

Research article

DOI: 10.59715/pntjimp.3.2.12

The satisfaction of students regarding the training quality offered by the medical imaging technology department of Pham Ngoc Thach University of Medicine in 2022

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Abstract

This survey summarized the satisfaction of students regarding the training quality offered by the Medical Imaging Technology Department of Pham Ngoc Thach University of Medicine. A cross-sectional survey was conducted on 136 students enrolled in the first to senior year of the training program. A 36-item questionnaire, scored on a five-point Likert scale, classified satisfaction levels as good at ≥ 3 points and very good at ≥ 4 points. The results showed that the average satisfaction scores were high, ranging from 3.34 to 4.66. The highest satisfaction score was for "Appropriateness of subject duration," while the lowest was for "Connection between theory and practice." These findings guided the Medical Imaging Technology Department in adapting the training program and enhancing training quality."

Received: 18/12/2023

Revised: 20/02/2024

Accepted: 20/4/2024

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Keywords: Feedback, satisfaction, medical students, training, quality, Medical Imaging Technology Department.

1. INTRODUCTION

In the university education system, students serve as both the product and the primary beneficiaries. The feedback provided by students regarding their satisfaction holds significant importance in evaluating the effectiveness of educational activities, serving as a metric for assessing training quality and a tool for ensuring quality assurance. Many countries regularly conduct satisfaction surveys for this purpose. Notably, in Vietnam, the implementation of satisfaction surveys has recently commenced in private universities, with plans for expansion to public universities [1].

In 1989, Pham Ngoc Thach University of Medicine was established with the aim of offering advanced medical training. In 2011, the school launched its first four-year

bachelor's degree program, and the Medical Imaging Technology department was approved for operation in 2013.

In 2022, based on the educational philosophy: "Learner-centered", which is also the guideline of Pham Ngoc Thach University of Medicine (HYKPNT), the Faculty Of Nursing - Medical Technology Department in general and Medical Imaging Technology (KTHA) Department in particular had collaborated to conduct survey. The feedback proved invaluable for both Departments, fostering a deeper understanding of the practical aspects of their operations in relation to the needs of the students.

In 2022, "Learner-centered" is also the guideline of Pham Ngoc Thach University of Medicine (PNTU). The Faculty of Nursing

- Medical Technology Department and the Medical Imaging Technology (KTHA) Department collaborated on a survey to gather students' feedback, aiming for a deeper understanding of how their training operations align with students' needs. The findings enable the proposal of improvement plans, enhancement of training quality, and increase in student satisfaction. Following the results of the aforementioned survey, the School, Faculty, and Department now have a better understanding of the training quality within the Medical Imaging Technology Department, facilitating timely adjustments to improve this aspect appropriately.

The aim of this study was to assess the level of student satisfaction with the department's teaching activities and service quality. This endeavor will culminate in the development of a comprehensive reform plan by the department, aimed at enhancing educational quality and serving as a robust foundation for international integration.

2. PARTICIPANTS METHODS

2.1. Participants

Study participants were students majoring in Medical Imaging Technology at Pham Ngoc Thach University of Medicine from first to senior year, spanning the school years 2018 - 2022 through 2021 - 2025.

Selection criteria

The selected subjects for survey were 136 students in Imaging Engineering at Pham Ngoc Thach University of Medicine in 4 classes: school year 2018 - 2022 (KT18); school year 2019 - 2023 (KT19); school year 2020 - 2024 (KT20) and school year 2021 - 2025 (KT21).

2.2. Study design

Cross - sectional descriptive design.

2.3. Data collection tool

We utilized a self - management questionnaire for data collection, consisting of 36 items divided into 7 domains developed in accordance with Official Dispatch 7324/

BGDDT-NGCBQLGD. Seven domains included subject information and teaching materials (7 items), lecturers' teaching methods (7 items), teaching content (6 items), assessment and evaluation (6 items), pedagogical approach (6 items), learning support (2 items) and training program (3 items).

Each item was scored on a 5-level Likert scale: (1) Strongly disagree (response < 40%) - corresponding to 1 point; (2) Disagree (40 - 49% response) - corresponding to 2 points; (3) No opinion (50 - 64% response) - corresponding to 3 points; (4) Agree (65 - 79% response) - corresponding to 4 points; (5) Completely agree (response > = 80%) - equivalent to 5 points. Satisfaction levels were classified as "good" for scores ≥ 3 points and "very good" for scores ≥ 4 points.

