

# Exploring the Lived-Experiences of Faculty Teaching Radiographic Positioning and Procedures: Challenges and Adaptations in Selected Private Schools in Laguna.

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## Index Terms:

instructional coping mechanism, student diverse-learning paces, subject proficiency, effective teaching strategy, limited resources

**Abstract.** Radiographic positioning and procedures competency are important components of radiologic technology education, yet existing research predominantly focuses on student learning outcomes while overlooking the instructional side of educators. This study aims to fill this gap by exploring the lived-experiences of professors to better understand their challenges and adaptations in delivering a quality radiographic positioning and procedure education. The study used phenomenological research design and transcendental phenomenological data analysis. Furthermore, the study is limited to 6 participants in accordance with the researchers criteria which are: (a) teach the subject for at least 1 year (b) degree holder in radiologic technology and (c) have at least 3 students fail the subject. 8 themes emerged from the participants responses including: Professors experiences in implementing and navigating effective teaching strategies, Student-centered strategies for effective learning, Diverse and context-driven assessment practices in evaluating students, Managing diverse learning paces and sustaining engagement in teaching, Faculty's coping strategies on the challenges in teaching, Emphasizing the importance of radiographic positioning and procedures in clinical practice, Teaching radiographic positioning and procedure as a continuous, adaptive, and reflective learning process, Adaptive and student-focused strategies in teaching radiographic positioning and procedures. The findings showed that the professors encountered various challenges in teaching radiographic positioning and procedures, particularly in managing student variability, conceptual complexity, and instructional delivery. However, they responded to these challenges by using and utilizing student-centered and context-based instructional approaches across different learning abilities and engagement levels between educators and students. This implies that flexible and reflective teaching practices of professors are significant for improving instructional effectiveness and supporting students' access to quality education through theoretical understanding and clinical competence development.

## Introduction

In the medical field, radiology is often regarded as the eye of medicine as it enables visualization of internal body structure through imaging. Radiologic technologists play a pivotal role in producing those accurate diagnostic images through the application of radiation and proper patient positioning. Without proper body positioning, high quality images are compromised, negatively affecting clinical interpretation and competence. Radiographic positioning and procedure are a subject that requires both theoretical understanding and hands-on experiences for effective clinical practice (Lampignano & Kendrick, 2024). Due to its proficiency, several studies including Similane et al.

(2021) and Abbey et al. (2024) showed that students perform high in the context of radiographic positioning and procedures.

Although these studies provide an interesting view towards students, it overlooks the side of educators who facilitate learning and contribute to the delivery of quality education. Hence, this study uncovers the lived experience of instructors teaching radiographic positioning and procedures, particularly their challenges and adaptive strategies, to provide a deeper insight and understanding into how quality education can be achieved through understanding educator's experiences.

Furthermore, this study employs a qualitative research approach to explore these experiences, present key findings on the challenges and instructional adaptations of professors, and discuss their implications for enhancing teaching students' competence.

Specifically, the study seeks to answer the following questions:

#### Central Question

1. What is the essence of the lived-experiences of radiologic technology faculty in teaching radiographic positioning and procedures?

#### Corollary Question

1. How do the radiologic technology faculty describe their experiences in teaching radiographic positioning and procedures?
2. What common patterns or themes arise from the participants' shared experiences?

## Methodology

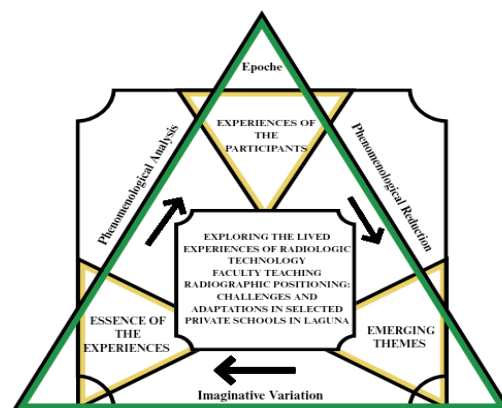


Figure 1: Triangulation method

This conceptual framework illustrates the phenomenological approach used to explore the lived experiences of Radiologic Technology faculty in teaching radiographic positioning and procedures in selected private schools in Laguna. Guided by the transcendental phenomenology of Moustakas (1994, as cited in Liao et al., 2021), this study examines faculty challenges and adaptive strategies through three interconnected processes: epoche, phenomenological reduction, and imaginative variation. At the center of the framework is the exploration of the faculty's lived experiences, analyzed through a systematic and cyclical process.

#### Research Design

The study is employed under the phenomenological research-method, which is fit for examining the lived experiences of the Radiologic Technology faculty teaching radiographic positioning and procedures. A phenomenological approach investigates the personal experiences that seek to understand regarding a particular phenomenon. According to John W. Creswell and Cheryl N. Poth (2023), the phenomenological approach is helpful for the researchers seeking to understand the shared lived experiences and how the researchers interpret those experiences in depth.

