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Diagnosing the Technocratic Orientation of Indonesian Pharmacy Education: Expert Validation toward an Adab Based Islamic Education Framework

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Abstract

This study aims to diagnose the technocratic orientation of Indonesian pharmacy education and validate the relevance of an adab-based Islamic education framework for reorienting professional formation in pharmacy. A qualitative-dominant design was employed through curriculum document analysis, expert validation, and expert interviews. The analyzed documents included Indonesian pharmacy education standards and the Pharmacy curriculum of UIN Syarif Hidayatullah Jakarta. Expert validation involved 31 respondents from pharmacy and health education backgrounds, while interviews were conducted with experts in Islamic philosophy and pharmaceutical sciences. The findings indicate that Indonesian pharmacy education remains strongly shaped by biomedical reasoning, technical competence, and outcome-based education. Expert validation shows that the adab/ta'dib dimension received the strongest acceptance, while the worldview and Tibb an-Nabawi dimensions require clearer operationalization. The study concludes that pharmacy education should not reject modern pharmaceutical science, but should be reoriented through adab so that scientific competence is integrated with moral responsibility, professional trustworthiness, and a holistic understanding of the human being.

Keywords: *Islamic Education; Pharmacy Education; Technocratic Orientation. : Adab; Expert Validation.*

Abstrak

Penelitian ini bertujuan mendiagnosis orientasi teknokratis dalam pendidikan farmasi di Indonesia serta memvalidasi relevansi kerangka pendidikan Islam berbasis adab bagi reorientasi pembentukan profesional farmasi. Penelitian menggunakan desain kualitatif-dominan melalui analisis dokumen kurikulum, validasi expert, dan wawancara pakar. Dokumen yang dianalisis mencakup standar pendidikan farmasi Indonesia dan kurikulum Program Studi Farmasi UIN Syarif Hidayatullah Jakarta. Validasi expert melibatkan 31 responden dari bidang farmasi dan pendidikan kesehatan, sedangkan wawancara dilakukan dengan pakar filsafat Islam dan pakar

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ilmu farmasi. Hasil penelitian menunjukkan bahwa pendidikan farmasi Indonesia masih kuat dipengaruhi orientasi biomedis, kompetensi teknis, dan outcome-based education. Dimensi adab/ta'dib memperoleh penerimaan paling kuat, sementara dimensi worldview dan Tibb an-Nabawi memerlukan operasionalisasi lebih jelas. Penelitian ini menyimpulkan bahwa pendidikan farmasi perlu direorientasi melalui adab tanpa menolak sains farmasi modern.
Kata kunci : Pendidikan Farmasi; Pendidikan Islam; Teknokratis; Validasi Expert

I. Introduction

Pharmacy education has undergone significant transformation in response to the development of biomedical science, pharmaceutical technology, patient safety movements, and competency-based professional standards. In many countries, including Indonesia, pharmacy curricula are increasingly structured around measurable learning outcomes, evidence-based practice, pharmaceutical care, drug safety, and professional competence. These developments have contributed positively to the quality assurance of pharmacy education, particularly in strengthening scientific rigor, therapeutic accuracy, regulatory awareness, and professional accountability. However, the dominance of technical competence and biomedical reasoning also raises an important educational question: does pharmacy education merely prepare technically competent graduates, or does it also form professionals who possess moral responsibility, wisdom, and a holistic understanding of the human being? (Koster et al., 2017; Henman, 2020; Rhoney et al., 2023; ACPE, 2025).

In the Indonesian context, pharmacy education is shaped by national standards, professional expectations, and higher education policies that emphasize graduate competence, employability, quality assurance, and responsiveness to the health system. The curriculum documents of pharmacy programs demonstrate strong attention to pharmaceutical sciences, biomedical foundations, pharmacotherapy, pharmaceutical care, halal product assurance, communication, and professional ethics. The 2025 Pharmacy Curriculum of UIN Syarif Hidayatullah Jakarta, for example, explicitly adopts outcome-based education, formulates graduate learning outcomes, integrates Islamic values, and includes courses related to halal assurance and Islamic medical approaches. Nevertheless, the structure of the curriculum remains largely organized around modern pharmaceutical sciences and professional competencies, while Islamic values are often positioned as complementary, normative, or institutional characteristics rather than as the philosophical foundation of the entire educational structure (Program Studi Farmasi FIKES UIN Syarif Hidayatullah Jakarta, 2025) (Cokro et al., 2021; APTFI, 2024; Program Studi Farmasi FIKES UIN Syarif Hidayatullah Jakarta, 2025).

