



Design and Implementation of Computerized Result Processing in Enugu State Polytechnic, Iwollo

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This study examined the design and implementation of computerized result processing in Enugu State Polytechnic, Iwollo. The specific objectives are to examine the effect of manual computerized results on students' efficiency and assess the effect of electronic computerized results on students' efficiency in the Enugu state. The study adopts a description method, a systemic approach that required a coherent and well-running system. The bottom-Up or Top-Down approach was required to take into account all related variables of the system. The finding revealed that manual computerized result has a significant negative effect on students' efficiency. While electronic computerized results have a significant positive effect on students' efficiency in the Enugu state. we concluded that electronic computerized results are far better than manual computerization of student results at Enugu state polytechnic Iwollo. We recommended that management should endeavour to implement with immediate effect the use of electronic computation of student results.

←
ABSTRACT

Keywords: Computerized Result Processing; Enugu State Polytechnic; Manual Computerized Results; Electronic Computerized Results; Students' Efficiency

Introduction

A Systems design is the process of defining a system's components, such as modules, architecture, and components, as well as their interfaces and data, depending on the requirements that have been given. It involves identifying, creating, and designing systems that meet the unique demands and requirements of a company or organization. According to Dunlop and Kling (1991), by the early 1990s, computing and telecommunication accounted for half of the capital investments made by private firms. However, paper (1980) Feigenbaum and Mc Corduck (1983), and Yourdon (1986) stated that the most fervent advocates of computerizing results have argued that the actual pace of computerized results in schools, factories, and homes is too slow. The necessity of using computers on database systems such as computerized result/course registration systems was widely discussed by Russell, M. (1987). A database, defined as any collection of connected information gathered together as a basic item, is at the core of any information system, according to Dimorji (2003). The phrase can also be used to describe how data is manually collected, used, processed, saved, and utilized.

A systemic approach is required for a coherent and well-running system. The bottom-Up or Top-Down approach is required to take into account all related variables of the system. A designer uses modelling languages to express the information and knowledge in a structure of the system that is defined by a consistent set of rules and definitions. The designs can be defined in graphical or textual modelling languages. Some examples of graphical modelling languages are

- a. Unified Modelling Language (UML): To describe software both structurally and behaviourally with graphical notation.
- b. Flowchart: A schematic or stepwise representation of an algorithm.
- c. Business Process Modelling Notation (BPMN): Used for Process Modelling language.
- d. Systems Modelling Language (SysML): Used for systems engineering. System design is a collection of interrelated and interconnected components that work together to perform or carry out a specific task in order to accomplish a particular goal. For every system, security is a paramount issue.

A strategy to prevent unauthorized access to the server housing a sensitive system, such as the Student Result Processing System, through scripts performed on the website has to be put in place due to numerous security incidents around the world and the loss of sensitive data. In order to provide a security mechanism between the front-end and back-end of the already-existing Student Result Processing System, this project will design and develop a PHP/MySQL database. The Student Result Processing System manages all aspects of student life in the class or department, including registration, maintaining student records for decision-making, computation, and generation of grade points as well as transcripts and transfer information. The work being done on this project will be of great assistance in protecting student information and results kept on the Student Result Processing System in secondary schools and universities, preventing malicious attacks, and reducing the delay experienced in the manual examination result processing system. Additionally, it creates and implements a safe database system to store and manage student data as well as their grades from the first to the last year.

Statement of the Problem

A few issues with managing student academic records include incorrect course registration, delayed release of students' results, accuracy owing to laborious manual calculations, and retrieval challenges. The manual method adopted in results processing poses some problems and these problems identified to be solved by this project include the following: Wrong computation of student's result, Untimely processing result. the safety of students' records located on the server. The location of administrator passwords in the script file is easily accessible via the website; Easy access and availability of student transcript/transfer on demand and Insecurity of students' results.

