

Original Article

Learning the Law Meaningfully: Dental Students' Experiences with Outcome-Based Instructional Materials in Dental Jurisprudence and Ethics

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Abstract. Existing literature indicates a scarcity of law-related, outcome-based instructional materials (OBIM) for non-law students. Using thematic analysis, this qualitative study explored how dentistry students at a university in Metro Manila experienced learning Dental Jurisprudence and Ethics through outcome-based instructional materials specifically designed for them. The OBIM was developed, validated, and enhanced through an empirical process involving needs analysis, iterative instructional design and material development, pilot implementation, and multi-level formative and summative evaluation. Following the use of the OBIM in classroom instruction, data were gathered through open-ended questions and reflective narratives. Four major experiential themes emerged: (1) Ethical Awareness and Professional Identity Formation, where students reported deeper understanding of ethical and professional responsibilities, respect for patient privacy, and the significance of informed consent, as well as development of professional confidence; (2) Legal Preparedness, reflecting increased awareness of legal consequences, familiarity with the legal framework, commitment to professional compliance, and recognition of the protective role of law; (3) Applied Learning, characterized by appreciation for real-life case-based learning, improved ethical-legal decision-making, and perceived preparedness for real practice; and (4) Foundational Knowledge, where the instructional materials were seen as providing a broad, essential understanding of ethics and law in dentistry and applying the ethico-legal principles early relative to their practice. Furthermore, students observed that the OBIM contains a supportive learning design and clear, accessible, and well-structured content. Nevertheless, learning barriers arose from information overload and the complexity of legal language, leading to a strong preference for visual, summarized materials. The findings suggest that outcome-based, case-grounded instructional materials can meaningfully enhance ethical-legal competence and professional identity among dental students, while stressing the need for multimodal designs that are accessible to non-law learners.

Keywords: Dental jurisprudence; Dental law; Dentistry; Legal education; Outcome-Based Instructional Materials (OBIMs).

The field of legal education is increasingly recognized for its essential role in shaping competent and ethical professionals. In fact, professional practice cannot occur without the concomitant legal and ethical considerations. In the practice of dentistry, these aspects are integral components to maintain professional

accountability, integrity, and public confidence in the profession. More importantly, to achieve this, instructional materials should be aligned with students' needs. Hence, the researcher developed, validated, and enhanced instructional materials to improve the learning experience of non-law students, such as Dentistry students who need to study legal theories, maxims, and principles applicable to their field of specialization.

Across many countries, higher education institutions have institutionalized legal education to accommodate the industry and practice needs of non-law students, a trend driven by the interdisciplinary nature of modern social, economic, and political milieus. In the Philippines, colleges and universities have integrated law-related and legal aspects, or jurisprudence, into the curricula of non-legal academic courses, particularly in business programs and other disciplines. Legal education, often considered the foundation of professional competence, has an essential role in promoting ethical awareness, accountability, and informed decision-making across various fields (Ali & Ali, 2009; Khan, 2021; Khan, 2024). Specifically, the inclusion of legal subjects such as Jurisprudence and Ethics in the Doctor of Dental Medicine program shows this need, as required by Commission on Higher Education (CHED) Memorandum Order No. 3, series of 2018. The subject equips dental students with knowledge of the laws, regulations, and ethical principles governing the practice of dentistry, enabling them to explore their professional responsibilities effectively.

Moreover, Dental Jurisprudence and Ethics is a two-unit professional core subject in the dentistry curriculum that aims to provide a solid understanding of the legal, regulatory, and ethical dimensions of the dental profession. Thus, literacy in the legal aspects of the profession, i.e., the awareness of rights, obligations, and institutional frameworks that govern social interactions and professional conduct, is the definitive outcome of the subject. However, legal education faces unique challenges, particularly for non-law students. Studies indicate that non-law students often find legal subjects inaccessible and unappealing due to the complexity of legal language, traditional teaching strategies, and the perceived irrelevance of the subject to their primary disciplines (Poon & Kong, 2014; Razak et al., 2020). Furthermore, existing learning materials are outdated and do not reflect the latest developments in Philippine law, jurisprudence, and ethical practices. Thus, they limit their pedagogical effectiveness. It is then recommended that legal education keep pace with the educational paradigm adopted by higher education, an Outcomes-Based Education (OBE). In dentistry, despite their importance, instructional materials on Dental Jurisprudence and Ethics in the Philippines remain insufficient and out-of-date. The most recent locally published textbook dates to 2009 (Bellosillo et al.), with earlier materials published as early as the mid-20th century (Banzali, 1947; Quiazon, 1951; Manongdo, 1953; Aprer, 1990; Joven, 1993). These books primarily focus on traditional teaching methods that may not align with modern educational frameworks, such as OBE.

Reiteratively, current materials fail to address the unique needs of dental students, who require an understanding of legal principles pertinent to their practice. The reliance on the Socratic method and lecture-based approaches in teaching law and ethics exacerbates disengagement among non-law students, particularly those in specialized programs like dentistry, where legal studies are perceived as ancillary to their primary field of study (Patrick, 2017; Roganović, 2021; Hsu et al., 2025). More importantly, a review of recent local and international literature reveals a clear research gap: there are no recent empirical studies that have developed, validated, and examined Outcome-Based Instructional Materials in allied health sciences (Deng et al., 2020; Xu & Wang, 2022) specifically for Dental Jurisprudence and Ethics. While OBE-aligned instructional designs have been explored in other professional fields, their application to dental legal education—particularly from the perspective of learner experience—remains largely unexplored. This absence limits evidence-based pedagogical innovation in a discipline where legal competence is critical to professional formation (Muralidharan et al., 2022; Swetha et al., 2023).

In 2012, the Commission on Higher Education (CHED) issued CHED Memorandum Order (CMO) No. 46 to strengthen quality assurance in Philippine higher education by adopting competency-based standards and an outcomes-based framework. Even before this, CHED had institutionalized Outcome-Based Education (OBE) through CMO No. 32, series of 2012, initially applied to engineering programs to align Philippine education with international standards. These reforms were further operationalized through the 2013 CHED Implementation Handbook for OBE and Institutional Sustainability Assessment, which defined OBE as “an approach that focuses and organizes the educational system around what is essential for all learners to know, value, and be able to do to achieve a desired level of competence at the time of graduation.” Collectively, these policies marked a shift from

input-based to outcomes-based instruction, prompting higher education institutions to redesign curricula, instructional materials, and assessment practices to align with professional competencies and ethical standards.

Within this national framework of educational reform, the present study is relevant. Anchored on the principles of outcomes-based education, the instructional materials in Philippine dental jurisprudence and ethics were developed and validated. These materials offer contextualized cases, authentic assessments, simplified legal explanations, and performance-based tasks to facilitate meaningful learning. The primary purpose of this qualitative study is to explore and describe the dental students' lived experiences in utilizing the Outcome-Based Instructional Materials in Philippine Dental Jurisprudence and Ethics. It is equally essential to understand how these materials influence learners' comprehension of legal concepts, engagement with ethical issues, and formation of professional identity—what they found meaningful, challenging, transformative, or complex. Understanding these perspectives is vital to sustaining pedagogical reforms in dental legal education, particularly in OBE-driven environments where learner experience is a primary indicator of instructional effectiveness.