2.4. Data analysis

We entered and examined data using Microsoft Excel 2019 software and analyzed the data using SPSS 16.0 software. Quantitative variables are described as mean and standard deviation, while qualitative variables are described as frequencies and percentages.

2.5. Medical ethics

The study was approved by the Board of Directors of the Faculty of Nursing - Medical Technology Department, as well as the Board of Directors of the Medical Imaging Technology Department.

3. RESULT

3.1. Participant characteristics

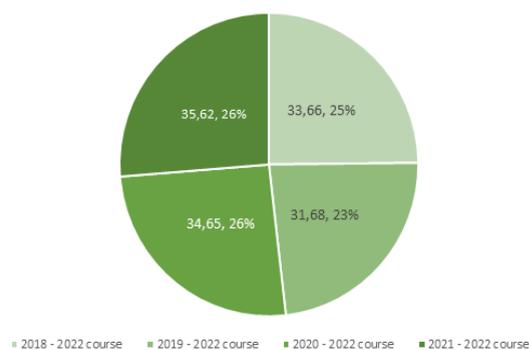


Diagram 1. Distribution of survey subjects by school year

3.2. Feedback on Provision of Training Information and Materials

Table 1. Feedback on Provision of Training Information and Materials

Objective (n = 136)	Average score (KT18) n = 34	Average score (KT19) n = 32	Average score (KT20) n = 35	Average score (KT21) n = 35
Lecturers introduce the outline of study subjects in details	3,73 ± 0,62	4,25 ± 0,76	3,91 ± 0,64	4,34 ± 0,75
Lecturers disseminate study goals, study outcomes, teaching content and subject requirements	3,85 ± 0,64	4,32 ± 0,78	3,91 ± 0,64	4,23 ± 0,72
Lecturers disseminate assessment forms and criteria for assessing study outcomes at the beginning of each study subject	4,00 ± 0,68	4,38 ± 0,79	3,89 ± 0,64	4,34 ± 0,75
Lecturers provide/introduce information about study materials (textbooks/lectures, research materials, websites...)	3,59 ± 0,60	4,32 ± 0,78	3,81 ± 0,62	4,17 ± 0,70
The amount of time (number of periods) devoted to each study subject is appropriate	3,76 ± 0,62	4,66 ± 0,88	3,75 ± 0,61	4,06 ± 0,68

Students exhibit a relatively high level of satisfaction regarding “Subject information and teaching materials”, with an average score typically ranging from approximately 4 points and above on a 5 - point scale. Conversely, “Lecturers providing/introducing information about study materials (textbooks/lectures, research materials, websites...)” received the lowest average score from KT18 students, averaging at 3.59 ± 0.60 . Additionally, “The amount of time (number of periods) devoted to the subject” received the highest average score from KT19 students, with an average of 4.66 ± 0.88 .

3.3. Feedback on teaching method

Table 2. Feedback on teaching method

Objective (n = 136)	Average score (KT18) n = 34	Average score (KT19) n = 32	Average score (KT20) n = 35	Average score (KT21) n = 35
Lecturers organize classes and guide students effectively in study	3,53 ± 0,59	4,28 ± 0,74	3,93 ± 0,66	4,34 ± 0,76
Lecturers have clear and easy - to - understand method of communication	3,35 ± 0,58	4,16 ± 0,72	3,84 ± 0,64	4,42 ± 0,78
Lecturers effectively coordinate teaching methods	3,56 ± 0,59	4,06 ± 0,69	3,73 ± 0,62	4,26 ± 0,74
Lecturers apply a variety of active teaching methods to encourage self - study, research and group work among students.	3,65 ± 0,61	4,06 ± 0,69	3,77 ± 0,63	4,20 ± 0,72

Objective (n = 136)	Average score (KT18) n = 34	Average score (KT19) n = 32	Average score (KT20) n = 35	Average score (KT21) n = 35
Lecturers encourage students to be creative and independent during study process	3,85 ± 0,64	4,09 ± 0,70	3,75 ± 0,62	4,31 ± 0,75
Lecturers accept feedback and promptly respond to students' questions	3,74 ± 0,62	4,19 ± 0,72	3,93 ± 0,66	3,83 ± 0,64
Lecturers create a positive learning environment for students	3,74 ± 0,62	3,97 ± 0,74	3,65 ± 0,61	3,97 ± 0,66

The survey scores indicate a high level of satisfaction, with all objectives scoring above 3 on the 5 - point scale. The average score ranges from 3.35 to 4.42, with standard deviations ranging from 0.58 to 0.78.

