

DEVELOPMENT OF AUTOMATED STUDENT INFORMATION AND ENROLLMENT SYSTEM OF CALINGATNAN NATIONAL HIGH

JENNIFER BAGULAYA-ABOGAA
Associate Professor I
Eastern Samar State University
Borongan City, Eastern Samar, 6800, Philippines

Abstract: *The Calingatan National High School is a secondary school with high morale in all aspect of academic. The school has vision to have an automated system that can help the process of enrollment, student's information, and file security. It has a total enrolment of 580 and 22 employees.*

The Automated Student Information and Enrollment System focus on the data efficiency, processing reliable data of information, and securing files. A good student Information and Enrollment System is not just for the process of recording, retrieving and tracking but also to increase the school's productivity, service, quality and competitiveness.

The development of the system employed, Microsoft Visual Basic 6.0 was used in developing GUI and My System Query Language or MySQL as database of the system. Program coding was done in Visual Studio. Reliability, and Usability were strongly agreed that they were attributes on the system. The Efficiency geared the highest average weighted of 4.90, described as strongly agree.

Recommendations are: to install network connectivity, just a local connectivity for monitoring and facilitations; rigid training for the end users should be undertaken, to include the maintenance of supplementary hardware and software facility; and alternative action when electricity interruption may occur.

Keywords: *automated system, Automated Student Information and Enrollment System, Graphical user Interface or GUI.*

1. INTRODUCTION:

The Calingatan National High School is a secondary school with high morale in all aspect of academic. The school has vision to have an automated system that can help the process of enrollment, student's information, and file security. It has a total enrolment of 580 and 22 employees.

According to Besel, (2000) data processing is divided into two kinds of processing: database processing and transaction processing. A database is a collection of common records that can be searched, accessed, and modified, such as bank account records, school transcripts, and income tax data. In database processing, a computerized database is used as the central source of reference data for the computations. Transaction processing refers to interaction between two computers in which one computer initiates a transaction and another computer provides the first with the data or computation required for that function.

The Automated Student Information and Enrollment System focus on the data efficiency, processing reliable data of information, and securing files. A good student Information and Enrollment System is not just for the process of recording, retrieving and tracking but also to increase the school's productivity, service, quality and competitiveness.

2. OBJECTIVES:

Determine the performance level of the automated enrollment system in terms of:

- a. Reliability;
- b. Usability; and
- c. Efficiency

3. INSTRUMENT

SOFTWARE QUALITY EVALUATION TOOL
(BASED ON ISO 9126 SOFTWARE QUALITY STANDARD)

Title of System: DEVELOPMENT OF AUTOMATED STUDENT INFORMATION AND ENROLLMENT SYSTEM OF CALINGATNAN NATIONAL HIGH

Direction: In all the identified software quality metrics below, please check the appropriate column stating your approval or disapproval on the degree of accomplishment per requirements identified.

5-Strongly Agree, 4 – Agree, 3 - Slightly Agree, 2 – Slightly Disagree, 1-Strongly Disagree

ISO SOFTWARE METRICS	Rating				
	5	4	3	2	1
Reliability					
The system is free from errors.					
The system validates user inputs.					
Data is recoverable after system network failures with minimal operator assistance.					
Usability					
The system is user-friendly (texts are visible; buttons and textboxes are of exact size)					
The system is easy to learn and operate.					
The system works at all workstations available at the CNHS.					
Efficiency					
The system displays all requested data promptly.					
The system processes the test results and print at a reasonable time.					
The system adhere to standards or conventions relating to efficiency					

Software Employed

Microsoft Visual Basic 6.0 was used developing Graphical user Interface or GUI and My System Query Language or My SQL as database of the system. Program coding was done in Visual Studio.

Respondents

The study was conducted in Calingatnan National High School in Borongan City, Eastern Samar. Alpha test was conducted by 15 Employees.

4. METHODS:

Statistical Tool

Average weighted mean was used on determining the extent of applicability of ISO software characteristics.

