UNIVERSITY of GREENWICH
Alliance with FPT Education

BTEC

Higher Nationals in Computing

UNIT 5

Computing Research

ASSIGNMENT 2

Learner's name: Ta Thai Bao

Assessor name: Ho Nguyen Phu Bao

Class: GCS0705PPT

Learner's ID: GCS18186

Subject's : 1639

Assignment due: 12/26/2020

Assignment submitted: 12/26/2020

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ASSIGNMENT 2 FRONT SHEET

Qualification	**BTEC Level 5 HND Diploma in Computing**		
Unit number and title	Unit 13:Computing Research Project		
Submission date	12/26/2020	**Date Received 1st submission**	12/26/2020
Re-submission Date		**Date Received 2nd submission**	
Student Name	Ta Thai Bao	**Student ID**	GCS18186
Class	GCS0705PPT	**Assessor name**	Ho Nguyen Phu Bao

Student declaration

I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that making a false declaration is a form of malpractice.

Student's signature	

Grading grid

P6	P7	M4	D3

❒ Summative Feedback:	❒ Resubmission Feedback:

Grade:	Assessor Signature:	Date:

Internal Verifier's Comments:

Signature & Date:

ASSIGNMENT 2 BRIEF

Qualification	**BTEC Level 5 HND Diploma in Computing**		
Unit number	UNIT 13: Computing Research Project		
Assignment title	Doing reflection on your project		
Academic Year	2019-2020		
Unit Tutor	Ho Nguyen Phu Bao		
Issue date		**Submission date**	12/26/2020
IV name and date	Ta Thai Bao		

Submission Format:

Format: The submission is in the form of 1 document

You must use font *Calibri size 12, set number of the pages and use multiple line spacing at 1.3. Margins must be: left: 1.25 cm; right: 1 cm; top: 1 cm and bottom: 1 cm.* The reference follows Harvard referencing system.

Submission Students are compulsory to submit the assignment in due date and in a way requested by the Tutors. The form of submission will be a soft copy posted on http://cms.greenwich.edu.vn/

Note: The Assignment *must* be your own work, and not copied by or from another student or from books etc. If you use ideas, quotes or data (such as diagrams) from books, journals or other sources, you must reference your sources, using the Harvard style. Make sure that you know how to reference properly, and that understand the guidelines on plagiarism. *If you do not, you definitely get failed*

Unit Learning Outcomes:

LO4 Reflect on the application of research methodologies and concepts

Assignment Brief and Guidance:

Scenario

As you have completed your research project now it is time to look back and learn some lessons from your work. You need to prepare a report to describe your personal development. **Remember to write your own experience, thoughts and it is specific to YOU NOT explaining the general concepts**.

Here are some suggestions which you can put in the report:

- Project's proposal, the research process (sequential example) how it helped you completed your research
- Reflection on the merits, limitations and potential pitfalls of the chosen methods: examples qualitative research, secondary research; the relationship between the two in your research
- The roles of Literature **review in your** project
- How did you create project plan and how often you did you update it? Why you need you need to update the plan
- How often did you meet the tutor and how the tutor helped you to create more effective research?
- How did you choose participations (sample types, sizes) and the importance of it?
- How did you present your research result?

- **Consider other research approach** and improvements in future research
- …..

P6: All or most previous questions are answered
P7: Mistakes, lessons learnt, improvements will have in future researches
M4: Discussed all previous concerns in a logical way, with good evidence
D4: Critically discuss all previous concerns and recommend changes in research process (from creating research proposal to conclusion after primary research), planning, carry out primary research in as systematic way. Suggesting different research process which may work out.

Learning Outcomes and Assessment Criteria		
Pass	**Merit**	**Distinction**
LO4 Reflect on the application of research methodologies and concepts		
P6 Reflect on the effectiveness of research methods applied for meeting objectives of the computing research project. **P7** Consider alternative research methodologies and lessons learnt in view of the outcomes.	**M4** Provide critical reflection and insight that results in recommended Actions for improvements and future research considerations.	**D3** Demonstrate reflection and engagement in the resource process leading to recommended actions for future improvement.

