



Students' Evaluation of the Medical Technology Assessment Program Enhancement Initiative for Licensure Examination Preparation

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Abstract

Structured academic enhancement programs are commonly implemented in professional education to reinforce disciplinary knowledge and support students' preparation for licensure examinations. This study evaluated students' perceptions of the Medical Technology Assessment Program Enhancement Initiative implemented at a university in Manila. A retrospective descriptive program-evaluation design was employed using all available individual student evaluation responses from Academic Year 2024–2025 and the first semester of Academic Year 2025–2026. The evaluation covered five program components—organization of lectures, lecture content, improvement of knowledge in licensure-related courses, time allotment, and overall lecture effectiveness—and three lecturer indicators: expertise, provision of printable materials, and cohesiveness of lecture delivery. Data were analyzed using means and standard deviations. Lecture content received the highest program-component rating ($M = 4.51$, $SD = 0.693$), followed by perceived knowledge improvement ($M = 4.47$, $SD = 0.712$). Time allotment received the lowest and most variable rating ($M = 3.52$, $SD = 1.106$). Among lecturer indicators, expertise obtained the highest rating ($M = 4.62$, $SD = 0.674$), while lecture cohesiveness received the lowest, although still favorable, rating ($M = 4.34$, $SD = 0.819$). The findings indicate that students generally perceived the enhancement initiative and its lecturers positively. Improved scheduling, increased instructional time for complex topics, standardized learning materials, and stronger coordination among lecturers may further strengthen program delivery and students' perceived preparedness for the licensure examination.

Keywords: *academic enhancement program; instructional quality; licensure examination preparation; Medical Technology education; program evaluation; student perception*

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1. Introduction

Licensure examinations serve as an important mechanism for determining whether graduates of regulated professional programs possess the knowledge and competencies required for entry into professional practice. In the Philippines, the Medical Technologists Licensure Examination (MTLE) functions as the principal qualifying examination for graduates seeking registration as medical technologists. Performance in the examination is therefore relevant not only to individual candidates but also to higher education institutions responsible for preparing graduates for professional practice.

Within Medical Technology education, institutional preparation for the licensure examination commonly extends beyond regular classroom instruction. Review courses, comprehensive assessments, mock examinations, targeted remediation, and expert-led lectures are frequently incorporated into the final stages of professional training. These initiatives are intended to reinforce foundational knowledge, address learning gaps, and familiarize students with the scope and demands of licensure examinations. The Commission on Higher Education curriculum for Medical Technology likewise recognizes the importance of integrating professional courses and internship experiences in developing competencies required for eventual practice (Commission on Higher Education [CHED], 2017).

One institutional mechanism used for this purpose is the Medical Technology Assessment Program (MTAP). MTAP is undertaken during the fourth year of the Medical Technology program and is conducted alongside clinical internship. It generally functions as a structured review and assessment course in which students revisit major professional subjects included in the licensure examination. Through lectures, review materials, formative

assessments, and discussions led by faculty members or invited specialists, the program is expected to consolidate students' understanding of essential concepts before graduation and licensure examination preparation.

At Centro Escolar University, MTAP is delivered through a combination of institutional faculty members and invited lecturers with expertise in specific Medical Technology subjects. This arrangement allows the program to draw from both academic and review-oriented experience. The enhancement initiative introduced in 2024 sought to strengthen the existing MTAP implementation through more organized lectures, subject-focused content, instructional materials, and sessions intended to reinforce knowledge in MTLE-related courses. The initiative was developed within the broader institutional effort to respond to changes in student learning conditions following the COVID-19 pandemic.

The pandemic substantially altered the delivery of higher education from 2020 to 2022. Medical Technology programs, which ordinarily rely on laboratory instruction, face-to-face interaction, and clinical exposure, were required to adopt online and blended learning arrangements. These changes created difficulties in sustaining student engagement, ensuring adequate practical exposure, and maintaining continuity in the teaching of technically demanding subjects. The transition also affected the manner in which students prepared for professional examinations. Institutional concerns following the period of disrupted instruction prompted the strengthening of academic support and review mechanisms (CHED, 2020).

