

E voting – 3941
words – college



Purpose and Background of the Study Computer is indeed one of great technological inventions that trigger future change. Computers nowadays have infiltrated every aspect of the society. In the Philippines, the students use the technology easily by using the computer or any gadgets. The election system is modern.

By using a system, many people find it easily to vote because they will no longer vote manually. Computerized election system is the best way to use rather than the manual election. Among the different biometric techniques, facial recognition may not be the most reliable and efficient. However, one key advantage is that it does not require aid (or consent) from the test subject.

Properly designed systems installed in airports, multiplexes, and other public places can identify individuals among the crowd. Other biometrics like fingerprints, iris scans, and speech recognition cannot perform this kind of mass identification. However, questions have been raised on the effectiveness of facial recognition software in cases of railway and airport security. Facial recognition systems are also beginning to be incorporated into unlocking mobile devices.

The android market is working with facial recognition and integrating it into their cell phones. Face recognition has created an application called Visidon Applock. This application allows you to put a facial recognition lock on any applications. This allows increasing the safety of the private applications and content. Facial recognition technology is already implemented in the iPhoto application for Macintosh. Also, in addition to biometric usages,

modern digital cameras often incorporate a facial detection system that allows the camera to focus and measure exposure on the face of the subject; thus, guaranteeing a focused portrait of the person being photographed.

Some cameras, in addition, incorporate a smile shutter, or take automatically a second picture if someone closes his/her eyes during exposure. Because of certain limitations of fingerprint recognition systems, Facial recognition systems are finding market penetration as Attendance monitoring alternatives. The Philippines uses the Automated Elections System (AES), which promises a quicker count and supposedly less fraudulent election. The counting, the Commission on Elections says, would be so quick and there would be no time to cheat. The automated system being eyed for every election, should have been a welcome change from the previous manual elections' interminable counting and tallying marked by violent incidents of ballot box snatching and reports of dagdag-bawas (vote padding and vote shaving).

But so far, the welcoming note is lost among Filipino voters who are skeptical not because the system is new, as the Comelec keeps saying, but because the Comelec's preparations leave so much to be desired. This early, legislators are already talking of possible failure of elections. The Comelec's ineptness " especially in providing the teachers with voters' education and basic knowledge regarding poll automation is already causing panic among the teachers and the voting public in general," said Prof. MyfelPaluga, regional coordinator of ACT Teachers' Party. In a voters' education project of the Ecumenical Institute for Labor Education and Research (EILER) and Computer Professionals' Union (CPU), they have identified at least 32

vulnerabilities in the current preparation of AES “ that can actually make cheating easier and less apparent than in manual processes. MBHS (formerly Pedro E.

Diaz High school Annex) is located in the former place where Buli Elementary School is situated. Due to the increase of enrolment and the presence of flood problems during the rainy seasons, it was moved to another place. After more than a decade, the idle lot became useful when the City government of Muntinlupa through the incessant support of Hon. Mayor Jaime R. Fresnedi, City Council and Schools Superintendent Dr. Alma Bella Bautista decided to build a secondary school in the area to accommodate school populace from the three equally important barangays of the city namely: Cupang, Buli and Sucat.

The secondary school at the center of these three barangays will facilitate and will give convenience to the students and parents in the locality since they do not need to travel in order to avail secondary school education The school finally became independent from its mother school, which was PEDHS - Main in alabang through the city ordinance initiated by Atty. Raul R. Corro. Thus, it became MBHS from Pedhs Annex.

As a business high school, it offers curriculum focused on preparing its graduates into collegiate degree. MBHS currently deploys manual election where the students are given ballots to vote for their candidates. The problems with their existing system are: results are not updated, discrepancies in the number of votes usually happen, election results are

misplaced, and other are lost. Lastly; human errors and irregularities take place.

