**Uncluttered: Development of a Collaborative Repository and Evaluation of Student Projects.**

A Thesis

Presented to the

Faculty of the College of Industrial Education

TECHNOLOGICAL UNIVERSITY OF THE PHILIPPINES

Manila Campus

In Partial Fulfillment

of the Requirements for the Degree

Bachelor of Technical Vocational Teacher Education

Major in Computer Programming

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October 2022

**Chapter I**

**The Problem and its Background**

This chapter includes the Background of the study, Objective of the study, Scope limitation of the study and the Significance of the study.

# Background of the study

In the 21st century, technologies in software are one of the most used in education. It is the instrument that used to deliver the learning in education to help us to aim our goal in education in every aspects, the effect of technologies in software is greatly benefit to daily lives of every person who live in this world. Technologies in software can be also determined as a threat particularly for the students. There is a lot of software that can cause the addiction of student who not using into good habit, especially in game related that can lack of attention. When covid-19 spread in a worldwide the universities decided to use the online platform in order to deliver the education to the students. Mostly universities handled this kind of situation as new traditional learning education. So we the researchers study the effects that can cause of any student to have behaviour that being lazy to do the certain task and this will affect mostly their grades in academic performance, many of them are not responsible to do the given task, also the dishonesty of student is one of the most impact to their academic performance. Therefore the researcher study the other software that related in e learning method such as the software that mostly used by the student to do their task to find some source and to upload their works, these are the Github, Gdrive, Google for searching some sources that related to their task. The used of github is to upload in repositories that really related for coding and for codes mostly benefit is student of programmers and ICT student. Gdrive is commonly used for backup files to upload files and to have a good and organized file repositories. These application can easily access it is for all and that’s how these application work as possibility of flexible work for all. When in terms of communication mostly we used is messenger in order to communicate with one another person but cannot be called as flexible for e-learning, messenger is capable as new software or application for to text call and video call. This kind of communication can also have a bad effect particularly to the students that can be cause of lack of attention and paying attention for the certain task that given by the school. Most of us using this as one of the best communication in terms schools related, we create some group chat that included a persons that member for the certain task given by the school. So the student cannot predict or to monitor and track the each member contribution in the given task. In the said of this study these application cannot predict or track the contribution of each member. Even though these software have good features and design that fit in our generation these software is for only their target purposely in there certain task, as I said github is for uploading some files but purposely for codes, and gdrive is for uploading file to have an organize repositories.

Therefore the researchers develop an application that purposely for student working place this related for collaboration, repositories for uploading files and evaluation of student project to tack the contribution of the student and have a good communication that focus in certain task with the help of chat system. That github and gdrive don’t have. This application purposely for the students. We believe that this project will help the student especially to those student who experience the struggle to use the other application.

**OBJECTIVES OF THE STUDY**

# The general objective

The main objective of the study is to develop an application that is collaborative repository and evaluation of student project it is a software that will use for to track the unresponsive student to track the contribution of student and to have focus paying attention to do the certain task with the help of communication chat system.

# Specific Objectives

This study has the following specific objectives:

1. Track unresponsive student
2. Communication thru chat system

# Scope and Limitations of the Study

This study primarily focus involving the development and testing how student do their task remotely tracking the unresponsive student, that could be used as for the developing the learning particularly the student of bachelor of technical vocational teacher education major in computer programming in Technological University of the Philippines. The study will be done through developing and will be done by the researchers of bachelor technical vocational teacher education major in computer programming. The study will be evaluated by the selected 30 participants of bachelor of technical vocational teacher education major in computer programming with the help of the instrument 5 point likert scale.

# Significance of the Study

The project will greatly benefit the following:

This study primarily for student of bachelor technical vocational teacher education major in computer programming will mostly benefit the study. The study may help them to communicate and focus to a certain task tracking their contribution and track the unresponsive member that can use a evidence if the student really do their task.

**Chapter II**

**REVIEW OF RELATED LITERATURE**

This chapter presents the related literature and studies that support the study based on the search done by the researchers and the importance of the present study.

