UNCOVERING CHALLENGES TO COMPLETION: A MULTIPLE METHOD STUDY IN THE MASTER IN TECHNICIAN TEACHER EDUCATION PROGRAM STUDENTS

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ABSTRACT. *Despite high enrollment numbers in the MTTE program, the graduation rate appears to be significantly low, indicating a concerning trend within the program. This study investigates the factors contributing to the low number of graduates in the Master in Technician Teacher Education (MTTE) program in comparison to its enrollment. The study examines the perceived factors that motivate students to enroll in and complete the program, and the challenges they encounter that hinder their completion. The study uses a multiple-method research approach, combining quantitative and qualitative methods. Forty-two respondents took part in the study, and the questionnaire used was developed by the researchers and validated by experts. Findings suggest that financial problems, time management issues, and difficulties in conceptualizing research studies emerge as significant challenges. These results can inform program administrators, policymakers, and educators in developing interventions and strategies to improve the program completion rate and address the declining trend in graduates. Additionally, the research contributes to the field of technical education research by providing evidence-based insights for program design and curriculum development.*

Keywords: *Graduate program completion, MTTE program*

1. INTRODUCTION

Technical education is a critical pathway for individuals seeking to acquire specialized knowledge and skills in the rapidly evolving field of technology [1]. The Master in Technician Teacher Education (MTTE) program offers comprehensive theoretical, practical, and research training to equip professionals with the necessary skills and knowledge to become leaders and trainers in technical-technology educational and industrial institutions. By completing this program, graduates are well-equipped to become effective educators, leaders, and consultants in their respective fields.

The MTTE program was established in 1993 in response to the demand for technical-vocational teachers and educational leaders with a strong theoretical understanding of teaching and technology. The Board of Trustees passed resolution no. 7 to formally offer the program. The curriculum was revised in 1995 per BOR resolution no. 57, and again in 2020 to comply with the Commission on Higher Education (CHED) Memorandum No. 15 series of 2019. The new curriculum was implemented in August 2020, and the program was renamed Master in Technical and Technology Education (MTTE) under Board of Regents Resolution No. 92. The program offers a curriculum with specialized tracks in Automotive Technology, Civil Engineering Technology, Electrical Engineering Technology, Electronics Engineering Technology, Fashion and Garments Technology, Food and Service Management, Mechanical Engineering Technology, and Technical Drafting Technology. CHED has issued Certificate of Program Compliance (COPC) # 59 s. 2016, for the program attesting to its high-quality standards, among other indicators of quality.

The graduation rate has become a commonly regarded statistical indicator of higher education's institutional performance [2]. However, graduate schools around the world struggle to shorten the long time to degree and to prevent dropout rates [3]. In the MTTE program, despite high enrollment numbers, the graduation rate appears to be significantly low, indicating a concerning trend within the program. Enrollment data in the MTTE program for the last seven years (SY 2016-2022) revealed a total of 104 students for new enrollees alone, while the total number of graduates from 2012-2022 was only 56. This trend poses a potential challenge to the future of this educational pathway.

The issues of low graduation rates, student desertion, or failure can have a ripple effect on the entire educational community [4]. However, previous studies focused on the challenges of higher education institutions pertaining to enrollment, retention, and attrition [5,6]. Thus, it is imperative to look into the underlying reasons for the challenges the students face.

This study investigated the factors that contribute to the low number of graduates in the MTTE program in order to provide insights to administrators, policymakers, and educators about potential issues and areas that require attention. The insights can help in developing effective interventions and strategies to improve the attractiveness of the MTTE program and ensure its sustainability. Additionally, it can contribute to the broader field of technical education research by providing evidence-based insights to guide future program design and curriculum development. In order to realize the aforementioned articulation, the following research questions are sought in this study.

1. What are the perceived factors that motivate students to enroll in the MTTE program?
2. What are the perceived factors that motivate students to complete the program?
3. What challenges do students encounter that hinder their completion of the MTTE program?
4. What support do the MTTE students need from the department to finish the program?