Because of their problems, the researchers come up with the idea that will improve the normal canvassing of annual elections of Supreme Student Government (SSG) in MBHS. Theoretical Framework Literature

Foreign According to BeVoting-Study of Electronic Voting Systems, Estonia is often referred to as E-stonia since the country has always included the development of e-government into its policy. With this system, the country is the first to use Internet voting in an election. The Internet is available to over 50% of the Estonian households, 40% of the households have a computer at home, and 81% of home computers are connected to the Internet.

Since a large part of the Estonian population lives in urban areas, Internet access is widely available. The government continues to promote the accessibility and use of the Internet in rural areas, through projects like 'Village road' (Madise, 2006: 6). The enabling factor in the whole eVoting project is the electronic ID card, which is widely spread. It allows for remote identification and signing of documents, and it plays a critical role in the Internet voting procedure. The aim of this overview is to review the traditional electoral system of the country, and discuss the electronic voting system that is currently being used ([http://www. ibz.](http://www.ibz.)

rrn). International Experience with E-Voting of Jordi Barrat i Esteve, Ben Goldsmith, and John Turner. This assessment report on International Experiences with E-Voting has been conducted as part of a larger assessment of the Norway E-Vote Project, a pilot of internet voting during the

September 2011 local government elections. This report represents one of seven assessment topics conducted on behalf of the Ministry for Local Government and Rural Development in order to analyze the recent pilot, and determine whether a broader adoption of internet voting would be suitable for future Norwegian elections U. S.

in 1975. (<http://www.fes.org>) Introducing Electronic Voting: Essential Consideration, Technology Upgrades electronic voting in polling stations is in place in some of the world's largest democracies.

Internet voting is used in some, initially mainly small and historically conflict-free countries. Many countries are currently considering introducing e-voting systems with the aim of improving various aspects of the electoral process. E-voting is often seen as a tool for advancing democracy, building trust in electoral management, adding credibility to election results and increasing the overall efficiency of the electoral process. The technology is evolving fast and election managers, observers, international organizations, vendors and standardization bodies are continuously updating their methodologies and approaches. (<http://www.>

idea. int) Local In Palawan Polytechnic College Inc. is a crucial task during the Election period every semester because it is manual and time consuming activity. The manual voting system requires diversity of information such as Administrator, Electoral Board, and Voters and censorious though the institution is upgrading its facilities along the power of technology; like the most in demand gadget in this time, the computers. But some of the office works are still being done manually like the voting system during election.

Create a good electronic voting system for Palawan Polytechnic College Inc. (2010, 09). E-Voting System. (<http://www.studymode.com>)

According to Polytechnic University of the Philippines - Santa Rosa Campus Results could be attained even right after the voting reducing the time to a mere fraction compared to the time it takes if the voting is done manually. It also increases the level of the voting experience because of multimedia enhancements. The present generation, people became more literate especially with the use of computers. Technologies emerged to introduce many different ways of advancement.

Computer machines are of these. Computers now in existence are the most powerful machines than can do anything people's lives. (<http://www.studymode.com>) Related Studies Local According to " Restudying the Filipino Voter Today", In 1995 the Institute for Political and Electoral Reform conducted a study on the voting behavior of the Filipino electorate. The study was conducted in December 1995 and was completed by October 1996.

Last July 2003, it undertook an eight-month update research of this same study. The 1995 study identified four determinants in which the Filipino voter chooses a candidate. The primary factor in choosing was based on the candidate's popularity. Findings show that the voters tend to easily identify with the candidate's popularity and public image. The next factor is the endorsement of traditional networks and organizations, which includes the family, church and ward leaders. The third factor that the voters consider in

choosing a candidate is the characteristics that can be of benefit to the voter.

The least consideration for the voters is the party program. (<http://www.iper.org.ph>) As early as 1992, the Commission on Elections (Comelec) has identified the modernization of the electoral process as a goal of what was called Operation Modex (Modex for “ Modernization and Excellence”). In the following year, Comelec commissioned foreign consultants to conduct studies on modernizing elections in the Philippines.