The research design focused on naturally occurring experiences rather than manipulation of variables; therefore, no experimental controls, randomization, or blinding procedures were required.

#### *Locale of the study*

This study was conducted in selected higher education institutions in Laguna offering Radiologic Technology programs. These institutions were selected because they offer the appropriate setting where the radiologic technology faculty were teaching Radiographic Positioning and Procedures.

#### *Participants and Sampling Technique*

The participants of the study were members of licensed Radiologic Technology Faculty who have prior or currently teaching Radiographic Positioning and Procedures at selected private education in Laguna.

Purposive sampling (non-probability sampling method) was employed to select participants who possessed characteristic or direct experiences related to the study. Purposive sampling was chosen because this ensures that the participant could provide rich and meaningful responses related to the phenomenon.

The criteria were:

1. Must be licensed Radiologic Technology recognized by Professional Regulation Commission
2. Must have a Master's Degree in Radiologic Technology
3. Currently teaching or taught Radiographic Positioning and Procedures at least 1 year experience
4. Have handled 3 or more failed students in Radiographic Positioning and Procedures subject

Faculty members who did not meet the aforementioned criteria were excluded from the study. The total participants was six (6) which is compatible with the research design phenomenological design of the study.

#### *Instrumentation*

The primary research instrument was a researcher-developed semi-structured interview guide. The questions were aimed at fostering a free-flowing discussion, allowing participants to discuss their problems and the adaptive strategies for teaching radiographic positioning, and to express their emotions, perceptions, and professional knowledge. It was also flexible because the researcher was willing to follow up on questions as needed. Personal interviews were employed, providing an opportunity to interact with participants directly and yielding more authentic, better-representative data.

#### *Data Gathering Procedure*

After acquiring approval from the institution, formal invitations were sent to the qualified participants. Also, this ensures the voluntary participation of the participants in the interview by the researchers and also the researcher's consent from the head of the university to undertake the study. Then after receiving the approved consent from the participants, interviews were scheduled at a convenient time.

Data were collected through face-to-face or virtual interview using google meet or zoom meeting at a time and settings most convenient for the participants. Each interview lasted approximately 30 to 45 minutes and the information collected during the act of interview were audio-recorded and presented in the form of field notes, audio tapes, and verbatim transcriptions.

#### *Ethical Considerations*

The researchers conducted the research with full respect for the ethical code, considering the confidentiality, integrity, and safety of the respondents. Each respondent received an informed consent form that explained the purpose of the research and the methods used to collect data. The study took into account the fact that the respondents in this research were approached voluntarily, and the researcher ensured that their identities were protected. In addition, respondents were informed that they could withdraw from the study at any time. All information provided by respondents was kept confidential and securely managed in accordance with institutional ethical guidelines, thereby ensuring anonymity and avoiding potential harm to all parties.

#### *Data Analysis*

The collected interviews were transcribed verbatim to maintain the originality and authenticity of the participants' responses. To analyze the data, the researcher applied transcendental phenomenological analysis.

The process analysis included:

- Bracketing: the researchers in which the researchers set aside their own beliefs and prejudices and listen exclusively to the participants' testimonies.
- Horizontalization: which involves scrutiny and re-reading of all the statements made during the interview, and equal treatment at the initial stage.
- Clustering into themes: it is here that related statements are brought together to form larger notions or perceptions. In a bid to strengthen the validity of these themes, the researcher will compare and authenticate them with the field notes, observations, and literature about the topic.
- Textual description: reveals the participants' experiences, both through direct quotes and elaborate descriptions. This action provided a fair impression of what the subjects were subjected to, and their words supported this.
- Structural description: apprehending the contextual and circumstantial background that shaped these experiences
- Textural-structural synthesis: combines all the descriptions into a single, combined narrative of the phenomenon. Such a synthesis summarizes the commonalities in the professors' experiences and presents a narrative that identifies themes related to the lived experiences of the professors who taught radiographic positioning.

*Reflexivity Statement*

As researchers and also students, our stand in this study has to be careful with our reflection in order for us to sustain objectivity while we are exploring the lived-experiences of professors teaching radiographic positioning and procedures. We are aware that our experiences as students can affect or influence the way we interpret the data. Therefore, we set aside our own personal biases and properly ensured that the responses from the participants were accurately and precisely represented. Having a deep conversation with the professors allows us to understand the world of teaching and we are able to understand the challenges of the professors and how they take actions to those challenging moments which makes us, the students, to foster our knowledge and technical skills when it comes to our future profession. Through this reflexive statement, we learned that students and professors may have a different world, but these two worlds might become a world for integration, communication, interaction that foster knowledge and wisdom building one another. Lastly, these reflections enhanced our awareness of our own perspectives as students towards our professors.

