the internet access is available. It also facilitates in keeping track of the records, transactions, and other activities of the students regarding the enrollment. Such systems provide businesses and educational institutions with fast and innovative services that aid the process of business development. Today, not all students have the same ability and skills to learn a certain subject. Students may have different background and knowledge for a topic that may affect their learning style. Some students need more explanations than the others. With the advent of technology, the researcher will come up with a Web Application that would help the teachers and students of School of Information Technology and Engineering in submitting, reviewing and checking of assignments online so that students' performance can be easily monitored. Based on the experiences and observations of the researcher, it is a tedious work for the teachers to collect massive projects from the students manually. It also consumes a significant amount of space in the teacher's table as well as time in scoring, thereby affecting the grade submission period by the teacher as well as the verification period by the Associate Deans, Deans, and the University Registrar. Once the proposed system is materialized, then the problems will be eliminated. All submitted projects will be stored in the system's server and will be automatically downloaded to the teacher's computer via Dropbox API. Hence, it is for this reason that the researcher conducts this study to come up with a proposed system which will evaluate and monitor students' performance in a subject. Moreover, the said proposed system will address and enhance the processing of the current system. Through this system, teachers can easily create and print grading sheets. Student grades will automatically be posted to their accounts so that they will be updated with their performances every semester.
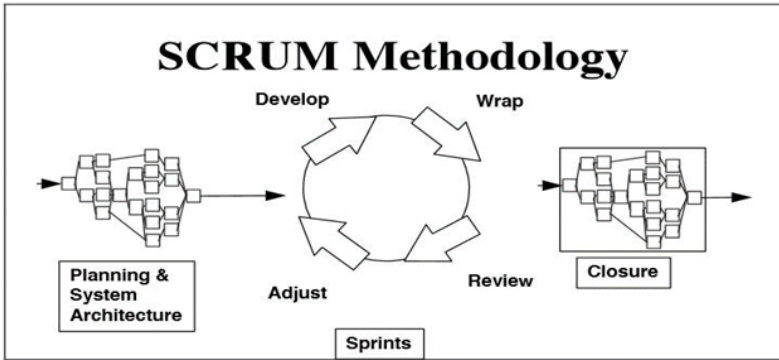
Conceptual Framework

Figure1. The SCRUM Model

The developed system followed the SCRUM process. This follows a continuous improvement cycle, exposing flaws faster and reducing waste. The goal is achieved faster since releases arrive at the client more frequently. The process started by defining the requirements, gathering data, and at the same time, initiating the project. Then a series of development, integration, and testing follows until a working system is achieved. The developers record and incorporate the changes and then back to the development process. The cycle is repeated improving the system after each release until the goal is achieved. The first and last phases (Planning and Closure) consist of defined processes, where all processes, inputs, and outputs are transparent. The ability of how to do these processes is evident. The flow is linear, with some iteration in the planning phase. The researcher defined the following inputs: (1) Survey results of the problems encountered in submitting, reviewing & checking of assignments, (2) Survey results of the problems experienced in the existing grading system, (3) Policies and procedures in submission of grades, (4) User Requirements, and (5) Development Tools and Techniques. The Sprint phase is an empirical process. Many of the processes in the sprint phase are unidentified or uncontrolled. It is treated as a black box that requires external regulations. Accordingly, laws, including risk management, are put on iteration of the Sprint phase to avoid chaos while maximizing flexibility. Sprints are nonlinear and flexible. Where available, specific process knowledge is used; otherwise, implied knowledge and trial and error is used to build process knowledge. Sprints are used to

regulate the outcome. The output is open to the environment until the Closure phase. The deliverable output can be changed at any time during the Planning and Sprint phases of the project. The project remains open to environmental complexity, including competitiveness, time, quality, and financial pressures, throughout these phases. Lastly, the deliverable output is determined during the project based on the environment. Thus, the final output of this research is Student Performance Monitoring and Information System of St. Paul University Philippines.

Statement of the Problem

The study aimed to develop and evaluate Student Performance Monitoring and Evaluation System of St. Paul University Philippines.

Specifically, it sought to answer the following questions:

1. What is the assessment of the faculty participants on the current system in terms of the following:
    a. Grading system:
        1.a.1 collecting and recording of scores;
        1.a.2 computation of grades;
        1.a.3 printing of grading sheets;
        1.a.4 submission of grades to the associate dean/dean;
        1.a.5 verification of grades; and
        1.a.6 encoding of grades?
    b. Assignment / Project Managing:
        1.b.1 Collecting;
        1.b.2 Checking;
        1.b.3 Recording; and
        1.b.4 Feedbacking of results?

2. What is the assessment of the student participants on the current system in terms of the following:
        2.a.1 Viewing of grades; and
        2.a.2 Submission of requirements?

3. What measures can be done to improve the current system?

4. What is the assessment of the faculty participants on the proposed system in terms of the following:

    a. Grading system:

        4.a.1 collecting and recording of scores;

        4.a.2 computation of grades;

        4.a.3 printing of grading sheets;

        4.a.4 submission of grades to the associate dean/dean;

        4.a.5 verification of grades; and

        4.a.6 encoding of grades?

    b. Assignment / Project Managing:

        4.b.1 Collecting;

        4.b.2 Checking;

        4.b.3 Recording; and

        4.b.4 Feed backing of results?

5. What is the assessment of the student participants on the proposed system in terms of the following:

    5.a.1 Viewing of grades; and

    5.a.2 Submission of requirements?