Structured licensure-preparation programs may help address such concerns by providing students with systematic opportunities to revisit important concepts, identify areas of weakness, and strengthen examination-related competencies. Studies in medical, nursing, teacher, and allied health education have reported that organized review sessions, formative assessments, mock examinations, mentoring, and expert-led instruction can contribute to improved preparedness and stronger academic confidence (Al-Sheikh et al., 2022; Heretape & Paglinawan, 2024; Hutapea et al., 2021). Programmatic approaches to assessment also emphasize the value of collecting multiple forms of evidence and using feedback continuously to support learning and instructional decision-making (Ross et al., 2021).

However, the value of an enhancement program depends not only on its existence but also on the quality of its implementation. Program organization, relevance of lecture content, adequacy of instructional time, availability of learning materials, lecturer expertise, and consistency of delivery may influence how students experience the review process. Even academically sound programs may become less effective when lectures are insufficiently coordinated, topics are compressed into limited schedules, or instructional materials vary substantially across lecturers. Evaluating these operational components is therefore essential for determining whether a program is meeting students' instructional needs.

Student evaluation provides one source of evidence for examining program implementation. Although student ratings cannot establish whether a review program directly improves licensure examination performance, they can identify perceived strengths and areas requiring institutional attention. Students are in a position to assess whether lectures are organized, whether content is relevant to their preparation, whether the allotted time is sufficient, and whether lecturers demonstrate subject expertise and provide useful learning resources. These perceptions may guide academic administrators in refining program schedules, coordinating lecturers, standardizing instructional materials, and improving the overall delivery of enhancement activities.

Most existing licensure-examination research has focused on relationships between academic grades, comprehensive examination scores, review participation, and actual licensure outcomes. Other studies have examined general preparedness, study strategies, and institutional support. Comparatively less attention has been given to the internal evaluation of specific program components and lecturer-related indicators within an institutionally managed Medical Technology enhancement program. Examining these dimensions is particularly relevant because implementation quality may influence how effectively students are able to use the program as part of their preparation.

The present study therefore evaluated the MTAP Enhancement Program using existing student evaluation records covering Academic Year 2024–2025 and the first semester of Academic Year 2025–2026. The study did not directly measure changes in MTLE scores or passing rates. Rather, it examined students' assessments of the program and its lecturers as indicators of perceived instructional quality and program implementation. The findings are intended to provide evidence for academic planning, program management, instructional coordination, and continuous quality improvement within Medical Technology education.

Objectives of the Study

This study aimed to evaluate students' perceptions of the Medical Technology Assessment Program Enhancement Initiative as preparation for the Medical Technologists Licensure Examination. Specifically, it sought to:

1. assess the program in terms of organization of lectures, lecture content, perceived improvement of knowledge in MTLE-related courses, time allotment, and overall lecture effectiveness;
2. evaluate the lecturers in terms of expertise, provision of printable materials, and cohesiveness of lecture delivery; and
3. identify program components that may require improvement to strengthen the implementation of the MTAP Enhancement Program.

2. Review of Related Literature

2.1 Structured Enhancement Programs and Licensure Examination Preparation

Institution-based enhancement programs are commonly used to reinforce disciplinary knowledge and support students preparing for professional licensure examinations. These programs typically combine structured lectures, formative assessments, mock examinations, mentoring, practice questions, and guided review sessions. Their principal value lies in providing an organized framework through which students can revisit core concepts, identify knowledge gaps, and become familiar with the content and demands of high-stakes examinations.

Evidence from licensure-based disciplines indicates that preparation becomes more useful when review activities are systematically planned and integrated with students' academic and professional training. Hutapea et al. (2021), in developing a preparation model for the Indonesian nursing licensure examination, emphasized structured review, formative testing, and coordinated academic support. Paz et al. (2024) similarly reported that institution-based review sessions strengthened the internal assessment performance of pre-service teachers, supporting the role of organized review in consolidating knowledge before licensure examinations.

Mock examinations provide a complementary mechanism by allowing students to identify weaknesses, become accustomed to examination formats, and receive performance feedback. Al-Sheikh et al. (2022) found that repeated mock medical licensure examinations supported these functions, although their usefulness depended on alignment with licensure competencies. Ross et al. (2021) further argued that professional education should draw on multiple forms of evidence collected over time, connecting assessment, feedback, and instructional decisions rather than relying on isolated examinations.

The need for coordinated support is particularly salient in health-professions education, where licensure expectations interact with post-pandemic learning conditions, faculty capacity, curriculum execution, and clinical-placement constraints (Bermido et al., 2025). At the workforce-system level, competency-alignment analyses likewise indicate that professional preparation must connect disciplinary knowledge with evolving practice, regulatory, language, and digital-readiness requirements (Atento et al., 2025).