2. REVIEW OF RELATED LITERATURE
Pursuing Advance Studies

Pursuing advanced education is motivated by both personal growth and salary augmentation, which are intrinsic and extrinsic factors, respectively [7]. Various reasons were identified that motivate teachers to enroll in graduate studies. One reason was *professional growth and development.* Many teachers pursue graduate studies to

enhance their knowledge and skills in their subject area or in pedagogy [8]. Graduate programs provide opportunities to deepen understanding, stay updated with the latest research and practices, and hone instructional techniques. By engaging in advanced coursework, teachers can gain expertise that enables them to become more effective educators and leaders in their schools [9]. Graduate studies can open doors to career advancement opportunities for teachers. Some educational institutions require advanced degrees for higher positions such as department heads, curriculum coordinators, or school administrators. Pursuing graduate studies can increase a teacher's chances of qualifying for such roles, leading to higher salaries and increased responsibilities [10]. More so, specialization in a specific field could also be a reason why teachers take graduate programs. Teachers with well-developed disciplinary and subject knowledge possess a deep understanding of the core concepts, theories, and methods [11]. Meeting *professional requirements* was found to be another factor for enrolling in graduate programs. Teachers need to complete a specific number of graduate-level credits or obtain a master's degree to maintain their teaching credentials or advance to a higher level of certification. The Department of Education In the Philippines has issued office order number 007, s. 2023 and number 2, s.2002 setting the criteria for selecting and promoting teachers. Similarly, the CHED has its NBC 461 for hiring and promoting higher education teachers. Personal *fulfillment* is also a key factor that pushes teachers to pursue graduate studies. Education is a life-long learning and personal fulfillment [12]. They are motivated to enroll in the program by their genuine passion for learning and desire to delve deeper into their field of study. *Contribution to the field of education* also motivates them to take advanced studies. Teachers who pursue graduate studies may aspire to contribute to the field of education through research, policy development, or curriculum design. By conducting original research or participating in advanced coursework, they can gain the knowledge and skills needed to make meaningful contributions that have a broader impact on educational practices and policies [13]. Another factor that plays a significant role in motivating students to pursue higher education is the quality of instruction [14].

Graduate Program Attrition

For decades, the issue of student attrition in graduate education has been a matter of concern [15]. Student attrition can have detrimental psychosocial effects, leading to feelings of frustration and depression among students, while also wasting valuable time and effort invested by faculty members [16]. Recent pieces of literature reported various reasons why many graduate students do not finish their programs. Some of the common factors contributing to non-completion include *Financial Constraints, Personal and Family Obligations, Work-Life Balance Challenges, Lack of Support and Mentorship, Research Challenges and Dissatisfaction, and Motivation.* Graduate education is often costly, placing a financial burden on many students who struggle to afford tuition fees, living expenses, and other related costs. The limited availability of funding options and inadequate financial support can present significant challenges for students aiming to sustain their enrollment in graduate programs. As a consequence, some students are compelled to drop out or fail to complete their studies. Lack of financial resources is a personal factor that

influenced graduate students' decision to discontinue their program [17]. Financial challenges were identified as the second most significant obstacle causing delays in postgraduate studies at Nigerian Universities [18].

Another issue that appears in the literature is personal and family obligations. Many graduate students juggle multiple responsibilities, such as work, family obligations, and caregiving responsibilities. Prior research has consistently highlighted the formidable challenge faced by graduate students in achieving a balance between their personal life and demanding academic and professional responsibilities [19]. This struggle to strike a balance has been identified as a prominent factor contributing to the dropout rates among graduate students. This will result in procrastination, missed deadlines, and an inability to effectively allocate time for studying and fulfilling program requirements [20]. Supervisors have a significant impact on student satisfaction, persistence, and academic achievement [21]. To promote successful academic advancement, departments should not only provide comprehensive administrative support but also offer regular and substantive communication between advisors and students [22]. However, the level of support that students receive from their professors is sometimes insufficient compared to what they anticipate or desire [23]. The lack of adequate support and mentorship from faculty members, advisors, or peers can significantly impact a student's motivation and progress in their graduate studies. Insufficient guidance, limited access to resources, mismatch between research interests and available faculty expertise can lead to feelings of isolation, frustration, and disengagement, which may ultimately result in students dropping out [24]. Consequently, inadequate mentorship can contribute to graduate school attrition [25]. Insufficient mentoring and advising was one major source of dissatisfaction among students, and one of the most frequently cited sources of delay or difficulty by graduate students [26].

Graduate programs often involve conducting original research, and the challenges associated with research can be a deterrent for some students. The primary reason for students dropping out of graduate school is the requirement to write a dissertation [27].