Objectives of the Study

The main objective of this study is to examine the design and implementation of computerized result processing in Enugu State Polytechnic, Iwollo. The specific objectives are;

- i. To examine the effect of manual computerized results on students' efficiency in the Enugu state.
- ii. To assess the effect of electronic computerized results on students' efficiency in the Enugu state.

Hypotheses

- i. Manual computerized results have no significant positive effect on students' efficiency in Enugu State.
- ii. Electronic computerized results have no significant positive effect on students' efficiency in Enugu State.

Review of Related Literature

Concept of Computation of Result

The parameters used to gauge a student's ability to complete academic work in school are their results. Additionally, it is utilized to gauge a student's proficiency in each subject they are able to choose from. Without a sufficient mechanism for handling results, it may be impossible to accomplish the intended goal because even the smallest error could have disastrous consequences (Assor, 2019). One of the most crucial factors in schools is the outcome of the student examination. While requiring straightforward operations to process the test results, these data must be treated under crucial management (Ukaoha and Amadin, 2014). The process of creating meaningful information known as "result processing" involves gathering all result items together and conducting operations on them in order to extract the necessary result from them. The processing of results at educational institutions like schools became crucial because grading is required in order to understand each student's ability. Additionally, it is essential to recognize and even encourage the greatest individuals. Therefore, result processing is required. There are essentially two forms of result processing: traditional result processing (manual) and computerized result processing:

a. Manual Method:

This involves actions taken by a clerk who may be supported, if requested, by particular tools such as adding machine or pocket calculator. This kind of processing is only appropriate when there is a modest number of results to be processed and little focus is placed on the precise time the operation must be finished. The method is straightforward, and in most situations, adding more hands will help with the time crunch. The update of handwritten outcome records is one instance.

b. Mechanical Method:

This involves actions that are carried out by a keyboard-based machine but are initiated by an operator depressing the necessary keys. The outcomes of this form of processing are printed in designated columns on the documents. An illustration is the use of an accounting machine to post deposits and withdrawals to the personal customers' ledger.

c. Electronic Method:

This is very similar to the mechanical method, with the exception that the equipment being used in this instance is electronic and might have optional add-on peripheral devices. Payroll, stock schedule, and ledger updates are just a few of the accounting processes it can be utilized for.

Computers are used in modern times. The keyboard, card reader, optical character/mark reader, and tape reader are used to input results, and the processed results are printed or saved on auxiliary storage. Due to its quick processing, it can manage a considerable number of results. Processing jobs that are repetitive in nature are well suited to it. Enugu State Polytechnic now computes results manually, which has presented many difficulties, including:

- i. **Delay in the generation of results:** Lecturers and Instructors work round the clock to ensure that assessment results reports are prepared, but most of the time they find it difficult to cope with a large number of students as a result of this, resulting in submissions being delayed.
- ii. **Errors in manual computation:** Sometimes mistakes are made by lecturers during the computation of scores and grades of students in a particular subject, this leads to the production of inaccurate results.
- iii. **Poor Security of documents due to unauthorized access:** Printed documents are usually accessed by unauthorized personnel. More often these documents get easily misplaced by those in charge of it. Students also may have access to the result sheet and alter their scores (Nwaoha and Nwankwo, 2020).

To tackle the issues of the manual result computation method, a more efficient method, the computerized method of result computation is been proposed.

Computerized Result Processing

Computerized record keeping follows the same principles as a manual system except that computer automates the process, so it makes computation faster and more accurate. Computerized student records will enable the registrar to organize, keep and retrieve information about students' results in a much easier way. This system will provide the necessary records of tertiary institution students including their past and previous grades, the subjects that they take up, and the subject that they will be going to take up (James, 2000). Modern computation and compilation systems provide timely and useful information that produces accurate student results. Such data must be generated properly and it must be stored in a format that is easy to access and process.