Taken together, the literature suggests that enhancement programs are most defensible when they combine coherent content review, formative assessment, feedback, remediation, and institutional coordination. Their contribution to licensure preparation therefore depends not merely on the presence of review activities but on the extent to which those activities are aligned, sequenced, and responsive to learners' identified needs.

2.2 Academic, Institutional, and Learner Factors Associated with Licensure Readiness

Licensure readiness is shaped by the interaction of academic, institutional, and learner-related factors. Prior achievement is consistently important because it reflects cumulative mastery of disciplinary content. In a scoping review of United States medical licensure examinations, Jeyaraju et al. (2023) identified academic performance and practice examination scores as among the most consistent predictors, while regular testing, cumulative learning, and spaced study practices were more consistently associated with performance than prolonged preparation or excessive reliance on commercial resources.

Philippine studies likewise connect performance in professional preparation with licensure outcomes. Bon et al. (2022) reported an association between achievement in Medical Technology professional subjects and MTLE results, suggesting that weaker course performance can help identify areas requiring targeted remediation. Talaroc et al. (2021) similarly found that internship grades, admission test results, and terminal competency assessments were associated with the licensure performance of Radiologic Technology graduates.

Institutional interventions can strengthen this preparation when they are based on diagnostic evidence and coordinated academic support. Gabasa and Raqueño (2021) found that academic and comprehensive examinations predicted aspects of teacher-licensure performance, although predictor strength varied across programs and subject areas. Gabor (2024) also reported a positive association between structured institutional interventions and graduates' perceived preparedness for the Licensure Examination for Teachers, supporting the use of review activities, mentoring, and targeted assistance.

Nevertheless, institutional programs do not produce uniformly favorable experiences. Dayadaya and Sermona (2024) found that graduates valued in-house review interventions but also identified limitations in content depth, technical arrangements, and consistency of delivery, while Villaflores (2023) identified time management as an area requiring improvement among students preparing for licensure examinations. From a learner perspective, evidence from vocational education further suggests that professional values and craftsmanship-oriented dispositions are closely related to learning motivation, indicating that readiness also depends on how students internalize the meaning and demands of their chosen profession (Yan, 2026).

Institutional support is therefore better understood as an ecosystem than as a single intervention. In an adjacent higher-education setting, training, mentoring, networking, access to resources, and funding support were positively associated with students' entrepreneurial skills, illustrating how coordinated support structures can reinforce competence development (Delmonte & Mendoza, 2026). Applied to licensure preparation, the literature indicates that academic preparation, assessment practices, learner motivation, mentoring, resources, and program implementation must operate together rather than independently.

2.3 Instructional Quality, Lecturer Expertise, and Learning Resources

The effectiveness of a licensure-preparation program depends substantially on instructional quality. Relevant content alone may not be sufficient when lectures are poorly sequenced, inadequately coordinated, or compressed into limited schedules. Program organization, lecturer expertise, availability of learning resources, delivery coherence, and appropriate time allocation therefore constitute interdependent dimensions of program quality.

Lecturer expertise is especially important in professional education because students depend on instructors to explain technically complex concepts accurately and relate them to practical and examination-oriented applications. Gegenfurtner et al. (2020) described teacher expertise as involving subject knowledge, professional reasoning, and the capacity to interpret instructional situations. Within an enhancement program, these competencies support clearer explanation, more relevant examples, and better adaptation to learners' difficulties.

Instructional materials extend learning beyond scheduled sessions and can assist students in organizing information for independent review. Castillo et al. (2022) found that printable materials were viewed positively when they were understandable, organized, and aligned with learning objectives. Digital resources may offer similar supplementary value, although perceived benefits should not be confused with objectively demonstrated performance gains; users have rated AI-enabled tools more favorably for engagement, content relevance, and feedback than for direct academic improvement (Rao et al., 2025).

Lecture organization and cohesiveness are equally important when several instructors contribute to a common program. Imran et al. (2023) emphasized that effective learning across face-to-face, online, and blended environments requires alignment among content, activities, and modes of delivery. Philippine higher-education evidence also suggests that digitalization is often adopted primarily for instructional continuity, underscoring the need to embed digital or blended resources within an intentional institutional strategy rather than treat them as isolated tools (Atento, 2025).