3.4. Feedback on teaching content

Table 3. Feedback on teaching content

Objective (n = 136)	Average score (KT18) n = 34	Average score (KT19) n = 32	Average score (KT20) n = 35	Average score (KT21) n = 35
Teaching content closely follows the detailed course outline	3,56 ± 0,59	4,09 ± 0,72	3,81 ± 0,81	4,42 ± 0,77
Lecturers often create connections between subjects and training programs	3,71 ± 0,62	4,00 ± 0,69	3,79 ± 0,84	4,42 ± 0,77
Lecturers often create connections between theory and practice in teaching	3,91 ± 0,65	4,21 ± 0,75	3,94 ± 0,74	3,34 ± 0,56
Lecturers continuously update new content and information related to study subject	3,76 ± 0,62	3,97 ± 0,69	3,98 ± 0,73	4,42 ± 0,77
The teaching content is suitable for students	3,88 ± 0,65	4,03 ± 0,70	3,68 ± 0,83	4,29 ± 0,73
Practical and useful teaching content	3,97 ± 0,67	3,97 ± 0,69	3,89 ± 0,75	4,42 ± 0,77

The average score for “Teaching Content” is high, according to the 5 - point scale, with scores ranging from 3.56 to 4.42 (standard deviation: 0.59 to 0.77).

3.5. Feedback on assessment and evaluation

Table 4. Feedback on assessment and evaluation

Objective (n = 136)	Average score (KT18) n = 34	Average score (KT19) n = 32	Average score (KT20) n = 35	Average score (KT21) n = 35
Lecturers introduce the form and requirements for test/assessment in details.	3,59 ± 0,59	4,16 ± 0,7	3,90 ± 0,77	4,43 ± 0,77
Lecturers evaluate attendance, process and final scores; appropriate score ratio	3,62 ± 0,60	4,28 ± 0,77	4,01 ± 0,72	4,34 ± 0,75
Lecturers demonstrate a serious, objective, accurate and fair attitude in testing and assessment	3,42 ± 0,57	4,38 ± 0,79	4,05 ± 0,71	4,37 ± 0,76
Assessment methods are appropriate to the training form, learning method and subject objectives	3,42 ± 0,57	4,19 ± 0,74	3,95 ± 0,75	4,31 ± 0,74
The test/assessment content evaluates the level of knowledge accumulation and problem-solving ability	3,65 ± 0,61	3,99 ± 0,69	3,83 ± 0,82	4,20 ± 0,71
The test/assessment content accurately reflects students' abilities	4,00 ± 0,67	4,00 ± 0,70	3,70 ± 0,88	4,11 ± 0,69

The average score for “Assessment and evaluation” is high, above 3 on the 5 - point scale, ranging from 3.42 to 4.43 (standard deviation: 0.57 to 0.77). Among the objectives, “Lecturers introduce the form and requirements for tests/assessments in detail” achieved the highest average score: 4.43 and standard deviation: 0.77.

3.6. Feedback on Pedagogical approach

Table 5. Feedback on Pedagogical approach

Objective (n = 136)	Average score (KT18) n = 34	Average score (KT19) n = 32	Average score (KT20) n = 35	Average score (KT21) n = 35
Lecturers come to class on time and teach all classes as scheduled	3,82 ± 0,63	4,06 ± 0,71	3,69 ± 0,91	4,26 ± 0,73
Lecturers have advanced professional knowledge	3,82 ± 0,63	4,06 ± 0,71	4,21 ± 0,66	4,43 ± 0,77
Lecturers have excellent preparation of content, documents, and lectures	3,88 ± 0,65	4,09 ± 0,72	4,02 ± 0,73	4,43 ± 0,77
Lecturers demonstrate consistently high standards of personal and professional conduct	3,82 ± 0,63	4,00 ± 0,69	4,15 ± 0,67	4,43 ± 0,77