**Results and Discussion**

*Theme 1. Professors' experiences in navigating and implementing effective teaching strategies in the subject of radiographic positioning and procedures.*

Participants	Responses
Prof. Caldwell	“sobrang dami ng inaaral sa posi...um, iisip yung professor or ako kung paano ko ididiscuss sa kanila ng mas madali or nang mas maiintindihan nila ung subject”
Prof. Fuch	“Nung una mahirap sya...kase sanay ako sa traditional na ano...classroom set-up’ ‘di naman ako nag-parequire pag pa camera on, so di ko alam kung may nakikinig ba saken”
Prof. Water	‘kasi nung nag online kami for two weeks gawa nung nakaraang year, nahirapan mag cope up yung mga students na magrereturn demo na kami’
Prof. Stenver	‘hindi ako nahirapan magturo ng positioning’ ‘yung techniques that I used...is effective sya sa aking mga students’
Prof. Taylor	“For me, kailangan ko rin mag-aral, hindi porke alam ko na siya; wala, e alam ko na ituturo ko na. No! Kailangan ko ulit siyang aralin. Hindi lang isang libro, dalawang libro, tatlong libro...icocompare ko yun”
Prof. Towne	“So kailangan maging creative ang professor to emphasize the clinical side of the positioning subject, not just the theoretical side...so creativity is the key.”

*Table 1.*

The research findings stated that there were varying experiences among the respondents in relation to teaching strategies for radiographic positioning and procedures. Some respondents observed the topic as challenging because of its complexity and the vast amount of information involved, forcing them to simplify lessons and adjust their way of instructing according to the student's understanding. One participant recognized the need to continuously study the subject matter before conducting classes, proving that proficiency affects effective teaching. On the other hand, some respondents experienced favorable teaching experiences because of the adoption of effective instructional strategies. Nevertheless, certain shortcomings emerged with regard to online learning platforms, as there was limited interaction as well as challenges in monitoring students' engagement levels.

The responses in table 1 highlighted the lack of laboratory facilities, which hindered practical practices. From these results, it is evident that adaptability, subject knowledge, and resource availability all have contributions in effective instruction. This is supported by Atencio et al. (2022), who stated that radiologic technology instructors modify their approaches to handle difficult subjects, and by Barrot et al. (2021), who claimed that low interactivity levels in online courses reduce student engagement in skills-based fields. From this, it is clear that adaptive instructional strategies are essential in conveying radiographic positioning.

*Theme 2. Student-centered strategies for effective learning of the radiographic positioning and procedures.*

Participants	Responses
Prof. Caldwell	<p>“pag pasok ko sa classroom syempre set-up ako ng computer then flash ako ng powerpoint sa kanila, and then nagrereview kami...siguro yung mga nauna naming discussion...”</p> <p>“kapag may topics na kaya kong paiksiin...pinapaiksi ko, nagbibigay ako ng mnemonics, nagbibigay ako sa kanila ng mga shorted keys...dun sa paraan na matatandaan nila ng mas mabilis kasi nga sabi ko ang positioning ay sobrang dami...so kailangan ng student na mapaikli yun or mas mapadali sa kanila ung subject.”</p>
Prof. Fuch	<p>“Kaya makikibagay lang din yung gagawin kong approach dun sa meron akong resources.”</p> <p>“nagpa-summary ako ng book. Kasi... nung nasa college 'yon, 'yon yung ginagawa...ay ayun, 'yon yung ginawa kong approach na sa tingin ko ay for me, naging effective siya sa akin.”</p> <p>“siyempre hindi ko naman puwedeng i-generalize na lahat ng estudyante ganito ang ano. Kasi meron silang kanya-kanyang learning curve na kung paano sila matuto.”</p>
Prof. Water	<p>“Tapos sa bawat positioning namin, meron kaming mnemonics... kung tawagin. So... siguro na-apply niyo rin sa inyo 'yon, no? Yun yung ginagawa namin. Mnemonics and positioning tapos mnemonics ulit sa structure shown.”</p>
Prof. Stenver	<p>“Okay. So first, uh, I have to go back to basics first before mag-proceed sa positioning itself, sa mga methods, sa mga ito, ganyan. Dapat kasi when you, uh, teach positioning or kahit sa general lang naman, mahirap mag-enter sa positioning na hindi pulido ang basics.”</p> <p>“then 'pag maganda na yung foundation ng anatomy, that's the time na mag-start ako ng positioning.”</p> <p>“So, besides sa mnemonics, nagpapaano ako last year, nagpagawa ako ng IR sa aking mga student or cassette made up of, tawag nito, uh, cardboard or anything, Ang ginagawa ko during class, during lecture pa lang, may IR sila sa harap nila. For example, place your hand on top of the IR. Lahat 'yan nakaganoon. 'Yan, nakaganoon, naka-position talaga lahat. Then i-explain ko one by one, ah, ganito ganyan, ganito ginagawa, paano 'to position ng ano, dito ang central ray. Umiikot ako sa buong classroom at tinitingnan ko kung tama ba ang pagturo nila, kung may mali, 'yun, ah.... i-co-correct.”</p>
Prof. Taylor	<p>“yung mga important key note inuulit ko in a way na sasabihin ko uulitin ko and then third repeat would be uulitin ng studyante for 2x bakit kasi that is for the repetition”</p>

