

A TRACER STUDY OF MASTER IN TECHNICIAN TEACHER EDUCATION: BASIS FOR STRATEGIC CURRICULUM ALIGNMENT FOR PROFESSIONAL SUCCESS

¹*Jahzen Gein C. Edpalina¹ and ²Sarah O. Namoco²

^{1,2}University of Science and Technology of Southern Philippines

¹jahzengein.edpalina@ustp.edu.ph

ABSTRACT. *This study investigates the career path of Master in Technician Teacher Education graduates from Batch 2004 to 2013. A concurrent triangulation mixed method research design was used. Forty-nine individuals responded to the online survey, while three school heads participated in personal in-depth interviews. The research instrument used, composed of three sections, was adopted. Meanwhile, the semi-structured interview questionnaire was also adopted. Both data collection tools were validated by experts in assessment, curriculum, and pedagogy. The data were collected during the first quarter of 2023. Frequency and percentage, and mean and standard deviation were used to analyze the quantitative data; while the qualitative data was analyzed thematically using the conventional content analysis approach. Results of the data analysis revealed that there was an increase in the status of employment as well as in the income of the respondents after finishing the program. The respondents also reported that the program has made a significant impact on their skills needed at work. The interview with the school heads revealed three themes: exceptional work ethics, exemplary content knowledge, and excellent skills. This study enhances the existing literature regarding factors that contribute to the success of master's students after completing the program. The findings of this study will contribute to the academic institution, in general, by providing empirical evidence-based data and insights to guide future program design and curriculum development.*

Keywords: Graduate Program Tracer Study, Mixed Methods Research, Philippine State University

1. INTRODUCTION

Higher Education Institutions (HEIs) play a crucial role in shaping the future workforce of any nation, they are responsible for equipping students with the necessary knowledge and skills that enable them to become competent professionals and contribute to the socio-economic development of their respective countries [1], [2]. In this regard, tracer studies have emerged as an essential tool for assessing the effectiveness of HEIs in fulfilling this crucial role. Tracer studies are designed to track the graduates of HEIs and collect data on their employment outcomes including their job placements, salaries, and job satisfaction levels. With data-based information, HEIs can gain insights into the employability of their graduates and the relevance of their curriculum to the changing demands of the labor market. This, in turn, enables HEIs to make necessary changes to their educational programs to ensure that their graduates are equipped with the skills and knowledge required to succeed in the job market [3]. Another important area that a tracer study looks into is determining whether the specific knowledge and skills are up-to-date and these must be embodied in the graduates' program since these are relevant competencies needed for the 21st-century labor market [3, 4]. Furthermore, the Commission of Higher Education (CHED) continuously monitors and assesses the academic and non-academic services provided by each HEIs to ensure that they meet national and international standards. Because of this, one of the metrics that CHED tracks are how employable graduates are. One of the specified requirements of higher education recognized bodies is documentation reports of graduate profiles being submitted to the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACUP) [5]. Keeping this in perspective, it is essential to conduct a thorough research-based tracer study for Master in Technical and Technology Education (MTTE) curriculum on a regular basis. This will help assess the program's compatibility with the local and global job markets, as well as the graduates' performance and expertise-related skills as evidence by the feedbacks of their employers. Moreover, this study will serve as a reference for the accrediting agency.

The main goal of this study is to conduct a research-based career pathway analysis of graduates who completed the MTTE program between 2003 to 2022 to evaluate the alignment of the MTTE program. Additionally, this study seeks to gather feedback from employers regarding the skills and performance

of these graduates in areas related to their field of work. By undertaking this study, the researcher aims to gain a better understanding of the extent to which the MTTE program has equipped graduates with the necessary knowledge and skills to succeed in their chosen careers and to identify potential areas for improvement.

2. METHODOLOGY

This study employed the concurrent triangulation mixed method design as it allows the researcher to evaluate and cross-check the results obtained from each quantitative and qualitative data collection and analysis technique, leading to a more comprehensive understanding of the research problem [6,7].

