

# TRACER STUDY OF MASTER OF TECHNICAL AND TECHNOLOGY EDUCATION (MTTE) GRADUATES IN A STATE UNIVERSITY IN NORTHERN MINDANAO

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**ABSTRACT.** *This graduate tracer study evaluates the performance of MTTE program graduates in their employment relative to the achievement of the program's educational objectives. This study further seeks to assess the performance of the MTTE program in its relevance to the Commission on Higher Education's four major thrusts: effectiveness and efficiency, relevance and responsiveness, quality and excellence, and access and equity. To achieve this goal, this study employed a survey research design and conducted an online survey of 33 graduates on their employment status and their perceptions of the relevance and usefulness of the program. Results of data analysis revealed that all the MTTE graduates are employed and had been promoted to higher positions upon earning their degree. Most of the graduates regarded the skills that they acquired from the program as useful and relevant to their field of work. Recommendations for curriculum enhancement are also discussed in this study.*

**Keywords:** Graduate studies, Northern Mindanao, Philippines, Technology Education, Tracer study

## INTRODUCTION

The number of graduates in any academic degree and their employability is among the measures of the success of a program [1]. However, equally important is the realization of the Program Educational Objectives (PEOs) of any program [2]. The best exercise to validate the academic program achievement is through a tracer study. Graduate and employer tracer surveys constitute one form of an empirical study that can provide valuable information for evaluating the results of the education and training of a specific institution of higher education [3]. This information may be used for further development of the institution and the academic program in particular in the context of quality assurance. An advanced approach for tracer studies will enable the institution of higher education to get information to indicate possible deficits in a given educational program and to serve as a basis for future planning activities. Therefore, information on the professional success (career, status, income) or employment transitions/promotions of the graduates are needed as well as information on the relevance of knowledge and skills (relationship between knowledge and skills and work requirements, area of employment, professional position).

The general goal of all graduate programs in education and other educational professionals is "to improve the capabilities of education professionals who aim to contribute to the continued improvement of teaching and learning in the classrooms, delivery of student services, and management of educational program" [4].

### The MTTE Program

The Master of Technical and Technology Education (MTTE) aims to equip today's future leader educators with the necessary skills and competencies in the field of Technical and Technology Education [5]. In addition, MTTE is described as "a program that prepares interested professionals to become technical and technology leaders and trainers in the basic and higher education institutions, TVET, and industries. The program provides both theoretical, practical and research training" [5]. Thus, the program envisions graduates who are globally innovative, and who possess entrepreneurial, technological, and

leadership skills that make him/her highly competitive and employable in the ASEAN region and globally. As reflected in the MTTE curriculum package which was approved by the University Board of Regents, after three to five years from finishing the program, the MTTE graduates are expected to become (a) expert educational leaders who possess expertise in the pedagogical, and anagogical, technological and content knowledge for an improved and quality educational system of the country; (b) competent researchers and innovators with relevant outputs in improving and providing timely and

relevant solutions to pressing academic, industrial and societal challenges; and (c) efficient academic and industrial trainers who are globally competitive and highly motivated to promote technical, vocational as well as entrepreneurial skills to propel the local, national and global economy. In the same vein, the institutional graduate attributes promulgated by the university are innovative thinking, critical thinking, resilience, and empathy, teamwork, and communication skills [6]

To cope with the demand of the emerging and complex nature and challenges of the 21st century the Philippine Qualifications Framework Commission on Higher Education (CHED) was mandated to review the learning standards and ensure that will promote relevant, efficient, and quality higher education [7]. Hence, CHED requires all HEIs to conduct a tracer study and is equally reflected as one of the required documents by any higher education accrediting body such as the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACUP), Inc. [8].

With these views, this tracer study intended to assess if the MTTE program has achieved its program educational objectives in reference to its relevance to the CHED's four major thrusts on effectiveness and efficiency, relevance and responsiveness, quality and excellence, access and equity.

### Statement of the Problem

This study aims to trace the graduates of the MTTE program and provide a comprehensive analysis of the impact of such a curricular program. Specifically, the study seeks to answer the following questions:

1. What is the present employment status of MTTE graduates and their present occupation?
2. What is the level of perception of the MTTE graduates regarding the relevance of the MTTE program to their current job?
3. What is the MTTE graduates' self-assessment regarding their level of:
  - a. Critical thinking skills,
  - b. Resiliency, and
  - c. Intrapersonal skills?