Time allocation represents another instructional concern. Müller and Wulf (2024) explained that learning effectiveness may decline when instructional environments impose excessive cognitive load. In a licensure-review setting, compressing extensive technical content into short sessions may reduce opportunities for explanation, clarification, practice, and knowledge integration. Scheduling must therefore balance content coverage with students' capacity to process and retain information.

Instructional quality is consequently multidimensional. Subject expertise, coherent sequencing, standardized but adaptable learning materials, suitable delivery modalities, and sufficient instructional time must operate together to create a unified review experience. Weakness in any one component may reduce students' ability to benefit from otherwise relevant content.

2.4 Synthesis and Research Gap

The reviewed literature shows that structured review programs, mock examinations, formative assessments, and institution-based interventions can contribute to licensure preparation when they are aligned with professional competencies and supported by feedback (Al-Sheikh et al., 2022; Hutapea et al., 2021; Paz et al., 2024; Ross et al., 2021). Academic achievement, professional-course performance, internship outcomes, and practice examination scores have also been associated with licensure results across professional disciplines (Bon et al., 2022; Jeyaraju et al., 2023; Talaroc et al., 2021). Collectively, this evidence positions readiness as the product of both prior preparation and the quality of institutional support.

At the same time, the existence of an institutional program does not guarantee consistent implementation. Limitations involving time, content depth, lecturer coordination, instructional resources, and delivery can restrict students' ability to benefit fully from review activities (Dayadaya & Sermona, 2024; Villaflores, 2023). Parallel evidence from organizational quality-improvement settings shows that positive engagement can coexist with documentation burdens, process inefficiencies, and resource constraints, reinforcing the importance of examining operational mechanics rather than program intentions alone (Garcia & Atento, 2026). Student-support research likewise indicates that persistent academic stress and workload conditions may constrain the effects of otherwise feasible self-monitoring interventions, providing a cautious parallel for evaluating scheduling demands in intensive review programs (San Juan et al., 2026).

Much of the existing research has concentrated on actual licensure performance, predictive academic variables, or general perceptions of preparedness. Comparatively less attention has been given to the internal evaluation of specific operational components of a Medical Technology licensure-preparation program, particularly lecture organization, content relevance, time allotment, lecturer expertise, learning materials, and cohesiveness of delivery. The present study addresses this gap by examining students' evaluations of the MTAP Enhancement Program and its lecturers. Rather than claiming direct effects on MTLE performance, it provides institution-level evidence concerning perceived instructional quality and areas for program improvement.

3. Methodology

3.1 Research Design

The study employed a retrospective descriptive program-evaluation design using previously collected institutional evaluation records. This design was appropriate because the study did not introduce an intervention, recruit participants prospectively, or collect new survey responses. Instead, it examined existing student evaluations to describe how the Medical Technology Assessment Program Enhancement Initiative and its lecturers were perceived across several implementation periods.

The study was evaluative in purpose because it assessed specific components of the program against the institution's existing evaluation criteria. However, the analysis was limited to descriptive ratings and therefore did not establish whether the program caused improvements in Medical Technologists Licensure Examination performance. The findings were interpreted as indicators of perceived program quality and implementation rather than direct evidence of examination effectiveness.

3.2 Data Sources and Record Selection

The data consisted of individual student responses from a school-developed evaluation instrument administered by the School of Medical Technology and maintained by the Medical Technology Office of Centro Escolar University–Manila. The records covered students enrolled in Medical Technology Assessment Program courses during the first and second semesters of Academic Year 2024–2025 and the first semester of Academic Year 2025–2026. The evaluations had been collected as part of the school's regular assessment of the MTAP Enhancement Program. No new survey responses were solicited specifically for the present study.

All individual response records made available by the Medical Technology Office for the three covered academic semesters were included. No form-level exclusions were applied, including to forms with one or more unanswered items; the available responses were retained for the corresponding indicators. The source documentation did not provide a consolidated total number of responses or semester-specific counts.

3.3 Evaluation Instrument and Measures

The evaluation instrument was developed by faculty members of the School of Medical Technology for the internal evaluation of the MTAP Enhancement Program and its lecturers. Program indicators included organization

of lectures, lecture content, perceived improvement of knowledge in MTLE-related courses, time allotment, and overall effectiveness of lectures. Lecturer indicators included expertise, provision of printable materials, and cohesiveness of lecture delivery.