Descriptive Study

The quantitative phase used a descriptive research design to describe the status and nature of the graduates [8]. 49 out of 86 MTTE graduates from 2003 to 2023 responded to the survey (Table 1). Snowball sampling, a networking-based approach relying on recommendations [9] was used in this study as the researcher contacted initial respondents who were then asked to refer their batchmates to take part in the study.

The adapted instruments had three sections: First included filtering questions. The second was the CHED Graduate Tracer Study and 2020 Survey of Master's Graduates Questionnaire [10] that gathered general information and assessed the program's impact on their work using a 5-point Likert Scale (1=Strongly Disagree, 5=Strongly Agree). The third was adopted from UCLan Questionnaire [11] which is measured using seven-point Likert scale (1=Strongly Disagree, 7=Strongly Agree). The instruments were validated by a curriculum and assessment experts, and a psychometrician.

Table 1 Profile of the Respondents (n=49)

Characteristics	Frequency	Percent
Sex		
Female	26	53.1
Male	23	46.9
Civil Status		
Single	12	24.5
Married	35	71.4
Separated/Annulled	2	4.1
Province		
Agusan del Norte	2	4.1
Agusan del Sur	1	2.0
Bukidnon	7	14.3
Cagayan de Oro	3	6.1
Cotabato	2	4.1
Lanao del Norte	12	24.5
Lanao del Sur	1	2.0
Misamis Occidental	3	6.1
Misamis Oriental	17	34.7
Zamboanga	1	2.0
Employment		
Yes	49	100.0
No	0	0.0

Data were collected through online survey using JotForm. The use of online survey was the most appropriate one due to the graduates' diverse geographical locations. The analysis involved summarizing the data using frequency, percentage, mean and standard deviation to present it concisely [12] with the use of SPSS software [13].

Phenomenological Study

A phenomenological research design was used for the qualitative phase. There were three participants who were recruited from the 49 alumni. The basis for selection was their willingness to be interviewed face-to-face for this study. To protect the participants' identity, code names were used to replace their real names, and the institutions where they are working are not divulged in this study (Table 2).

Table 2 Demographics of Interview Participants

Name	Age	Sex	Designation	Institution
FP1	52	F	Campus Director	TESDA
FP2	47	F	Department Chairperson	State University
MP1	45	M	School Principal	Public Secondary School

The semi-structured interview questionnaire that was used in this study was adapted from RMIT University [14]. The interview questions aimed to assess the employers' perceptions of thwie employees who are MTTE graduates (Table 3). Probing questions were used to make follow up questions and to dig in-depth the answers of the interviewees of this study. The interviews, which were agreed upon in advance by the researcher and the participants, were carried out within the confines of their office to ensure privacy. The duration of each interview ranged from 30 minutes to one hour using the vernacular language to facilitate effective communication. Prior consent was obtained from the participants regarding the recording of the conversation to

ensure data accuracy. In addition, respondents' and participants' names were not mentioned in the findings to maintain anonymity. Thematic analysis using the conventional content analysis was employed to identify patterns and themes in the data [15][16]. The results were then triangulated with the results of quantitative findings to enhance conclusions and ensure accurate interpretation of the findings[17].

Table 3 Qualitative interview question items.

1. What are your perceptions about the work performance of (Name of the MTTE graduates)? Is he/she an expert in his/her field?
2. Can you describe the characteristics of (Name of the MTTE graduate) that you find ideal as an employee?
3. Is there an edge if the graduate is coming from the USTP? Why?

3. RESULTS AND DISCUSSION

Career Pathway Analysis of MTTE Graduates

Frequency and percentage were used to analyze the career pathways of the MTTE grades. The analysis involved comparing their accomplishments in terms of employment, academic rank, and salary grades before joining the MTTE program and after finishing the MTTE program. Figure 1 shows the comparison of the MTTE alumni in terms of work status.