	“after the discussion magkakaroon ako ng return demo”
Prof. Towne	“so rad.posi is the integration of multiple subjects like radiobiology, principles of imaging, anatomy...so kailangan i-integrate yung tatlo na yon, at least those three subjects”  “ For clinical naman, you have to use um, some tools para ma... assess mo or para ma-track naten ung learning uhh...learning curve nila.”

Table 2.

The responses indicated that faculty members employ a variety of teaching methods, including reviewing previous lessons, utilizing mnemonic strategies, applying repetition, and conducting demonstrations. Establishing foundational knowledge, particularly in anatomy, was emphasized as essential prior to introducing positioning techniques. Mnemonic strategies and repetition were used to simplify complex concepts and enhance retention, while demonstrations facilitated practical skill developments. Some participants reported modifying their teaching approaches by incorporating indirect strategies, such as summarization, while others highlighted the integration of multiple subject areas.

These findings in table 2 indicated that both direct and indirect teaching strategies promote learning of radiography positioning and procedures. This is supported by Akhter et al. (2022), who discovered that mnemonic-based tactics improve student performance, and Atencio et al. (2022), who emphasize the need of adaptive teaching approaches in radiologic technology education. Overall, the study found that flexible and multi-strategy approaches improve both theoretical comprehension and practical skills.

**Theme 3.** *Diverse and context-driven assessment practices in evaluating student-learning outcomes in radiographic positioning and procedures.*

Participants	Responses
Prof. Caldwell	“Assessment...um, through a series of laboratories...um...kapag ongoing yung klase ko, kapag may tanong ako...dun lang ako naghahanap ng sagot...recitation kumbaga, and another one is yun nga, through a series of practical exams...after ng discussion, the other week ay maglalaboratory yung mga bata sakin. Ide-demonstrate nila sakin ung mga discussion namin a week bago yung mismong practical exam.”
Prof. Fuch	“Same pa rin, exam pa lang..umm, exam lang, quizzes ganon.pero yung sa skills,wala masyado kasi hindi naman tayo nabiyayaan ng magandang laboratory, mga equipment, ganon”
Prof. Water	“Kapag quiz, exam, tapos practical.. Kapag medyo nag alangan, may mababa, may practical kami. Tapos after non.. may long quiz pa kami ulit.”
Prof. Stenver	“Ina-assess ko siya through lecture, pakatapos may laboratory, pinapagawa ko isa-isa... before pa ‘yan ng return demo, nagque-question din ako sa kanila.”
Prof. Taylor	“Kailangan talaga repetition, hindi lang dapat tinuturo, dapat dine-demonstrate, return demo by partner. Hindi ko binababa ang estudyante kapag nagkamali.”
Prof. Towne	“Sa theoretical written exam, dapat may recall hanggang create... sa clinical, nagde-design ako ng rubrics to assess procedures kahit walang laboratory.”

Table 3.

The findings indicated that evaluation processes in radiographic positioning and procedures are diversified and context-driven, with practical demonstrations, written tests, and ongoing formative assessment. Participants stressed return demonstrations, questioning, and recitations as essential tactics for evaluating procedural ability, whereas others depended on quizzes and written assessments due to restricted laboratory resources. Others used repetition and structured rubrics to monitor student progress and ensure consistency in grading.

However, due to limited laboratory facilities and equipment, other participants relied more heavily on written assessments as an alternative way of evaluating learning outcomes. These variations indicate that assessment practices are not standardized and are often adjusted based on the teaching environment and accessibility of resources.

The findings in table 3 indicate that assessment is influenced by the requirement to balance competency-based evaluation with contextual constraints. This aligns with Cohen et al. (2005), as cited by Majumder et al. (2021), who emphasize the relevance of performance-based evaluation in radiologic education, and Tadesse et al. (2021), who promote planned and systematic assessment planning to improve learning outcomes. Overall, the study found that combining practical, formative, and structured evaluation methods improves both theoretical understanding and clinical competence.