Some advantages of computerized result processing:

- i. **Accuracy:** It is capable of storing and processing students' results with high speed and accuracy.
- ii. **Efficiency:** Because of the ever-increasing number of students enrolling in tertiary institutions, it is becoming progressively harder to cope with the paperwork involved in the existing system of students' assessment processing. A computerized system will make the job a lot more efficient and students will obtain their results soon after the marking of the scripts is completed.
- iii. **Retrieve ability:-** In the existing systems, information is stored in files, this information can be retrieved by searching for the file that contains it, but with the use of computers one needs to do is to punch a few keys on the keyboard or simply click the mouse and the information is retrieved.
- iv. **Safety and security:** information stored in the computer is safe from animals, insects, and intruders. Also, a password can be used to make the program assessable to only authorized persons (Nwaoha and Nwankwo, 2020).

Computerization provides security for students' academic records

Data security according to Carrie, (2009) is the practice of keeping data protected from corruption and unauthorized access. Data security is centred on maintaining privacy while safeguarding individual or corporate data. Data is the unprocessed form of information kept in our databases, network servers, and personal computers as columns and rows (Wole and Rosemary, 2007). To protect students' academic records kept on the computer, the following data security measures should be of good help.

Encryption: For both prospering networks and active home users, encryption has emerged as a crucial security component. This security measure scrambles data into unintelligible language using mathematical formulas and algorithms. It is only capable of being decoded or decrypted by the person holding the accompanying key.

Strong User Authentication: Another aspect of data security that backup solutions deal with is authentication: Without a way to back up your important data, data security would be incomplete. There is always a possibility that your data could be hacked while using a computer on a regular basis, even though it can seem secure while locked away in a machine.

Data Security Technologies: To avoid data theft, software-based security solutions encrypt the data. A malevolent application or hacker, however, can damage the data in order to render it useless or worthless.

Computerization ensures accuracy in computing results

Like any manually run systems, there are occasionally extremely small faults that, when they do happen, are simple to spot and fix. The utilization of interactive processing allows for this (Ezenma, Bala, and Nyap, 2014). You wouldn't want to discover that the overall best student's award was handed to another owing to a system fault in the examination and result computing. Cumulative results, positions, and general performance should be accurate.

Methods and Material

A systematic approach is necessary for a well-functioning, cohesive one. All system-related variables must be taken into account, whether using a bottom-up or top-down strategy. To express information and knowledge in a system's structure that is governed by a standardized set of rules and definitions, a designer employs modelling language. Graphical or textual modelling languages can be used to define the designs. Unified Modeling Language (UML), for