Contents

1. Introduce

This is an article about studying a conventional bicycle with existing powers. It is studied to add many intelligent features to assist users in protecting their health and improving their health even better.

2. Project's proposal, the research process (sequential example) how it helped me completed my research

2.1. Project's proposal

Before I do a formal smart bike research project, I also need to put your project's proposal for review. If they approved, the project I proposed was accepted, otherwise, they would not agree with my proposal. The project's proposal includes the following parts:

a) Technical approach:

The proposal begins with a general description of the problem to be solved or the project to be implemented. If the issue is complex, the small parts of the problem or the project should be noted along with the organization's approach to each issue.

The information presented must be complete and detailed so that a knowledgeable person can understand what the proponent intends to do. The proposal should clarify the general approach to solving the key points.

If there are many sub-problems, the method for dealing with each must also be presented.

All special customer requirements must also be mentioned and analyzed together with the expected performance plan. Inspection and inspection procedures to ensure quality, reliability, and compliance with parameters should also be noted and detailed to increase the persuasion of the proposal.

b) Deployment plan:

Include the required time, cost and materials required.

Each project component must be presented, described, analyzed together with the associated cost estimate. These costs are aggregated for the entire project and the total cost must be calculated for each item.

The proposal should specify the time and amount of materials to be used, as well as a schedule of equipment costs, a schedule of estimated total costs, and required management costs.

c) Logistics and management planning:

Explain how to control subcontractors.

The nature and timing of all progress, budgeting, auditing and evaluation reports should also be presented with a description of the final documentation. The project closure procedures also need to be specifically described, which should specify how personnel, materials and equipment will be handled when the project is completed.

An important often overlooked issue is a detailed description of how the order changes and the cost of these changes are handled.

Order changes are often the cause of conflicts between the project implementation organization and the client. Clients seldom understand that sometimes a project brings just a simple change, but the fact can be a big mess.

I need to be very careful and clear these details in order to avoid the greater risks and costs that could happen later in the project implementation.

2.2. The research process

The research process includes identifying, research, research, .. the basic product into the product that I want to research. It helps me control each project phase to avoid wasting time on something for a long time or research in the wrong direction. My research process includes the following steps:

Step 1: Introduce and identify a problem that I will study in the post (such as a smart bike). Asking questions as a goal compels me to find its answers in the course of my research on smart bikes.

Step 2: Introduce the existing background of the product and the people with a research project similar to mine. The purpose is to find out what my product has been developed and what it hasn't developed yet so that I will further develop it in the research paper.

Step 3: Research to add new features for the product to make sense or not? I also have to come up with the correct parameters for product development. I then gathered users' comments on my new product google form.

Step 4: After collecting users' opinions about my product. Next, we begin to analyze the data we have collected to find out what features our users like or dislike in our products.

Step 5: Combining the collected data after analyzing, I start implementing the project, writing the report, and creating the product.

2.3. Summary

Thanks to the project's project, I was able to summarize the project that I want to implement in the most concise manner and recommend it to the administrator for approval to allow me to execute the project. The project's proposal has saved me a lot of time. After that, I will follow the research process to research my products in stages to avoid wasting a lot of time or to help my research in control and regulation. submit.

3. Evaluation of research methods

3.1. Quantitative research

Quantitative research is the main research method in my paper. Quantitative research needs to cover a large area and to be statistically significant, the number of samples can be several tens, hundreds, or thousands of people. When doing quantitative research, a sequential questionnaire is available. Each sentence has a specific answer. You often see in my surveys when doing research on customer experience when they use my product, or the questions "What brand are you watching" on YouTube are also a wallet. example.

Quantitative research gives us the answers in terms of number, percentage, percentage of people choosing each answer. Therefore, people often implement this method after qualitative research, helping businesses to redefine the number of people choosing each trend, thereby giving out suitable business methods.

Using this approach has helped me identify features that my customers like or dislike on my products. I can also identify users' trends using this method, such as the places that are still the most bikers, so that I can choose to sell my smart bike in those places to increase income for the company. Besides this method also has the disadvantage that the number of answers is limited in my understanding. When the user wants to answer differently from the answers that we have given, with this method, we will not collect those answers but must use other research methods.