The present study aimed to explore the lived experiences of dental students in using Outcome-Based Instructional Materials in Dental Jurisprudence and Ethics by identifying and interpreting emergent themes that are related to learning engagement, comprehension of legal-ethical concepts, and professional identity formation within the context of dental practice. Through thematic analysis, the study sought to identify patterns of meaning that explain how and why these instructional materials support or hinder meaningful learning among non-law learners, based on their structure, presentation, and organization.

Methodology

Research Design

A qualitative study using thematic analysis (Braun & Clarke, 2006) was used to explore the experiences of dental students who used the Outcome-Based Instructional Materials in Dental Jurisprudence and Ethics. This design focused on the students' subjective perceptions, reflections, and sense-making processes as they explored legal and ethical learning using a structured, outcome-based instructional tool.

Research Participants and Sampling Technique

Purposive sampling was used to select participants with direct, sustained exposure to the instructional materials as part of their coursework. A total of 178 fifth-year Doctor of Dental Medicine students from Centro Escolar University (CEU) Manila and CEU Makati participated in the study. All participants were enrolled in Dental Jurisprudence and Ethics during the Second Semester of School Year 2024–2025 and had formally completed the course using the developed OBIM. This group represents non-law students encountering legal concepts formally for the first time.

Research Instruments and Data Collection

Data were collected using a researcher-developed Outcome-Based Instructional Materials Evaluation Instrument that included open-ended questions and reflective narrative prompts. The instrument was designed to gather students' experiences, perceptions, challenges, and insights regarding the utilization of the OBIM. Content validity was established through expert review in dental and legal education, as well as through outcomes-based instructional design, to ensure alignment with course outcomes and research objectives. Because the instrument was qualitative, statistical reliability measures were not applicable. The developed, validated, and enhanced Outcome-Based Instructional Materials were used as an integral part of the Dental Jurisprudence and Ethics course for one academic semester. The instructional materials consisted of outcome-aligned learning chapters that included simplified legal explanations, contextualized dental case scenarios, guided learning tasks, reflective questions, and performance-based assessments. Students interacted with the materials through a combination of guided in-class activities and independent learning tasks. This was to allow them to apply legal and ethical concepts to realistic professional scenarios. The instructional materials were designed to support non-law learners and were consistently used throughout the course. Data collection was conducted immediately after the course to capture timely and authentic reflections. Students submitted their written responses electronically through the university's learning management system (LMS) as part of a post-intervention reflective activity, independent of graded course assessments. The data collection process spanned approximately two weeks.

Data Analysis

Data were analyzed using thematic analysis following Braun and Clarke's (2006) six-phase framework. The researchers familiarized themselves with the data, generated initial codes, identified themes, reviewed them, defined and named them, and produced the results or reports. Coding was inductive but informed by OBE theory, jurisprudential content, and the structure of the OBIM. Themes were validated through constant comparison to ensure coherence and depth. To ensure trustworthiness, several qualitative rigor strategies were employed. Credibility was established through prolonged engagement with the data and iterative review of codes and themes. Dependability was ensured by maintaining a clear audit trail of analytic decisions and coding procedures. Confirmability was addressed through reflexive memoing and constant comparison to minimize researcher bias. Transferability was supported by providing detailed descriptions of the participants, context, instructional materials, and procedures, enabling readers to assess the applicability of the findings to similar educational settings.

Ethical Considerations

Participants provided informed consent; anonymity was maintained, and responses were kept confidential. The study was conducted in accordance with the ethical policies of the Centro Escolar University Institutional Ethical Review Board (CEU IERB) and aligned with guidelines for research involving human participants.

Results and Discussion

Dental Students' Experiences in Using Outcome-Based Instructional Materials in Dental Jurisprudence and Ethics

Four major themes emerged from the student participants' open-ended responses regarding their lived experiences with the subject's instructional materials. These central themes, along with their sub-themes, were interpreted in light of relevant literature to provide in-depth insights into the impact of Outcome-Based Instructional Materials on learners' understanding and application of ethical and legal aspects of the practice of dentistry.

Table 1. Dental Students' Experiences in Using Outcome-Based Instructional Materials in Dental Jurisprudence and Ethics

Major Emerging Themes	Sub-themes
<i>Ethical Awareness and Professional Identity Formation</i>	Understanding Ethical and Professional Responsibilities Respect for Patient Privacy Importance of Informed Consent Developing Professional Confidence
<i>Legal Preparedness</i>	Awareness of Legal Consequences Familiarity with Legal Framework Importance of Professional Compliance Protective Role of Law
<i>Applied Learning</i>	Real-Life Case-Based Learning Improved Decision-Making Preparedness for Real Practice
<i>Foundational Knowledge</i>	Broad Understanding of Ethics and Law Early Application of Principles

Ethical Awareness and Professional Identity Formation

The practice of dentistry, like any other profession, is imbued with public interest. Hence, stakeholders, particularly the government and the community, are called upon to safeguard the profession: the government through regulation and protection, and the community through the recognition of dentistry's public service role. To maintain the integrity and trust of the profession, ethics should be a way of life for dental practitioners; it should be the profession's core. Thus, professionals such as dentists must adhere to these standards, as they are both a function of personal choice and formal obligation.

Through the developed Outcome-Based Instructional Materials, the student-participants have consistently enhanced their ethical understanding of dental practice. They added that the instructional materials prompted them to reflect on the real-world implications of professional decisions and the ethical responsibilities of dental practitioners. This amplified awareness goes beyond memorizing the Dental Code of Ethics; it involves internalizing professional values such as honesty, integrity, beneficence, and respect for patients' rights.

Moreover, the instructional materials played a transformative role in shaping participants' professional identity. Through real-life scenarios, legal simulations, and values-oriented discussions, students began to internalize the attitudes, responsibilities, and ethical norms expected of dental professionals. Based on their responses, they realized that through the modules, they see themselves not merely as learners but as future practitioners accountable to patients, the law, and society.

Understanding Ethical and Professional Responsibilities. Students gained clarity on their roles as ethical practitioners. Across responses, they repeatedly framed OBIM as a clarifying lens for their professional obligations. They emphasized that the modules moved them beyond “knowing rules” toward acting on duties such as obtaining informed consent, maintaining records, maintaining confidentiality, and respecting patient rights. Thus, a student-participant feels *“more confident and prepared to act professionally and ethically when dealing with patients.”* There was also a realization from one student, saying, *“Honestly, mas naging aware ako kung gaano kahalaga ang responsibilidad namin bilang isang dentista. Tumataak siya sa akin and feel ko madadala ko siya hanggang magkaroon ako ng sarili kong clinic.”*

The responses below summarize the increased ethical awareness of the dental clinicians in terms of their responsibilities, accountability, and moral and legal obligations:

“It helped me understand the importance of following legal and ethical guidelines in dental practice.”

“They provided real-life scenarios that made it easier to apply these principles in clinical situations. As a result, I feel more confident and prepared to act professionally and ethically when dealing with patients.”