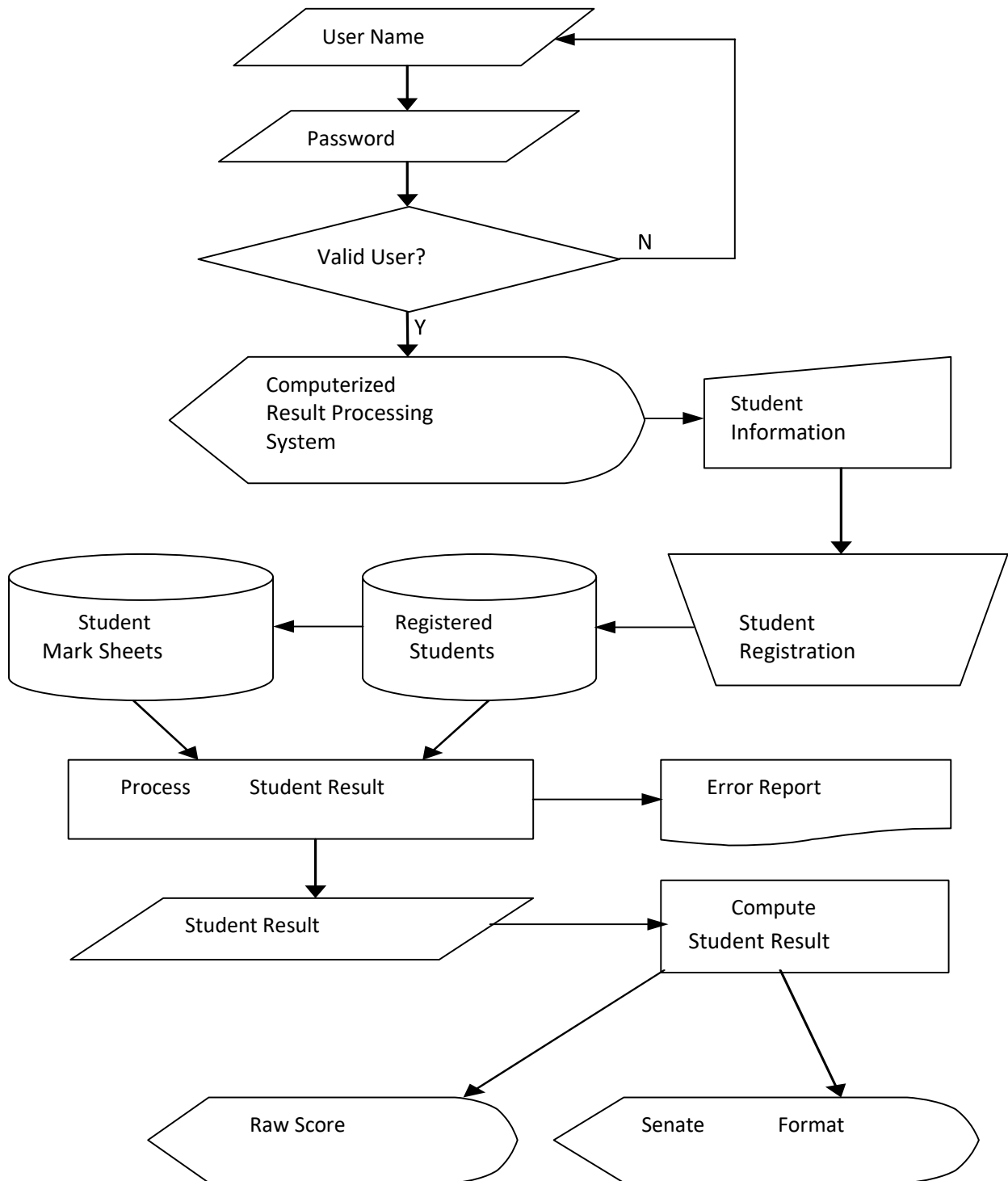
example, uses a graphical notation to describe software's structural and behavioural characteristics. b. Flowchart: An algorithm's schematic or step-by-step representation. BPMN, often known as Business Process Modeling Notation, is a language used for process modelling. Systems engineering is done using the Systems Modeling Language (SysML).

- a. Architectural design: To explain the system's viewpoints, models, behaviours, and structure.
- b. Logical design: To depict the system's inputs, outputs, and data flow. Consider ER diagrams (Entity Relationship Diagrams).
- c. Physical design is defined as a) how information is added to the system by users and returned to them by the system. b) The system's modelling and storage of the data. c) The manner in which data enters and exits the system, and the manner in which it is verified, protected, and/or altered.

A student must go through several registration procedures after being accepted. The secondary school indicated in the aforementioned areas of Nsukka and Enugu currently uses a manual system for subject registration. This adds to how time-consuming and tiresome the system is. Here, the student must visit each registration office with a form for them to sign, which can take up to two weeks to complete. The fact that these documents/forms have been signed demonstrates that the student has been registered. Both the personnel and the students engaged are under a lot of stress as a result. The registration forms are kept in a filing cabinet under the manual system. Every time a student form is required, a file cabinet search is done to find a specific student listed in the student file/result sheets. This study's discovery of a number of operational and logical issues supports the need to establish a new system.

The suggested system must be capable of being implemented during data collection utilizing the Processor Hypertext Programming Language (PHPL) and the Structural System Analysis and Designed Method (SSADM) (PHP).

Fig. 1: Proposed Student Result Processing System Architecture



It is necessary to collect accurate data and establish an inventory before performing any useful computational analysis. Each student in a class should have their name, registration number, date of birth, sex, nationality, state of origin, and religion listed on a list of all pupils (Abel and Abu 2013). This agrees with the manual method of preparing student results in Enugu state polytechnic Iwollo. It is shown in table 1a and 1b below.