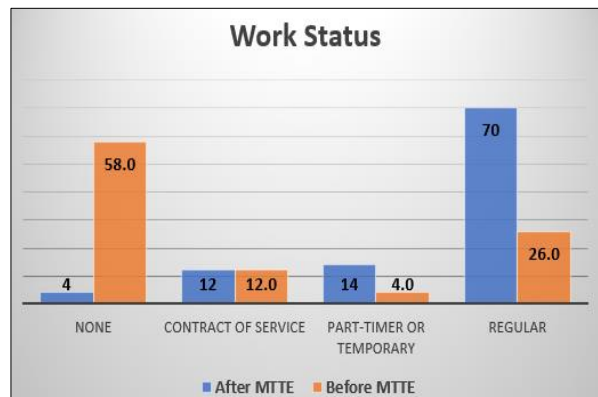


Figure 1. Status of Work of the Respondents Before and After Finishing the MTTE Program

Results of data analysis presented in Figure 1 revealed that, prior to participating in the MTTE program, 58% of the respondents are not yet employed in educational institutions. However, having finished the program, this number reduced drastically to only 4% as most of the graduates already landed a job. The results also indicate that a majority of the respondents which is 70% were able to secure regular employment after completing the MTTE, aligning with the preference of Filipinos for job stability. Additionally, among the employed respondents, 12% were under a contract of service, while 14% held part-time or temporary position. Hence, the 50% respondents Before MTTE and the 70% after MTTE shows that the MTTE program has an impact with the work status of the respondents.

As reflected in Figure 1, it can be observed that almost 60% of the MTTE graduates, before they joined the program, are not employed to any academic institution. However, it is noteworthy that when they finished MTTE, only 4% are not in the academe, while 96% are spread across different academic ranks in the Department of Education (DepEd), HEIs and in Technical Education and Skills Development Authority (TESDA). This findings satisfied the goal of the program which is to produce graduates who are in the teaching practice and are capable of middle-level management responsibilities [18].

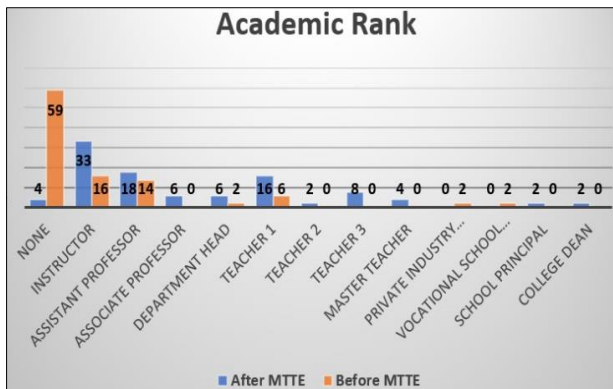


Figure 2. Comparison of Academic Rank Before and After Finishing the MTTE Program

Figure 2 shows the distribution of the respondents before and after their MTTE journey. Before they joined the MTTE program, it can be observed that almost 60% considered themselves to be employers. This means that they are self-employed as online sellers, or as small entrepreneurial owners. Meanwhile, 28% of the respondents were employed as secondary school teachers in DepEd. On the other hand, after finishing MTTE, 60% of the respondents are now employed in HEIs, and 22% in DepEd. The increased number of HEIs employees could be due to the higher salary grade in HEIs compared to DepEd and other academic institutions in the Philippines [19].

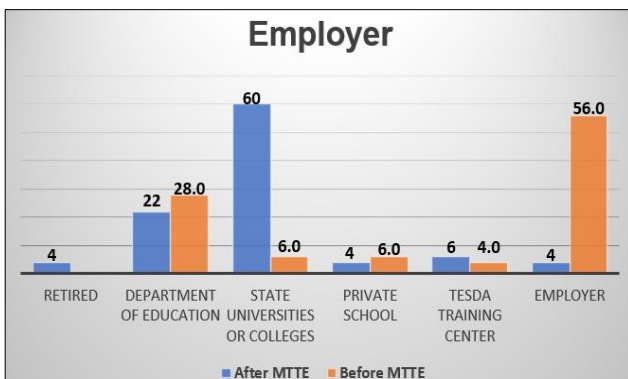


Figure 3 Employment of the Respondents Before and After Finishing the MTTE Program

With the improved and more stable employment of the MTTE graduates, their source of income has also significantly increased. Figure 4 shows that the number of those who are receiving a lower Salary Grade before joining the MTTE program decreased to almost half. Meanwhile, the increase of salary grades can be clearly observed. In the Philippines. Once a teacher is hired in DepEd, he/she is guaranteed a security of tenure and a higher salary Grade compared to private academic institutions [20]. Moreover, being hired in HEIs also mean a much higher salary grade compared to DepEd [19].