Each indicator was rated on a five-point scale ranging from 1 (Very Unsatisfactory) to 5 (Very Satisfactory). Because the available records did not document formal numerical cutoffs for classifying mean scores, the results were interpreted comparatively through their means and standard deviations rather than assigned verbal classifications. No reliability coefficient or formal validation documentation was available for the present secondary analysis.

3.4 Data-Gathering Procedure

The researchers submitted a formal request to the dean of the School of Medical Technology and the Medical Technology Office for permission to use the existing MTAP evaluation records. Following administrative authorization, the relevant evaluation results for Academic Year 2024–2025 and the first semester of Academic Year 2025–2026 were obtained for analysis. Because the study relied on previously collected records, the researchers did not administer a new questionnaire or directly interact with students for data collection.

3.5 Data Analysis

Descriptive statistics were used to summarize the evaluation results. The mean was used to determine the average rating for each program and lecturer indicator, while the standard deviation was used to describe the variability of responses. Indicators with higher mean values were interpreted as more favorably evaluated, whereas lower mean values identified areas that may require program improvement. Larger standard deviations were interpreted as reflecting greater variation in students' evaluations.

No inferential statistical procedures were reported. Accordingly, the analysis did not test differences among semesters, determine relationships among variables, or assess whether the ratings were associated with actual MTLE outcomes. The terms significant, predictive, and causal were therefore avoided in interpreting the findings.

3.6 Ethical and Administrative Considerations

The study involved the secondary use of institutional program-evaluation records. Administrative permission to access the data was requested from the dean of the School of Medical Technology and the Medical Technology Office. No new responses were collected, and students were not contacted directly for the present analysis. The records were used for research and program-improvement purposes, and the analysis did not report personally identifying information.

4. Results and Discussion

The analysis covered two principal dimensions of the MTAP Enhancement Program: students' evaluation of the program components and their evaluation of the lecturers. Means summarized the average ratings, while standard deviations indicated the degree of variation in the evaluation responses. Higher mean scores represented more favorable assessments.

4.1 Evaluation of the MTAP Enhancement Program

Table 1 presents the students' assessments of the five components of the MTAP Enhancement Program.

Table 1. *Students' Evaluation of the MTAP Enhancement Program*

Program indicator	Mean	Standard deviation
Organization of lectures	4.27	0.775
Lecture content	4.51	0.693
Perceived improvement of knowledge in MTLE-related courses	4.47	0.712
Time allotment	3.52	1.106
Overall effectiveness of	4.24	0.784

Program indicator	Mean	Standard deviation
lectures		
Composite program rating	4.20	0.885

Lecture content obtained the highest mean rating ($M = 4.51$, $SD = 0.693$). This result indicates that students generally considered the material presented in the program to be relevant and responsive to their preparation needs. The comparatively low standard deviation also suggests that the respondents were relatively consistent in evaluating the quality of the lecture content.

The favorable assessment of lecture content is particularly important in a licensure-preparation program because the usefulness of review sessions depends substantially on the alignment of the material with professional competencies and examination requirements. Hutapea et al. (2021) similarly emphasized that structured and appropriately focused content can strengthen students' preparation for professional licensure examinations. Paz et al. (2024) also found that well-organized institutional review sessions supported students' academic preparation by providing focused coverage of examination-related topics.

Perceived improvement of knowledge in MTLE-related courses received the second-highest rating ($M = 4.47$, $SD = 0.712$). This finding shows that students generally believed that participation in the program helped reinforce their understanding of professional subjects covered in the licensure examination. However, the indicator reflects students' perceptions rather than an objectively measured increase in knowledge. No pretest, post-test, or comparison-group data were reported. The finding should therefore be interpreted as perceived knowledge reinforcement rather than demonstrated academic improvement.

The favorable rating is consistent with research indicating that repeated exposure to core content, formative assessment, and guided review may help students consolidate previously learned concepts (Al-Sheikh et al., 2022; Ross et al., 2021). Such reinforcement may be especially useful when students are completing clinical internship requirements while simultaneously preparing for the licensure examination.

The organization of lectures also received a favorable rating ($M = 4.27$, $SD = 0.775$). This suggests that students generally perceived the sequence and arrangement of lectures as orderly and understandable. Logical sequencing is relevant in an enhancement program because professional subjects contain interconnected concepts that must be integrated across different lectures and content areas. Ross et al. (2021) emphasized that educational assessment and instructional activities should be intentionally organized so that learning, feedback, and evaluation operate as connected elements of a program.

