



Effectiveness and Relevance of the Master of Arts in Teaching Major in Technology and Home Economics in Advancing Professional Growth and Competence

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ABSTRACT: This descriptive tracer study determined the contributions of the Master of Arts in Teaching major in Technology and Home Economics (MAT-THE) program of Sorsogon State University to the professional and personal development of its graduates. Data were collected from the graduates' self-assessment of the program's effectiveness in terms of their expertise, skills, curriculum, and relevance. Results revealed remarkable ratings across domains, with exemplary ratings for professors' expertise and personality development, and consistently high ratings for professional skills, curricular design, and relevance. However, lower scores were observed for facilities and ICT integration – an essential component for THE instruction. The study concludes that while the MAT-THE program excels in pedagogy and curricular design, continuous improvement in laboratories, facilities, digital integration, and global linkages is vital to sustain its contributions to professional growth and advance the Sustainable Development Goals.

KEYWORDS: Master of Arts in Teaching, Technology and Home Economics, Tracer Study

INTRODUCTION

Graduate education is widely recognized as a catalyst for professional advancement, innovation, and leadership in education. In the Philippines, graduate programs such as the MAT-THE play a vital role in strengthening teachers' competence in applied sciences, home economics, entrepreneurship, and livelihood education. Graduate programs are essential in preparing educators to respond to the evolving challenges of education while ensuring alignment with international standards (Altbach, 2015; UNESCO, 2020). This specialization contributes directly to preparing learners for life skills, employability, and sustainable living, which are the core elements of SDG 4 on quality education and SDG 8 on decent work and economic growth. Moreover, because of its strong link to applied technologies and sustainable practices, THE also resonates with SDG 9, or the industry, innovation, and infrastructure, and SDG 12 on responsible consumption and production.

Meanwhile, the Education Act of 1982 provides the overarching framework for the Philippine education system, mandating institutions to develop "productive and responsible citizens" and to instill values, knowledge, and skills necessary for national development. Central to this goal is the responsibility of higher education to equip professionals with both academic and technical expertise that directly respond to the country's social and economic needs. Graduate education, such as the MAT-THE program, has become an avenue for human capital formation. As knowledge producers and professional training hubs, universities play a central role in advancing national competitiveness through the generation of skilled, innovative, and globally attuned graduates (CHED, 2021; OECD, 2018). Research shows that countries with strong investments in higher education achieve greater economic productivity and innovation (World Bank, 2019). Within this framework, the MAT-THE program functions as a critical component of human capital development in the Philippines, addressing the dual objectives of improving teacher education and fostering entrepreneurial and technical skills essential in THE.

Several tracer studies have been conducted focusing on various objectives and intentions. Some highlight the importance of continuous program evaluation to ensure relevance to labor market demands and to strengthen teacher preparation (Tutor et al., 2019; CHED, 2021); others focus on the employability trends of graduates in different graduate programs (Casanova & Paguia, 2022; Causing et al., 2022; Sayson et al., 2024); those that aimed to determine the mismatch, underemployment, and promotion



issues of graduates (Meñez, 2014), those that ascertain curriculum relevance (Buena, 2017; Sarsale et al., 2024), and also those that ascertain the graduates' competitive edge (Janer et al., 2015; Pamittan et al., 2022). The present study builds on such findings by focusing on the MAT-THE program of Sorsogon State University, which plays a unique role in bridging pedagogy, technical expertise, and applied skills essential for sustainable development.

This study, therefore, examines the MAT-THE program from the perspective of its graduates, focusing on its contributions to professional growth, skills development, curriculum quality, and relevance. By situating findings within the framework of the SDGs, this research provides insights into how graduate education in applied and technical fields advances both individual competencies and broader societal goals.

This study assesses the MAT-THE program at Sorsogon State University from the perspective of its graduates, focusing on its contributions to professional growth, skills development, curricular quality, and relevance. By situating findings within the framework of the SDGs, this research provides insights into how graduate education in applied and technical fields advances both individual competencies and broader societal goals. For brevity, MAT-THE shall be referred to in the succeeding sections as the program or MAT.