Recent discussions on pharmacy education in Indonesia have generally focused on curriculum development, professional standards, graduate competencies, accreditation, and the alignment between academic education and pharmacist professional education. Such discussions are important because pharmacy education must respond to scientific development, industrial needs, hospital practice, community pharmacy, and regulatory

changes (Cokro, 2021). However, limited attention has been given to the deeper philosophical assumptions underlying pharmacy education, particularly how the curriculum shapes students' views of the human being, health, disease, medicine, professional practice, and moral responsibility. This philosophical dimension is crucial because every educational system is never value-free; it presupposes a certain conception of human nature, knowledge, and the purpose of professional formation (Cokro et al., 2021; APTFI, 2024).

The technocratic orientation of pharmacy education may be seen in its emphasis on measurable outcomes, procedural compliance, scientific validation, and technical problem-solving. While these elements are necessary for professional safety and quality, they may become problematic when they function as the dominant or even exclusive orientation of education. When education is reduced to competence production, the formation of the person may be overshadowed by the training of professional function. In such a condition, ethics may be treated as an external requirement, while knowledge, skill, and professional performance remain separated from deeper questions of meaning, moral responsibility, and human wholeness. This concern becomes especially relevant for Islamic higher education institutions, whose mission is not merely to produce technically skilled graduates, but also to form individuals whose knowledge and professional conduct are grounded in faith, moral responsibility, and adab (Henman, 2020; Koster et al., 2017; Rhoney et al., 2023).

The concept of adab in Islamic education offers a significant framework for addressing this issue. Syed Muhammad Naquib al-Attas defines education as ta'dib, namely the inculcation of adab, which implies the recognition and acknowledgement of the proper place of things in the order of creation, knowledge, and human conduct (al-Attas, 1979). In this perspective, the crisis of education is not merely a lack of information or skill, but a confusion and error in knowledge that leads to the loss of adab. Applied to pharmacy education, this framework suggests that the problem is not only whether students master pharmacology, pharmaceutics, or clinical pharmacy, but whether they are able to place knowledge, medicine, patients, profession, and scientific authority in their proper moral and epistemological order. Thus, adab-based education does not reject modern pharmaceutical science, but reorients it within a meaningful and ethically grounded worldview (al-Attas, 1979a, 1993, 1995; In'ami et al., 2025; Setiawan et al., 2025).

Alongside the concept of adab, Tibb an-Nabawi may also contribute to an Islamic framework for rethinking health education. In this article, Tibb an-Nabawi is not understood as a substitute for modern pharmacy or as a list of uncritically accepted therapeutic products. Rather, it is positioned as a value framework and an Islamic health paradigm that emphasizes human wholeness, the role of divine decree, the meaning of

healing, the ethical use of medicine, and the understanding of medicine as a means of human effort. This position is important to avoid two extremes: rejecting modern pharmaceutical science in the name of religious medicine, or dismissing Islamic medical heritage as irrelevant to contemporary health education. An adab-based Islamic education framework must therefore integrate scientific rigor with moral-spiritual orientation (Ibn Qayyim al-Jawziyyah, 1998; Bhikha, n.d.; Fadhlina et al., 2025; Hamdan et al., 2025).

The novelty of this study lies in its attempt to diagnose Indonesian pharmacy education from the perspective of Islamic educational philosophy, particularly the concept of adab, and to validate this diagnosis through expert judgment. Previous studies on pharmacy education in Indonesia have discussed curriculum structure, professional standards, and competency development, but few have examined the technocratic orientation of pharmacy education through the lens of Islamic worldview and adab-based professional formation. Furthermore, this study does not remain at the level of conceptual reflection; it incorporates expert validation involving 31 respondents from pharmacy and health education backgrounds, supported by expert interviews in Islamic philosophy and pharmaceutical sciences. Therefore, this article contributes to the development of Islamic education discourse by extending the concept of adab into the field of pharmacy education, which has rarely been addressed in Islamic educational research (Fitriyawany et al., 2022; Irham, 2025; Araújo-Neto et al., 2024).

This study aims to diagnose the technocratic orientation of Indonesian pharmacy education and to examine expert validation of an adab-based Islamic education framework as a basis for reorienting professional pharmacy education. Specifically, this article analyzes how Indonesian pharmacy education reflects biomedical and technical orientations, how experts evaluate the relevance of worldview, adab/ta'dib, and Tibb an-Nabawi as conceptual dimensions, and how these findings may inform the development of a more holistic, morally grounded, and Islamically meaningful framework for pharmacy education. By doing so, this article argues that pharmacy education should not abandon modern pharmaceutical science, but should be reoriented through adab so that scientific competence is integrated with moral responsibility, human wholeness, and professional wisdom (al-Attas, 1979a; Cokro et al., 2021; Rhoney et al., 2023).