Overall effectiveness of lectures obtained a mean of 4.24 ($SD = 0.784$). This indicates that the respondents generally regarded the lecture sessions as useful components of their examination preparation. This indicator should not, however, be interpreted as proof that the program increased actual licensure examination scores or institutional passing rates. The present data capture perceived lecture effectiveness only. Demonstrating actual effectiveness would require examination scores, pretest and post-test results, licensure outcomes, or a suitable comparison design.

Time allotment received the lowest mean rating ($M = 3.52$, $SD = 1.106$) and the largest standard deviation among the program indicators. The comparatively lower mean suggests that students were less satisfied with the amount of time available for the lectures than with the other program components. The higher variability indicates that experiences with time allocation may have differed considerably among students.

The result may indicate that some lectures covered extensive or technically demanding content within schedules that students considered insufficient. Medical Technology subjects require both conceptual understanding and application of laboratory principles, making rapid or compressed discussion potentially difficult for some learners. Müller and Wulf (2024) noted that excessive instructional demands may increase cognitive load and reduce learning effectiveness when students must process large amounts of information within limited periods. The original manuscript attributed differences in time-allotment ratings partly to internship assignments, but this explanation was not directly measured and is therefore treated only as a plausible institutional consideration.

The composite program rating was 4.20 ($SD = 0.885$), indicating a generally favorable evaluation of the program, with time allotment emerging as the clearest area requiring attention.

4.2 Evaluation of MTAP Lecturers

Table 2 presents the students' evaluation of the lecturers in terms of expertise, provision of printable materials, and cohesiveness of lecture delivery.

Table 2. *Students' Evaluation of MTAP Lecturers*

Lecturer indicator	Mean	Standard deviation
Expertise	4.62	0.674
Provision of printable materials	4.45	0.789
Cohesiveness of lecture delivery	4.34	0.819
Composite lecturer rating	4.47	0.771

Lecturer expertise received the highest rating ($M = 4.62$, $SD = 0.674$). It also had the lowest standard deviation, indicating a relatively high degree of agreement among the respondents. The finding suggests that students generally regarded the lecturers as knowledgeable and competent in the subjects assigned to them.

Expertise is particularly important in licensure preparation because lecturers must be able to explain complex technical concepts, distinguish essential material from peripheral information, and relate theoretical knowledge to examination-oriented applications. Gegenfurtner et al. (2020) argued that teacher expertise includes not only subject knowledge but also professional reasoning and the ability to interpret and respond to instructional situations. The high rating suggests that the program's use of faculty members and invited specialists was one of its strongest features.

The provision of printable materials obtained a mean of 4.45 ($SD = 0.789$). This indicates that students generally found the handouts or review materials available and useful. Printable resources can assist students in organizing information, annotating key concepts, and conducting independent review beyond scheduled lecture sessions. Castillo et al. (2022) found that well-prepared instructional materials can support understanding and student satisfaction, particularly when materials are clear and aligned with learning objectives.

The slightly greater variability in the rating for printable materials, compared with lecturer expertise, may suggest that availability, quality, or consistency differed across lecturers or topics. This interpretation remains tentative because the evaluation did not separately assess content quality, completeness, or uniformity.

Cohesiveness of lecture delivery received the lowest rating among the lecturer indicators, although the rating remained favorable ($M = 4.34$, $SD = 0.819$). The result indicates that students generally perceived the lectures as coherent but that there may have been some variation in how topics were connected or presented across sessions. Different lecturers may use distinct teaching styles, terminology, sequencing, examples, and review strategies. Although such variety can enrich instruction, insufficient coordination may produce overlapping discussions, gaps between topics, or inconsistent emphasis on particular competencies.

Imran et al. (2023) emphasized that coherent delivery requires alignment among instructional activities, content, and learning modalities. Dayadaya and Sermona (2024) likewise reported that institution-based review initiatives may encounter difficulties involving consistency and depth of delivery. The present result suggests that coordination among MTAP lecturers could be strengthened without diminishing the value of their individual expertise.