Pedagogically, this pattern echoes constructive alignment: the Outcome-Based Instructional Materials' explicit outcomes (“what graduates must reliably do”) are practiced through authentic cases and assessed through performance tasks, which strengthens role clarity and ethical judgment (Spady, 1994; CHED, 2014). Students' reports of greater confidence and decision readiness are consistent with evidence that structured ethics instruction and case- or problem-oriented curricula improve moral reasoning and professional judgment in dentistry (Bebeau & Thoma, 1994; Ozar, Sokol, & Patthoff, 2018). In the Philippine context, students' references to “legal and ethical responsibilities” align with Republic Act No. 9484 (the Philippine Dental Act of 2007) and the Philippine Dental Code of Ethics, which articulate duties to the community, the profession, and the public. Findings support retaining Outcome-Based Instructional Materials' features that make duties actionable: (a) scenario-based tasks linking statutes and codes to chairside choices; (b) explicit outcome statements tied to assessment rubrics; (c) reflective writing on patient rights and provider obligations. These are likely to fuse ethical role identity and support licensure-relevant competencies in jurisprudence and practice management (Bebeau & Thoma, 1994; Ozar et al., 2018).

On the other hand, according to the participants, the professional responsibilities were made clear through instructional materials. They described that such use improved their understanding of the duties and responsibilities as future dental professionals. They internalized that professionalism extends beyond technical skill to include ethics, accountability, and decorum. This captures the occurrence of *professional self-awareness*, a salient feature of *professional identity formation (PIF)* developed by Cruess et al. (2015). PIF is defined as “a dynamic developmental process by which individuals merge the knowledge and skills of clinical practice with the values and behaviors of their personal identity” (Trevino & Poitevien, 2021). Through OBIM, students began to perceive dentistry not only as a technical discipline but as a moral vocation governed by ethical codes and social trust. It emphasizes patient care and professional accountability. PIF posits that identity develops through internalization of professional values, guided reflection, and the influence of mentorship. Participants' acknowledgment that *“one small mistake can be used against us”* and the importance of *“to always think before you act, because as our professor always says, one act can result in three circumstances once we are already a professional”* also reflects a mature understanding of professional accountability and the consequences of malpractice. Integrating ethics instruction into dental curricula leads to greater self-regulation and adherence to professional codes. Similarly, professionalism is cultivated through a curriculum that combines knowledge, reflection, and situational practice — precisely what the outcome-based instructional materials provide.

Respect for Patient Privacy. The dentist-patient relationship is fundamentally a contract under applicable law,

including the Civil Code and the Philippine Dental Act of 2007. Such a relationship falls under the principle of privileged communication. Hence, privacy and confidentiality are of paramount significance. In the student participants' responses, the importance of maintaining privacy and handling patient information ethically was emphasized. They highlighted confidentiality and the careful handling of patient information as salient lessons from the modules, repeatedly linking these to documentation practices and communication. One student shared that the developed OBIM has taught them to *"handle issues like informed consent, patient confidentiality, and professional misconduct."* Further, he recalled that they were *"prepared to treat patients with respect, fairness, and integrity."*

Other participants mentioned:

"The modules helped me understand my duties as a future dentist, like getting informed consent and respecting patient confidentiality."

"...handle issues like informed consent, patient confidentiality, and professional misconduct... prepared me to... treat patients with respect, fairness, and integrity."

These statements are in accordance with the PDA Code of Ethics (duties to patients, proper record management, informed consent) and with Republic Act No. 10173 (Data Privacy Act of 2012), which treats health data as sensitive personal information and requires lawful, informed, and secure processing, including consent and breach notification standards (DPA; NPC health privacy guidance). Respect for privacy is not merely a matter of legal compliance; it is a core ethical obligation grounded in deontological duties to protect patient dignity and trust (Garbin et al., 2008). Students' emphasis on "real-life cases" is consistent with evidence that case-based learning enhances transfer to practice in health professions and dentistry, thereby improving judgment in documentation, disclosure, and consent (Thistlethwaite et al., 2012; Shigli et al., 2017). In dentistry-specific ethics education, blended/case-based approaches have also been shown to improve ethical problem-solving, consistent with students' reports here (Karamzadeh et al., 2021; Macpherson et al., 2022). It is important to note that OBIM tasks should operationalize privacy by drafting consent forms for different scenarios (adult/minor/third-party requests), conducting charting and audit exercises, conducting breach-response tabletop simulations, and reflective analyses of competing duties (confidentiality vs. public health). Moreover, the curriculum in dentistry should embed the PDA Code/RA 10173 criteria into rubrics so students demonstrate both legal sufficiency and ethical sensitivity in documentation, disclosure, and communication.

Importance of Informed Consent. Participants have consistently stated that the Outcome-Based Instructional Materials (OBIM) deepened their understanding of when and how to properly obtain informed consent—an essential conduct of ethical dental practice. Through case-based examples and statute integration, they learned to treat consent as a continuing dialogue rather than a perfunctory signature:

"...informed consent, the procedures must be properly stated and discussed with the patient, not just by making them sign. This is important, especially since it is also the patient's right to know what procedures will be done."

"Real-life instances, statutes like RA 9484, and ideas like informed consent, civil responsibility, and professional regulation taught me that my actions as a future practitioner had both health and legal ramifications."

These reflections reveal that OBIM's case-anchored learning design transformed informed consent from a bureaucratic formality into a moral and legal dialogue centered on patient autonomy. Beauchamp and Childress (2019) describe informed consent as an expression of respect for autonomy—the patient's right to make decisions based on adequate disclosure, comprehension, and voluntariness. Students' recognition that "consent is not just a signature" indicates a shift from rule-following toward principled reasoning, consistent with higher stages of moral development in professional ethics education (Rest, 1986; Bebeau & Thoma, 1994). The repeated mention of "real-life cases" indicates that contextualization facilitated transfer of ethical theory to clinical application—a finding consistent with Nash (2007), who reported that structured ethical modules using authentic scenarios significantly enhance health-care students' moral reasoning and ethical decision-making skills. Moreover, OBIM's outcome-based orientation required learners to demonstrate their understanding through performance tasks such as role-play, legal case analysis, and reflective documentation. Such alignment between expected outcomes, activities, and assessments reflects Biggs and Tang's (2011) theory of constructive alignment, which enables deeper

learning by ensuring that intended outcomes are observable and measurable.

Developing Professional Confidence. The student-participants reported developing a sense of professional confidence, particularly in applying legal and ethical principles in real-life contexts, through the OBIM. They described feeling more capable of handling professional dilemmas, communicating effectively with patients, and making sound ethical decisions.

“Dental Jurisprudence modules helped me understand legal responsibilities, improve ethical decision-making, enhance patient communication, prepare for real-life scenarios, and boost my confidence in applying legal and ethical principles in daily dental practice.”

“It helped me a lot and allows me to see how legal and ethical principles apply to real situations in practice, giving me the confidence to make better, more responsible decisions for my patients and my profession.”

