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INTRODUCTION

RATIONALE

At the present day with the rapid development of Technology it is important to have technical skills especially in the strand of Information and Communication Technology (ICT). In Philippines the ICT strand in Senior High School is designed to provide students with basic skills to prepare them for college and for their. One of the important subjects in this strand is the subject of programming that has many technological professions like Software developers, Web developers, Mobile App developers, and others. The absence of a programming subject in MNHS for Grade 12 ICT students in the Academic Year 2024-2025 may raise fears of its possible impact on the technical proficiency of students and their future, especially those who want to take it as a course in college.

Programming is the process of creating instructions and updating the code that makes it possible for computer hardware and software to carry out particular functions is known as programming. It involves using a programming language such as Html, Java, Python, C++ etc., to create instructions for a computer to execute functions, solve problems, or achieve desired outcomes. Programming is important to developing software applications, automating tasks, and enabling various digital technologies to work effectively. It also plays a critical role in different industries, from finance and healthcare to entertainment and education, making it a versatile and essential skill in the modern world.

Coding is one of the most valuable skills of the 21st century often leading to high-paying and stable careers. Many students start learning to code in college but there's a common belief that only exceptionally talented individuals can succeed in coding. However coding is simply a way to instruct software and hardware to perform tasks. Learning to code involves understanding a specific process and developing logical thinking. It helps learners break down complex problems into simpler parts, improving their problem-solving skills. (Kohli, 2021)

1

Republic of the Philippines

Department of Education
REGION III - CENTRAL LUZON
SCHOOLS DIVISION OF CITY OF MEYCAUAYAN
MEYCAUAYAN NATIONAL HIGH SCHOOL
CAMALIG, CITY OF MEYCAUAYAN, BULACAN

Computer programming is a fundamental skill for so many different applications, not just software development or cutting-edge research into artificial intelligence. It makes banking more accessible, smooth's out supply lines, and creates those fantastic online experiences we love. Programming means your favorite jeans are one click away, and governments can open services faster and more efficiently during a crisis. (MOOC BLOG TEAM, 2022)

In recent years, there has been a lot of focus on improving 21st-century education. Experts have suggested different ways to help students learn new skills. One idea is to start teaching programming as a separate subject from the first grade. This paper explores why teaching programming is important, the challenges involved, and how it should be taught. Teachers, who guide learning in classrooms, need clear and practical advice on what to teach and how to teach programming effectively (Abesadze & Nozadze, 2020).

In this study the researchers aim to show the importance of programming in shaping technical proficiency that will ultimately contribute to the improvement of ICT education in Meycauayan National High School.

STATEMENT OF THE PROBLEM

GENERAL PROBLEM:

The General problem of this study is to analyze the Effect of Absence of Programming subject in Meycauayan National High School among Grade 12 Information and Communication technology Student's Technical Proficiency at the Academic Year 2024-2025

SPECIFIC PROBLEM:

1. What are the profile of the respondents in terms of:

A. Section

B. Age

C. Gender

2. What is the perceived level of technical proficiency among ICT students who have not taken programming subjects compare to those who have, to determine their abilities in technical tasks and to understand exactly how the absence of programming affects them?

Republic of the Philippines

Department of Education

REGION III - CENTRAL LUZON
SCHOOLS DIVISION OF CITY OF MEYCAUAYAN
MEYCAUAYAN NATIONAL HIGH SCHOOL
CAMALIG, CITY OF MEYCAUAYAN, BULACAN

3. How does the absence of programming subject influence ICT students' confidence in performing technical task such as:

A. Web Development

B. Computer Programming Language

C. Graphic Design

D. Data Analysis

E. Fixing Bugs

4. What factors contribute to the decision to exclude programming subject from certain ICT program and how these factors relate to technical students technical proficiency?

RESEARCH HYPOTHESIS

Null Hypothesis (H_0):

The absence of the programming subject in the ICT curriculum at Academic year 2024-2025 will have a negative effect on the technical proficiency of the ICT students in Meycauayan National High School which may give them disadvantages when they come to college.

Alternative Hypothesis (H_1):

The absence of the programming subject in the ICT curriculum in Academic year 2024-2025 has no negative effect on the technical proficiency of the ICT students in Meycauayan National High School which may not giving them a disadvantages when they come to college.