Several Comelec officials also travelled to the United States to inspect the voting system there. A US company was chosen to supply canvassing equipment. No contract between the government and the supplier could be signed, however, pending the passage of a law on the use of a new election system. Meanwhile, Comelec conducted public demonstrations of the new system using two units on loan from the supplier. (<http://www.filipinaslibrary.org.ph>)

Foreign Based on “ The Belgian E-Voting System” of Mr. Carlos Vegas Gonzales, the system is based on a proposal develop, at the request of the government, by a consortium of Belgian universities and presented in the comparative study on e-voting. The new voting system²³ was developed by a Smartmatic-led consortium that also includes Steria and Wincor-Nixdorf.

Specifically customized for Belgium, it is based on the system proposed in the aforementioned BeVoting study. This new prototype seems to be a combination of the first two systems proposed in the study (“ improved paper-based voting” and “ direct optical scanning”) and consists of a

<https://assignbuster.com/e-voting-3941-words-college/>

combination of a touch-based electronic voting machine (17" touch screen SAES3350), a barcode printer, a scanner, and a ballot box (e-urn). As with the current system, it is the president of the polling station that activates the voting machine with a USB key booting up the equipment. The voting procedure starts²⁴ with the verification of the identity of the voter by the polling station staff after which the voter is given a token (smartcard) which will allow him or her to activate the voting machine in the voting booth.

(<http://www.e-voting.cc>) According to "A Novel Design of Electronic Voting System Using Fingerprint" of D. Ashok Kumar and T. UmmalSaribaBegum, The heart of democracy is voting. The heart of voting is trust that each vote is recorded and tallied with accuracy and impartiality.

The accuracy and impartiality are tallied in high rate with biometric system. Among these biometric signs, fingerprint has been researched the longest period of time, and shows the most promising future in real-world applications. Because of their uniqueness and consistency over time, fingerprints have been used for identification over time. However, because of the complex distortions among the different impression of the same finger in real life, fingerprint recognition is still a challenging problem. Hence in this study, the authors are interested in designing and analyzing the Electronic Voting System based on the fingerprint minutiae which is the core in current modern approach for fingerprint analysis.

The new design is analyzed by conducting pilot election among a class of students for selecting their representative. Various analysis predicted shows that the proposed electronic voting system resolves many issues of the

current system with the help of biometric technology. (<http://ijitce.co.uk>)

Based on the study of Procedural Security in Electronic Voting of Alexandros Xenakis and Prof. Ann Macintosh, this paper that the researchers explore the security related procedures that are required for the successful development and deployment of electronic voting in legally-binding government elections.

Initiating the research on the theoretical basis which justifies the necessity for security in deploying electronic elections, the researchers further explore the question of who and what should be safeguarded in the course of the e-electoral process. Based on the research study, they suggest that security in e-voting has two aspects: the technical and the procedural one. It is recognized that from the technical perspective further research is necessary to ensure full and complete voter authentication and voting security to enable an e-election. However, the researchers do argue that e-voting security can also be enhanced through providing procedural security measures at specific points in the e-electoral process. (<http://citeseerx.ist.psu.edu>)

Objective of the study / Statement of the Problem The Muntinlupa Business High School is currently using Manual Election System, which gives them the following problem: 1. Slow process of canvassing 2. Unsecured canvassing The Computerized Election System for MBHS aims to change the existing manual system specifically: 1. To speed up the process in canvassing 2.

To protect the canvass 3. To eradicate irregularities during election

Significance of the Study School. The proposed system will help the school in

canvassing the election return and to ease the process of election of Supreme Student Government. Students.

Quick voting for the Supreme Student Government Candidates Supreme Student Government Secured canvass of election returns, prevention of cheating, reduce errors Scope and Delimitation The proposal will maintain the major principle of e-voting; which is of being similar to regular voting system. It ensures single vote for a single person and the security of the process of collecting votes will be achieved. The students will go to an assigned laboratory where the election is being conducted. They will cast their votes by clicking the buttons in the system. The system can generate the results whenever they are needed.