The above-cited statements indicate that the OBIM strengthened student participants’ self-efficacy and moral assurance in their professional roles. Students began to perceive themselves as competent actors capable of exploring the complicated nature of the legal and ethical environment—a sign of emerging professional identity and self-regulation. Cruess et al. (2015) emphasized that professional identity formation (PIF) in health professions involves cognitive mastery and affective growth. Here, they develop confidence, autonomy, and a sense of belonging to the profession. The students’ references to “confidence” and “readiness” show that OBIM’s experiential and case-based learning design supported both dimensions of this identity formation. Furthermore, OBIM provides repeated chances for mastery through case analysis, simulated legal hearings, and reflective assessments. Therefore, OBIM is an effective instructional strategy for nurturing confidence through competence. As learners gain conceptual clarity and experiential exposure, they become more self-assured in translating ethical and legal knowledge into practice. Confidence, in this sense, is not overconfidence—it is a grounded assurance grounded in preparation, reflection, and an understanding of accountability.

Legal Preparedness

OBIM modules provided legal grounding, increasing participants’ awareness of legal responsibilities and risks. Participants consistently emphasized that the Outcome-Based Instructional Materials (OBIM) on Dental Jurisprudence and Ethics enhanced their legal preparedness by integrating statutes, professional codes, and case-based exercises that linked classroom learning to real-world professional accountability. The modules clarified that legal literacy is indispensable to ethical competence, since dental practice operates within both moral and statutory boundaries.

Awareness of Legal Consequences. Malpractice and negligence were better understood. Students reported that OBIM deepened their understanding of malpractice, negligence, and professional liability, reinforcing that each clinical act carries both ethical and legal implications:

“It made me realize that every action or clinical decision has both ethical and legal consequences if not done correctly. But I also learned that these principles protect not only the patients, but us, dentists as well.”

“The module helps me understand the Philippine dental act and how it outlines the civil, criminal, and administrative consequences dentists may face if they make mistakes like negligence or malpractice.”

The participants’ reflections reveal a shift from rote memorization to consequential moral reasoning—an awareness that dental errors, even if unintentional, can constitute legal violations under Republic Act No. 9484 (Philippine Dental Act of 2007), Civil Code provisions on negligence, and Professional Regulation Commission (PRC) regulations on administrative discipline. This awareness corresponds to what Bebeau (2002) terms professional moral sensitivity—recognizing how one’s conduct affects the rights and welfare of others. Through OBIM’s case studies and scenario-based discussions, students learned that the law not only punishes but also protects practitioners who act in good faith and follow due process, thereby cultivating a balanced sense of accountability and self-protection.

Familiarity with Legal Framework. Students learned about applicable laws and their implications. Further, they expressed appreciation for the OBIM’s clarity in mapping out the legal foundations that govern professional practice:

"It helped me better understand the legal framework and ethical obligations that dentists have to know and practice under... one 'mistake' can nullify all of our hard work through revocation of our licenses."

"The modules provided me with knowledge about the legal frameworks, professional ethics, and regulations that govern the practice of dentistry."

"Elucidating the legal frameworks governing dental practice within the Philippines, exploring complex ethical dilemmas encountered in daily work, offering practical guidance on adhering to these principles."

This sub-theme captures the cognitive dimension of legal preparedness – students' improved conceptual grasp of statutory frameworks, such as the Philippine Dental Act of 2007, the Dental Code of Ethics, and the Data Privacy Act of 2012. OBIM's integration of these laws through annotated lessons and guided analyses provided what Biggs and Tang (2011) describe as constructive alignment—ensuring that intended outcomes ("demonstrates understanding of legal frameworks") are reinforced by learning tasks ("case analysis of negligence," "mock administrative hearing") and directly assessed. Students' remarks support the findings of Mariño, Manton, and Reid (2023) that early exposure to legal frameworks in dental education enhances regulatory compliance and professional confidence. New dental graduates acknowledged their limitations and emphasized the importance of lifelong learning to maintain competence. They also demonstrated awareness of the legal and ethical responsibilities essential to providing safe and effective dental care. Likewise, J. Rest's (1986) Four-Component Model of Moral Behavior explains that understanding the normative context (laws, rules, codes) is a prerequisite for moral judgment and motivation.

Importance of Professional Compliance. The importance of licensure and regulatory compliance was emphasized. Students reported that the Outcome-Based Instructional Materials (OBIM) strengthened their commitment to professional compliance, underscoring the importance of licensure, regulatory adherence, and lawful practice. Their reflections showed a heightened awareness that compliance is not merely bureaucratic but an ethical commitment to patient safety and professional integrity.

"This helped me confidently navigate complex real-life scenarios involving informed consent, patient confidentiality, and professional responsibilities, ensuring compliance with legal standards while prioritizing patient care."

"The Dental Jurisprudence modules provided clear explanations of legal and ethical principles relevant to dentistry... to protect patient rights, ensure professional responsibility, and comply with regulations in real-life practice."

Participants' statements reflect a mature understanding that compliance is essential to protecting both patients and practitioners. OBIM led them to view legal compliance as a moral duty rather than merely a regulatory obligation. This learning outcome aligns with Republic Act No. 9484 (Philippine Dental Act of 2007), which outlines qualifications for licensure, conditions for registration, and penalties for violations of professional standards. Harden (1999) finds that outcome-based education (OBE) is a performance-driven approach that focuses on the desired outcomes of education—namely, the kind of professional produced—rather than the process itself. In medical education, it emphasizes clearly defined outcomes that shape curriculum content, teaching strategies, assessments, and evaluation. Accountability and shared responsibility between teachers and learners can also be promoted through OBE. Further, it prepares future doctors to meet the evolving demands of healthcare practice and patient expectations.

Similarly, Noor et al. (2019) emphasized the critical need to integrate comprehensive ethics training into medical and dental education to address observed gaps and improve professional conduct among future healthcare providers. Their findings underscore the urgent need to incorporate comprehensive ethics training into medical and dental education. They also state that the observed gaps in ethical understanding and behavior could inform curriculum development and foster professionalism among future medical and dental practitioners. Such improvements may finally improve the quality of patient care and strengthen public trust in the healthcare system. OBIM's alignment of clear learning outcomes ("demonstrates knowledge of laws governing dental practice") with authentic assessment tasks (e.g., mock licensing hearings, compliance case studies) operationalized what Biggs and Tang (2011) call constructive alignment. This pedagogical coherence ensured that students internalized not only what to comply with but also why compliance matters—to maintain public trust and uphold patient welfare.

Protective Role of Law. The legal system was regarded not only as a set of rules but also as a mechanism for protecting both dentists and patients. Participants viewed the law not solely as restrictive but as protective—a safeguard that ensures fairness and safety for both the dentist and the patient.

“Dental jurisprudence enhanced my understanding and awareness of the laws governing dental practice, preparing me for real-life situations... ensuring the protection of both myself and my patients from potential liabilities.”

“It made me more aware of my responsibilities and how to make decisions that protect both the patient and myself.”

Legal knowledge is critical in reducing professional liability. Brous (2020) states that professionals such as nurses and dentists can reduce their liability by adhering to professional standards and documenting their observations and communications. Participants’ remarks indicate that OBIM facilitates the internalization of legal norms; therefore, integrating medico-legal training into clinical curricula is warranted. They also explain that legal literacy in dental education reduces anxiety about malpractice and enhances confidence in clinical decision-making. The law, as experienced through OBIM, was reframed from punitive to preventive—a system ensuring justice, due process, and ethical balance. The internalization of legal awareness should be beyond rote learning, thereby helping students recognize how legal systems reinforce ethical behavior and protect healthcare relationships.

