**QUEZON CITY UNIVERSITY**

**673 Quirino Highway Novaliches, Quezon City**

**“LEARNING WEB APPLICATION”**

**A Project Presented to the**

**Faculty of**

**College of Computer Science and Information Technology**

**In Partial Fulfillment of the Requirements for the Subject**

**SE101 - Software Engineering**

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Lastly, we would like to express our greatest appreciation for the Parents who consider and understand. We would also like to express our gratitude for helping us through financial support needed for the proposal. We are forever indebted to our parents for giving us the opportunities and experiences that have made us who we are, and helped us discover what we are capable of.

**DEDICATION**

To God, almighty my creator, my strong pillar, our source of inspiration, wisdom, knowledge and understanding

To our parents, even though they are strict, we thank them for the love and concerns, for believing us, for the guidance, for the motivation and encouragement to continue this study.

To our teachers, we dedicate this study to all of you. This is the evidence that all of your knowledge that you’ve shared to us impacts our life and we thank them for the guidance and for giving directions to make this study possible.

To the user of learning application, we make this study to provide creative learning materials by using this application to gain knowledge and for you to enjoy. It would not be possible without you; we were inspired by you.

**ABSTRACT**

*(This part contains summary of your study, every Chapter’s contents. Create this at the end of your project development.)*

The recipient of this application will be Burgos National Highschool. Burgos National High School is the response to the painstaking sacrifice of Burgos residents and nearby Barangay Maly of San Mateo who had been clamoring for a barangay high school which could ease the lives of students and parents as well where they can reach by walking instead of the tiring every day journey to General Licerio Geronimo Memorial National High School, the lone public school in Montalban since 1990.

Humans have grown in the recent decades, advancements in technology have rapidly improved, and our dependency and need for it has also increased, whether for good and bad. These changes have occurred throughout the years, a new generation is born, one that has been exposed to these new advancements since birth, and the effects it is causing on students is something we have noticed, as this is the first generation to experience these changes. Children growing up in the modern world of today would rather stay inside and go online, watch television, or play video games. Technology and modern society have created lifestyle changes that are harmful to their well-being and as a student.

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**CHAPTER I**

**BACKGROUND OF THE PROJECT**

**Introduction**

The recipient of this project will be the Burgos National High School, located in Daang Bakal ST. Burgos, Rodriguez, Rizal 1860. Burgos National High School started in the year of 2002 up until now in the present, Burgos National High School (BNHS) is a public secondary school located in the municipality of Burgos, Pangasinan and duly recognized by the Department of Education (DepEd). With the new K-12 basic education program, they provide Junior and Senior High School. It offers Academic track such as General Academic Strand (GAS) as well as Technical-Vocational Livelihood (TVL) track specializes in Information and Communication Technology (ICT) strand, Home Economics (HE) strand and Industrial Arts (I.A) strand for its senior high school program.

**Background of the Project**

Humans have grown in the recent decades, advancements in technology have rapidly improved, and our dependency and need for it has also increased, whether for good and bad. These changes have occurred throughout the years, a new generation is born, one that has been exposed to these new advancements since birth, and the effects it is causing on students is something we have noticed, as this is the first generation to experience these changes. Children growing up in the modern world of today would rather stay inside and go online, watch television, or play video games. Technology and modern society have created lifestyle changes that are harmful to their well-being and as a student.

But looking at the bright side of the modern world, Apps are making our lives a lot more fun and easier. Because of this the proponents decided to create learning apps for students, which assist them in the process of learning new and interesting things. Educational & E Learning apps are fast emerging as potent tools of learning for preschoolers as well as junior school students. In a recent survey, it has been seen that educational apps are highly sought after among kids between 5 to 10 years of age. In fact, not just the parents but also the junior-level teachers are encouraging children to use online learning apps to enhance their skills as well as overall competence level. Needless to say, the use of online learning applications has grown immensely over the last few years.

Online education, as a matter of fact, is a fast-growing trend which people all across the globe are embracing with open arms. They use technology to learn new things and to teach children, especially now that our country is forced to use online education as a mode of learning.

The proponents think that the application should be more entertaining and rewarding. The system’s interface should be easy to navigate and every second of the users spending time in the application will be rewarded with ranks, perks, reward and users can share it to social platforms to promote competitiveness among friends, classmates and family.

Our system will offer an application that is eye catching and easy to use and designs that will attract children, students or casual users and the system can offer entertainment while learning with a simple user interface that is easy to navigate.