**Cooperative Learning**

In cooperative learning, students collaborate with their peers to achieve a common objective. Instead of one person working alone, the entire group depends on one another to achieve the goal. Each team member oversees the project's success (Dahley, 2020). Thompson (2022) claims that because of technological improvements, people from all walks of life can now access online education. In the United States, where roughly a third of the 20.6 million college students enroll in online courses, the format is particularly well-liked. Martino, et al. (2019) state that when implementing new technology in the classroom, it's critical to keep in mind that effective pedagogy cannot be replaced by web technologies. Consider them learning supplements rather than a magic wand for better teaching when you add them to your toolset.

According to Ansari and Khan (2020), despite physical boundaries, mobile devices and social media provide excellent educational e-learning opportunities to students for academic collaboration, access to course content, and tutors. As electronic communication technologies encroach on every aspect of life, educational institutions have found it difficult for decades to see the role of such devices in content sharing, usefulness, and interactivity style. For Leeuwen and Janssen (2019), opportunities for students to engage in collaborative activities that support their learning process arise during student collaboration. The degree to which teachers exert control over these moments determines whether they can be transformed into genuine learning opportunities for learners. According to Fu and Hwang (2018) The review found that the amount of research on mobile collaborative learning increased and the connection between new mobile technology and collaborative learning activities became tighter. Cognitive group awareness tools are a means to guide collaborative learning activities by providing knowledge-related information to the learners. While positive effects of such tools are firmly established, there is no consistency about the awareness information used and a wide range of target concepts exist (Schnaubert and Bodemer, 2019). According to Pavo (2020). Collaborative learning has great potential in the field of higher education because it promotes the joint construction of knowledge, as well as the development of skills related to the interaction that results in more essential learning processes.

**Collaborative Repository**

To facilitate the sharing and reuse of promising datasets, it is important to construct appropriate, high-quality public data repositories (Okuda and Watanabe, et al. 2017). Watanabe, Yoshikawa, et al. (2021) states that, to promote the sharing and reuse of promising datasets, it is important to build an appropriate, high-quality public data repository. For this purpose, several repositories have already been created.

According to the article Collaborative ORDnance Data Repository written by R. Evans and E. de Brun (n.d) data repository has existed since 2015. It is first use as a database with over 5,000 entries and is used as a means of identifying and detailing a wide range of explosive ordnance for those who are working in the field of humanitarian mine action. Collaborative ORDnance Data Repository is an online tool to enable web-based search of landmine and other unexploded data. This data repository was used to assists humanitarian demining disposal operations. The term repository came from a latin word repositorium which means a chamber where things can be placed or collected. Repository in information technology is a storage place in which data, files or documents are can be obtained in an organized way (Tech Target Contributor, n.d).

On the article Innovative Collaboration Technologies can Improve Business Outcomes (O. Vargas and M. Stevens, 2017), it is indicated that way back March 2020 many companies were forced to adapt the concept of collaboration technologies where employees are required to work from their homes to follow the health protocols provided by the state during lockdown against pandemic. Companies using this approach have some benefits, their employees can now work on their homes remotely and let themselves with their colleagues learn on how to use and develop the collaboration platforms and come up with the most optimal workflows. Collaboration repositories in this era can help organizations to reduce costs, this can enable face-to-face conversations without traveling. This collaboration platform helped organizations to cut expenses that has noticeable effects.  Also, in this kind of set up work can be done faster. Since employees will no longer need to travel, no need to wait as well for everybody to be in the office. Instead, all leaders of the company can take a quick pep talk to everybody from wherever they are working. Many organizations saw an increase on their employee’s productivity during the pandemic as workers proved their proficiency in managing their time and schedules. Workplace flexibility can result in employee retention and satisfaction (O. Vargas and M. Stevens, 2017).

**Evaluation of Students’ Projects**

Lamb (n.d.) stated that in evaluating student projects, rubrics, and portfolios are effectivetools along with student peer and self evaluations. In evaluating, there comes the rubric. This provides students with a tangible framework that makes them know what are the requirements to pass the project. For Torah High, the primary purpose of assessment and evaluation is to improve students' learning. It is an important tool for adapting curriculum and instructional approaches for students’ needs and to identify the overall effectiveness of programs and classroom practices. These strategies are varied in nature, administered over a period of time, and designed to provide opportunities for students to showcase their full range of their learning. (*ASSESSMENT AND EVALUATION OF STUDENT ACHIEVEMENT*, 2018). The rubrics are made to score the students’ academic skills as well as their skills in public presentation, writing, problem solving, time management, and more. Based on Gigi Doboneski at EdVisions Off Campus School, “Students must communicate why they should earn credit for their work and what level of mastery they attained." Additionally, “It’s not about scope and sequence. Instead, we ask if students reach the goals they set out for themselves. We also consider how much they grow as individuals during every project, and project-to-project,” said by Karen Locke. (*Evaluation Rubrics for Student Projects | Teacher-Powered Schools*, n.d.).