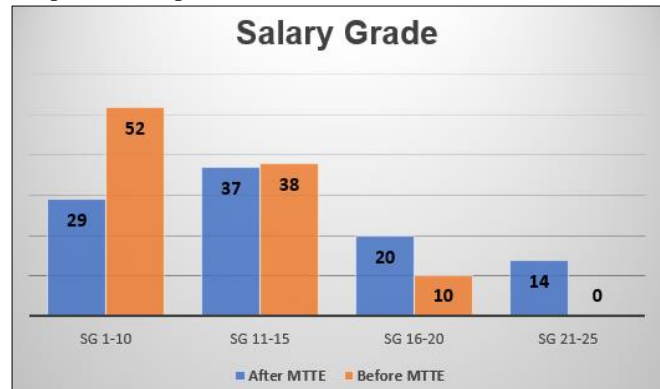


Figure 4 Comparison of Salary Grade of the Respondents Before and After the MTTE Program

Impact of the Graduate Program to the MTTE Graduates

The impact of the program to the lives of the MTTE graduates is measured using the 2020 Masters Survey Questionnaire developed by the CHED. The purpose of which is to validate how significant is the bearing of the graduate program to the quality of life and professional career of the graduates. Results of data analysis revealed that, in general, the MTTE graduates are unanimous in claiming that the MTTE program has adequately equipped them with hard and soft skills ($M=6.42, SD=0.62$) (Table 4) appropriate for their professional career which gives them an edge to be promoted at work ($M=4.38, SD=0.97$) as presented in Table 5.

Table 4 Achievement of the Program Educational Objectives for the MTTE Graduates

Question Items	Mean	SD	Description
1. The MTTE program provided me an up-to-date knowledge.	6.35	0.627	SA
The MTTE program developed my	6.39	0.603	SA
Figure 4 Comparison of Salary Grade of the Respondents Before and After the MTTE Program			
2. capability to use ideas and information.			
3. The MTTE program developed my ability to test ideas and evidences.	6.37	0.662	SA
4. The MTTE program gave me the ability to generate new ideas and evidences.	6.41	0.606	SA
5. The MTTE program enabled personal development.	6.51	0.612	SA

6. The MTTE program developed my capability to plan and manage self-learning.	6.51	0.612	SA
Overall Mean	6.42	0.62	SA

Table 5 Impact of the MTTE Program to Employment

Items	Mean	SD	Description
1. Increasing job opportunities (changes of company or institution, changes of job, etc.)	4.43	1.04	SA
2. Taking on new duties or responsibilities to those you previously had.	4.32	0.98	SA
3. Developing new projects or products, new lines of action, strategies, etc.	4.34	0.98	SA
4. Taking a key role in decision-making with a potential direct impact on the business.	4.28	0.95	SA
5. Enhancement/upgrading of academic studies or professional or technical training.	4.53	0.95	SA
6. The possibility to establish contacts and/or network with individuals or institutions.	4.38	0.95	SA
Overall Mean	4.38	0.97	SA

MTTE Employers' Feedback

To triangulate the information that resulted in quantitative phase of this study, a qualitative phase was conducted. Based on the thematic analysis using conventional approach, three themes emerged that described the characteristics of MTTE graduates who made them valuable in their respective workplace. The three themes are: positive attitude, exceptional work ethics, and excellent skills.

Exceptional Work Ethics

According to Aring (1974), people who demonstrate high values on work ethics are somehow more effective or productive and consequently more valuable as employees and managers. This definition is exemplified by MTTE graduates as described by their immediate superiors.