II. **Research Methods**

This study employed a qualitative-dominant research design combining document analysis, expert validation, and expert interviews. The design was selected because the study did not aim to test the effectiveness of a curriculum intervention, but to diagnose the paradigmatic orientation of Indonesian pharmacy education and to validate the relevance of an adab-based Islamic education framework for reorienting pharmacy professional formation. In this sense, the study integrated philosophical interpretation,

curriculum document analysis, expert judgment, and thematic validation. The use of multiple data sources was intended to strengthen the credibility of the findings through triangulation (Creswell & Creswell, 2018; Patton, 2015; Bowen, 2009).

The first source of data consisted of curriculum and policy documents related to pharmacy education in Indonesia. The documents included national references on pharmacy education and curriculum development, as well as the 2025 curriculum document of the Pharmacy Study Program, Faculty of Health Sciences, UIN Syarif Hidayatullah Jakarta. The UIN curriculum document was selected as a case because it represents a pharmacy curriculum within an Islamic higher education institution and explicitly contains elements of outcome-based education, graduate learning outcomes, Islamic integration, halal assurance, Islamic medical approaches, and modern pharmaceutical sciences. The document analysis focused on how the curriculum conceptualizes professional competence, scientific knowledge, patient care, Islamic values, and the integration of religion and pharmacy education. (Bowen, 2009; Cokro et al., 2021; Program Studi Farmasi FIKES UIN Syarif Hidayatullah Jakarta, 2025).

The second source of data was expert validation using an online questionnaire distributed through Google Form. The questionnaire was designed to assess expert perceptions of three proposed dimensions: Islamic worldview, adab/ta'dib, and Tibb an-Nabawi. The validation involved 31 expert respondents from pharmacy and health-related educational backgrounds. Most respondents were lecturers, curriculum managers, heads of study programs, or academic leaders, with significant teaching and academic experience. This profile was considered relevant because the study required judgment from individuals familiar with curriculum development, professional education, and health sciences. The expert validation data were used not merely to obtain numerical scores, but also to identify patterns of acceptance, hesitation, and criticism toward the proposed framework. (Brownstein, 2019; Yusoff, 2019; Madadizadeh & Bahariniya, 2023).

The questionnaire consisted of closed-ended and open-ended items. The closed-ended items used a Likert-type scale to assess the relevance of each dimension and indicator. The quantitative data were analyzed descriptively using mean scores and standard deviations. The interpretation of mean scores was used to classify the level of relevance of each dimension. In addition, Content Validity Index (CVI) analysis was used to examine the degree of expert agreement regarding the relevance of the proposed indicators. The analysis included item-level interpretation and overall scale-level interpretation. The use of descriptive statistics and CVI was intended to provide an initial measure of conceptual validity while still recognizing that the study remained primarily qualitative and exploratory in nature. (Yusoff, 2019; Madadizadeh & Bahariniya, 2023; Gupta et al., 2025).

The open-ended responses were analyzed using thematic analysis. Responses were read repeatedly, coded based on recurring meanings, and grouped into thematic categories. The thematic analysis focused on expert perceptions of the current condition of pharmacy education, the strengths of the proposed adab-based framework, weaknesses or risks in the model, and suggestions for improvement. Particular attention was given to themes related to technocratic orientation, lack of value integration, operationalization challenges, difficulty in assessing adab, the risk of misinterpreting Tibb an-Nabawi, and lecturer readiness. These qualitative findings were then compared with the quantitative results to identify convergence and divergence across the data. (Braun & Clarke, 2021; Creswell & Creswell, 2018).

The third source of data was expert interviews. Two experts were interviewed to deepen and validate the conceptual interpretation of the findings. The first was Prof. Syamsuddin Arif, whose expertise in Islamic philosophy and the thought of Syed Muhammad Naquib al-Attas provided epistemological and philosophical validation for the adab-based framework. The second was Prof. Elfahmi, whose expertise in pharmacy, natural product science, and pharmaceutical research provided scientific and professional validation regarding the position of Tibb an-Nabawi in pharmacy education. The interviews were conducted in a semi-structured manner, allowing the researcher to explore predetermined themes while also giving space for the experts to elaborate on conceptual and practical issues., (Patton, 2015; Creswell & Creswell, 2018).

The interview with the Islamic philosophy expert focused on the legitimacy of Islamic worldview as an epistemological framework, the critique of reductionism in modern education, the meaning of adab and ihsan, and the role of worldview formation in professional education. Meanwhile, the interview with the pharmacy expert focused on the scientific position of Tibb an-Nabawi, the relationship between prophetic medicine and modern pharmaceutical science, the importance of scientific proof, the ethical use of natural products, the integration of adab into technical pharmacy courses, and possible strategies for operationalizing adab assessment. The interview with Prof. Elfahmi also clarified that Tibb an-Nabawi should not be positioned as a replacement for modern pharmacy, but as a value framework, historical inspiration, and moral orientation that must remain compatible with scientific validation, safety, standardization, and pharmacovigilance.