*Theme 4. Managing diverse learning paces and sustaining student engagement in radiographic positioning instruction and skill development.*

Participants	Responses
Prof. Caldwell	“Siyempre number one sobrang ingay ng mga estudyante... ayan, to the point na sa sobrang dami ng posi...um, hindi mo na maipinta yung mga mukha nila, nag-iingay na lang ganyan... ‘yon yung number one talaga na problem ko, siguro yung pangalawa is yung lack of facilities or yung...um, mga gamit sa laboratory, wala tayong laboratory na area para ma-execute nang maayos yung mga itinuturo ko.”
Prof. Fuch	“...kasi first time ko ‘yon, so walang...sakin part lang ‘to, walang nag-guide sa akin kung paano mag-properly assess ng mga estudyante kung natutunan ba nila. Basta, ang alam ko, kapag nagbigay ako ng exam, sasagutan nila, pasado sila doon.”
Prof. Water	“Ano... una na yung pala absent tapos nag-ce-cellphone sa klase, number one yan eh, tapos yung isa gumawa ng fake na excuse letter, so yung difficulties pa yung isa eh... yung ano eh... siguro yung naging foundation nila sa anatomy kasi yung parang prof nila before... so nagkaroon ng problem, panay absent, so... kaya nangyari nagba-back to basics kami ng anatomy.”
Prof. Stenver	“Siguro yung ano lang, kasi sa estudyante, ah, makikita mo talaga na, tawag nito, ang bilis mapagod. Tapos may mga students din kasi na mas mabilis maka-catch up. May iba na hindi. ‘Yun gets natin yung ganyan. Bale, ang mahirap diyan ay ‘yun nga, uulitin mo nang uulitin. Nakakapagod siya, oo, nakakapagod siya, pero okay lang sa ‘kin kasi nga hindi naman lahat ay pare-pareho ng, ah, ng pacing when it comes to learning.”
Prof. Taylor	“Ah, mannequin, the rules and regulations set by the local authority for me. I find it difficult. kung baga yun lang all of a sudden, sabihin na natin may mga school yung machine nila hindi kasing ganda nung sa hospital kaya nag kakaroon ng problem sa image pero kerl lang mahirap siya in a way na pagdating kasi sa hospital you as an intern di naman dummy eh di mo naman bibigyan ng “ma’am/sir hingang malalim” di naman susunod yung dummy di naman hihingang malalim yung dummy di naman mag pipigil ng hininga, aside from that kunyari merong yung manneqin diba may mannequin kapag xray mo technically speaking kasi pag yun xray niyo ang hirap position so ang nangyayari yung restriction nung dummy”
Prof. Towne	“Okay...number one difficulty is the equipment sa school...laboratory, that is the number one difficulty, kase kung wala kang working equipment that is... if not identical sa ginagamit sa ospital, magkakaroon talaga ng problem yung estudyante kase when it comes to internship, culture shock ang estudyante, ni-hindi sila nakakahawak ng machine. In addition, in theoretical naman, napakahirap talagang ibaba yung level ng positioning since it is a combination of multiple subjects, so the challenge dito is paano mo ibababa yung delivery ng...mga details ng positioning without compromising the quality of the information of the image.”

Table 4.

The findings indicated that teaching radiographic positions and procedures presents a range of challenges in terms of instructional delivery and learning circumstances. Participants reported challenges managing classroom conduct, keeping

students engaged, and dealing with absenteeism, all of which disrupted the flow of instruction. Weak foundational knowledge, particularly in anatomy, requires educators to repeat fundamental concepts before moving on to more complex areas. These problems caused lesson delivery delays and additional instructional effort.

Furthermore, limited resources, such as lack of laboratory facilities and functional equipment, had a substantial impact on the teaching process. Participants stated that lack of sufficient tools limited hands-on learning opportunities and made it difficult to simulate real clinical scenarios. In certain circumstances, professors used mannequins or other approaches that were not always adequate for building procedural competence. These situations illustrate the gap between theoretical instruction and practical application.

These findings in table 4 suggest that teaching difficulties emerge from the combination of structural restrictions and student-related factors, which can impede both teaching effectiveness and learning outcomes. This is consistent with Cohen et al. (2005), as cited by Majumder et al. (2021), who recognized resource limits as a major challenge in radiologic education, and Lauroza et al. (2025), who stressed institutional constraints and workload as contributing factors to instructional difficulty. Overall, the findings suggest that enhancing both institutional support and student readiness is important to improve instructional quality.

*Theme 5. Faculty Coping Strategies on the Challenges in Teaching*

Participants	Responses
Prof. Caldwell	“Ginu-grupo ko sila, pinapa-demonstrate ko sa kanila by group... itong classroom... yun na din yung ginagawa kong laboratory.”
Prof. Fuch	“Kailangan ko lang din maging observant sa bawat estudyante... kapag may na-call out ako... yung attention ng ibang estudyante ay magfo-focus doon.”
Prof. Water	“Ginawa ko... every day quiz kami, return demo namin dalawang beses sa isang term.”
Prof. Stenver	“Paulit-ulit lang talaga... nagbibigay ng example... nagbibigay ng break kapag pagod na.”
Prof. Taylor	“Kapag na hardcore mo yung knowledge mo sa anatomy... maganda yung foundation ng positioning.”
Prof. Towne	“Step-by-step... familiarize muna sila sa anatomy... integrate positioning principles... hanggang sa higher form ng knowledge.”