The composite lecturer rating was 4.47 ($SD = 0.771$). The overall result indicates that students generally held favorable views of the lecturers' competence, resources, and delivery. Expertise was the clearest strength, while cohesiveness represented a comparatively weaker, though still positively evaluated, area.

4.3 Discussion

The findings indicate that students generally viewed both the MTAP Enhancement Program and its lecturers positively. The strongest program components were lecture content and perceived knowledge reinforcement, while

lecturer expertise emerged as the highest-rated instructional characteristic. These results suggest that the program was perceived as academically relevant and supported by competent lecturers.

The favorable rating for lecture content is consistent with the literature on structured licensure preparation. Enhancement programs are more likely to be viewed as useful when they provide focused coverage of examination-related competencies rather than broad or disconnected discussions (Hutapea et al., 2021; Paz et al., 2024). The result suggests that the content selected for MTAP generally corresponded with students' perceived preparation needs.

The high perceived knowledge-improvement rating also supports the value of repeated and structured review. Ross et al. (2021) emphasized that learning is strengthened when assessment and instruction are organized as continuous processes rather than isolated events. Similarly, mock examinations and formative review activities may help students identify knowledge gaps and revisit areas requiring further study (Al-Sheikh et al., 2022). Nevertheless, the present study did not measure actual knowledge gains. Future evaluations should combine perception data with objective evidence such as diagnostic test results, comprehensive examination scores, and MTLE outcomes.

Time allotment was the most prominent area requiring improvement. The relatively low rating and high variability suggest that the existing schedule may not have met the needs of all students. This finding is especially relevant because MTAP is conducted alongside clinical internship. From a program-management perspective, complex or high-weight MTLE subjects may require longer sessions, while less demanding topics may be covered more efficiently. Recorded supplementary lectures, asynchronous review materials, consultation periods, or additional practice sessions may help accommodate students whose internship schedules restrict participation.

Lecturer expertise appears to be a major institutional strength. The high and consistent ratings indicate that the selection of subject specialists was generally successful. This supports the continued engagement of faculty members and invited lecturers who possess both disciplinary knowledge and familiarity with licensure-examination requirements.

However, expertise alone does not ensure uniform program delivery. Cohesiveness obtained the lowest lecturer-related rating, suggesting a need to improve coordination among instructors. The institution may consider developing a shared lecture blueprint specifying topic coverage, learning outcomes, terminology, reference materials, and expected assessment activities. Pre-program coordination meetings may also reduce duplication and ensure that related topics are presented in a logical sequence.

The favorable rating for printable materials indicates that students value resources they can retain and review independently. Standardizing these materials across lecturers may further improve their usefulness. A common format may include learning objectives, concise summaries, key concepts, practice questions, and references to relevant MTLE competency areas.

Overall, the findings support the continuation of the MTAP Enhancement Program as a positively perceived institutional support mechanism. However, the evidence should be understood as an evaluation of implementation and student experience rather than proof of improved licensure performance. The principal management priorities arising from the results are improved scheduling, stronger lecturer coordination, and greater standardization of instructional materials.

The interpretation is limited by the absence of a consolidated response count in the available records and by the retention of incomplete forms. These constraints prevent calculation of a response rate and detailed assessment of item-level missingness. The findings should therefore be treated as descriptive evidence from the available institutional responses rather than as estimates intended for broader generalization.

5. Conclusions, Recommendations, and Implications

5.1 Conclusions

The study evaluated students' perceptions of the Medical Technology Assessment Program Enhancement Initiative in terms of program implementation and lecturer performance. Based on the available institutional evaluation records, the program was generally assessed favorably. Lecture content received the highest rating among the program indicators, followed by perceived improvement of knowledge in MTLE-related courses. These findings indicate that students generally regarded the content as relevant to their licensure-examination preparation and perceived the sessions as useful in reinforcing previously learned professional concepts.

The organization and overall effectiveness of the lectures were also evaluated positively, suggesting that the program was generally implemented in an orderly and instructionally useful manner. However, these findings reflect students' perceptions and should not be interpreted as direct evidence that the program improved actual MTLE scores, passing rates, or objectively measured knowledge.

Time allotment emerged as the principal area requiring improvement. It received the lowest mean rating and the highest variability among the program indicators. This result suggests that the duration, scheduling, or pacing of some sessions may not have adequately addressed the learning requirements and varied circumstances of all students.