Objectives

Generally, this study assessed the effectiveness and relevance of the MAT program in advancing the professional growth and competencies of its graduates. Specifically, it aims to a) profile the graduates; b) determine the contributions of the MAT program to the professional development of graduates, c) assess their skills, d) determine their perceptions on the MAT curricula, and lastly e) determine the graduates' perceptions on the relevance of the MAT program to teaching, learning, and professional practice.

METHODOLOGY

This study employed a descriptive research design, utilizing survey data from 26 MAT-THE graduates of Sorsogon State University from 2018 to 2023. The number of respondents constitutes 87% of the population of 30 graduates during those five academic years. For ethical reasons, the identities of the graduates were not disclosed in this study. Table 1 shows the distribution of the 26 graduates:

Table 1. Number of MAT-THE Graduates

School Year	No. of Graduates (f)	Percentage (%)
2018 – 2019	5	19
2019 – 2020	11	42
2020 – 2021	4	15
2021 – 2022	1	4
2022 – 2023	5	19
Total	26	100

The graduates were surveyed using a Google Form sent via email and messenger. Aside from the graduates' profiles, the respondents rated indicators of professional contributions, skill enhancement, curriculum, and program relevance using a Likert scale. Weighted means were computed to determine overall assessments. Results were synthesized and interpreted in relation to existing tracer studies, professional development frameworks, and the UN SDGs.

RESULTS AND DISCUSSION

Profile of the Graduates

Table 2 shows the profile of the respondents along age, sex, civil status, length of service, affiliation, and monthly income.



Table 2. Profile of the MAT Graduates

Categories	Freq (f)	%
1. Age		
31 & below	10	38
32 – 37	9	35
38 & above	7	27
2. Sex		
Male	8	31
Female	18	69
3. Civil Status		
Single	8	31
Married	18	69
4. Length of Service		
< 1 year	4	15
1 – 5	7	27
6 – 10	12	46
>10 years	3	12
5. Affiliation		
DepEd	19	73
SUC	7	27
6. Monthly Income		
≤ 30,000	16	62
30,001 – 50,000	10	38

The respondents are all permanently employed and work full-time. They are predominantly female, married, and gainfully employed and are DepEd-affiliated, with most in their early to mid-career stages. Their monthly income clusters at ≤ ₱30,000 and ₱30,001–50,000. These results mirror Philippine tracer findings where public-sector teachers constitute the bulk of education graduates and pursue graduate study for progression and credentialing.

Contributions of the MAT Program to the Graduates’ Profession

As shown in Table 3, the graduates rated the program ‘exemplary’ in personality development and alignment with their current job (\bar{x} =4.56), and a consistent rating of ‘very good’ for expertise, intellectual ability, career goals, and professional networking, with an overall mean of 4.45. The graduates perceive tangible professional values, such as human capital and social capital, consistent with studies that show graduate education enhances teachers’ professional growth, reflective capacity, and career opportunities, such as role expansion and leadership pathways (Sevim & Akin, 2021). The strong network or linkages ratings resonate with tracer literature that emphasizes postgraduate programs as platforms for professional networks that support advancement and collaborative inquiry (Dela Cruz, 2022).



Table 3. Contributions of the MAT Program to the Graduates’ Profession

Indicators	Mean	Description
Expertise	4.48	Very Good
Intellectual ability	4.48	Very Good
Network and Linkages	4.48	Very Good
Career Goals	4.44	Very Good
Personality development	4.56	Exemplary
Current job	4.56	Exemplary
Opportunity abroad	4.04	Very Good
Overall WM	4.45	Very Good

These results indicate that the MAT program significantly enhances both the personal and professional dimensions of graduates. The remarkable scores on the various indicators suggest that the program not only equips them with academic expertise but also fosters confidence, adaptability, and employability. The findings also imply that the program aligns well with the professional demands of teachers. These outcomes contribute directly to SDG 8, decent work and economic growth, by fostering career advancement and mobility, and to SDG 17 for partnerships for the goals through the strong emphasis on networking and linkages. Given all these, the University must take actions to enable the MAT program to continuously strengthen industry-academe linkages and international opportunities for graduates, thereby further elevating its professional relevance.