SIGNIFICANCE OF THE STUDY

The Importance of this Study is to show the Importance of the Programming subject because it is one of the required subjects in the Information and Communication Technology (ICT) strand.

ICT STUDENTS: The first who will benefit the most from this are the ICT students, especially the students who want to develop their programming skills and knowledge to prepare themselves for college.

Republic of the Philippines
Department of Education
REGION III - CENTRAL LUZON
SCHOOLS DIVISION OF CITY OF MEYCAUAYAN
MEYCAUAYAN NATIONAL HIGH SCHOOL
CAMALIG, CITY OF MEYCAUAYAN, BULACAN

TVL TEACHERS: Teachers who knows a lot about programming will benefit especially if this is what they want to teach. This will also benefit them especially if they already have experience in this because they can share their knowledge with students willing to do programming.

PARENTS: Supportive parents will also benefit from this especially if the field of programming is what they want for their children.

SCHOOL ADMINISTRATOR: School administrators will also benefit from the result of the study because they can use the discovered data to evaluate and improve the ICT strand especially considering the return of the programming subject.

LOCAL COMMUNITY AND INDUSTRY PARTNERS: Local communities and industries that rely on ICT professionals will also benefit. Better preparation of students will result in a more qualified workforce that will strengthen the local economy.

CODING COMPANIES: Coding Companies will benefit with the students who have studied programming from Senior High School to College because they have a wider experience so it will be good for them because they have enough skills to be employed.

LOCAL GOVERNMENT UNITS (LGUS): LGUs can use the results of this study to create programs or projects that will support ICT education, such as scholarships or partnerships with tech companies that will strengthen the local workforce and economy.

FUTURE RESEARCHERS: Educational researchers can use it when they conduct a new research related to this topic.

SCOPE AND DELIMITATION

This study focuses on the importance of the programming subject and conveying it to the Students in the Information and Communication Technology (ICT) strand at the Meycauayan National High School (MNHS). What the researchers want is to express to the students the skills and knowledge they can get in the programming subject and to show the students the advantages that the student will get in studying this subject especially and if this they want a college course. This Study is only for Grade 12 students in the Information and Communication Technology strand and for the year 2024-2025 only. Our scope is also limited because we can only get data within the Meycauayan National High School. The most weakness of this Study is that the researchers do not have enough skills to fight the return of subject programming in Senior High School to the strand of ICT.

Republic of the Philippines
Department of Education
REGION III - CENTRAL LUZON
SCHOOLS DIVISION OF CITY OF MEYCAUAYAN
MEYCAUAYAN NATIONAL HIGH SCHOOL
CAMALIG, CITY OF MEYCAUAYAN, BULACAN

METHODOLOGY

RESEARCH DESIGN

This study will use a Descriptive research design in investigating and gathering quantitative data through a structured survey that will be implemented for Grade 12 students of Information Communication and Technology (ICT) in Meycauayan National High School. Utilizing descriptive research design, the researchers can be able to highlight the need for the inclusion of programming into their curricular studies that will promote their technical knowledge and prepare them for future challenges within the ICT industry.

The lack of a specific subject on programming in the ICT curriculum might prevent students from gaining critical understanding on the logic that governs software applications, in that problem researchers may examine the possible effect of the absence of a programming subject on the technical competencies of Grade 12 Information and Communications Technology students at Meycauayan National High School during the school year 2024-2025. This data analysis will give a description of the technical level of competence on the part of the students, and some potential points of strength and weakness about their knowledge in programming. It will therefore give an invaluable descriptive portrait of the situation and point to a need for programming within the curriculum of the Mecauayan National High School to empower students into advancing their technological capabilities and capabilities for future academic and career opportunities.

POPULATION AND SAMPLE

The total population of Grade 12-Information and communication technology (ICT) students is 139 students within Meycauayan National High School Academic year 2024-2025. This research used sample random sampling because every student in the population has an equal chance of being picked. The respondents we're Grade 12-ICT students in Meycauayan National High School, using random sampling, 28 respondents we're randomly selected from Hollerith, Pascal, Babbage, and Thompson, representing the four section of Grade 12 ICT. The sample ensure that there is no bias involved and a good sample that will be enough to represent the characteristics valuable research results.