Objective (n = 136)	Average score (KT18) n = 34	Average score (KT19) n = 32	Average score (KT20) n = 35	Average score (KT21) n = 35
Lecturers are enthusiastic and responsible in teaching	3,79 ± 0,62	4,06 ± 0,71	4,04 ± 0,71	4,06 ± 0,68
Lecturers provide academic advice to students outside of class (via meetings or emails)	3,85 ± 0,64	3,88 ± 0,67	3,93 ± 0,84	4,09 ± 0,68

The average scores surveyed for Pedagogical approach are considered high, ranging from 3.69 to 4.43 (standard deviation: 0.66 to 0.91). Notably, approximately four objectives received very high scores: “Lecturers have advanced professional knowledge,” “Lecturers demonstrate excellent preparation of content, documents, and lectures,” “Lecturers consistently uphold high standards of personal and professional conduct,” and “Lecturers exhibit enthusiasm and responsibility in teaching”.

3.7. Feedback on Learning support

Table 6. Feedback on Learning support
(survey among all students majoring in Medical Imaging Technology)

Objective (n = 136)	Average score	Standard deviation
Students are fully informed about the training program's objectives and output standards	3,86	0,81
Students are provided/informed about the Ministry of Education and Training's rules and regulations, as well as the school regulations.	3,94	0,77

The average score for “Learning Support” is considered high, above 3 on the 5 - point scale. “Students are provided/informed about the Ministry of Education and Training’s rules and regulations, as well as the school regulations” receives the highest score, with an average score of 3.94 ± 0.77 .

3.8. Feedback on Training program

Table 7. Feedback on Training program

Objective (n = 136)	Average score	Standard deviation
Flexible training program, creating favorable conditions for students	3,76	0,70
The distribution ratio between theory and practice is reasonable	4,13	0,65
The training program provides essential knowledge, skills, and attitudes that meet the students' expectations	3,69	0,96

The average rating for the “Training program” is rated highly, surpassing 3 on the 5 - point scale.

4. DISCUSSION

According to the study, the average scores indicating students' satisfaction with lecturers' teaching activities and the service quality provided by the School/Faculty are all high, surpassing 3 on a 5 - point scale, ranging from 3.34 ± 0.56 to 4.66 ± 0.96 . These results align completely with the findings of study conducted by author Lien (2016) from the University of Economics, Hanoi National University, where the average values predominantly fluctuated within the 3 - 4 range on a scale of 5 [3].

In our study, the aspect that garnered the least satisfaction from students was "Lecturers often make connections between theory and practice in teaching" (3.34 ± 0.56). This outcome provides valuable insights for the Department to review and prioritize improvements aimed at enhancing student satisfaction.

Third - year students (KT19) have the opportunity to engage in specialized subjects, which contributes to their high satisfaction with all items. All ratings exceed 4 points on a 5 - point scale. Particularly, "The amount of time (number of periods) devoted to this subject is appropriate" received the highest rating (4.66 ± 0.88), surpassing the feedback provided by first - year students (KT21).

5. CONCLUSION

The study findings indicate high levels of student satisfaction with teaching activities and the service quality of the School/Faculty, reflecting positive interactions among students. The vital point this study wishes to emphasize is that the amount of time invested in study subject is highly appreciated, and students are appreciated with the helpful support throughout their learning process. Nevertheless, there is a need for improvement in the connection between theory and practice within the teaching process, pinpointing a specific area that demands focused attention and enhancement.

The differentiation of satisfaction levels between student groups based on their school year reveals significant findings. Third-year students, who have delved into specialized subjects, exhibit notably higher satisfaction compared to first - year students. This indicates the necessity to adjust the approach method to enhance student satisfaction and effectiveness in the learning process, particularly during their first year.

The findings of this study have provided valuable insights into student satisfaction levels and have outlined guidelines for enhancing teaching quality and improving the learning experience to meet students' educational demands and requirements. These results have played a significant role in establishing a foundation for the accreditation of educational quality and have provided practical insights for the department regarding the current state of teaching activities and service quality. As a result, the department will take necessary measures to implement improvements and enhance training quality in response to the growing educational needs worldwide.

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