For graduate students, conducting research without adequate exposure to research methodologies and subject-related knowledge can be challenging. Lack of knowledge and skills related to their field can hinder students' ability to conduct research and produce dissertations of good quality [28]. To increase graduation rates, it is necessary to enhance the motivation of graduate students in their research, encourage them to submit more journal articles to develop their writing skills, and further bolster their self-confidence [29].

3. METHODOLOGY

Research Design

This study utilized multiple methods of research. Multiple methods of research involve researchers utilizing data from multiple sources and employing various types of analysis. This can include using two or more qualitative methods, two or more quantitative methods, or a mixed methods approach that combines both qualitative and quantitative methods [30].

The quantitative method was first employed to investigate the motivating factors that drive students to enroll in the

MTTE program, as well as the factors that influence their program completion. In the second investigation, the qualitative method was used to gain deeper insights into the barriers that hinder students from completing the program and to generate potential strategies for mitigating such challenges within the program. For the online survey, a researcher-made questionnaire that includes an open-ended question was utilized and validated by experts.

Respondents and Participants

The study respondents were students enrolled in the MTTE program from the University of Science and Technology of Southern Philippines (USTP) – Cagayan de Oro Campus-the only university in Mindanao offering the MTTE program and have obtained a level 4 accreditation from AACUP. Table 1 presents the demographic profile of the respondents.

Table 1. Profile of the Respondents

Profile	Frequency	Percentage
Year of Admission		
2012-2015	5	11.9
2016-2019	7	16.7
2020-2023	30	71.4
Academic Status		
Coursework	26	61.9
Thesis Writing	6	14.3
Completed Academic Requirement	10	23.8
Area of Specialization		
Electrical Engineering Technology	2	4.8
Food and Surmise Management	21	50.0
Electronics Engineering Technology	3	7.1
Civil Engineering Technology	3	7.1
Information Technology	1	2.4
Fashion and Garments Technology	5	11.9
Technical Drafting Technology	3	7.1
Automotive Technology	4	9.5
Age		
21-30	15	35.7
31-40	17	40.5
41-50	8	19.0
51 and above	2	4.8
Sex		
Female	28	66.7
Male	14	33.3
Civil Status		
Widow	1	2.4
Single	18	42.9
Married	23	54.8
Employment Agency		
Department of Education	17	40.5
State Universities and Colleges	20	47.6
Others	5	11.9

Respondents included those who were enrolled under the old curriculum and the new curriculum. Students who have discontinued, abandoned, or are on leave of absence (LOA) but have been enrolled in the program were also included. The respondents were considered because they are the most appropriate to provide valuable insights into the problem under investigation. The participants for the qualitative phase were those who voluntarily responded to the open-ended questions.

Ethical Considerations

The study was conducted in strict accordance with ethical principles and guidelines of transparency, honesty, and without bias. The works of other researchers were properly acknowledged and cited. All study materials, including survey questionnaires and consent forms, were free from offensive or discriminatory language, and all data were treated with confidentiality as mandated by the Data Privacy Act of 2012.

4 RESULTS AND DISCUSSION

Factors that motivate students to enroll in the MTTEprogram
Mean and standard deviation was used to determine the motivating factors that influence the students to enroll in the program. Findings revealed that students enrolled in the MTTE program displayed a significantly higher level of agreement regarding their strong motivation to enroll in the program (M=4.46; SD=.569). This indicates that participants had favorable opinions about the quality of instruction, curriculum, relevance to work, interactive classroom methods, classroom management, assessment and feedback, self-directedness, learning environment, and academic advising within the program.

Table 2. Motivation to enroll in the MTTE program

Factors	Mean	SD	Description
Quality instruction	4.48	.671	SA
Quality curriculum	4.43	.770	SA
Relevance of the program to my work or potential work	4.76	.576	SA
Use of interactive classroom	4.38	.795	SA
Effective classroom management	4.43	.703	SA
Progressive assessment and timely feedback	4.38	.731	SA
Self-directedness	4.38	.731	SA
Conducive Learning environment	4.50	.672	SA
Academic advising	4.40	.734	SA
Overall	**4.46**	**.569**	SA

This result is similar to the study of Sogunro [31] which concluded that the top eight (8) factors that are critical in eliciting willpower in students toward successful learning are quality of instruction; quality of curriculum; relevance and pragmatism; interactive classrooms and effective management practices; progressive assessment and timely feedback; self-directedness; conducive learning environment; and effective academic advising practices. In this study, quality of instruction had the highest mean (M=4.48; SD=.671), indicating its significance in students' decision-making process to enroll in the MTTE program that has a level 4 accreditation status. Quality of instruction

was a crucial factor motivating graduate students to pursue higher education. Without adequate quality instruction, students' motivation to learn may diminish [14]. Furthermore, when students experience better quality instruction, they are satisfied and become loyal to their institution [23]. Similarly, satisfied students are less likely to discontinue their schooling [32].