4. What are the views and recommendations of the graduates on the program's curriculum based on their experiences as expressed by their employers?

From the target respondents using a validated researcher-made questionnaire. The respondents of this study were 33 MTTE graduates from 2010 to 2022. In addition, six employers were recruited to participate to a one-one interview regarding the performance of the MTTE graduates. Table 1 presents the demographic profile of the respondents and the participants of this study.

**Table 1: Demographic profile of the respondents of the study (n=33).**

Characteristics	Frequency	Percentage
Year Graduated		
2010	1	3
2011		0
2012	1	3
2013	1	3
2014	4	12
2015	4	12
2016	3	9
2017	3	9
2018	6	18
2019	3	9
2020	4	12
2021	2	6
2022	1	3
Sex		
Male	13	39
Female	20	61

The sampling technique used in this study was snowball sampling. The list of the graduates was secured from the student's file at the Registrar's Office of the University. The researchers contacted all the MTTE graduates that they are acquainted with through Facebook messenger. They are referred to as gatekeepers. From these gatekeepers, snowball sampling was employed. Table 2 presents the profile of the participants of the interview of this study.

**Table 2: Profile of the participants of the interview (n=6).**

Code Name	Age	Sex	Position
MPr1	46	M	School Principal
MPr2	38	M	School Principal
MPr3	55	M	Vice-Chancellor
FPr1	41	F	College Dean
FPr2	44	F	Department Chair
FPr3	53	F	Campus Director

Since the data collection method was an online survey, two filtering questions were employed to ensure that only graduates of the MTTE program should answer the survey. Lastly, this study utilized the researcher-constructed questionnaire. The questionnaire was

**METHODOLOGY**

This study used the explanatory mixed methods research design covering the employment characteristics and transition to the employment of the MTTE graduates and the description of the employers. This method was employed to gather information validated by three experts. After the revision of the questionnaire based on the feedback from the experts, the survey questionnaire was disseminated online through Google Forms. To analyze the data, descriptive statistics such as frequency and percentages to profile the respondents, and the mean and standard deviation were used to assess their level of perception.

**RESULTS AND DISCUSSION**

The following are the results of the data analysis of this study. By visual examination, it can be observed in Table 3 that the MTTE graduates are all employed even before they took the program. However, it is notable that after finishing the program, all of the respondents were promoted to a higher academic rank. Regarding their position at work, it is worthy to underscore that while all of the MTTE graduates are working as faculty members in educational institutions, 42% of them (n=14) were designated with the supervisory position. This goes to show that the

**Table 3: Numerical comparison of the employment status of the MTTE graduate before registering and after finishing the program.**

Characteristics	Before MTTE		After MTTE	
	F	%	F	%
Nature of employment				
Teacher 1	17	52		
Teacher 2			5	15
Teacher 3			6	18
Part-time Faculty	5	15		
Instructor 1	11	33	2	6
Assistant Professor			17	52
Associate Professor			2	6
Position at Work				
Faculty	33	100	19	58
Supervisory			14	42
Status of Appointment				
Contractual	8	24		
Probationary	6	18	1	3
Regular	19	58	32	97
Income				
Below PhP20,000	14	42	1	3
P21,000 to 30,000	17	52	21	64
P 31,000 to 40,000	2	6	5	15
P 41,000 to 50,000			4	12
P 51,000 to 60,000			1	3
P 71,000 to 80,000			1	3

The MTTE program, which aims to prepare middle-level managers, has successfully attained its program goal. Corollary to the MTTE graduates' status of appointment at work, 42% were contractual and on probationary

status before they took the program. After finishing the program, 97% of the respondents were given regular status. The MTTE program, thus, helps ensure its graduates a better and more secure economic status. This is further verified by the respondents' claim that their salaries, after having been promoted at work and given permanency of job security, increased to a significant amount.

Table 4 presents the level of relevance of the MTTE program to the graduates' employment. Based on the results presented, the MTTE graduates expressed high satisfaction with the training they acquired from the program ( $M=4.84, SD=0.48$ ). This could be due to a well-crafted curriculum that suits the need of the industry [9].