Republic of the Philippines

Department of Education
REGION III - CENTRAL LUZON
SCHOOLS DIVISION OF CITY OF MEYCAUAYAN
MEYCAUAYAN NATIONAL HIGH SCHOOL
CAMALIG, CITY OF MEYCAUAYAN, BULACAN

DATA COLLECTION

The questionnaire focused on determining the effects of Absence of Programming subject on the Technical proficiency of Grade 12 Information and Communication Technology (ICT) student. The questions created by Researchers were reviewed by a practical research teacher ensure that the survey form was correctly formatted. The researchers created a survey questionnaire that consist three questions related to the study and it has four choices which is the 4 likert scale. Each scale has meanings that can help the researchers to determine the technical proficiency of the ICT students based on their experiences.

DATA ANALYSIS& DATA INTERPRETATION

Table 1: Demographic Profile

Gender		
MALE	18	64%
FEMALE	7	25%
LGBTQIA	3	11%
TOTAL	28	100%

Section		
HOLLERITH	8	29%
BOBBAGE	6	21%
THOMSON	7	25%
PASCAL	7	25%
TOTAL	28	100%

Age		
15-17	20	71%
18-20	7	25%
21-ABOVE	1	09%
TOTAL	28	100%

Republic of the Philippines
Department of Education
REGION III - CENTRAL LUZON
SCHOOLS DIVISION OF CITY OF MEYCAUAYAN
MEYCAUAYAN NATIONAL HIGH SCHOOL
CAMALIG, CITY OF MEYCAUAYAN, BULACAN

Arbitrary Table

1.00-1.74	Much Less Focus
1.75-2.49	Less Focus
2.50-3.24	More Focus
3.25-4.00	Much More Focus

1. Rate your level of technical proficiency based on your programming experience:

Table 2.A Tally of Respondent

Q	4	3	2	1
1	4	8	10	6

Table 2.B Summary

Q	F(4)	F(3)	F(2)	F(1)	∑fx	WAM	Interpretation
1	16	24	20	6	66	2.35	Less Focus

On question number 1, the weighted average mean is **2.35** which is **Less focus**, because most of students believe that their technical proficiency is low because of absence of programming.

2. What is the level of technical proficiency among ICT students who have not taken programming subjects compare to those who have?

Table 3.A Tally of Respondent

Q	4	3	2	1
1	3	6	16	4
2	2	9	13	4
3	2	9	12	5
4	2	4	14	8
5	10	8	6	4

Republic of the Philippines

Department of Education
REGION III - CENTRAL LUZON
SCHOOLS DIVISION OF CITY OF MEYCAUAYAN
MEYCAUAYAN NATIONAL HIGH SCHOOL
CAMALIG, CITY OF MEYCAUAYAN, BULACAN

Table 3.*B Summary of A. Web Development*

Q	F(4)	F(3)	F(2)	F(1)	∑fx	WAM	Interpretation
1	12	15	32	4	63	2.25	Less Focus
2	8	27	26	4	65	2.23	Less Focus
3	8	27	24	5	64	2.28	Less Focus
4	8	12	28	8	56	2.00	Less Focus
5	40	24	12	4	80	2.85	More Focus

On question number 2.A, the weighted average mean is **2.34** which is **Less Focus**, because the absence of Programming subject causes less confidence on ICT students in performing the technical task in web development.

Table 4.*A Tally of Respondent*

Q	4	3	2	1
1	4	10	5	9
2	3	12	6	7
3	4	11	7	6
4	11	7	6	4
5	5	6	9	8

Table 4.*B Summary of B. Computer Programming Language*

Q	F(4)	F(3)	F(2)	F(1)	∑fx	WAM	Interpretation
1	16	30	10	9	65	2.23	Less Focus
2	12	36	12	7	67	2.39	Less Focus
3	16	33	14	6	69	2.46	Less Focus
4	44	21	12	4	81	2.89	More Focus
5	20	18	18	8	64	2.28	Less Focus

On question number 2.B, the weighted average mean is **2.46** which is **Less Focus**, because the absence of Programming Subject causes less confidence on lot students in performing technical task in computer programming language.