Program’s Contribution to the Skills of the Graduates

Table 4 presents a uniform rating of ‘very good’ for all the skills with an overall mean of 4.35. The ICT skills rating, which is slightly lower than research and social skills, reflects a familiar pattern: postgraduate study boosts ICT competency, but sustained integration usually requires targeted professional development and practice (McGarr & O’Brien, 2007). This area aligns with the MAT, which the University must continuously pursue to achieve ICT standards and provide graduate students with the necessary integration.

Table 4. Program’s Contribution to the Skills of the Graduates

Skills	Mean	Description
Problem-Solving	4.28	Very Good
Research	4.44	Very Good
Communication	4.36	Very Good
Social	4.40	Very Good
Interpersonal	4.32	Very Good
ICT Skills	4.28	Very Good
Overall WM	4.35	Very Good

The findings suggest that the program successfully develops higher-order skills crucial for 21st-century teaching, such as problem-solving, research, communication, interpersonal competence, and ICT, all of which are essential for teacher effectiveness and lifelong learning. Evidence of well-designed professional learning, especially at the graduate level, improves teacher practice and student outcomes (Ventista & Brown, 2023). This supports SDG 4, or quality education, by ensuring that educators are equipped to deliver inclusive, equitable, and innovative instruction. This aligns with OECD (2018) reports that highlight the role of advanced study in enhancing transversal skills that directly impact student outcomes. Meanwhile, the slightly lower scores in ICT skills indicate that while graduates acquire adequate digital competencies, there remains the need for sustained integration of ICT in teaching and research, aligning them with SDG 9 (industry, innovation, and infrastructure). Strengthening digital literacy components of the MAT curriculum is therefore vital to ensure that graduates remain adaptive in technology-driven learning environments (Voogt & Pareja-Roblin, 2012).



Graduates' Assessment of the MAT Curricula

Table 5 reveals that the professors' expertise received the highest rating of 4.72, interpreted as 'exemplary', while foundation and major subjects also scored strongly. Support structures such as libraries, laboratories, and facilities, though rated 'very good', were comparatively lower (4.04 – 4.28). These results reflect patterns in Philippine tracer studies. The pattern - strong pedagogy or content delivery with comparatively lean physical or learning resources is often cited as a priority for quality assurance and program enhancement, which includes upgrading facilities, digital resources, and research infrastructure (Bueno, 2017; CHED, 2021; Dela Cruz, 2022).

Table 5. Graduates' Assessment of the MAT Curricula

Indicators	Mean	Description
Major subjects	4.52	Very Good
Foundation subjects	4.60	Very Good
Cognates	4.44	Very Good
Co-curricular activities	4.24	Very Good
Library resources	4.28	Very Good
Laboratory resources	4.08	Very Good
Class size	4.32	Very Good
Classrooms	4.20	Very Good
Other facilities	4.04	Very Good
Expertise of professors	4.72	Exemplary
Graduate sch policies	4.52	Very Good
Overall WM	4.36	Very Good

The exemplary rating of professors' expertise reflects the program's academic rigor and its contribution to SDG 4, or quality education, by ensuring high-quality instruction. However, the relatively lower scores in library, laboratory, and other facilities emphasize the need for continuous investment in educational infrastructure, consistent with SDG 9 (Industry, Innovation, and Infrastructure). Enhancing resources will enable graduates to apply theory in practice more effectively, further elevating the quality of education delivered through the program.