**Table 4 Relevance of the MTTE program to employment.**

Statements	Mean	SD	Description
Is the MTTE program relevant to your job?	4.91	.051	The MTTE program is very much relevant for the employment
Does your educational experience with the MTTE program help you perform your work effectively?	4.85	0.43	
Is your course relevant to present needs because of the introduction of technologically advanced Instrument?	4.76	0.49	
Overall Mean Score	4.84	0.48	

As regards the MTTE graduate's level of critical thinking skills, Table 5 shows that they are totally able to think critically on their own ( $M=5.31, SD=0.92$ ), with very little to no supervision needed anymore from their immediate superior. These results prove that the MTTE graduates have embodied the institutional graduates of the university in critical thinking and problem-solving skills.

**Table 3 MTTE graduates' critical thinking skills**

Questionnaire Statements	Mean	SD	Description
I can assess situations, identify problems and evaluate solutions.	4.39	0.74	Totally able to think critically on their own.
I recognize the many dimensions of a problem and can determine a root cause.	4.24	0.95	
I am not afraid to be creative when solving problems.	4.21	1.01	
I like to make sure the solution works in case improvement is required	4.41	0.98	
Overall mean score	4.31	0.92	

Regarding the MTTE graduates' level of resiliency, Table 6 shows that the respondents are totally willing to embrace new concepts and situations ( $M=4.64, SD=0.62$ ). This attitude exemplifies the resilient attitude of the graduate which is an embodiment of the university's institutional attributes.

**Table 4: Resiliency of MTTE graduates**

Questionnaire Statements	Mean	SD	Description
I like to learn new things.	4.59	0.74	Totally willing to embrace new concepts and situations
I know where I need to improve and I like to set learning goals. I can identify and access learning opportunities.	4.71	0.52	
I learn from my mistakes and can accept feedback.	4.62	0.60	
Overall mean score	4.64	0.62	

Finally, the corollary to the intrapersonal skills of the MTTE graduates, Table 7 shows that the respondents have a strong intrapersonal skill ( $M=5.54, SD=0.64$ )

**Table 5: Intrapersonal skills of the MTTE graduates**

Questionnaire Statements	Mean	SD	Description
I am a confident person.	4.33	0.69	Totally agree
I am usually honest.	4.64	0.60	
I'm a person who likes to take responsibility.	4.58	0.66	
I can adapt to new circumstances or information.	4.61	0.61	
Overall mean score	4.54	0.64	

The interview conducted with the MTTE graduates' immediate superiors at work (Department Chairperson, College dean, or school principals) validated the claim of the respondents regarding the relevance of the program to their job, their leadership, and other soft skills. To elucidate this, the following superiors expressed their observations about their faculty members.

MPr1: *"The employee is able to work well with her colleagues demonstrating emotional insights regarding their situation. She also has openness to her superiors and colleagues' suggestions, has a positive stance, expresses opinions, and embraces issues with determination to find solutions during challenges encountered at the workplace."*

MPr2: *The employee is able to hold and maintain the interest and attention of the entire class throughout the session. She also has the ability to create a pleasant and wholesome atmosphere during instruction.*

MP23: *This employee really caught my attention for she exerts time and effort in every task assigned to her. Also, she respects others by arriving at work and at meetings on time and adheres to the schedule whenever possible. Accepts constructive criticism wholeheartedly. Always keep up the good work!*

FPr1: *"She is an employee that any principal can count on. She is dependable with tasks assigned to her. Her work ethic is excellent, and she delivers her assignments beyond expectations. She also exemplifies strong leadership with her problem-solving skills and decision-making skills. She is resilient in times of untoward circumstances.*

FPr2: *"The employee always demonstrates commendable work ethics. She is very responsible and has a positive spirit towards work. I admire her professionalism in*

*dealing with other employees I observed she's resilient and can work under pressure while maintaining a good attitude and compassion."*

FPr3: *"She can articulate well her thoughts and collaborates well with the team. She can finish tasks with little to no supervision and with quality."*

### CONCLUSION

The MTTE program has a strong curricular offering, and its faculty members are high-caliber, world-class professors who are committed to molding the MTTE students towards excellence. Furthermore, the university administrator has strong provided strong support to promote students' welfare. Thus, the university has produced excellent MTTE graduates. According to an adage, "excellent input yields to a strong output."

Based on the findings and analysis of the result the researchers conclude that the MTTE program provided the graduate students with advanced knowledge and theories, as well as essential soft skills that are useful to their field of specification, and honed skills that are relevant in their actual work setting.

### RECOMMENDATIONS

It is recommended that future studies be conducted to evaluate in-depth whether other graduate attributes which are not covered in this study are achieved by the graduates. Moreover, the sample size may also be increased and earlier graduates are included in the survey.

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