8

Republic of the Philippines

Department of Education
REGION III - CENTRAL LUZON
SCHOOLS DIVISION OF CITY OF MEYCAUAYAN
MEYCAUAYAN NATIONAL HIGH SCHOOL
CAMALIG, CITY OF MEYCAUAYAN, BULACAN

Table 5.*A Tally of Respondent*

Q	4	3	2	1
1	9	11	5	3
2	8	15	1	4
3	6	11	9	2
4	12	12	6	0
5	1	11	4	9

Table 5.*B Summary of C. Graphic Design*

Q	F(4)	F(3)	F(2)	F(1)	∑fx	WAM	Interpretation
1	36	33	10	3	82	2.92	More Focus
2	32	45	2	4	83	2.96	More Focus
3	24	33	18	2	77	2.75	More Focus
4	48	30	12	0	90	3.21	More Focus
5	4	33	18	7	62	2.21	More Focus

On question number 2.C, the weighted average mean is **2.81** which is **More Focus**, because the absence of Programming subject does not influence the confidence of lot students in performing technical task in Graphic Designing.

Table 6.*A Tally of Respondent*

Q	4	3	2	1
1	5	11	10	2
2	3	13	8	3
3	2	19	3	4
4	4	14	7	3
5	6	7	11	4

9

Republic of the Philippines

Department of Education
REGION III - CENTRAL LUZON
SCHOOLS DIVISION OF CITY OF MEYCAUAYAN
MEYCAUAYAN NATIONAL HIGH SCHOOL
CAMALIG, CITY OF MEYCAUAYAN, BULACAN

Table 6.*B Summary of D. Data Analysis*

Q	F(4)	F(3)	F(2)	F(1)	∑fx	WAM	Interpretation
1	20	33	20	2	75	2.67	More Focus
2	12	39	18	3	72	2.57	More Focus
3	8	57	6	4	75	2.67	More Focus
4	16	42	14	3	75	2.67	More Focus
5	24	21	21	4	71	2.53	More Focus

On question number 2.D, the weighted average mean is **2.62** which is **More Focus**, because the absence of Programming subject does not influence the confidence of ICT students in performing technical task in Data Analysis.

Table 7.*A Tally of Respondent*

Q	4	3	2	1
1	4	9	5	10
2	10	9	4	5
3	3	11	7	7
4	6	9	8	5
5	4	9	7	8

Table 7. *B Summary of E. Fixing Bugs*

Q	F(4)	F(3)	F(2)	F(1)	∑fx	WAM	Interpretation
1	16	27	10	10	63	2.25	Less Focus
2	40	27	8	5	80	2.85	More Focus
3	`12	33	14	7	66	2.35	Less Focus
4	24	27	16	5	72	2.51	More Focus
5	16	27	14	8	65	2.21	Less Focus

10

Republic of the Philippines

Department of Education
REGION III - CENTRAL LUZON
SCHOOLS DIVISION OF CITY OF MEYCAUAYAN
MEYCAUAYAN NATIONAL HIGH SCHOOL
CAMALIG, CITY OF MEYCAUAYAN, BULACAN

On question number 2.E, the weighted average mean is **2.44** which is **Less Focus**, because the absence of programming subject causes less confidence on ICT students in performing technical task in Fixing Bugs.

3. How these factors affects your technical proficiency as an ICT student?
A. Removal of programming subject from Grade 12 curriculum **B**. NCII Target requirements.
D. Focus only on CSS subjects.   **C**. Lack of computers.   **E**. Lack of programming teaches.

Table 8.*A Tally of Respondent*

Q	4	3	2	1
A	10	7	4	7
B	14	10	0	4
C	11	6	4	7
D	11	11	6	0
E	8	10	4	6

Table 8.*B Summary*

Q	F(4)	F(3)	F(2)	F(1)	∑fx	WAM	Interpretation
A	40	21	8	7	76	2.71	More Focus
B	56	30	0	4	90	3.21	More Focus
C	44	18	8	7	77	2.75	More Focus
D	44	33	12	0	89	3.17	More Focus
E	32	30	8	6	76	2.71	More Focus

On question number 3, the weighted average mean is **2.91** which is **More Focus**, because most of ICT students believe that these 5 factors cause to exclude the Programming subject does not much affect their technical proficiency.

For the overall weighted average mean is **2.56** which is **More focus**, It proves that the absence of Programming subject in Meycauayan National High school does not much affect the technical proficiency of the ICT students.