**Statement of Objectives**

**General Objective**

The main objectives of the proponents are to provide creative learning materials for students, kids and casual user and help them to develop needed and academic skills, to provide as a reviewer for different students and build alternative ways of studying while enjoying your time doing it.

**Specific Objectives**

1. To develop an application that will help students explore academic skills and new knowledge in the compulsory core subjects.
2. To design an application that helps students and other learners to optimize their time in studying.
3. To develop an application that can provide both the lesson and evaluation through quizzes from students.
4. To develop an application that can store the evaluation of students.
5. To design an application that can help to solve some of student’s problems from financially to absentees.

6. To evaluate the proposed system in terms of security, usability and efficiency

**Scope and Delimitations of the Project**

**Scope**

Compiled lessons

The proponents will compile all the lesson and quizzes given by the teachers in this application.

Optimizing time

As soon as the user finish the provider lesson an evaluation in the form of quiz based on the lesson will appear. After they finish this evaluation the score that the user get will be posted in the database and inside their account.

Solve some academic problems

This application is flexible and you can use while in your home, computer café, or everywhere as long as you can access the web application.

Maintenance

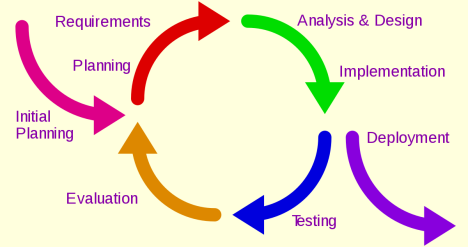
The proponents will update, fix bugs if needed to ensures the integrity of the system. Also, the proponent will train the admin of this application on how to update lessons and quizzes inside the application

**Limitations|Delimitations**

*(This part contains the things that your system* ***cannot******perform or do*** *in relation to the transactions or processes in the company.)*

* The developers exclude the use of artificial intelligence.
* The developers exclude the grading system.

**Methodology**

****

Iterative Model

We, the developers, will use the Iterative model in developing our system. As the system aims to provide an interactive learning experience while also providing an engagement to the users, we would like to develop a system and also improve it further as we test it and gain new ideas on how to deliver the targeted objectives. The developers will make a basic version of the program and test it numerous times to identify the weaknesses and gaps in deploying the planned features. As we develop further, we would also like to apply modern engagement techniques to the system.

Initial Planning:

The first part of the development process, this is where the proponents decide what to develop and whether it is feasible or not.

Planning:

This part is where the proponents gather related documents, outlining the scope and limitations of the project and creating a timeline for the first iterative cycle.

Requirements:

In this stage the proponents meet costumers or prospective customers, analyzing requirements and features that are in demand. In this phase research will do the most work, the people involved in the development of the system should study and find out what kind of content should be included.

Analysis & Design:

This phase the proponents will develop a variety of project designs ranging from sketches, flowcharts, prototypes, etc. This process involves the interplay between design and business strategy that the client or stakeholders can choose from and achieve the desired project goal.

Implementation:

The implementation phase involves putting the project plan into action. It's here that the project manager will coordinate and direct project resources to meet the objectives of the project plan. The chosen designs will be tested before the proponents can integrate it to the complete system.

Testing:

Testing can never completely identify all the defects within software. Instead, it furnishes a criticism or comparison that compares the state and behavior of the product against oracles — principles or mechanisms by which someone might recognize a problem. The proponents will test the system from design to the functionality of each component and finally test the complete integrated system that is necessary to detect software failures so that defects may be discovered and corrected.

Evaluation:

In this phase, after the product deployment, an evaluation phase is performed to check the behavior and validity of the developed product. And if there are any errors found then the process starts again from the planning phase.

Deployment:

When the system meets approval and is ready to go live, the proponents will deploy it to the production environment and assist with the organization’s transition to the new system. Systems evolve after deployment. We will continue to make improvements and changes to your systems as needed.

**Significance of the Project**

The Result of this project will be a great benefit to the following members of educational system:

Burgos National Highschool: This application will help the school of Burgos National Highschool, the proponent believe that this application will reduce the workloads and promote organize learning.

Students: One of the sole purposes of this application is to help students and the proponents believe that this application will solve some of student’s problem in their academic life.

Teachers: Learning Application can help to reduce the workloads of the teacher and this application can also serve as reviewing alternative for students.

Proponents: This study will provide them self-fulfillment as well as new knowledge. This project proposal will help and encourage the proponents to be more innovative and creative in their future endeavors.