The results suggest that the program excels in its delivery of instruction, particularly through the expertise of professors, which graduates rated 'exemplary'. This strength underscores the program's alignment with SDG 4, as faculty competence is a cornerstone of academic excellence and effective graduate preparation. The significant ratings for foundation and major subjects likewise affirm the program's curricular relevance and rigor, resonating with Darling-Hammond's (2017) findings that teacher expertise and strong curricular grounding are key drivers of quality learning outcomes.

In contrast, the comparatively lower scores in support structures, such as libraries, laboratories, classrooms, and other facilities, highlight a persistent gap between instructional quality and resource adequacy. This trend, observed in Philippine tracer studies (CHED, 2021), reflects the need for institutional investments in infrastructure and digital resources, directly aligning with the targets of SDG 9 related to industry, innovation, and infrastructure. Strengthening facilities and research infrastructure would not only complement the exemplary teaching but also enhance experimental learning and innovation.

Graduates' Assessment of the Relevance of the MAT Program

The data in Table 6 reveal the graduates' affirmation of the MAT program's high relevance, particularly in quality of instruction, faculty-student relationships, research, and interdisciplinary learning, with an overall mean of 4.44. These ratings confirm the program's capacity to provide meaningful and responsive graduate education, aligning with evidence that positive faculty-student relationships and high-quality instruction enhance engagement and learning.



Table 6. Graduates' Assessment of the Relevance of the Programs

Skills	Mean	Description
Teaching and learning environment	4.28	Very Good
Quality of instruction	4.44	Very Good
Faculty-student relationship	4.36	Very Good
Research	4.32	Very Good
Interdisciplinary learning	4.28	Very Good
Overall WM	4.44	Very Good

The consistently 'very good' relevance ratings suggest that the program effectively prepares graduates for diverse professional roles by ensuring strong instructional quality, positive faculty-student relationships, and research competence. This closely aligns with SDG 4 by promoting student engagement, reflective practice, and interdisciplinary learning. Furthermore, the program's emphasis on research and collaboration resonates with SDG 17, or partnerships for the goals, reinforcing the importance of collaborative inquiry and knowledge-sharing to improve education systems. These findings also support Taylor and Francis (2020), whose article emphasizes the centrality of graduate education in fostering reflective practice and interdisciplinary inquiry. This implies that the program should maintain its strengths in instructional delivery while exploring more interdisciplinary and collaborative learning opportunities, in line with Education 2030 goals. Doing so will ensure graduates are equipped to contribute to both local and global educational landscapes.

Generally, the implications for the MAT program are twofold – to sustain its strong faculty expertise and curricular design while systematically addressing resource limitations. In doing so, it will equip graduates who are not only academically prepared but also trained in an environment that reflects the holistic quality standards of global graduate education. This balance between pedagogy and infrastructure is crucial for maintaining competitiveness and for producing graduates who can contribute meaningfully to various educational contexts.

CONCLUSION AND RECOMMENDATION

The MAT program consistently demonstrates strong contributions to graduates' professional growth, skill development, and curricular relevance. The program enhances expertise, intellectual ability, and employability, while fostering critical skills such as research, communication, and problem-solving – competencies that are recognized globally as central to effective teaching. The consistently high scores of instructional quality, faculty expertise, and curricular design confirm the program's academic rigor, although resource-related areas such as laboratories, facilities, and ICT integration warrant continuous development. While the MAT program is already aligned with international standards for graduate education, its long-term competitiveness will depend on strengthening infrastructure, sustaining interdisciplinary approaches, and deepening global linkages. With this, the program will not only maintain its local relevance but also prepare graduates to be adaptive, innovative, and globally competitive professionals in the field of education.

It is therefore recommended that the MAT program sustain its exemplary faculty expertise and curricular strengths while investing in the upgrading of learning resources and ICT integration. Strengthened partnerships with local and international institutions should also be pursued to broaden professional networks and interdisciplinary opportunities. By addressing these areas, the MAT program may remain relevant and continuously produce graduates who are technology-driven, digitally literate, and research-oriented professionals, necessary in maintaining a steady supply of the country's human capital.

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