**Plagiarism**

The value of online education has grown considering the COVID-19 epidemic. The risks associated with a long-term solution to issues brought on by widespread Internet access, the usage of pre-made instructional materials, and students' propensity for plagiarism have all increased. Five categories can be used to categorize the remedies put forth by the specialized literature to deal with the issue of plagiarism: better prepared pupils, more engaged professors, the use of anti-plagiarism software, transparent anti-plagiarism rules, and ethical education of the youth (Sorea, Rosculet, and Bolborici, 2021). According to Elmusya, Suswanto, Asfani and Hidayat. (2018). “Plagiarism is frequently caused by a number of factors, including (a) a lack of understanding of what quotation marks and paraphrases mean and how to quote properly, (b) waiting until the last minute to complete a task, (c) the belief that plagiarism is the quickest way to complete tasks, (d) the conviction that others won't notice what is done, and (e) a lack of additional opportunities to complete the task due to poor time management, work-related procrastination.” For Altheneyan and Menai (2019), determining whether two text segments have the same meaning is a challenge in natural language processing (NLP) known as phrase identification. Machine translation (MT), automatic plagiarism detection, text summarization, and question answering are a few NLP applications that depend on a solution to this issue. The outcome showed that forgery tends to decrease with increased technology use. Some research has been done to improve how well technology supported forging acts. To boost the rate at which plagiarism is detected, researchers continuously improve and evolve their algorithms as stated by Torres, Diaz, et al. (2018). String matching can be done using a variety of algorithms, each of which has its own complications. If there is a sign of plagiarism or not, it can be determined by comparing texts using the string-matching technique (Hansun and Leonardo, 2017).

**REVIEW OF RELATED STUDIES**

Plagiarism comes in different forms. It has different types according to Lloyd Chrispin, Nirmala, et al. (2020). Since plagiarism is an act that refers to usage of words, images, ideas, etc., we all know that plagiarism is not a good act. Other than those mentioned, plagiarism may be claiming one’s own work as your own, information used without proper acknowledgement, and inaccurate citations. The types of plagiarism according to Lloyd Chrispin, Nirmala, et. al. (2020), are the following: Complete Plagiarism, Source based Plagiarism, Direct Plagiarism, Self or Auto Plagiarism, Paraphrasing Plagiarism, Inaccurate Authorship, Mosaic Plagiarism, and Accidental Plagiarism. Complete Plagiarism refers to exact copying of somebody else’s manuscript or study. Source based Plagiarism refers to inaccurate references mentioned by an author that does not actually exist. Direct Plagiarism is like Complete Plagiarism. Direct Plagiarism refers to copying another document without accrediting the author that leads to plagiarism. Self or Auto Plagiarism cites getting portions of someone else’s work without giving credit. Paraphrasing Plagiarism refers to making small changes in the sentences made by someone and getting credit for it. Inaccurate Authorship means contributing to manuscripts without getting credits for their work and someone who gets credit even though they didn’t contribute to the work. Mosaic Plagiarism means inserting others' words or sentences into their own research. Last, Accidental Plagiarism refers to unintentionally plagiarizing someone’s words or works. However, for Sowell (2018), nonnative English speakers tend to plagiarize because they are trying to master academic writing in a language, lack of confidence in their English-speaking skills, and to keep up to their heavy workloads.

To avoid plagiarism and be able to check papers if there are plagiarized parts, that may slow down the labor of the professors, Plagiarism Checker of Juvekar, Bhopatrao, et. al. (2019) made a system which makes the checking of plagiarism faster than reading it thoroughly one by one. The main goal of their project is to create a plagiarism checker using Levenshtein Algorithm that focuses on paragraph detection which makes it simple, efficient, reliable and reduces human effort. Their conclusion states that using line detection algorithms like the mentioned algorithm makes it more efficient than normal checkers that made them develop the software.