Future Researcher: This project proposal can be used as a reference for future researchers in the field of making a system.

**Definition of Terms**

**Word.** Definition from the dictionary or reference. Your operational definition here.

**CHAPTER II**

**REVIEW OF RELATED LITERATURE, STUDIES AND SYSTEMS**

**Foreign Literature, Studies and Systems**

According to Bernard, who builds on Graham’s definition, blended learning can be defined as “the combination of instruction from two historically separate models of teaching and learning traditional F2F learning systems and distributed learning systems” In some cases, blended learning is seen as the more effective counterpart to the other two formats used separately characterized as F2F and online learning being “optimally integrated” or combining their “benefits” Moreover, several studies seem to agree that blended learning is definable according to the relative time spent on respectively online and F2F instruction in courses.

According to Barbour and Reeves, a more cautious conclusion would be that we may expect to find a relationship between outcomes from online distance learning programs and the propensity of students for self-regulated learning, rather than the conclusion that this capacity is a precondition of success. Kauffmann notes that students with the capacity for self-regulated learning tend to achieve better outcomes from online courses. This result is not surprising, given that in online learning more responsibility is placed on the learner.

According to Hassan Abuhassna online learning platforms potentially increase student engagement and interactivity, thus contributing toward enhancing students’ satisfaction with distance learning. The main aim of this research is to investigate the efficacy of an interventional online module based on Moore transactional distance theory on students’ learning autonomy and satisfaction regarding the utilization of distance learning.

According to M. AL-Rahmi E-learning is the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services, as well as remote exchange and collaboration”. Several theoretical models are used in related literature to evaluate individuals’ satisfaction with e-learning and a lack of models to evaluate usefulness. In addition, there is a lack of models that have researched understanding using e-learning and how it affects learning performance in Malaysian higher education. Thus, this research focuses on aspects of e-learning in Malaysian higher education by including self-efficacy, the content of e-learning, students’ satisfaction, perceived usefulness and the intention to use e-learning in light of previous related literature

According to Dawadi, in low-income countries such as Nepal, online learning is likely to increase the already existing inequalities because there are big gaps among its citizenry in terms of their socio-economic and education/literacy background. In the advent of COVID-19, the digital divide and the uneven access to e-learning and e-resources will increase the gaps even further by widening the inequalities between the advantaged and disadvantaged children. Unlike online learning, the classroom learning method is more real, and students have an opportunity to debate, deliberate, and discuss with their class teachers and friends. Therefore, while remote learning may sound as an alternative to face-to-face learning, it created a lot of challenges for students and academics.

Andersen claims that the feedback function in these mobile apps is limited. Although some evidence exists based on case studies of the effectiveness of mobile phones and their apps on the enhancement of foreign language learning, there is still a need for further research in this area. Therefore, the author of this study attempts to show how smartphones can be useful in university students’ performance if the teaching and learning processes are purposefully designed and tailored-made. The purpose of this pilot study is to illustrate that foreign language learning supported by a personalized smartphone app can be effective in the enhancement of university students’ performance by implementing smartphone app learning in a formative assessment.

Jacqueline Wong's evaluation of 35 papers on online learning investigates the relationship between online learning and self-regulated learning. The study emphasizes the importance of self-regulated learning aids, such as the use of prompts or feedback, in fostering the creation and deployment of self-regulated learning techniques, which leads to improved accomplishment in online learning: In online learning environments where the instructor presence is low, learners have to make the decisions regarding when to study or how to approach the study materials.

Al-Azawei said that to deal with rapid advances in technology, educational methods, approaches, and strategies have been updated. The integration of technology in many aspects of life has led to the creation of various online platforms by technical firms.

According to Al-Salman, online education makes education more student-centered, with students participating in the learning process and professors serving as supervisors and mentors

In addition of EasyLMS, the majority of global institutions use synchronous and asynchronous online teaching methods: synchronous refers to faculty and students meeting at a pre-determined time for interactive learning classes, whereas asynchronous refers to the faculty giving the course without interaction with the students. There is no interaction between students and instructors. Students can access online information anytime they choose with asynchronous types of online learning.

Jordan Times concludes that due to the collapse of colleges, education has shifted to the internet. The necessity of having adequate infrastructure and the ability to offer online lectures is highlighted by the closing of colleges. Jordan has a developed Middle East area and is regarded one of the leading countries in terms of Internet infrastructure.