6. What is the degree of effectiveness of the proposed Student Performance and Monitoring System of St. Paul University Philippines in terms of the following software characteristics / capabilities:

    6.1 Functionality;

    6.2 Reliability;

    6.3 Usability;

    6.4 Maintainability; and

    6.5 Portability?

METHODOLOGY

Research Design

The research design employed in this study is the descriptive design. It describes the assessment of the participants regarding the existing Microsoft Excel-based grading system and the proposed Web-based Learning Support System. Systems Development is used for the design and implementation of the proposed system.

Participants of the Study

The participants of the study involved both college faculty and students of the second semester for the academic year 2014-2015 which composed of the following:

Participants	Frequency	Percentage
SAB Students	55	15.49
SASTE Students	137	38.59
SHS Students	29	8.17
SITE Students	116	32.68
SOM Students	3	0.85
Faculty	15	4.22
Total	**355**	**100.00**

The 355 participants consisting of college students and faculty members, selected at random from the different schools of St. Paul University Philippines. Multi-stage sampling technique and Slovin's formula were used to proportionally allocate the participants per year level per school as well as college faculty of St. Paul University Philippines.

Instrumentation

There are two sets of questionnaires to address the specific questions in this study such as pre-survey and post-survey questionnaires. A pre-survey questionnaire was used to assess the degree of seriousness of the problems encountered in the current system while the post-survey questionnaire was used to determine the extent of effectiveness of the proposed system regarding software characteristics/ capabilities.

Data Gathering Procedure

Before embarking on the writing of the research proposal, the researcher consulted some teachers and the dean of the School of Information and Engineering. Recognizing the potential contribution of the study to the development of the department, the dean, and fellow

teachers were asked to cooperate with the interview and gave permission to proceed with the proposed system.

The conduct of the pre-survey involved the gathering of information about the current system and the developed proposed system. While, on the post-survey, it included the evaluation of the effectiveness of the proposed system.

Data Analysis

The data were tallied and analyzed according to the objectives of the study and were treated using descriptive statistics.

1. Frequency and Percentage Count. This was used to obtain the participants' readiness and willingness to use the proposed system.

2. Weighted Mean. This was used as a statistical measure to compute the average of the obtained data.

RESULTS AND DISCUSSION

Summary of the Assessment of the Faculty-Participants' responses on the Current System

Results revealed that the assessment of the faculty participants on the current system ranges from "Poor" with an overall mean of 2.14. As evidence, Promptness in recording of scores, Checking and verification of recorded scores, Completion of scores, Promptness in submitting grading sheets, Returning of signed grading sheets, Promptness in encoding of grades, Promptness of collecting of assignments and projects, Checking and verification of assignments and projects and Completion of assignments and projects

Summary of the Assessment of the Student-Participants' responses on the Current System

Results revealed that the current system is "Poor" with an overall mean of 2.13, while they were satisfied on the accuracy of inputs. As

a result, the researcher developed a proposed Student Performance Monitoring and Evaluation System of St. Paul University Philippines (SPMES) and presented it to the participants for testing.

Summary of the Assessment of the Faculty-Participants' responses on the Proposed System

Results revealed that the proposed system is "very satisfactory" with an overall mean of 3.65. This implies that the proposed system could better facilitate in terms of monitoring and evaluating students' performance

Summary of the Assessment of the Student-Participants' responses on the Proposed System

Results unveiled that the assessment of student participants on issues of viewing of grades and passing of requirements is "Very Satisfactory" with an overall weighted mean of 3.98. This implies that the proposed system provided the features to facilitate better the processes involved in monitoring and evaluating of students' performance.

Summary of the Assessment of the Faculty-Participants' responses on the Effectiveness of the Proposed System

Results unveiled that after the system testing, the proposed system is rated "Very Effective" on the aspects of functionality, reliability, usability, maintainability, and portability with an overall weighted mean of 4.51. This finding implies that the college faculty participants who have evaluated the proposed system have seen the desired features and were very satisfied with the processes demonstrated during the system testing. Moreover, the proposed system compared with the current system is more efficient because it could better facilitate the needed transactions and processes in monitoring and evaluation of student's performance.

Summary of the Assessment of the Student-Participants' responses on the Effectiveness of the Proposed System

Results showed that after the system testing, the proposed system is

rated "Very Effective" on the aspects of functionality, reliability, usability, maintainability, and portability with an overall weighted mean of 4.49. This finding implies that the college student participants who have evaluated the proposed system have seen the desired features and were satisfied with the processes demonstrated during the system testing. Moreover, the proposed system compared with the current system is more efficient because it could better facilitate the needed transactions and processes in monitoring and evaluation of student's performance.

CONCLUSION

The researcher concluded that compared to the current system of control and assessment operation of student's performance, the proposed system is more efficient and more reliable in facilitating the monitoring and evaluation of the transactions and processes of student's performance.

RECOMMENDATIONS

Based on the findings and conclusion of the study, the following recommendations are derived:

Faculty and students may be encouraged to adopt the proposed system to ensure its reliability, functionality, usability, maintainability and portability.

The administrator may continuously support the use of the proposed system for maintenance.

The researcher may present the proposed systems to the administrators of the St. Paul University Philippines for the approval of the implementation of the scheme.

A stand-alone server may be provided to sustain the utilization of the proposed system.

An additional module for the registrar's account may be added for direct validation of grades as enhancement of the proposed system.

Training may be conducted to all the end users on the usage of the proposed system.

The utilization of the proposed system may be implemented to enhance the current system.

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