Factors that motivate students to complete the program
Table 3 reveals a strong agreement among participants regarding their motivation to pursue graduate studies as a means of enhancing job opportunities, advancing professional careers, and acquiring additional knowledge (M = 4.70, SD = .458). This could imply a wider range of perspectives and motivations among the respondents. Even though the majority of respondents wanted to advance in their professional careers (M=4.93, SD=.261), only a few aspire to pursue a doctorate degree (M = 4.21, SD= 1.159). This could be an indication that conducting research studies as well as thesis and dissertation writing at the graduate level are hindrances in pursuing graduate studies.

Results of the study could also mean that finishing the MTTE program is enough for them to improve their job opportunity, gain complementary knowledge and training and advance their professional career.

The majority of respondents are currently employed in state-run educational institutions. In the case of DepEd, DO No. 66 series of 2007 states that achieving a Master's degree is the minimum requirement for teachers to be eligible for promotion. Similarly, for SUCs, acquiring a full-fledged Master's degree is necessary for permanency of tenure, while pursuing a doctorate degree corresponds to academic re-ranking, per NBC 461. Pursuing advanced education would lead to academic advancements in the chosen field as well as salary augmentation [7].

Table 3. Motivation to finish the MTTE program

Factors	Mean	SD	Description
I want to finish my graduate studies to improve my job opportunity	4.88	.395	SA
I want to advance my professional career	4.93	.261	SA
I want to pursue a doctorate degree or post-doctoral degree	4.21	1.159	SA
I want to complement, enhance or gain insight into either academia, the professional world, or technical training	4.81	.455	SA
Overall	**4.70**	**.458**	**SA**

Challenges Encountered by MTTE Students
Thematic analysis was employed to interpret the results of the qualitative phase. The analysis identified three themes that described the factors hindering participants from completing the program: (a) time management, (b) financial expenses, and (c) conceptualization of the research study.

Financial Problem
Financial expenses were the most commonly reported reason hindering participants from completing the MTTE program. Several participants expressed similar concerns regarding financial issues.
P07: "Is difficult for me because I also need to sustain the daily needs of my family"
P10: "A am struggling financially because of other expenses"
P22: My source of finances is not enough to support both my study and other personal needs.
P18: "I am having a family emergency situation and it requires financial attention"
This finding is similar to Leijen, et al and Duze [17, 18] citing lack of finances as one of the factors that influenced graduate students to discontinue the program or caused its delay. This struggle can arise due to the expenses associated with pursuing education, such as tuition fees and other study-related costs. Since the participants mentioned are mostly married, they also have the responsibility of providing for their families, which adds an additional financial burden. Meanwhile, the availability of financial support plays a vital role in shaping the experiences and well-being of graduate students, fostering increased focus and perseverance in the study [33]. This suggests that financial resources were redirected towards meeting other urgent needs leading to a sacrifice in their own educational pursuits. Thus, economic reasons were considered a higher priority for most participants than completing their studies.

Time Management
According to the literature, time management is defined as "behaviors that aim at achieving an effective use of time while performing certain goal-directed activities" [34]. Several participants shared that time management is one of the reasons that hamper them to finish the program.
P05: "Time constraints hinder me to finish on time"
P29: "It's hard for me to manage my time because aside from my work responsibilities, there are tons of course requirements to submit"
P37: "Time management because I also have several papers works to do related to my work"
P40: "I am a working mom with 2 children. It's very difficult to budget my time"
Thus, time constraints shared by the participants can be linked to family responsibility, heavy workload, and submission of course requirements. This theme suggests that students face difficulties in effectively managing their time while pursuing the MTTE program. These students may struggle with balancing their academic responsibilities, work commitments, personal obligations, and other time-consuming activities. Some students are incapable of balancing both personal life and academic and professional aspects, while other students do not want to balance them at all leading to students' dropout [19]. Similarly, difficulties in achieving a balance between work, personal life, and graduate studies are a frequent motive for the student to consider dropping out of the program [35]. On the other hand, poor time management skills can lead to procrastination, missed deadlines, and an inability to allocate sufficient time for studying and completing program requirements [20].