*Table 5.*

The findings in table 5 indicated that faculty members use a variety of coping techniques to deal with the difficulties encountered when teaching radiographic positions and procedures. Participants said they modified typical teaching approaches by integrating group demos, frequent quizzes, and return demonstrations to reinforce learning. Some instructors utilized available classroom spaces as alternative practice areas to compensate for the lack of laboratory facilities, while others concentrated on building students’ core knowledge before introducing more difficult techniques.

To guarantee knowledge and retention, lessons were frequently repeated, step-by-step guidance was provided, and student performance was continuously monitored. Participants emphasized the importance of observing student behavior and encouraging involvement in order to keep them engaged during discussions. Other strategies for preventing student weariness and improving attentiveness included providing breaks and properly timing courses. These approaches indicate the instructors’ efforts to modify their teaching strategies in response to both student needs and environmental limits. These findings show that coping methods for sustaining learning in the face of adversity focus on adaptation, reinforcement, and active involvement. This is consistent with Shi and Liu (2025) emphasis on adjusting teaching methods to efficiently convey both theoretical and practical knowledge, as well as Foster (2024) finding that formative assessment procedures increase student performance and procedural competence. Overall, the data show that adaptive teaching approaches are critical for ensuring effective instruction.

*Theme 6. Emphasizing the importance of radiographic positioning and procedures in clinical practice*

Participants	Responses
Prof. Caldwell	"Ayan...so pagdating naman sa pagbibigay-diin sa subject na 'yan...ang posi kahit madami, kailangan ninyong matutunan kasi magagamit ninyo talaga 'yan sa totoong buhay...that will be your foundation pagdating sa ospital."
Prof. Fuch	"Mas effective talaga ang pagtuturo ng face-to-face kasi skills yung tinuturo mo...mahirap siyang ituro pag online."
Prof. Water	"...nagbibigay ako ng other ways or techniques para sa pinaka-clinical setup na ginagawa sa hospital."
Prof. Stenver	"...Ito important ito sa hospital...ginagawa ko sila ng scenarios...pero sinasabi ko din na ito ginagamit sa board exam."
Prof. Taylor	"...napakaimportante ng posi...di kayo magkakaroon ng lisensya kung hindi niyo ipapasa ang cluster 3...kaya mahalaga siya."
Prof. Towne	"...rad. Posi is basically the heart of the profession...kailangan muna ma-master yung theoretical para pagdating sa clinical, try to apply it and master it."

*Table 6.*

The study's results highlighted the relevance of radiographic positioning and procedure in clinical practice and professional development. Participants emphasized that positioning serves as a foundation, and is essential in ensuring accurate and good quality image production, patient safety, and diagnosis. They also stated that being professional and mastering positioning is necessary to be able to pass the licensure examinations and perform clinical responsibilities.

Some of the participants further emphasized the importance of applying classroom instructions to real life clinical scenarios. Providing alternative techniques and practical demonstrations was evaluated as helpful in students' understanding of positioning in actual hospital settings. These responses indicate that radiographic positioning and procedures play a crucial role in connecting theoretical knowledge and clinical application.

These results suggest that learning radiographic positioning and procedures is an essential skill that has a direct impact on clinical outcomes. This is supported by Ingrassia (2020), who stated that positioning affects diagnostic accuracy and patient care. Bontrager and Lampignano (2020), which emphasized its role in producing high quality diagnostic images. The findings indicate that strong foundational learning in radiographic positioning and procedures is necessary for effective clinical performance.

*Theme 7. Teaching Radiographic Positioning as a Continuous, Adaptive, and Reflective Learning Process.*

Participants	Responses
Prof. Caldwell	"Ako...sa akin, natutunan ko, di lahat ng bata ay pare-parehas ng talino when it comes dun sa subject. Kaya nga sabi ko kanina, di ba, gumagawa ako ng paraan para yung shine-share ko sa kanila ay pang-isip na pangkalahatan"
Prof. Fuch	"Natutunan kong humarap sa harap kasi ayoko talagang nasa harap ako na nasa akin yung attention.pero dito ,dito ko natutunan yung magsalita, humarap sa tao ,at maging confident sa sarili ko na may ma-share akong information kahit papaano."
Prof. Water	So dito kasi iba eh depende siguro sa generation nung bata, merong iba... talagang merong anxiety pag napagalitan mo... di na papasok, bumababa yung self-esteem, tapos meron namang pag nasabihan mong bawal mag-cellphone,wala na, tahimik na yan. So... ang ginagawa ko dun, kinakausap na lang ulit pero pag ayaw, back to the lesson na lang ulit."