The mean values and qualitative descriptions were employed to determine its extent of applicability of ISO 9126 software characteristics:

Mean Value Qualitative Description

4.10 – 5.00	Strongly Agree	1.10 – 2.00	Slightly Not Disagree
3.10 - 4.00	Agree	0.00 – 1.00	Strongly Disagree
2.10 – 3.00	Slightly Agree		

5. RESULTS:

Table -1: Frequency Distribution of Respondents’ Perception on the Quality of the Software Based on ISO 9126

Characteristic	Level of Agreement					Weig hted Mean	Interp re tation
	(SA) 5	(A) 4	(S L A) 3	(S L N) 2	(S N A) 1		
Reliability							
The system is free from errors.	12	3	0	0	0	4.8	Strongly Agreed
The system validates user inputs.	13	1	1	0	0	4.8	Strongly Agreed
Data is recoverable after system network failures with minimal operator assistance.	10	3	1	1	0	4.8	Strongly Agreed
Usability							

The system is user-friendly (texts are visible; buttons and textboxes are of exact size)	13	2	0	0	0	4.86	Strongly Agreed
The system is easy to learn and operate.	13	2	0	0	0	4.86	Strongly Agreed
The system works at all workstations available at the CNHS.	9	2	2	2	0	4.2	Strongly Agreed
Efficiency							
The system displays all requested data promptly.	10	5	0	0	0	4.66	
The system processes the test results and print at a reasonable time.	12	3	0	0	0	4.8	Strongly Agreed
The system adhere to standards or conventions relating to efficiency	11	2	2	0	0	4.6	Strongly Agreed

Legend: (SA)=Strongly Agree; (A)=Agree; (SLA)=Slightly Agree; (SLN)=Slightly Not Agree; (SNA)=Strongly not Agree

Table -2: Average Weighted Mean of Respondent’s Perception on the Attributes of the Developed Automated Enrolment System of SFNHS

Theorem Attributes	Average Weighted Mean	Interpretation
Reliability	4.82	Strongly Agreed
Usability	4.68	Strongly Agreed
Efficiency	4.68	Strongly Agreed

Reliability, and usability were strongly agreed that they were attributes on the system. The Efficiency geared the highest average weighted of 4.90, described as strongly agree.

6. CONCLUSION AND RECOMMENDATIONS:

The developed automated enrolment system was very efficient for a small size school like Calingatnan National High School, very helpful to the stakeholders and the workers of the institution. Very useful for a growing school as a starting benchmark.

It was recommended to install a network of connectivity, even a local connectivity for monitoring and facilitations. Rigid training for the end users should be undertaken, to include the maintenance of supplementary hardware and software facility, as well as alternative action when electricity interruption may occur.

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SCREEN INTERFACE:

CNHS Student Information & Enrollment System

REGISTRATION

Student LRN School Year Status

Last Name First Name Middle Name

Birth Date Gender (M/F) Religion

Age Mother Tongue

Home address

Barangay Municipality/City Province

Parents and Guardian Info.

Father's Name Contact Number of Parents or Gardian

Mother's Name Relation

Guardian

Search Last name:

Student LRN	Last Name	First Name	Middle Name	Gender	Birth Date	Age	Mother tongue	R
123456789080	Amaya	Marcos	Kestano	M	01/21/1995	22	Waray	C
937492792634	Apura	Johndy	Cabagnot	M	12/16/1995	20	Waray	C
112568900545	Cadalin	Francis	Catubay	M	5/29/1994	21	Waray	C
12377786664	Capito	Emilay	Bajasan	F	12/16/1995	20	Waray	C
895453779549	Catubay	Jimmy	Bosio	M	12/16/1991	24	Waray	C
000000000001	Concan	Edward	Casimo	M	12/1/1994	21	Waray	C