The lecturers were also evaluated favorably. Expertise obtained the highest rating, indicating that students generally regarded the lecturers as knowledgeable and competent. The provision of printable materials was likewise positively assessed. Cohesiveness of lecture delivery received the lowest rating among lecturer indicators, although it remained favorable, pointing to possible variations in sequencing, terminology, instructional approach, or topic integration across lecturers.

Overall, the MTAP Enhancement Program was perceived as a valuable institutional support mechanism for licensure-examination preparation. Its principal strengths were the relevance of its content and the expertise of its lecturers. Its major areas for improvement were time allocation, coordination among lecturers, and consistency in instructional materials and delivery.

5.2 Recommendations

The School of Medical Technology should review the scheduling and time allocation of the MTAP Enhancement Program. More instructional time may be assigned to technically demanding or high-weight MTLE subject areas. The program schedule should also consider the varied clinical internship assignments of students to reduce conflicts and unequal access to lectures.

A subject-based lecture blueprint should be developed to improve coordination among lecturers. The blueprint may specify learning outcomes, required topic coverage, terminology, sequence of instruction, suggested references, and assessment activities. Pre-program coordination meetings should identify possible duplication, content gaps, and inconsistencies before the lecture series begins.

Printable and electronic review materials should be standardized without unnecessarily restricting lecturers' professional discretion. A common format may include instructional objectives, key concepts, concise summaries, practice questions, answer rationales, and references to MTLE competency areas. Materials should be reviewed for accuracy, relevance, readability, and consistency before distribution.

The program should incorporate more formative assessments, practice questions, and guided feedback activities. Diagnostic examinations may be administered at the beginning of the program to identify subject areas requiring additional attention. Subsequent assessments may be used to track progress and inform targeted remediation.

Students should be provided with supplementary learning options when scheduled sessions are constrained by internship requirements. These may include recorded discussions, asynchronous modules, digital review repositories, consultation periods, and additional practice activities. Such options should supplement rather than replace interactive instruction.

Future program evaluations should collect both perception-based and objective evidence. Student ratings may be combined with attendance records, diagnostic test results, comprehensive examination scores, and actual MTLE outcomes. This would allow the institution to determine whether favorable student evaluations correspond with measurable academic and licensure performance.

The institution should strengthen documentation for subsequent program evaluations by recording the total number of respondents, semester-specific response counts, item completion rates, and procedures for handling missing responses. The school-developed instrument may also undergo content review and reliability testing if it is to be used regularly for research and longitudinal program evaluation.

Future researchers may compare evaluation results across academic semesters, internship assignments, subject areas, or lecturer groups. Longitudinal studies may also examine whether changes in scheduling, coordination, and instructional materials lead to improved student ratings and objective performance outcomes.

5.3 Implications of the Study

The study has practical implications for the management of licensure-preparation programs in professional education. It demonstrates that internal student evaluations can provide actionable evidence regarding program content, instructional delivery, lecturer performance, scheduling, and learning resources. When systematically analyzed, such evaluations may support evidence-informed academic planning and continuous quality improvement.

For educational administrators, the findings indicate that program quality should not be judged solely by lecturer qualifications or the availability of review sessions. Effective implementation also requires sufficient instructional time, coordination among instructors, consistent learning materials, and alignment between program activities and students' academic and internship responsibilities.

For Medical Technology educators, the study underscores the importance of balancing comprehensive content coverage with manageable cognitive and scheduling demands. Highly rated lecturer expertise should be preserved, while stronger coordination may help ensure that subject specialists contribute to a unified rather than fragmented review experience.

For institutional quality assurance, the results support the use of multiple indicators when evaluating academic enhancement initiatives. Student perceptions provide important information about instructional experience, but they should be integrated with objective academic and licensure data. A more comprehensive evaluation framework would permit stronger conclusions about program outcomes and institutional effectiveness.

Methodologically, the study highlights the limitations of relying exclusively on retrospective satisfaction ratings. Although such data are useful for identifying perceived strengths and weaknesses, they do not independently establish causal effects or actual learning gains. Future evaluations should therefore adopt mixed or longitudinal designs that connect program implementation, student perceptions, academic assessments, and licensure outcomes.

The study also contributes to educational leadership and program management by illustrating how an institution-specific enhancement initiative can be evaluated at the operational level. Its findings may inform similar programs in other professional disciplines where students must balance final-year academic requirements, clinical or field-based training, and preparation for high-stakes licensure examinations.

6. References

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