Prof. Stenver	“Patience. ‘Yan talaga yung pinaka ano ka siguro, pinaka natutunan ko, maging patient. Maging patient talaga sa student, yun. Kasi hindi naman lahat is may the same na pacing ng to receive and absorb the information.
Prof. Taylor	“Na-review ko yung anatomy ko. Alam mo yung feeling na naging estudyante din ako kasi for seven years na nasa hospital ako, or sabihin na nating 10 years, di ako nagbabasa, di ako nagbabasa ng libro. pero noong nagturo ako, sabi ko, aaahhh, ganun pala yun, ah, kaya ko pala ginagawa yun kasi ito pala yung gustong makita, ito pala yung pathology, dapat ito pala yung method or projection na kailangan kong gawin. So it is part of learning, and of course, sharing. Pagdating naman din kasi sa pagtuturo hindi naman pwedeng turo kalang ng turo, you need to share for example sa mga students ko shinesshare ko sakanila mga experience ko sa mismong hospital kaya for me importante yung nagtuturo ng posi is may clinical practice kapag nag turo”
Prof. Towne	“So yan din yung isa sa natutunan ko, during may internship kase, I learned the practice of clinical first before I studied theoretical...pero once nag start na ako magturo, I realize na the theoretical is actually very important if you can transfer it into practice... wala ka ng confusion, mas madali mo na lahat naa-adjust yung mga position so since nagtuturo ako, ayun yung difference so na observe ko naman sa other na hindi nagtuturo pero pero nagpa-practice, tuloy tuloy lang yung ginagawa nila...pero sakin, unti-unti napa-polish yung knowledge in clinical through exploration of theoretical.”

Table 7.

The findings show that participants view teaching radiographic positioning and procedures as a continuous, adaptive, and reflective learning process rather than just giving information to the students. Participants have emphasized that instruction requires patience, flexibility, and regular adjustment depending on students’ learning needs and levels of understanding. Some participants mentioned that they simplify the lessons to match students’ understanding, while others said that teaching also helps them improve their confidence and communication skills, showing that learning also occurs on the part of the instructor.

In addition, participants emphasized that being emotionally aware, when dealing with students who experience anxiety or struggle with different learning paces. Teaching was also described as an opportunity to revisit and strengthen foundational knowledge in anatomy and better connect theoretical with clinical practice. Overall, teaching is seen as a process where both faculty and students continue to learn.

These findings in table 7 are supported by Amiri et al. (2025) demonstrating that effective teaching requires continuous adjustment of strategies to support both theory and practical skills. Corbin and Carey (2021) explained that reflective teaching helps link classroom lessons with clinical experiences.

*Theme 8. Adaptive and Student-Focused Strategies in Teaching Radiographic Positioning and Procedures.*

Participants	Responses
Prof. Caldwell	“Repetition is the key. Paulit-ulit kong sinasabi sa kanila...pero hindi yung subject ha, hindi subject yung i-rerepeat...yung lesson itself ang i-rerepeat kasi naniniwala ako na the more na nire-rerepeat mo yung mga bagay-bagay sa pag-aaral mo, mas natatandaan mo siya.  ‘Sina-suggest ko rin sa kanila, pagdating sa pag-aaral nila ng posi, use the Pomodoro Technique, um...use the Feynman Technique, kung alam man nila yun”
Prof. Fuch	“Siguro mag focus sa skills na hindi nawawala yung detailed. Procedure na nasa libro kase ang tinitingnan naten yung board exam kase don naman yung end goal naten e na ,kapag naipasa nila yung board exam ibigsabihin yung written technicalities nung sa board exam naintindihan talaga nung mga estudyante .so sana skills sa laboratory,return demo na hindi nawawala yun pagtuturo sa pagtuturo ng detailed lectures.