Republic of the Philippines

Department of Education
REGION III - CENTRAL LUZON
SCHOOLS DIVISION OF CITY OF MEYCAUAYAN
MEYCAUAYAN NATIONAL HIGH SCHOOL
CAMALIG, CITY OF MEYCAUAYAN, BULACAN

RESULTS

QUESTION NO. 1: What is the perceived level of technical proficiency among ICT students who have not taken programming subjects compare to those who have, to determine their abilities in technical tasks and to understand exactly how the absence of programming affects them?

• The results for the second question in the Statement of the Problem is that most of ICT students perceive themselves as having low technical proficiency, primarily due to a lack of programming experience. While some students have programming experience but their knowledge is limited to basic concepts only, such as Hypertext Markup Language (HTML).

QUESTION NO. 2: How does the absence of programming subject influence ICT students' confidence in performing technical task such as:
A. Web Development
B. Computer Programming Language
C. Graphic Design
D. Data Analysis
E. Fixing Bugs

• For question 3, most ICT students have less confidence in performing technical tasks such as web development, using computer programming languages, and fixing bugs. However, their confidence is not affected when performing tasks such as graphic design and data analysis. For the last question, the researchers found five factors that contributed to the decision to exclude the programming subject from Grade 12 curriculum.

QUESTION NO. 3: What factors contribute to the decision to exclude programming subject from certain ICT program and how these factors relate to technical students technical proficiency?

• These five factors are Removal of programming subject from Grade 12 curriculum, NC II Target requirements, Focus only on CSS subjects, Lack of computers, and Lack of programming teachers. Most of the ICT students believe that these 5 factors does not much affect their technical proficiency.

12

Republic of the Philippines

Department of Education
REGION III - CENTRAL LUZON
SCHOOLS DIVISION OF CITY OF MEYCAUAYAN
MEYCAUAYAN NATIONAL HIGH SCHOOL
CAMALIG, CITY OF MEYCAUAYAN, BULACAN

DISCUSSION

CONCLUSION

In conclusion, this study shows how programming is significant for Meycauayan National High School students regarding their ICT programs. Even though programming was not in the curriculum for the year 2024-2025.The researchers noticed that the technical skills of ICT Students in performing Technical task such as Web development, Computer Programming Language, and Data analysis is low. However, in the remaining technical task such as graphic design and data analysis doesn't much affect the ICT student technical skills due to their experience.

The researchers also noticed that the absence of programming subject did have some negative effects especially in coding-related tasks, but it didn't completely stop students from their learning. Bringing back programming would possibly improve student's technical skills and better prepare them for college and future careers. However, the result of this research proven that the absence of Programming subject in Meycauayan National High school doesn't much affect the student's Technical proficiency. Over all the researchers Alternative Hypothesis was right that the absence of the programming subject in the ICT curriculum in Academic year 2024-2025 has no negative effect on the technical proficiency of the ICT students in Meycauayan National High School which may not giving them disadvantages when they come to college.

RECOMMENDATION

The researchers found some recommendations that can help current and upcoming ICT students in having a problem on absence of programming. These are the following recommendations below:

• For the future researchers if they have enough time they must use an experimental research design to get better information about respondents technical proficiency.

• For future researchers if it is going to use this study for their research they must properly cite the source's information.

• For future ICT students who are interested in Programming they should look for other school that has this subject if they think that it can improve them.

13

Republic of the Philippines

Department of Education
REGION III - CENTRAL LUZON
SCHOOLS DIVISION OF CITY OF MEYCAUAYAN
MEYCAUAYAN NATIONAL HIGH SCHOOL
CAMALIG, CITY OF MEYCAUAYAN, BULACAN

• For school administrators they must aware future ICT Students that the programming subject was removed in grade 12 ICT curriculum.

• For current ICT students in Meycauayan National High school, if they want to have a few knowledge in programming there are applications they can use for coding and also they can use social media to learn programming.

Republic of the Philippines

Department of Education

REGION III - CENTRAL LUZON
SCHOOLS DIVISION OF CITY OF MEYCAUAYAN
MEYCAUAYAN NATIONAL HIGH SCHOOL
CAMALIG, CITY OF MEYCAUAYAN, BULACAN

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