Conceptualization of research study
Another theme that emerged during the data analysis is the difficulty in conceptualizing their research study. In the

MTTE program, students are required to pass the Thesis Writing as the final requirement of the degree. The participants shared the following thoughts:

P12: "I encountered a problem with my thesis proposal"

P32: "I am confused and don't have any idea about my research topic"

P28: I struggle with my research topic and lost confidence because I was advised to change the concept of my study.

This theme suggests that students encountered difficulties in conceptualizing and conducting their research study. Common challenges faced by graduate students were struggling to define a research problem or being unprepared and later on experiencing unexpected frustration in the process of conducting research [24]. These challenges can impede the progress of the students and hinder the successful completion of their research projects. Enhancing students' persistence in graduate programs requires a focus on improving their autonomous regulation and advisor support while minimizing controlled regulation [36]. Conversely, engagement with research training and early appointment of a supervisory team has been positively associated with thesis completion (Tinto 1993) as cited in the study [17].

Support needed by the MTTE students from the department

Financial Assistance

This theme suggests that MTTE students express a need for financial support from the department to overcome the financial challenges they face during their program. The participants expressed the following suggestions:

P21: "Offer student loans might lessen the burden of their financial responsibilities"

P22: "Offer more scholarships"

P30: "The department may lessen the amount paid for a thesis proposal and final defense"

P35: "The university may offer a study now pay later program to assist graduate students financially"

These findings conform to several other studies expressing the need for financial assistance. Access to financial opportunities alleviates graduate students' financial situations, allowing them to better focus and advance in their studies [33]. More so, the availability of research grants and scholarships significantly influences the persistence of students in their programs [36]. Furthermore, research has shown that increased access to funding is associated with higher levels of overall satisfaction among doctoral students and lower attrition rates [17]. This financial assistance could involve offering scholarships, grants, or other forms of financial aid to alleviate the burden of tuition fees, educational resources, and other related expenses. By providing financial assistance, the department can help students focus more on their studies and reduce financial stress, thereby increasing their chances of successfully completing the program.

Guidance from Thesis Advisor

In this study, participants reported that proper and consistent guidance from a thesis advisor is one of the assistance they need in order to complete the program. Here are some of their concerns:

P12: "I need help and guidance to improve thesis writing proposal"

P13: "Consistent guidance and follow-ups for me are necessary to keep me motivated to continue"

P19: "Regular consultation schedule could be a great help for me in my thesis writing"

P11: "Department should provide more thesis advisors for timely feedback"

This theme highlights the importance of guidance and support from a thesis advisor and the department as a whole to help students navigate through the MTTE program successfully. Regular meeting with advisors has an impact on students' progress [17]. The authors further emphasize that to promote successful academic advancement, departments should not only provide administrative support but also offer substantive assistance to supervisors and doctoral students, including identifying poor progress, monitoring supervisor-supervisee cooperation, and providing guidance on research and overall doctoral study management. Supervisors can have a significant impact on student satisfaction, persistence, and academic achievement [21]. Supervisory relationships, initially centered around fulfilling basic advising duties, can evolve over time into an "ideal" mentoring relationship [22]. In this dynamic, the student begins to view their supervisor as a valuable source of guidance, motivation, and a contributor to their future success.

5   CONCLUSIONS

Based on the results of the study, it can be concluded that MTTE students' decision to enroll in the program is favorably influenced by motivating factors. The study also revealed that the respondents have a strong motivation to finish the program to improve job opportunities, advance their professional careers, and gain complementary knowledge. However, the motivation to pursue a doctorate or post-doctoral degree was relatively lower. Furthermore, financial problems, time management issues, and difficulties in conceptualizing the research study are challenges that hinder the completion of the program. Financial constraints, lead graduate students to prioritize their family's financial needs over their educational pursuits. Struggling to balance academic responsibilities, work commitments, and personal obligations resulted from a lack of time management. Lastly, difficulty in conceptualizing the research study hinders the progress and successful completion of the research requirement of the program.

6.   RECOMMENDATIONS

Based on the findings, the department can provide support to address these challenges. Financial assistance, such as scholarships, grants, or study-now-pay-later programs, can alleviate the financial burden faced by students. Improved time management strategies and support systems can help students better balance their responsibilities and allocate sufficient time for their studies. Enhancing guidance and mentoring from thesis advisors can assist students in overcoming difficulties in conceptualizing and conducting their research study.

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