In addition of Nemetz, the views of students regarding teaching the same interactive courses online and face to face are comparable. Students in both online and face-to-face training did as well in interactive courses. The success of face-to-face training is dependent on consistent attendance, whereas interactive programs rely on students completing interactive worksheets. As a result, the success of online and face-to-face learning is determined by the curriculum structure, mode of delivery, and completion rate

René F. Kizilcec said that the adjustment of emotional, cognitive, and behavioral processes during a learning experience in order to attain a desired degree of performance,' according to self-regulated learning. Self-regulating learning abilities are defined as the ability to organize, manage, and regulate the learning process.

According to Rosell, online learning is used to contain the epidemic and maintain social distance. Online education provides valuable learning tools as well as 24/7 access to educational platforms at their convenience. It also provides flexibility in terms of location and time. It also allows students to ask questions, receive free answers, and receive feedback on the content of the prescribed courses

In addition of Ruchan Uz & Adem Uzun a study of 167 undergraduate students in a programming language course compared blended learning to traditional learning. The study discovered that blended training was more successful than traditional instruction in establishing self-regulated learning skills.

Siripongdee conclude that the transition to online learning in higher education necessitates a rethinking of higher education, including institutions and student demands. Theoretical classes, for example, can be taught online. Practical courses, on the other hand, should be delivered in person to guarantee excellent teaching methods in terms of monitoring and mentoring pupils. As a result, technology can make larger courses more adaptable and meet the requirements of students.

Stern said that blended learning combines classroom and online learning. The online method denotes that the course material is supplied over the internet. Students may access online resources 24 hours a day, which makes online education easy.

The researchers reviewed 35 studies from all over the world that included nearly 5,000 children under the age of six playing with interactive apps, and measured their academic, cognitive, or social-emotional skill outcomes. The review found the strongest evidence for a learning benefit for apps targeting early math skills, followed by early language and literacy skills, which includes letter knowledge, phonological awareness, letter writing and vocabulary.

Children’s literacy and mathematical competencies are a critical platform for their successful functioning as individuals in society. However, many children, in particular those with low socio-economic status (SES) backgrounds who may not receive the home support needed to develop to their full potential, are at risk of not reaching sufficient competence levels. The overall aim of this project is to develop innovative computer tablet applications (‘apps’) and test whether the apps support parents in the provision of high-quality home learning environments (HLEs) and impact positively on the short- and long-term development of children’s competencies.

According to Guru Techno labs, the fast and easy accessibility of the internet has made it possible to reach out from the most developed region to the remotest areas in the world with the same information. Also, there is a unified platform available for every field that anyone can access worldwide. Out of which, the Education sector has also seen many changes in the past few decades with digitization. Education apps have been developed to encourage students of all ages to learn and explore more in the field and generate more interest to make learning fun.

**Local Literature, Studies and Systems**

On Globe.com.ph, Smartphones and learning apps are beneficial these days, says Art Matthew Ian Fetalver (23 June 2021), as the pandemic continues and students still rely on the internet for online courses. As a result, these devices have also become one of the best motivators for children to seek new information and learn new things by using learning application. Online learning is that it gives kids a fun and interactive way to process new concepts and ideas. Educational apps range from quick learning tools to informational videos guaranteed to keep the little ones occupied for the rest of the day. This can keep them occupied while busy parents work or do other essential household tasks.

**CHAPTER III**

**COST-BENEFIT ANALYSIS**

**FEASIBILITY STUDY**

**Technical Feasibility**

The proposed system consists of 2 computer unit. The computer unit is connected to a Local Area Network (LAN) and connected to a single database for retrieving/sending data from 1 computer unit as a Server. The usage of barcode scanner is to record the stocks that has been released in the warehouse of the company. The proposed system requires a network hub for connecting the 2 computer units. The Windows10 Professional will be used as an operating system for the computer and MySQL will used as the database of the system. These hardware and software will be used for five years to handle or to maintain the Learning application system and the Local Area Network. The Uninterrupted Power Supply (UPS) will not be provided though it is essential; the school will decide for providing the equipment.

**Operational Feasibility**

The proposed Learning application enables the school to reduce some workloads of teachers putting their time with more important matters. This learning system monitors and provide learning material for the student of school. It also reduces time spent taking traditional quizzes and lessons. The Burgos National Highschool has traditional teaching way which is manually conducted. Innovation from manual to computerized will greatly benefit the school.

**Economic Feasibility**

The proponents can say that Burgos National Highschoolis economically feasible because for over 32 years of business, the Burgos National Highschool growing and growing since its established. The Burgos National Highschool is willing to explore and modernize its current system. Installing the hardware and software needed for the proposed system will be possible for the company.