Add Edit Delete Clear Close

Section Maintenance

Section Title

Year Level

Section ID	Section Title	Year Level
1	Rose	Grade 7
2	Sampaguita	Grade 7
3	Mango	Grade 8
4	Santol	Grade 8
5	Narra	Grade 9
6	Ipil-ipil	Grade 9
7	Rizal	Grade 10

Add Edit Delete Close

Teacher Maintenance

Personal Information

Teacher Name Major

Barangay Municipality

Province

Teacher ID	Teacher Name	Major	Barangay	Mun
1	Edward Concan	Dancer	Anduyon	Dola
2	Marvin Amoyo K. Odion	Janitor	Mt. Apo	Boro
3		Developer	Dolores San Polipol	Boro
4	Danica E. Amoyo	Model	brgy. Campesao B...	Boro
5	marvin k. amoyo	Programmer	Borongon	Boro
7	Odak, wang C.	Borolag	Taboc	Boro
8	Patrick Glano	Mapah	Brgy. B	Boro

Schedule Maintenance

School Year

Section

GradeLevel

Subject

Time

Day

Teacher Name

Schedule ID	Year Level	Section	Time	Day
4	Grade 7	Rose	7:30-8:30	Monday
5	Grade 7	Rose	8:30-9:30	Monday
6	Grade 7	Rose	10:00-11:00	Monday
7	Grade 7	Rose	11:00-12:00	Monday
8	Grade 7	Sampaguita	3:00-4:00	Monday
9	Grade 7	Sampaguita	2:00-3:00	Monday
12	Grade 7	Rose	2:00-3:00	Monday
13	Grade 7	Rose	2:00-3:00	Monday
14	Grade 7	Rose	3:00-4:00	Friday
15	Grade 7	Rose	11:00-12:00	Monday
16	Grade 7	Sampaguita	10:00-11:00	Monday
17	Grade 7	Sampaguita	11:00-12:00	Monday
18	Grade 7	Sampaguita	1:00-2:00	Monday

School Year Maintenance

School year

School Year ID	School Year
1	2015-2016
2	2016-2017
3	2017-2018
4	2018-2019
5	2019-2020
6	2020-2021

Subject Maintenance

Subject Title

Year Level

Subject ID	Subject Title	Year Level
1	English 1	Grade 7
2	Math 1	Grade 7
3	T.L.E 1	Grade 7
4	Pilipino 1	Grade 7
5	Aral-Pan 1	Grade 7
6	Mapah 1	Grade 7
7	Values 1	Grade 7
29	Science 1	Grade 7
8	English 2	Grade 8

Enrollment

Student LRN School Year

Last Name Status

First Name Year Level

Middle Name Section

Current Year level Card

Gen. Ave. Remarks

Good Moral Fair Moral No Moral

Citizenship Status

Enrolm...	Student LRN	School Year	Status	Year Level	Section Title	Card.	General Ave...	Remarks	Good Moral
7	00000000001	2015-2016	Dropped	Grade 7	Sampaguita	Submit	90	Passed	1
10	047284728048	2015-2016	New	Grade 7	Rose	Submit	90	Passed	1
11	036261993615	2015-2016	New	Grade 7	Rose	Submit	84	Passed	1
12	123456789123	2015-2016	New	Grade 7	Rose	Submit	95	Passed	1
13	036261993615	2015-2016	Old	Grade 8	Mango	Submit	90	Passed	1
14	895453779549	2015-2016	New	Grade 7	Rose	Nothing to S...	88	Passed	1
15	123366356785	2015-2016	Dropped	Grade 7	Rose	Submit	88	Passed	0

The screenshot shows a web application window titled "CNHS Student Information & Enrolment System". The main heading is "LIST OF HONORS (TOP 10)" with a small icon of a student. Below the heading are three dropdown menus labeled "School Year", "Section", and "Year Level". To the right of these menus is a button labeled "View TOP 10". Below the filters is a table with three columns: "LRN", "Name", and "Total Ave.". The table is currently empty. At the bottom of the window are two buttons: "Print" and "Close".