Penultimately, adherence to legal mechanisms sustains trust in the profession. Participants’ view that “law protects both the patient and myself” captures what Ozar, Sokol, and Patthoff (2002) describe as the “dual function” of professional ethics: to guide proper action and to preserve social trust in professional authority. Legal education in the dental profession is considered a form of empowerment. When dental students understand that laws are designed to protect both their practice and their patients, compliance becomes self-motivated rather than imposed. Embedding reflective exercises that require students to analyze how laws uphold both patient welfare and professional rights could reinforce this protective understanding. It also highlights the value of integrating legal and ethical considerations within professional curricula, ensuring that future dentists can navigate conflicts with confidence and integrity.

Applied Learning

Participants appreciated that the Outcome-Based Instructional Materials (OBIM) employed authentic, context-based activities, enabling them to connect abstract legal and ethical concepts to real clinical situations. This experiential design transformed Dental Jurisprudence and Ethics from a theoretical subject into a practice-oriented discipline. This provides them the opportunity and the ability to analyze, decide, and act responsibly in the dental setting.

Real-life Case-Based Learning. Modules were grounded in scenarios that mirrored actual dental practice. Students frequently mentioned that the OBIM’s case-based and scenario-driven design helped them contextualize complex legal and ethical principles.

Honestly, those Dental Jurisprudence modules were an eye-opener... Stuff about patient rights or consent does not just feel like boxes to tick – it is actually stuff that comes up in real life... being a dentist is not just about poking at teeth; you are juggling people’s trust and a whole ton of responsibility.”

“The modules provided many practical examples and real-life scenarios for the legal and ethical principles, which aided in my understanding. It dissected each complicated concept and explained it clearly in detail.”

Participants’ testimonies reveal the power of case-based learning (CBL) in developing contextual understanding and reflective thinking. The OBIM transformed abstract statutes and doctrines into lived experiences by simulating real legal-ethical dilemmas encountered in dental practice. This aligns with Thistlethwaite et al. (2012), who conducted a systematic review that found that CBL significantly enhances students’ analytical reasoning, professional judgment, and retention of applied knowledge in the health professions. The use of realistic clinical scenarios in OBIM aligns with the pedagogical foundations of Kolb’s Experiential Learning Theory (1984), which posits a cycle of experience, reflection, conceptualization, and application. Students’ reflections, such as “seeing how law and ethics crash into daily practice makes me realize...” demonstrate that learning occurred at the reflective observation and active experimentation stages, which Kolb identifies as crucial for professional competence. Through practical cases, OBIM achieved alignment by enabling learners to demonstrate measurable outcomes, such as “analyze legal dilemmas” and “apply ethical principles in clinical decisions.” Embedding authentic case-

based learning in Dental Jurisprudence strengthens clinical legal literacy, helping future practitioners internalize ethical norms through action rather than memorization. It also supports the shift from knowing about to thinking like a professional by cultivating self-regulation, empathy, and contextual reasoning. Continuing to integrate simulated jurisprudence hearings, case reflections, and peer ethical reviews can sustain this experiential learning model (Karamzadeh et al., 2021).

Improved Decision-Making. OBIM strengthened ethical and legal decision-making in ambiguous situations. Students emphasized that the OBIM sharpened their ability to make legally and ethically sound decisions in complex or ambiguous situations.

"These seminars taught me to think critically about patient rights, ethical decision-making, and how to practice dentistry within the law, protecting both my patients and my license."

"Dental Jurisprudence modules helped me understand legal responsibilities, improve ethical decision-making, enhance patient communication, prepare for real-life scenarios, and boost my confidence in applying legal and ethical principles in daily dental practice."

Participants' responses show the occurrence of critical and reflective decision-making, a higher-order skill promoted by outcome-based education. They transitioned from passive learners to active moral agents capable of reasoning in the face of uncertainty. This development aligns with Rest's (1986) Four-Component Model of Moral Behavior, which identifies moral sensitivity, judgment, motivation, and implementation as sequential capacities cultivated through guided reflection and case discussion. Structured ethical modules strengthen students' decision-making by providing a scaffold for analyzing conflicts between legal and moral obligations. Furthermore, exposure to real ethical cases improves dental students' confidence and competence in navigating moral dilemmas, reinforcing the effectiveness of experiential and case-based instruction. Students' acknowledgment that *"every decision should be legally and ethically safe"* highlights the integration of ethical reasoning with risk management—an essential competency in modern dental practice. According to Ozar, Sokol, and Patthoff (2018), ethical decision-making in dentistry involves balancing professional autonomy with accountability to patients and society, a principle clearly absorbed through OBIM activities.

Preparedness for Real Practice. Students felt more prepared to face real-world ethical and legal challenges. Participants consistently emphasized that the Outcome-Based Instructional Materials (OBIM) enhanced their readiness to address the ethical and legal complexities of clinical practice. Through realistic case scenarios, legal frameworks, and reflective exercises, they gained the confidence to apply ethical reasoning and legal principles in future clinical contexts:

"This subject made us understand the laws, regulations, and ethical guidelines in Dentistry. Real-life scenarios were also presented and prepared us for our future practice. It also taught us how to apply legal and ethical principles in handling patients' complaints and avoid malpractice."

"They provided real-life scenarios that made it easier to apply these principles in clinical situations. As a result, I feel more confident and prepared to act professionally and ethically when dealing with patients."

The reflections above affirm the transformative effect of OBIM's experiential structure in promoting both competence and confidence. Students transitioned from passive recipients of rules to active ethical practitioners-in-training, capable of anticipating real-world dilemmas and applying legal-ethical reasoning in context. This directly corresponds to Kolb's (1984) Experiential Learning Theory, which posits that meaningful learning occurs when learners experience, reflect, conceptualize, and actively experiment within authentic contexts. Anchoring lessons in real-life dental scenarios in OBIM creates a bridging space between classroom learning and clinical application. Participants' reported preparedness indicates that exposure to simulated ethical and legal challenges enhanced their ability to make professional judgments. Furthermore, experiential legal-ethical education in dental schools improves students' self-efficacy, professional responsibility, and ethical management of patient interactions. In this study, participants' recognition of malpractice prevention, complaint handling, and respect for patient rights indicates that OBIM successfully operationalized these competencies into measurable learning outcomes—a clear manifestation of Spady's (1994) outcome-based education principles.

Foundational Knowledge

Some of the student-participants' responses emphasize OBIM's role in providing a comprehensive, foundational

understanding of law. As they stated, this course was their first structured exposure to the laws governing the profession. Thus, it makes the experience both enlightening and essential for future decision-making.

Broad Understanding of Ethics and Law. According to the participants, they can establish a foundational knowledge of how ethical and legal principles interplay in dental practice. They emphasized that the modules clarified expectations for them as future practitioners and the actions that could lead to legal or ethical consequences.

"It acts like an instructional guide of what to do and not to do when becoming a legal and authorized dentist. Since law is not our forte, the examples, definitions, and in-depth discussion in the modules expounded the whole Dental Act of 2007 (RA 9484), while also providing general and basic law, which allowed us to build a stronger foundation of our concept of dental jurisprudence."

"Lessons tackled in the Dental Jurisprudence subject helped me understand the different basic concepts regarding the law. Because of this, I can say that I am now mindful of the law, not only the basic ones but also the law involving the dental practice."