3.2. Secondary research

Secondary research or desk research is a research method that involves using already existing data. Existing data is summarized and collated to increase the overall effectiveness of research. Secondary research includes research material published in research reports and similar documents.

Once I know the foundations of my product, I will use this research method to improve and develop my smart bike from what the product has. For example, now that all bicycles do not have a phone connection to signal health parameters, I will use Secondary research to develop that power based on bikes that don't that credit. Besides, using this method forced me to spend a lot of time reading articles on product-related topics that we research. This could have taken me a very long time in planning to be able to complete this research method.

3.3. The relationship between the two in my research

The use of Quantitative research and Secondary research in my research is purposeful. The first is the Secondary research method, which will find out and research the product with the qualities that I want. Second, Quantitative research lets customers experience our products and survey information from them, such as: What features do they like or dislike on my products? Finally, from that information, I will choose to develop products with features that match the user's trends.

4. The roles of Literature review in my project

In my research, a Literature review plays a very important role as it will be the stage that determines how my product will be developed. The literature review helps me to study and research the existing features of my products as well as those of people who have the same idea of developing smart bikes as me. From

there it gives me a certain amount of knowledge about the product that I am researching and helps me know if I want to develop it, I can know if the product is missing or what is needed to be better.

5. How did I create project plan and how often I did me update it? Why need to update the plan

The project plan helps me control each stage of my research project. Even planning the right time so I can save time executing the different phases of my research. Usually, I update the project plan every 3 days. Because in my daily life or work, sometimes it also appears the case that I can not count the mishaps. It was imperative that I find a solution immediately and it could lead to my plan going wrong. So I also need to update my project plan regularly so that I can know how I am doing or whether I can keep up with the plan I have given.

6. How often did I meet the tutor and how the tutor helped me to create more effective research?

During the research phase, especially during the school sessions. I often ask the tutor of my class to check whether my research project is correct or not, what phases I weaken and need to be corrected to make it more accurate. Even when I go home, I often discuss my project with the tutor through social networking tools like Facebook about my project. Thanks to the advice and help from the tutor, my research project has been on track and getting better and better.

7. How did I choose participations (sample types, sizes) and the importance of it?

My research product is a smart bike. It helps people move from where they want to, without wasting materials, and protects the environment in which we live. Besides, the bike is relatively small and compact in size. You can put it in your car. When you have a need to exercise, you can use it. It has an important role to play in protecting and improving your health and the charisma I have developed on the bike. These qualities will help you best in managing your own health.

8. How did me present my research result?

After the research phase, my product is complete. I have given my product to people to experience and evaluate it. From the information, I have gathered from my clients and I began to analyze them to pick out improved trending smart bikes for users. Finally, after the product is officially completed, I will present my product to my manager for a license so that I can give it to everyone to experience and get better health.

9. Consider other research approach and improvements in future research

In the future, I will learn more new research methods to develop for this project. In particular, the current capabilities of the products that I researched have not yet been fully and fully combined. So I will need to research and develop more new features for my products, such as smartphone charging on bicycles.

10. Mistakes, lessons learnt, improvements will have in future researches

During the research process, I also made many mistakes. For example, what I did in this period for a long time and time wasted a lot made the plan that I came up with being delayed. Research documents sometimes use words that I do not understand, I have to use a dictionary or look up on google for a long time before I can understand it. Thanks to this research, it has helped me to learn a lot of useful knowledge, such as specialized words when I read research papers and discovered those words or skills to control time. working time to work most effectively and keep up with my plan. While researching I also learned soft skills such as how I communicate with friends around to learn more new knowledge from them and use it in my research paper. In the future I need to develop more of my teamwork skills and hard skills like project management so that I can control the progress of this research work more and more efficiently.

11. Summary

In my research, each part or every item plays a very important role together. They will support each other to get more data for me to develop for the product. Especially when these parts are combined, I can have data with a very high reputation, which will make our product development more and more popular with everyone. After my research product is completed, I will give it to people with the purpose of selling my product to bring income to the company, protect the environment and especially improve. User health while using my smart bike.

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