Table 1a: Manual Results Computerization

OFFICE OF THE REGISTRAR							
ENUGU STATE POLYTECHNIC, IWOLLO (ESPOLY)							
OFFICIAL GRADE REPORT SHEET							
COLLEGE:	APPLIED NATURAL SCIENCE & TECHNOLOGY	COURSE TITLE:	INTRODUCTION TO SYSTEM PROGRAMMING				
DEPT. OFFERING:	COMPUTER SCIENCE	COURSE CODE:	COM 212	SIZE:	0	LEVEL:	NDII
DEPT. TAKING	COMPUTER SCIENCE	SESSION:	2021/2022	R E S U L T S U M M A R Y			
LECTURER:	MRS. MBA CHIOMA J.	SEMESTER:	FIRST	A	80-100	BC	50-59
HOD:	DR. CHIZOBA EZEAKU-EZEME	CREDIT UNITS:	2	AB	70-79	C	40-49
DEAN:		EXAM DATE:		B	60-69	F	0-39
S/NO.	NAME	REGISTRATION NUMBER	IN-COURSE 40%	EXAM 60%	SCORE 100%	FINAL GRADE	
1.	Agbo Chibuikwe Harrison	ESPOLY/CS/ND2020/0124	20	14	34	F	
2.	Anayo Ifeoma	ESPOLY/CS/ND/2020/0006	27	f	46	C	
3.	Arinze Solomon Ugonna	ESPOLY/CS/ND/2020/0046	29	20	49	C	
4.	Ajogwu Cynthia Ebube	ESPOLY/CS/ND/2020/0123	26	16	42	C	
5.	Ayogu Abel Nnamdi.	ESPOLY/CS/ND/2020/0102	22	28	50	BC	
6.	Ede Chidera Christian	ESPOLY/CS/ND/2020/0160	25	18	43	C	
7.	Ewelum Chidiogo Grace	ESPOLY/CS/ND/2020/0048	29	28	57	BC	
8.	Idogwu Cynthia Chinenye	-	22	28	50	BC	
9.	Joseph Grace Amarachi	ESPOLY/CS/ND/2020/0033	32	30	62	B	
10.	Nnamani Felicia Chichebem.	ESPOLY/CS/ND/2020/0025	24	27	51	BC	
11.	Nnamani Odinaka .Anthony	ESPOLY/CS/ND/2020/0022	16	19	35	F	
12.	Nomeh Innocent Chiagozie.	ESPOLY/CS/ND/2020/0094	33	21	54	BC	
13.	Obiora Perpetua Ifeyinwa	ESPOLY/CS/ND/2020/0011	28	22	51	BC	
14.	Obodokwe Arinze Clinton.	ESPOLY/CS/ND/2020/0101	24	7	31	F	
15.	Odi Wotachukwu Anthony.	ESPOLY/CS/ND/2020/0152	16	34	50	BC	
16.	Odo Benjamin Okenna	ESPOLY/CS/ND/2020/0051	25	21	46	C	
17.	Okafor Ruth Chiamaka	-	-	-	-	-	
18.	Okechukwu Chidubem Miracle.	ESPOLY/CS/ND/2020/0153	26	17	43	C	
19.	Okolo Kingsley Chijioke	ESPOLY/CS/ND/2020/0104	20.5	24	45	C	
20.	Ubalagu Emmanuel Chideraz .	ESPOLY/CS/ND/2020/0060	28	22	50	BC	
21.	Ugwu Favour Chisom	ESPOLY/CS/ND/2020/0093	31	35	66	B	
PART-TIME							
1.	Agu Chinasia Ruth	ESPOLY/CS/PT/ND/2020/0143	31	37	68	B	