The OBIM serves as a scaffolding mechanism, building essential legal and ethical literacy that supports more complex reasoning in later professional stages. This foundational knowledge of law and ethics constitutes early yet critical learning that prepares students for higher-order competencies, such as analysis and evaluation. The participants' descriptions of *"knowing what to do and not to do"* and *"being mindful of consequences"* exemplify the transformation from awareness to application, a guarantee of effective outcome-based education (Biggs & Tang, 2011). To sustain this developmental trajectory, subsequent instructional phases (e.g., clinical ethics seminars or professional responsibility rotations) should build on this foundational knowledge, enabling students to apply and extend it in increasingly complex and uncertain contexts. Ultimately, this ensures a progressive continuum of ethical and legal competence from classroom to clinical practice.

Early Application of Principles. Several students reported that they had already begun applying legal and ethical principles in their clinical rotations, demonstrating the immediate transfer of learning from the OBIM to authentic professional settings.

"Helping me understand how to apply these rules to protect patient rights, ensure professional responsibility, and comply with regulations in real-life practice."

"The Dental Jurisprudence modules helped me understand how legal and ethical principles apply in daily dental practice by using real-life scenarios that showed the consequences of certain actions."

Based on the student participants' responses, their experience with the OBIM demonstrates an instructional approach known as situated learning, in which students engage in cooperative activities that challenge their critical thinking and kinesthetic abilities. Jean Lave and Etienne Wenger developed this teaching approach in the early 1990s. The activities in situated learning have to be applicable and transferable to students' homes, communities, and workplaces (Stein, 1998). While immersed in the experience, students reflect on prior knowledge and challenge other students' assumptions. In addition, "situated learning environments place students in authentic learning situations where they are actively immersed in an activity while using problem-solving (critical thinking) skills. These opportunities should involve a social community that replicates real-world situations. In the end, the situated learning experience should encourage students to tap their prior knowledge and to challenge others in their community" (Stein, 1998, para. 3). In the OBIM developed by the researcher, situated learning is embedded by incorporating activities that let dental students visit a dental clinic for observation purposes. Furthermore, students immediately applied abstract principles to clinical practice through their Clinical Dentistry subjects – a key indicator of experiential transfer. This is demonstrated when one student-participant said, *"As I am still a student, I only apply it when doing procedures in school. I always make sure that I have informed consent from my patient and that I do the procedure with the proper standard of care."*

Here, dental students bridged the gap between theory and practice by demonstrating behaviors such as obtaining informed consent, maintaining patient confidentiality, and following due care standards. This early professional exposure shows that professional identity develops when students begin to act and think like practitioners, even before full qualification. Outcome-based tasks, e.g., analyzing malpractice cases or simulating patient complaints,

provide *legitimate peripheral participation (LPP)* (Lave & Wenger, 1991), giving students an authentic sense of belonging to the dental profession. In this light, learning is unintentional; this unintentional nature of learning moves from the periphery of the community to the center as he/she gains expertise and engages and participates actively in the sociocultural practices of the community (Lave & Wenger, 1991). Early application of principles indicates that OBIM has cultivated ethical habits of mind—an early moral consciousness that will anchor future professional conduct. In fact, one participant remarked, *“Everything you do as a dentist needs consent! Para di ka mademanda, and think critically to avoid negligence because it is difficult na makasuhan.”* To reinforce this, clinical supervisors should integrate *jurisprudence debriefing* and reflective journaling into rotations, allowing students to articulate how legal-ethical standards inform their everyday actions. This approach may promote accountability and the gradual embodiment of professional values within their body systems.

Structure, Presentation, and Organization of the Outcome-Based Instructional Materials in Dental Jurisprudence and Ethics

The student participants were asked to evaluate and describe their experiences with the Outcome-Based Instructional Materials in terms of their structure, presentation, and organization. They said the modules are well-organized, structured, and supportive of comprehension, especially for non-law students studying Dental Jurisprudence and Ethics. The OBIM’s design elements—its clear layout, logical progression, and integration of case-based examples—facilitated understanding of complicated legal concepts. However, they encountered some learning barriers. The findings are organized into the following themes and sub-themes:

Table 2. Dental Students’ Experiences in Using the Outcome-Based Instructional Materials
Based on the Structure, Presentation, and Organization

Major Emerging Themes	Sub-themes
Supportive Learning Design	Clear and Accessible Content Effective Structure and Flow Preference for Visual/Summarized Materials
Learning Barriers	Complex or Confusing Content Content Overload or Excessive Length

Supportive Learning Design

This central theme encapsulates participants’ appreciation of the OBIM’s accessible, organized, and learner-centered design. They consistently reported that the modules’ clarity, flow, and structure facilitated their understanding of legal and ethical principles that are otherwise abstract and challenging.

Clear and Accessible Content. According to the student participants, the clarity and organization of the OBIM content facilitated the absorption of legal and ethical concepts. Clear and organized content is central to the development of instructional materials. This is essential to the effectiveness of OBIM.

“The clear structure, engaging presentation, and well-organized content of the Dental Jurisprudence modules supported my learning by making complex legal and ethical concepts accessible and easier to retain, often integrating case studies and interactive elements that enhanced understanding.”

“The clear structure and logical organization of the Dental Jurisprudence modules made it easy to follow and absorb complex legal concepts step-by-step.”

As explained by the student participants, the OBIM employed plain language, logical sequencing, and practical examples to clarify legal jargon. In 2009, Mayer proposed the Cognitive Theory of Multimedia Learning, which states that well-structured, visually coherent content supports better information processing and retention. The student acknowledges that the OBIM *“is well organized and has clear content with logical flow, which helps learners grasp complex legal concepts more easily.”* One added, *“The clear structure and logical organization of the Dental Jurisprudence modules made it easy to follow and absorb complex legal concepts step-by-step.”* Furthermore, clarity and organization are essential in instructional design, as proven by Sweller’s (1994) Cognitive Load Theory. In theory, instructional design that minimizes extraneous load—through clear text, segmented lessons, and guided examples—allows learners to focus on meaningful schema construction. To further enhance student participants’ learning through intrinsic motivation and conceptual transfer, OBIM employs real-life examples and cases. The stress on authentic examples in learning is consistent with the statement of the participant, *“The clear structure and organized presentation of the Dental Jurisprudence modules supported my learning by making the topics easier to follow. The*

use of examples and real-life cases helped me understand better."

The clarity and organization of the OBIM developed by the researcher reflect Spady's (1994) OBE principle of clarity of focus, which states that learners should always know what they are expected to understand and demonstrate. Clarity and accessibility are not merely instructional design preferences but pedagogical requirements for complex and interdisciplinary subjects such as Dental Jurisprudence and Ethics. This is the very heart of the developed OBIM – the readability and incorporation of guided examples, flowcharts, and scenario-based and case-based illustrations to ensure understanding across varying levels of legal literacy.

Effective Structure and Flow. The student-participants emphasized that the logical organization and sequential flow of the OBIM helps facilitate step-by-step acquisition of knowledge of legal concepts:

"For me, it is the most significant help, the structured and organized flow of the modules in the subject. It made me understand and follow concepts or information much easier, especially in legal terms, which are initially hard to understand."