The system is specifically designed for the MBHS. The system can only be used for the SSG Election. Election of other clubs is not included in the system. Definition of Terms Operational Terms Computerized - a process or type of work means to arrange for a lot of the work to be done in computer. Election - is a process in which people vote to choose a person or group of people to hold an official position.

System - is a way of working, organizing, or doing something which follows a fixed plan or set of rules. Face Recognition - the ability of a computer to scan, store, and recognize human faces for use in identifying people. MBHS - Muntinlupa Business High School. Lan-Based - refers to the application of services that are acquired to a network. Technical Terms Casting of Votes - is a vote given to the presiding officer of a council or legislative body to resolve a deadlock and which can be exercised only when such a deadlock

exists. Examples of officers who hold casting votes are the Speaker of the British House of Commons and the Vice President of the United States.

Election Return - is a writ issued by the government ordering the holding of a special election for a political office. Canvassing -is the systematic initiation of direct contact with a target group of individuals commonly used during political campaigns Chapter II RESEARCH METHODOLOGY Research Designed The developmental research design will be used in designing the system. A developmental research is a true experimental design which is regarded as the most accurate form of experimental research. It tries to prove or disprove a hypothesis mathematically using statistical analysis. Construct a Theoretical Framework Develop System Architecture Analyze and Design the System Build the (Prototype) System Observe & Evaluate the System Construct a conceptual framework.

Researchers should justify the significance of the research questions pursued. An ideal research problem is one that is new, creative, and important in the field. When the proposed solution of the research problem cannot be proven mathematically and tested empirically, or if it proposes a new way of doing things, researchers may elect to develop system to demonstrate the validity of the solution based on the suggested new methods, techniques, or design. In constructing the theoretical framework, the researchers used the Internet and books to research on the topics that will support the proposed system about computerized election. Develop a system architecture.

A system architecture provides a road map for the system's building process, and defines the structural relationships and dynamic interactions among system components. In the developmental type of research, researchers must identify the constraints imposed by the environment, state the objectives of the development efforts, and define the functionalities of the resulting system to achieve the stated objectives. In developing the system architecture, the researchers made a blueprint to see the layout and the design of the system. Analyze and design the system.

A research project's requirements may be driven by new functionalities envisioned by the researcher, or may be determined partially by the research sponsor's request. The term, design is one of the most important parts of a system development process which is rooted in engineering. Build the system. Building a prototype system is an engineering concept.

Researchers in system development often conduct their research by building a prototype system. In order to test the system in an arial-world setting, an effort to further develop a prototype into a product and the transfer of the product into an organization is necessary.

Experiment, observe, and evaluate the system. Once the system is built, researchers can test its performance and usability as stated in the requirement definition phase, as well as observe its impacts on individuals, groups, or organizations. The test results should be interpreted and evaluated based on the conceptual framework and the requirements of the system are defined at the earlier stages. Setting of the Study The researchers will conduct the study at Muntinlupa Business High School.

The said school is located at Espeleta St. BuliMuntinlupa City. The school has 2 buildings with 44 rooms including the guidance, computer laboratory, administrative offices, clinic and 5 technical rooms. Subject of the Study The respondents of this study are the students who are enrolled in Muntinlupa Business High School year 2013-2014. The respondents will evaluate and validate the system to get the information for the evaluation of the system.

The respondents of this study are the constituents of Muntinlupa Business High School

Classifications	Number of population	Number of Respondents	Percent
Grade VII	1212	29	30%
Grade VIII	1108	27	28%
3rd Year	968	24	24%
4th Year	738	18	18%
Total	4026	98	100%

Sources of Data Survey the researches will be using this in order for the respondents to evaluate the propose system Survey was done by creating sets of question that were distributed to the target respondents who were the students of the school. Interview was also used to actually gather raw information and reliable data direct from the subjects. The researchers interviewed the school principal and the president of the SSG. Research the developers used the internet to look for information and topic related in the topic. Observation the researchers observe the facilities on how they conduct yearly election of MBHS. Procedure of the study System Development Life Cycle The system's development life cycle (SDLC) is a conceptual model used in project management that describes the stages involved in an information system development project from system planning study through maintenance of the completed application.