"She is committed to teaching and performs quasi-assignments. She also actively participates and accepts responsibility for all the tasks given to her. She is willing to extend her time for the benefit of the department." (FP2)

"As for the performance of the MTTE teachers in my school, I can say that their leadership skills are enhanced. This is exhibited by their reliability at work, hence receiving awards in the division and even in the national categories of outstanding teachers. Some MTTE graduates who are also teaching here received various awards and I also received one which was an outstanding teacher award." (MPI)

When hiring for faculty members, I always consider the MTTE graduates because I am sure that they embody positive attitudes that exemplified the graduate attributes of the university. In fact, I have observed their commitment and dedication at work. Their positive attitudes are acknowledged by the various award-giving bodies where my faculty members are recognized." (FP1)

Exemplary Content Knowledge

Content knowledge is the "knowledge about actual subject matter that is to be learned or taught"[22]. Therefore, teachers must be aware of the lesson material they will be teaching and how different curriculum areas require different types of expertise.

"All our faculty members are Licensed Professional Teachers. They passed the national Licensure Examinations for Professional Teachers." (FP2)

"Two faculty members of the department who are graduates are given the Teaching Excellence Award by the university. All of the faculty members, mostly are MTTE graduates, also received Research Publication awards given by the university. If these awards do not exemplify that they are knowledgeable in the content, then I don't know how else to describe it (with a smile)." (FM2)

"Our faculty members are very knowledgeable and skilled." (FP1)

Excellent Skills

Skills is the ability to use one's knowledge effectively and readily in execution or performance [23]. When the skills possessed by a teacher is carried out excellently, whether the hands-on skills or pedagogical skills, then it will reflect in the students' achievements. The interviewees in this study confirmed that the students in their respective institutions are garnering awards in recognition of the skills they developed while studying.

"So far, our MTTE graduates are experts in their fields. They were trainers and assessors for how many years and aside from their MTTE degree, they also participated in various capability training programs which are sponsored by the institution in TESDA in order for them to improve and enhance their knowledge and skills and competencies as a TVET trainers." (FP1)

"During Technomic's in DepEd, the students of my faculty members who are coaches in different areas of specialization almost always bag the top awards. This is because my teachers, who are mostly MTTE graduates possess the necessary knowledge and skills of their field." (MPI)

The university (where the MTT is offered) is one of the top universities in the country which is why there is an edge if the applicant is a graduate of this university. That is because the instructors/professors are experts in their field. Hence, we cannot deny that our graduates are equipped with the required knowledge, skills, and attitude needed in their respective fields of work." (FP2)

4. CONCLUSION

This study showed empirical evidence that the MTTE graduates soared high and contributed significantly to the community by providing quality services through excellent teaching, and to their respective families through stable employment and increased income. The Program Educational Objectives are apparently observed from the programs' earlier graduates. The Program Outcomes are equally described from the five respondents of this study who just finished their MTTE program this School Year. The excellent performance of the MTTE graduates could be

attributed to the excellent curriculum that the university is offering. In fact, the program has been issued a Certificate of Compliance by the CHED. Another factor that could be attributed of the MTTE graduates' excellent performance is the quality of the faculty members who are mostly PhD holders from the top universities of the country and abroad. Furthermore, the quality of the faculty members could also be attributed to their long teaching experience. The university administration is also a key factor to the success of the MTTE program and thus its graduates. The university supported the program with world-class learning facilities as well as top-of-the-line student support. These three factors: excellent curriculum, exemplary faculty members, and highly supportive university administration, explain why the MTTE graduates successful.

5. RECOMMENDATIONS

This study has its limitations. For one, the number of respondents did not reach the minimum required sample size for a population of 86 due to time constraints. It is thus recommended in this study that for future studies, the sample size maybe increased. The respondents and the interview participants of this study are coming from the academe. Hence, it is also recommended that employers and employees who are graduates of the program and are working in the industry may also be included. Finally, based on the findings of this study, it was found out that the students are equipped with knowledge, skills, and attitudes. However, as benchmarked from top universities in the world, it is recommended that students be also given opportunity to mingle with other graduate students through extra-curricular activities. In this way, the students will have opportunity to enlarge their networks.

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