"It supported me in a way that the modules were easy to understand and were organized neatly. The flow of the lessons was properly discussed one at a time."

Instructional coherence is a key factor in designing effective instructional materials. It is the alignment between content sequence, pacing, and conceptual progression. The model of systematic instructional design proposed by Dick, Carey, and Carey (2015) was used to develop the OBIM's step-by-step design. This is due to its advocacy for logically sequenced instruction anchored on measurable objectives and scaffolded learning experiences. This structural clarity means organizing lessons from basic to applied concepts. Through this, learners have the opportunity to build on prior knowledge, thereby reducing confusion. A well-structured instructional design not only ensures cognitive continuity but also learner autonomy. This is where independent learning comes in. Even without or with less teacher input, students can independently understand the learning materials; this is a salient feature of learner autonomy. A student claimed that OBIM *"supported me in a way that the modules were easy to understand and were organized neatly. The flow of the lessons was properly discussed one at a time."*

According to the student participants, the OBIM's logical flow and modular sequencing enabled them to study independently and progressively. This is very important for non-law majors encountering legal materials for the first time. Thus, one student remarked, *"For me, it is the biggest help, the structured and organized flow of the modules in the subject. It made me understand and follow concepts or information much easier, especially on legal terms, which are initially hard to understand."* Furthermore, the integration of lesson objectives and self-assessment opportunities should continue to serve as directional aids to promote metacognitive awareness and learner ownership.

Preference for Visual/Summarized Materials. While the clarity and organization of the OBIM are not problematic, several student participants expressed a strong preference for visual, summarized, and interactive learning materials. They stated that visual elements, such as flowcharts, illustrations, infographics, and summaries, could improve understanding and sustain attention, particularly for dense or text-heavy content, such as law-related lessons.

"My brain started checking out halfway through some parts. If they had just thrown in a few pictures, charts, or even something interactive, I probably would not have spaced out so much. Just saying it would definitely stick better."

"However, at times, the text-heavy structure and absence of graphic summaries or interactive aspects made it difficult to remember complicated material. Including flowcharts, case analyses, or review checklists may have improved clarity and involvement."

Most of the student participants in the present study are Generation Z (Gen Z), who are often described as "digital natives," "internet kids," "digital generation," or "crystal generation." This young generation represents individuals born between 1996 and 2012. Hammad (2025) reports that multimedia elements, such as videos, animations, and infographics, play an essential role in the learning process for Generation Z students, with 50 percent rating them as extremely important for enhancing their understanding. Generation Z students have a very short attention span and increasingly use online sources to access information (Sparks et al., 2017; Purcell et al., 2012). The statements of the student participants reveal a generational and cognitive preference for multimodal, visually enhanced learning materials, particularly among today's digital-native learners. This is validated by the

statement, *"Since our generation has a really short attention span, I think visual aids would help, or like a summarized version of the chapters since they are 20-30 pages long."* While the OBIM is textually clear, its text-heavy format limits sustained engagement and memory retention. They recommend incorporating charts, images, and interactive components into the instructional materials developed. Another student-participant clarified that interactive illustrations are important, saying, *"My brain started checking out halfway through some parts. If they had just thrown in a few pictures, charts, or even something interactive, I probably would not have spaced out so much. Just saying it would definitely stick better."* They also explained that they are not accustomed to heavy-text modules; thus, *"We are not used to this kind of module presentation (mostly text), since most of our subjects need to have figures and pictures attached for better and easier understanding."*

The finding is supported by Mayer's (2009) Cognitive Theory of Multimedia Learning, which explains that learners understand better when words are paired with relevant visuals that reinforce core concepts. Integrating graphics, flowcharts, and case visuals in professional education reduces cognitive load and increases learner motivation. Moreover, the participants' comments on attention span and focus demonstrate Sweller's (1994) Cognitive Load Theory. The theory suggests that instructional designs that rely on lengthy texts impose extraneous demands on memory, thereby reducing comprehension. Visual e-learning materials improve retention and understanding of complex biomedical content among dental students. There is a need to modernize OBIM's presentation by employing multimodal learning strategies—visual summaries, infographics, flowcharts, short-case visuals, and interactive quizzes—to accommodate varied learning styles. In conclusion, clarity and visual accessibility are both valuable for pedagogical inclusivity and learner engagement, especially in outcome-based education contexts.

Learning Barriers

While the overall reception of the OBIM's clarity and structure is commendable, student participants identified challenges that hindered full engagement and understanding. These barriers primarily involved (1) complex and legalistic content, and (2) information overload or excessive length. This proves that the tension between academic rigor and cognitive accessibility, particularly for non-law students exploring legal material for the first time, is real.

Complex, Confusing, and Legalese Content. Dense terminology, complex sentence structures, and legal jargon unfamiliar to dentistry students predominate in the student participants' descriptions of the developed OBIM on Dental Jurisprudence and Ethics. They reported difficulty understanding certain sections of the modules due to these language features.

"Not all terminologies or jargons were properly understood upon the first time reading the provided notes, hence the confusion when it comes to trying to understand the content."

"The sentence structure and use of technical legal words, or somehow legalese, hinders my learning process."

According to Hackemann, Heine, and Höttecke (2022), the highest linguistic demand of the texts led students to perceive the texts as less comprehensible, although text comprehension was unaffected. Hence, evidence indicates that the influence of linguistic features on text comprehension is minimal and may be overestimated. Spencer et al. (2019) found that text complexity negatively impacted reading outcomes, particularly oral reading fluency and free recall. In the present OBIM, student participants report a linguistic and disciplinary gap between law and dentistry. Students experienced cognitive strain when legal terminology (e.g., quasi-delict, res ipsa loquitur, respondeat superior, ostensible agent) was presented in lengthy, complex sentence structures. One student said, *"The only hindrance would probably be the jargon and terminologies that may be unfamiliar to dental students."* Another said, *"The use of jargon and heavy legal terms that may be unfamiliar to dentistry students also challenged me into learning."* The specific hindrance that the student participants experienced in using the OBIM is consistent with Sweller's (1994) Cognitive Load Theory, which posits that unfamiliar jargon and unsegmented text increase cognitive load, thereby impeding learning efficiency.

One student also mentioned the use of legalese: *"The sentence structure and use of technical legal words, or somehow legalese, hinders my learning process."* Thus, it can be inferred that legal jargons demonstrate a disciplinary mismatch in language expectations. In legal education, instruction often relies on abstract, technical phrasing, whereas in

allied health professions education, it values concise, practical communication. Empirical studies show that comprehension barriers arise when instructional materials employ domain-specific language beyond learners' prior knowledge. In fact, Alderson and Clapham (1992) remind designers to take into account the generally accepted views on the nature of language, language proficiency, and language use. Hence, the language used in the developed OBIM was adjusted to meet students' learning needs, particularly those of non-law students. Since all the student-participants were non-law students, they had limited exposure to the legal environment – its structure and language – making certain sections cognitively demanding.