**CONCEPTUAL FRAMEWORK**

**OUTPUT**

**INPUT**

**PROCESS**

Profile

Independent variable

Dependent variable

Code

Survey questionnaire

Website development

Functioning app

Data gathering

Data presentation

Data discussion

- The user can work with other people efficiently to be more productive,

- Be able to do task remotely

- Exterminate unorganized storing files habit

- Track unresponsive members in a group project

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*Figure 1. Conceptual framework*

This framework will help identify the goals and objectives of this research, and represents the system in three stages. Inputs provide all the needed resources made available to a program to meet the requirements of the objectives and goals of the system to enable its operation and it includes the profile of the participants, independent and dependent variables, codes and survey questionnaire (Psychology, n.d). Processes is where conversion of inputs into outputs takes place to achieve the objectives and goals of the study. It is composed of raw data such as website development, fully function application, data gathering, data presentation and discussion that are put into a system to obtain and reach the desired output. The outputs define the results and outcomes to which all of the inputs and processes are applied (Dallastown, n.d).

**HYPOTHESIS OF THE STUDY**

Developing a collaborative repository does not affect engaging an organized collaborative environment.

**DEFINITION OF TERMS**

Github - a platform where you can control and collaborate projects anywhere.

Plagiarism - taking someone else's work or ideas and telling them as your own.

Collaboratory - something involves collaboration.

Repository - a place where you can store things such as data.

Cooperative - involves cooperation towards one goal.

Algorithm- used for solving a problem or for computation.

Software - set of instructions or programs used for operating a computer and executing specific tasks.

**CHAPTER III**

**RESEARCH METHODOLOGY**

This chapter will presents the research methodologies used in the study. This includes the research design, together of population, sampling techniques, source of the data, the instruments will use in the project, research locale, data analysis and data analysis plan that will be discuss in planning the data of the project.

**Research Design**

The researchers of this study will use developmental research or the Universal design for learning. (UDL) this addresses the need of the students According to Rose & Meyer (2002) that these models were inspired by the Universal Design (UD) framework that was applied before in architecture. And according to Smith & Harvey (2014) that the earlier literature, or the UDL framework was attracted in significant attention by the educationalists for tackling limitations in curricula According to by Jones and Richey (2000) that developmental research was occurs in any natural work environments. This also said that this tends to enhance the credibility of the research, as well as to create methodological dilemmas for the researchers. Nonetheless, whether the research is conducted during the design and development process or retrospectively, the best research pertains to actual projects, rather than simulated or idealized projects. Such as involving the stand-up training and the other computer-based training.

**Research Locale**

The study will be conducted in College of Industrial Education particularly the students of Bachelor of Technical Vocational Teacher Education Major in Computer Programming at Technological University of the Philippines, located at Ermita, Manila

According to Orodho (2017), it refers to a group of people, objects, or items from which samples are taken for measurements. A population is a group of people who are of interest to the researcher and to whom the researcher would like to generalize the results of a study.

The target population of this study comprising roughly 30 students from Bachelor of Technical Vocational Teacher Education Major in Computer Programming. This is to back up the use of simple random sampling.

According to (Crossman, 2020) the major advantage of a simple random sample is that everyone in the population has an equal chance of being selected for the research. This ensures that the sample chosen is representative of the population and that the sample was chosen in an unbiased manner.

Simple Random Sampling will be used so that each member of the population has an equal chance of being chosen for the study.

**Research Instrument**

According to CIHAL, (2022) questionnaires or scales are the measurement tools for conducting a study and used for collecting data from the respondents of the said study.

The Researchers will use adaptive 5 point likert scale survey questionnaire through digital platform such as Google forms.

**Data Collection Procedures**

The 30 selected students of Bachelor of Technical Vocational Teacher Education from the Department of College of industrial education is the selected participants of the said study. To get the list of the enrollees, the researchers prepared a letter for the TAD office to get the whole list of the enrollees. To successfully gather data, the researchers will use adaptive test questionnaire that has rating scale which the 5-point Likert scale in order to know the performance of the project output.

**Data Analysis Plan**

The researchers will use Statistical Analysis for analyzing the Data. Descriptive Analysis is under Statistical Analysis and will help them to show the summary of the numerical data from the data they have gathered. With the use of Average or Mean of the responses, they will be able to easily identify if the prototype really achieved its aim. They will use Charts for visualization of the analyzed data.

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