Phase 1 System Planning Phase 5 System Maintenance Phase 4 System Implementation Phase 3 System Design Phase 2 System Analysis Procedure

of the Study System Planning The researchers also conducted observation of the area where the system was developed and the people who would benefit from it. The researchers also gathered information that might help the existing system of the school. The proposed system is about the Computerized Election System. The Supreme Student Government (SSG) department will benefit from this system.

System Analysis The system was analyzed to clearly understand its flow and its functionalities. It determined also where the problem was. The researchers came up with the best solution by analyzing the problem of the existing system. The system is very useful to the users because it is easy to use for voting and canvassing that makes the transaction quite fast.

System Design The researchers designed this system for the users. The design functionalities and operations are described in detail, including screen layout, process diagrams and other documents. The platform of the system described the design of the system. The proposed system covered the prescription monitoring of the election.

The image and the details of the candidates are stored. System Implementation Implementation is the second to the last part of the research design. This is where the system was introduced to the administrator of the school. Trainings and seminars were conducted for the users to be fully aware as to how the system works. System Maintenance The last part is maintenance where the system needs to be maintained in order to achieve its effectiveness and its reliability.

New changes will be implemented which will require system update. Any errors that will occur in the system have to be fixed immediately. The Administration can call the researchers to explain how to update the use and maintain the proposed system. Project Design Hardware and Software Requirements The Hardware Requirements * Monitor * At least 1GB RAM or higher At least Pentium 4 or higher * Mouse * Keyboard * Face Detector The Software Requirements * Visual Basic 6.

0 * At least Windows XP or Windows 7 OS Data Flow Diagram Administrator Students Student no. / Face recognition Updated voting report 0 Voting System with Face Recognition Permit to access voting system request for voting report For Face Recognition: User 1. 0 Image capturing Student 1. 1 Face detection 1. 2 Feature extraction Stored face images 1. 3 Template comparison database Load 1.

4 Declare matches Student Lower Level: Try again please Face recognition Student No. 1. 0 Log in process Invalid Give alert Valid Log in Log in Valid Students Students found 2. 0 Voting process Submit to database Voting report Log in 3. 0 Student processes 3.

1 Update of records Add, edit, delete Student data voting report 4. 0 Viewing of reports 4. 1 Tally 4. 2 Final canvass 4.

3 Final report Diagram 0 3. 0 Student processes 1. 0 Log in process Add, edit, delete Log out Verify password 1 Log in 3 student data 4. 0 Viewing of report 2. 0 Voting process Voting Log out Least of candidates 2 voting report tally/canvass Send data records Permit to enter system Request to Access

systemStudents Administrator Statistical Treatment The researchers used the following techniques in order to interpret and analyze data gathered.

1. Percentage Formula - is a way of expressing a number of a fraction.

Formula: $P = \frac{f}{W} \times 100$ Where P= computed percentage F= part of the total population W= total population 100= constants

2. Slovene's Formula - this is the formula that is used to determine the ideal sample size of the population.

Formula: $n = \frac{w}{1 + Ne^2}$ Where n= sample size N= total no.

of population e= marginal error (10%) 1- Constants

3. Lickert's Scale - is a psychometric scale commonly involved in research that employs

questionnaires. This is used to measure respondents attitude being the

extent which they agree or disagree with a particular question or statement.

Sample: Range WeightEquivalentCode 4. 51-5. 00 5Strongly AgreeSA 3.

51-4. 50 4AgreeA 2. 51-3. 50 3UndecidedU 1. 51-2. 50 2DisagreeD 1.

00-1. 50 1Strongly DisagreeSD 4. Weighted Mean - is the formula used to

compute weighted arithmetic mean. This is the approach to determine the

opinion of the respondents. 5. T-test - is an inferential statistics test that

determines if there is a significant difference between the means of the two data sets.