Source: Registry, Enugu State Polytechnic, Iwollo

Table 1b: Manual Results Computerization

OFFICE OF THE REGISTRAR							
ENUGU STATE POLYTECHNIC, IWOLLO (ESPOLY)							
OFFICIAL GRADE REPORT SHEET							
COLLEGE:	APPLIED NATURAL SCIENCE & TECHNOLOGY	COURSE TITLE:	INTRODUCTION TO COMPUTER PROGRAMMING				
DEPT. OFFERING:	COMPUTER SCIENCE	COURSE CODE:	COM 113	SIZE:	0	LEVEL :	NDI
DEPT. TAKING	COMPUTER SCIENCE	SESSION:	2021/2022	R E S U L T S U M M A R Y			
LECTURER:	MRS. MBA CHIOMA J.	SEMESTER:	FIRST	A	80-100	BC	50-59
HOD:	DR. CHIZOBA EZEAKU-EZEME	CREDIT UNITS:	2	AB	70-79	C	40-49
DEAN:		EXAM DATE:	10/8/2022	B	60-69	F	0-39
S/NO.	NAME	REGISTRATION NUMBER	IN-COURSE	EXA	SCOR	FINAL	
			40%	M	E	GRAD	
				60%	100%	E	
CARRYOVER STUDENT							
1.	Anayo Ifeoma	ESPOLY/CS/ND/2020/0006	30	10	40	C	
2.	Edeh Chidera Christian	ESPOLY/CS/ND/2020/0160	34	6	40	C	
3.	Okolo Kingsley Chijioke	ESPOLY/CS/ND/2020/0104	30	21	51	BC	

Source: Registry, Enugu State Polytechnic, Iwollo

Manual Result Computation

A manual calculation system is essentially one where records are kept by hand without the aid of a computer or other automated system. Prior to the development of technology, manually calculating student outcomes was the most popular method. However, it is thought that manually calculating results have numerous drawbacks. Sometimes, the students suffer severe losses as a result of the results not being released in a timely manner. Typically, this prevents them from continuing their education or participating in competitive exams (Mohini and Amar, 2011). Eludire (2011) pointed out further flaws and emphasized that manual result computation leaves the possibility for manipulation with student records. There is a potential for tampering with student records in a manual school management system. Additionally, there is no online verification of such outcomes, and fraudulent results could be generated deliberately. This results in unhealthy behaviours, which can damage the reputation of higher education institutions where they are present. Incorrect course registration, a delay in the release of students' results, accuracy owing to laborious human calculations, retrieval issues, and a huge quantity of results for students to process are just a few of the issues related to managing student academic records.

Ezenwa et al. (2014) pointed out that manual result computation can allow for the recurrence of operations, which is another drawback. Because the same information is recorded in many sections of the test, there is a duplication of effort in the current method. Data duplication results from this, and institution administration also spends a significant amount of hard-earned money on stationery and other exam supplies. Keeping track of pupils' records is a particularly laborious task when computing results manually. Additionally, retrieving student records from handwritten registers, keeping track of records, and data reconciliation all take time and are a hindrance. According to the aforementioned, a new strategy needs to be investigated due to the enormously destructive impact of human results processing and inconsistent and other non-coherent technological ways. In order to emphasize the need for consistent, dependable, error-free, and credible result-processing activities that can produce results quickly, a thorough and well-organized electronic result-processing platform is proposed.