**Cost – Benefit Analysis**

**An Analysis and Design of Burgos National Highschool**

Cost - Benefit Analysis of the Proposed System

**Personnel Monthly Salary**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Personnel** | **Number** | **No. of Working Days** | **Hrs. / Day** | **Rate / Day** | **Salary** | **Monthly Amount** |
| Admin | 1 | 20 | 8 hrs. | 512 | 10,240.00 | 10,240.00 |
|  | | | | | | **10,240.00** |

**Personnel Annual Salary**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Personnel** | **Number** | **Salary** | **Monthly Amount** | **Annual Amount** |
| Admin | 1 | 10,240.00 | 10,240.00 |  |
|  | | | **10,240.00** | **122,880.00** |

**Hardware**

|  |  |  |  |
| --- | --- | --- | --- |
| **Quantity** | **Particular** | **Price** | **Total Price** |
| 2 | Intel Core i3 (PC Set) | 40,000.00 | 40,000.00 |
| 1 | DLink DES 1008 8-port (Network HUB) | 850.00 | 850.00 |
| 1 | Database Server | 10,000.00 | 10,000.00 |
| 1 | APC BACK UPS BR500IC – AS (UPS/AVR) | 2,800.00 | 2,800.00 |
| 1 | Printer | 3,500.00 | 3,500.00 |
|  | | | **63,800.00** |

**Software**

|  |  |  |  |
| --- | --- | --- | --- |
| **Quantity** | **Particular** | **Price** | **Total Price** |
| 1 | Windows 10 Professional | 1,800.00 | 1,800.00 |
| 1 | MySQL | - | - |
| 1 | Word | 200.00 | 200.00 |
| 1 | Visual Basic.Net | - | - |
|  |  |  | 2,000.00 |

**Furniture and Fixture**

|  |  |  |  |
| --- | --- | --- | --- |
| **Quantity** | **Particular** | **Price** | **Total Price** |
| 1 | Computer Chair | 850.00 | 850.00 |
| 1 | Computer Table | 1,300.00 | 1,300.00 |
|  | | | 2,150.00 |

**Stationeries and Supplies**

|  |  |  |  |
| --- | --- | --- | --- |
| **Quantity** | **Particular** | **Price** | **Total Price** |
| 5 reams | Bond paper | 150.00 | 750.00 |
| 24 | Color ink | 90.00 | 2,160.00 |
| 24 | Black ink | 50.00 | 1,200.00 |
|  | | | **4,110.00** |

**Expenses**

|  |  |
| --- | --- |
| **Particular** | **Amount** |
| Hardware | 43,800.00 |
| Software | 2,000.00 |
| Furniture and Fixture | 2,100.00 |
| Stationeries and Supplies | 4,110.00 |
| **Total** | **50,210.00** |

**Summary Operational Cost**

|  |  |
| --- | --- |
| **Particular** | **Cost Amount** |
| Personnel | 122,880.00 |
| Expenses | 50,210 |
| **Total** | **173,090.00** |

**Cost – Benefit Analysis**

**An Analysis and Design of Burgos National Highschool**

Cost – Benefit Analysis of the Existing System

**Personnel Monthly Salary**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Personnel | Number | No. of Working Days | Hrs./day | Rate/day | Salary | Monthly Amount |
| MIS | 1 | 20 | 8 hrs. | 626.10 | 12,522.00 | 12,522.00 |
| Accounting Head | 1 | 20 | 8 hrs. | 600 | 12,000.00 | 12,000.00 |
|  | | | | | | 24,522.00 |

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Impact of Mobile Learning on Students’ Achievement Results

Blanka Klimova

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Online Distance Learning: A Literature Review

29 Sep 2020

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**APPENDIX A**

**Gantt Chart**

**APPENDIX B**

**Context Diagram**

(and so on… complete the Appendices indicated in the Table of Contents)

**APPENDIX E**

**Data Dictionary**

**Table Name: Company**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Data Name** | **Data Aliases** | **Data Type** | **Length** | **Used in** |
| Company ID | C\_ID | int | 3 | None |
| Company Name | C\_Name | varchar | 30 | None |

**Table Name: Personnel**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Data Name** | **Data Aliases** | **Data Type** | **Length** | **Used in** |
| Employee ID | Emp\_ID | int | 3 | SystemAdminControl |
| First Name | Fname | varchar | 30 | SystemAdminControl |

**CURRICULUM VITAE**