In an article titled *“Ensuring Ethical Dental Care: Obtaining Legal Consent for Nonverbal Adults”* written by TDIC Risk Management Staff (2023), in asking for consent from adults, one of the communication strategies is adapting communication methods to suit the unique needs of the patients. The article also recommends utilizing visual aids, written materials, pictures, or sign language interpreters to facilitate comprehension and using simple words based on the patient's comprehension level and preferences. The simplification of pedantic, jargon-laden concepts and the integration of contextual definitions considerably improved understanding among dental student participants studying dental jurisprudence and ethics. Additionally, it is prudent to include glossaries of legal terms, contextual examples, and simplified explanations of jurisprudential principles to reduce confusion and information overload. The process of simplifying the law is not intended to weaken legal precision but to mediate complexity, i.e., to bridge legal discourse with the clinical experiences and realities of dentistry through learner-centered curriculum design.

Information Overload and Excessive Length. Information overload, due to the text-heavy and lengthy nature of the modules, is a common weakness of outcome-based modules, according to the student participants. While they acknowledged that the law is inherently comprehensive, it has become quite difficult for them to sustain engagement due to the volume and density of material. In fact, because the modules were too long to read, they sometimes skipped portions to finish them.

“I think the only thing that hindered my learning process is the lengthiness of the modules. I had a hard time reviewing it while struggling with clinical duties.”

“What hindered the learning process was the amount of texts to be read. In dentistry, when we read books, as in science-related subjects, we read a lot too, but there are diagrams and illustrations of examples. I know Atty. Has broken down specific topics. I think it is just too much for me to bear as a non-law student reading that much material.”

Non-law students perceive reading long paragraphs as burdensome. One student even compared the textbooks in dentistry with those from law, saying, *“In dentistry, when we read books, as in science-related subjects, we read a lot too, but there are diagrams and illustrations of examples...I think it is just too much for me to bear as a non-law student reading that much material.”* This feedback reflects only the struggle of student participants to balance comprehensiveness with cognitive manageability. While detail is significant for legal accuracy, excessive verbosity can overwhelm learners' working memory and reduce motivation. A student-participant remarked, *“...some parts of the modules were very heavy texts with long paragraphs, making it difficult sometimes to stay focused or absorb the material effectively.”*

Based on Miller's (1956) Information Processing Theory, a person's ability to chunk information, or recode it into parts, allows him or her to increase the amount of texts or information they can effectively recall. The theory states that humans can hold only a limited number of chunks of information at a time; lengthy instructional materials can exceed this threshold, leading to disengagement. Additionally, Mayer and Moreno (2003) remind curriculum designers and textbook authors that cognitive load is a significant consideration in the design of multimedia instruction. While the developed OBIM does not include multimedia elements, such a recommendation is good. Although the researcher made efforts to record video lectures for each module, these efforts were insufficient. Thus, overloaded text presentations in the OBIM create split attention and redundancy effects that impede meaningful learning. Hence, instructional materials should be concise, segmented, and supported by interactive activities and chunked information to minimize extraneous load and enhance retention.

Nevertheless, a student participant recognized that the OBIM is law-related material; hence, it is expected to be lengthy. He stressed, *“Given that it is law that we are talking about, the modules are expected to be lengthy.”* Sweller

(1994) explains that learning difficulty depends on cognitive load, which is influenced by the interaction of several elements in the instructional materials. It distinguishes between intrinsic cognitive load – the inherent complexity of the material – and extraneous cognitive load, which stems from poor instructional design. However, he advises curriculum developers that when interactivity is high, learning becomes more difficult; instructional design plays a key role in reducing unnecessary cognitive demands to improve understanding.

One extraneous cognitive load factor that made it difficult for student-participants to understand the legalese and text-heavy language of the law was their clinical duties. *“I think the only thing that hindered my learning process is the lengthiness of the modules. I had a hard time reviewing it while struggling with clinical duties,”* a student-participant stressed. Reduced student engagement and comprehension are correlated with the length and complexity of written materials, particularly for non-law students such as dental clinicians. Students’ comments that the modules *“felt more suited for law students”* show this discipline mismatch in text density and reading expectations.

To reduce information or content overload, strategic text segmentation, visual or textual summaries of major points are recommended. Modules can be reorganized into shorter sub-themes that include key takeaways, self-check questions, or flowcharts summarizing laws, cases, or examples. According to Hug (2006), microlearning is defined as delivering content in small, focused segments that support short-term, goal-oriented learning. Examples of microlearning include brief, modularized content focused on a single learning objective. This strategy may increase accessibility and retention for non-law audiences.

Conclusion

The present qualitative study contributes to the underexplored and underexamined field of legal education for non-law students by demonstrating the pedagogical and instructional value of Outcome-Based Instructional Materials in Dental Jurisprudence and Ethics. As one of the few empirically examined, outcome-based instructional innovations explicitly designed for dentistry students, the study fills an essential gap in updated, learner-centered, and OBE-aligned legal education resources in the Philippines. Rather than treating law, jurisprudence, and ethics as abstract topics, the findings show the significant potential of Outcome-Based Instructional Materials to make the study of law meaningful, relevant, and professionally situated and contextualized for future dentists. This outcome-based framework also empirically supports deeper reflection, practical reasoning, and a more integrated understanding of professional responsibilities, without reducing the subject to purely technical instruction. Nevertheless, there are times of difficulty for learners when legal language became dense or when information felt excessive. This reveals how organization and pacing can either facilitate or hinder understanding.

From a practice perspective, the study emphasizes the importance of instructional materials deliberately designed for non-legal learners, incorporating simple legal language, contextualized and localized case scenarios, and reflective activities. These features support more engaged learning and may guide instructors in redesigning teaching methodologies for Dental Jurisprudence and Ethics beyond traditional lecture-based and Socratic-type approaches. For educational institutions, the findings indicate that Outcome-Based Instructional Materials can serve as a viable and sustainable model for integrating outcome-based, practice-oriented, and ethics-aligned legal education into other health-related programs, such as nursing, pharmacy, and allied health sciences. With respect to policy implications, the study provides empirical evidence that could guide higher education specialists in refining curricula aligned with CHED’s outcomes-based education reforms. The development, implementation, validation, and enhancement of Outcome-Based Instructional Materials exhibit how national OBE policies can be operationalized at the course and instructional-material levels. In this way, it supports institutional efforts toward curricular modernization and quality assurance. The adoption of similar instructional models may strengthen compliance with CHED policy standards and improve graduates’ professional competence and ethical formation.

Meanwhile, several directions for future research can be derived from the study. Periodic validation of the Outcome-Based Instructional Materials may be conducted through comparative or quasi-experimental studies examining their effectiveness relative to conventional instructional methods. Longitudinal research may also be conducted to determine the sustained impact of outcomes-based legal instruction on professional competence, ethical decision-making, and legal compliance in the actual practice of dentistry. Finally, this study positions Outcome-Based Instructional Materials as catalysts for meaningful curricular reform in professional education in

colleges and universities. It further offers a forward-looking pathway to enhance legal competence, ethical practice, and professional identity formation; to respond to the learning needs of current law students; to align with national education policies; and to address longstanding gaps in dental legal education.

Contributions of Authors

Author 1: conceptualization, proposal writing, data gathering, data analysis, and interpretation

Author 2: conceptualization, proposal writing, data gathering, data analysis, and interpretation

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Conflict of Interests

The authors declare that they have no conflicts of interest in relation to this study.

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