Fig 4: Electronic Computerized Results

S/N	Matric Number	Full Name (LASTNAME IN BLOCK LETTERS)	Course Code											Total Credit Passed		Total Credit Failed	Total Credit Registered					
			CHM 111	CSC 110	GST 111	GST 112	MTH 110	MTH 112	PHY 109	PHY 111	PHY 113	CHM 122	CSC 120	GST 121	GST 122	MTH 123	MTH 125	PHY 124				
			First Semester						Second Semester													
1	SCN0401952	Kelvin ABIEYUWA	74A	56C	53C	94A	52C	63B	74A	85A	82A	57C	63B	71A	55C	68B	60B	94A	63B	46	0	46
2	SCN0401316	Oghenede ABUMCHUKWU	74A	52C	63B	63B	52C	41E	52C	74A	41E	46D	64B	62B	44E	57C	49D	63B	52C	46	0	46
3	SCN0401167	Ahovi ALIKA	59C	79A	49D	54C	82A	69B	47D	80A	54C	54C	60B	68B	52C	65B	57C	49D	60B	46	0	46
4	SCN0401235	Owoh AUSTIN	47D	54C	49D	47D	60B	47D	69B	71A	69B	43E	60B	49D	41E	54C	46D	47D	49D	46	0	46
5	SCN0401796	Udoh BELYNDA	43E	33F	65B	47D	47D	69B	80A	58C	58C	52C	47D	47D	50C	63B	55C	47D	58C	43	3	46
6	SCN0401107	Lynda CHIDIOGO	59C	69B	59C	78A	47D	67B	77A	56C	58C	52C	80A	58C	50C	63B	55C	78A	58C	46	0	46
7	SCN0401760	Ehi CHINWE	51C	55C	46D	66B	46D	55C	66B	88A	60B	51C	58C	46D	49D	62B	54C	46D	57C	46	0	46

4	SCN0401235	Owoh AUSTIN	47D	54C	49D	47D	60B	47D	69B	71A	69B	43E	60B	49D	41E	54C	46D	47D	49D	46	0	46
5	SCN0401796	Udoh BELYNDA	43E	33F	65B	47D	47D	69B	80A	58C	58C	52C	47D	47D	50C	63B	55C	47D	58C	43	3	46
6	SCN0401107	Lynda CHIDIOGO	59C	69B	59C	78A	47D	67B	77A	56C	58C	52C	80A	58C	50C	63B	55C	78A	58C	46	0	46
7	SCN0401760	Ehi CHINWE	51C	55C	46D	66B	46D	55C	66B	88A	60B	51C	58C	46D	49D	62B	54C	46D	57C	46	0	46
8	SCN0401978	Ujunwanne ELOHO	58C	60B	26F	60B	60B	49D	60B	12F	63B	34F	49D	57C	41E	54C	46D	60B	49D	38	8	46
9	SCN0401220	Ikneye ESTHER	60B	44E	61B	54C	55C	53C	57C	75A	55C	49D	53C	64B	47D	60B	52C	44E	55C	46	0	46
10	SCN0401405	Taiwo FAVOUR	64B	62B	59C	71A	83A	63B	50C	50C	77A	57C	74A	82A	55C	68B	60B	71A	63B	46	0	46
11	SCN0401912	Gladys GLORIA	41E	38C	47D	67B	56C	41E	55C	58C	44E	41E	45D	47D	44E	52C	44E	67B	47D	46	0	46
12	SCN0401234	Wesley GODWIN	64B	48D	60B	55C	44E	77A	66B	44E	44E	49D	66B	63B	47D	60B	52C	55C	55C	46	0	46
13	SCN0401253	Obiekwe HAPPINESS	81A	82A	43E	70A	61B	81A	44E	50C	72A	44E	50C	50C	42E	55C	47D	70A	50C	46	0	46
14	SCN0401886	Ayemere IKHINE	68B	70A	64B	75A	70A	48D	79A	81A	80A	53C	46D	49D	51C	64B	56C	75A	59C	46	0	46
15	SCN0401112	Grace ISABELLA	58C	71A	80A	71A	49D	72A	47D	60B	50C	54C	49D	49D	52C	65B	57C	71A	60B	46	0	46
16	SCN0401202	Okojie MADU	70A	71A	65B	80A	60B	49D	60B	60B	60B	54C	58C	60B	52C	65B	57C	80A	60B	46	0	46
17	SCN0401596	Chinedu MALTIDA	45D	61B	71A	83A	30F	52C	63B	41E	37F	46D	41E	60B	44E	57C	49D	83A	52C	40	6	46
18	SCN0401284	Onochie NOSAKHARE	89A	67B	55C	67B	17F	34F	54C	56C	79A	50C	78A	45D	48D	61B	53C	34F	56C	37	9	46
19	SCN0401083	Amamat OBOH	77A	80A	59C	89A	47D	58C	78A	70A	80A	52C	58C	58C	50C	63B	55C	89A	58C	46	0	46
20	SCN0401526	Enajewhe OGEDEGBE	47D	61B	36F	69B	49D	60B	60B	71A	61B	54C	79A	48D	52C	63B	57C	69B	30F	40	6	46
21	SCN0401384	Ukofi OJEMU	56C	67B	73A	66B	45D	56C	78A	67B	78A	50C	78A	67B	48D	66B	53C	66B	56C	46	0	46
22	SCN0401812	Zaha OMORUYI	64B	20F	60B	44E	75A	44E	44E	53C	46D	49D	30F	45D	47D	60B	33F	44E	55C	37	9	46
23	SCN0401937	Paschal ONASA	75A	62B	44E	62B	53C	42E	53C	43E	75A	47D	42E	53C	42E	58C	50C	62B	53C	46	0	46
24	SCN0401187	Ekene OSAKPAMWAN	89A	57C	78A	68B	57C	46D	66B	79A	52C	51C	46D	55C	49D	62B	54C	47D	57C	46	0	46
25	SCN0401586	Abraham OSAYANDE	60B	52C	45D	60B	40E	62B	70A	56C	82A	45D	40E	60B	43E	56C	48D	51C	51C	46	0	46
26	SCN0401461	Ifok PHILIP	56C	88A	52C	58C	46D	57C	46D	58C	57C	51C	68B	46D	49D	62B	54C	58C	57C	46	0	46
27	SCN0401984	Frank STANLEY	44E	57C	60B	46D	68B	68B	57C	58C	57C	51C	79A	46D	49D	62B	54C	46D	57C	46	0	46
28	SCN0401333	Osagie SUNDAY	72A	62B	86A	42E	84A	64B	62B	72A	86A	47D	83A	53C	45D	58C	50C	42E	53C	46	0	46
29	SCN0401534	Agbah TANIMOLA	52C	76A	59C	53C	54C	65B	41E	74A	48D	48D	65B	54C	46D	59C	51C	42E	54C	46	0	46
30	SCN0401798	Obokparovictoria	51C	40E	54C	51C	40E	40E	51C	71A	51C	45D	51C	62B	43E	56C	48D	51C	51C	46	0	46