Prof. Water	Ano sana... magkaroon ng more on foundation sa anatomy, hindi lang sa positioning terms kasi sa positioning puwede pang matutunan ulit sa hospital pag nag-interns na kayo or by the room. “
Prof. Stenver	“Wag magbasa ng PowerPoint, ’wag umupo. ’Yun. Palagi kang gumawa ng example. Like, ano talaga, ah, hindi lang yung example na makikita mo sa picture. Do it in front of them. Like for example, classmate mo yung patient, pero not all the time, yung kaklase niyo na lang maging pasyente, kasi kung siya na lagi ang pasyente, hindi siya makakaaral. May rotation. Oh, ikaw naman yung patient ko, sino yung next? Ikot ’yan palagi ang nangyayari. ’Yun. Isa-isa, pinapa...pinapakita talaga sa harap na ganito mag-x-ray, ganito mag-position, ito dapat yung ginagawa, this is how you do it, do that. ’Yun.”
Prof. Taylor	“I-emphasize ang anatomy, parts ng anatomy, gawing sabi ko nga eh, ahhh, for some ha, kasi “ahmm, posi madali lang ’yan ituro.’ However, technically speaking, kasi, I do respect the different subjects, may kanya-kanyang label ’yan eh, kung maipapakita lang kasi ’yung kahalagahan ng posi madali lang ’yon. Suggestions... Siguro gandahan yung anatomy recommendations, same as well yung sa sana magkaroon tayo ng alam mo yun, parang totoong tao na mannequin yung ma-po-position mo.”
Prof. Towne	“So recommendation, una depende sa facility...if you do not have the high-end facility, be creative. Pangalawa, always stick to the theoretical first before applying the techniques sa clinical na wala sa book, so yun lang naman yung magiging ano ko...then of course, master the basics, always master the basics before continuing to the most complex part. “

Table 8.

The study’s results showed that adaptive and student-focused strategies in teaching radiographic positioning and procedures are important in improving radiologic education. Participants explained that teaching is more effective when it is adjusted based on students’ needs, with lessons simplified, using flexible methods, and patient approaches. They also highlighted the importance of being attentive to students’ learning abilities and using strategies that support better understanding. Overall, the findings suggest that adapting teaching approaches and focusing on students’ needs can improve learning outcomes in radiographic positioning and procedures.

The findings also showed that reflection and student-centered approaches help connect theoretical with clinical practice. Participants mentioned that using different strategies like demonstrations, repetition of lessons, and active guidance, helps students apply what they learn in clinical settings. This shows that teaching radiographic positioning is not only about delivering information but also about developing students’ practical skills.

These results in table 8 are supported by Castro and Lombrio (2023), who stated that effective teaching involves adapting strategies, reflecting on challenges, and understanding student needs. Tadesse et al. (2021) also emphasized that student-centered and experience-based learning improves engagement and outcomes.



Figure 2: Mucadamara Framework

This framework was based on the Hub-and-Spoke Model, in which various variables are tied to a single topic. It possesses the superordinate themes that were informed by the answers of the participants as: Professors experiences in implementing and navigating effective teaching strategies, Student-centered strategies for effective learning, Diverse and context-driven assessment practices in evaluating students, Managing diverse learning paces and susutaining engagement in teaching, Faculty'sncoping strategies on the challenges in teaching, Emphasizing the importance of radiographic positioning and procedures in clinical practice, Teaching radiographic positioning and procedure as a continuous, adaptive, and reflective learning process, and Adaptive and student-focused strategies in teaching radiographic positioning and procedures.

This framework demonstrates faculty members' experience in teaching radiography positioning and procedures as an interconnected, dynamic, and holistic process. The central phenomenon is the point at the center of the diagram, it is the point from which all themes take their origin. In the circle are eight small circles representing the eight themes most frequently found in participants' answers. Moreover, the mucadamara framework reveals the themes as analytically separate but interrelated in experience, as indicated by the diagram's circularity.

## Conclusion and Recommendations

The study concluded that teaching radiographic positioning and procedures presents significant challenges due to the subject's complexity, which requires integration of both theoretical knowledge and practical skills. The findings revealed that students' difficulty in understanding key concepts, particularly anatomy, due to the limited resources and alternating modes of classes affects their ability to perform radiographic positioning properly. Faculty members respond to these challenges by adjusting their teaching strategies based on students' learning needs and learning environment. The use of various teaching methods, including repetition, mnemonics, demonstrations, and hands-on activities, was found to enhance students' understanding and skill development, improving learning outcomes in complex procedures. This study advances existing knowledge by suggesting that the effectiveness of radiographic positioning and procedures is strongly influenced by adaptive teaching strategies, as well as by the availability of institutional resources, equipment, and laboratory facilities that support practical training.

To improve the teaching of radiographic positioning and procedures, Radiologic technology faculty should continuously enhance their knowledge, technical skills, and instructional strategies to enhance instruction in Radiographic positioning and procedures. Educational institutions should also strengthen student-centered methods such as simulation-based and case-based learning, while providing faculty with regular training, updated resources, and balanced workload. Furthermore, strong collaboration between academic institutions and clinical facilities is recommended to ensure that teaching practices remain aligned with current clinical standards. Future research should include a wider range of institutions and participants and further examine factors such as resources, technology, and student-related variables to better understand and improve teaching effectiveness.

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## Data Availability Statement

Data sharing is not applicable to this article as no new data were created or analyzed in this study; all data used were obtained from previously published sources as cited in the reference list.

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## Appendices

No appendices are attached to this study.