Electronic Result Computation

Over the previous few decades, technology has made a significant leap. The general method of computing has altered from a manual system to an automated or computerized system as a result of the ongoing advancement in technology. People, corporations, and organizations are using technology more and more as they carry out daily tasks using contemporary tools and digital technologies. Because of the rapid and expedited large turnover made

possible by the use of this technology up till now, the numerous business operations carried out by the decreased workforce have seen a marked decline in errors. Utilizing an electronic or automated approach to compute results can help to reduce stress, errors, and processing time for results. Amadin and Ukaoha's (2014) research provided significant support for electronic result computation and suggested that it might provide the following advantages:

- i. Time-saving and less demanding tasks;
- ii. Ordered manipulation steps with interactive graphics.
- iii. Managing vast volumes of student records easily and efficiently

Conclusion

The study was based on the design and implementation of computerized result processing at Enugu State Polytechnic, Iwollo. The electronic method of computerizing student results was successfully developed, tested, and found to be working as expected. It is capable of storing and processing students' results with high speed and accuracy and presenting output in certain required forms. It has some qualities such as a reduction in the cost of the processing; reduction in time spent in computing students' first and second-semester results, generating position in class for each student, and elimination of duplication of effort which makes it overshadow the manual system of students record keeping. Based on the study, we concluded that electronic computerized results are far better than manual computerization of student results at Enugu state polytechnic Iwollo.

Recommendation

The management should endeavour to implement with immediate effect the use of electronic computation of student results. We recommended the following;

- a. The manual method of student result computation should not be allowed in the higher institution in Nigeria.
- b. The electronic method of student result computation should be used in all to compute and process student results at all costs.

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