The interview data were analyzed thematically. The transcripts were reviewed and coded according to major themes relevant to the research questions: worldview legitimacy, critique of technocratic education, holistic anthropology, the meaning of adab, the scientific status of Tibb an-Nabawi, operationalization of adab, lecturer role, and institutional support. The themes from the interviews were then compared with the document analysis and expert validation results. This process enabled the researcher to

identify whether the expert interviews confirmed, clarified, or challenged the findings obtained from the questionnaire and document analysis.

Triangulation was used as the main strategy to strengthen the credibility of the study. The triangulation involved three levels. First, document triangulation was conducted by comparing national and institutional curriculum documents. Second, methodological triangulation was conducted by combining document analysis, questionnaire-based expert validation, and expert interviews. Third, theoretical triangulation was applied by interpreting the findings through the lens of Islamic education, especially the concept of adab and ta'dib, while also considering the realities of modern pharmacy education. Through this process, the study sought to avoid purely normative claims and instead produce a framework grounded in curriculum analysis, expert judgment, and philosophical reflection (Patton, 2015; Creswell & Creswell, 2018).

The scope of this study was limited to diagnosis and conceptual validation. It did not conduct classroom implementation, experimental testing, or longitudinal evaluation of student outcomes. Therefore, the findings should be understood as an expert-validated diagnostic and conceptual contribution rather than an evaluation of the effectiveness of an implemented curriculum. Nevertheless, this limitation is consistent with the aim of the article, namely to diagnose the technocratic orientation of Indonesian pharmacy education and to validate the relevance of an adab-based Islamic education framework as a basis for future curriculum development and implementation research.

III. Result and Discussion

A. The Technocratic Orientation of Indonesian Pharmacy Education

The document analysis indicates that Indonesian pharmacy education is strongly structured by competency-based and outcome-oriented approaches. The Pharmacy curriculum of UIN Syarif Hidayatullah Jakarta, for instance, explicitly states that curriculum renewal was carried out to respond to developments in pharmaceutical science, professional needs, the labor market, and the implementation of outcome-based education as a standard in higher education. The curriculum document also emphasizes graduate competence, integration between undergraduate pharmacy education and pharmacist professional education, adjustment of credits, improvement of graduate learning outcomes, and efficiency of study completion. (Cokro et al., 2021; APTFI, 2024; Program Studi Farmasi FIKES UIN Syarif Hidayatullah Jakarta, 2025).

This orientation is not necessarily negative. It reflects the need for pharmacy education to ensure scientific competence, professional accountability, and responsiveness to health-care demands. The curriculum document shows that pharmacy education is expected to produce graduates who are competent, globally competitive,

professional, and able to meet the needs of pharmaceutical practice in various sectors. However, when such orientation becomes dominant, education risks being reduced to technical training, measurable performance, and professional compliance. This is where the technocratic tendency emerges: the curriculum may become very strong in producing capable technical graduates, but less explicit in forming the deeper worldview, moral reasoning, and adab required for a holistic health professional. (Koster et al., 2017; Henman, 2020; Rhoney et al., 2023).

The technocratic tendency is also reflected in the strong emphasis on evidence-based problem solving, pharmaceutical care, pharmacotherapy, pharmaceutical calculation, pharmacovigilance, pharmacoepidemiology, pharmacoeconomics, and the management of pharmaceutical products. The graduate learning outcomes of the UIN Pharmacy curriculum include the ability to identify and solve drug-related problems using evidence-based approaches in designing, preparing, distributing, managing, and/or providing pharmaceutical services to optimize therapeutic outcomes. This statement indicates that the curriculum places drug-related problem solving and therapeutic optimization at the center of pharmacy education. Again, this is professionally necessary, but philosophically it also shows that the primary framework remains modern pharmaceutical science and clinical utility. (ACPE, 2025; Seselja Perisin et al., 2021; Rhoney et al., 2023).

At the same time, the UIN curriculum already provides an important opening for Islamic integration. The curriculum includes Islamic studies, Qur'anic recitation and worship practice, Arabic, Islam and knowledge, halal product assurance, halal analysis of drugs and food, and Islamic medical methods. The curriculum also describes three models of knowledge integration: separated curriculum, correlated curriculum, and integrated curriculum. This shows that Islamic values are not absent. Rather, the challenge lies in whether these values function as the philosophical foundation of the whole curriculum or remain as complementary elements attached to a largely modern biomedical structure. The present study argues that this distinction is central: integration at the level of courses is different from integration at the level of worldview. (Fitriyawany et al., 2022; Irham, 2025; Program Studi Farmasi FIKES UIN Syarif Hidayatullah Jakarta, 2025).

The expert validation data support this diagnosis. Respondents recognized that current pharmacy education tends to be dominated by technical competence and requires paradigmatic reorientation. The diagnostic items show relatively high mean scores, especially the item indicating that outcome-based education may risk becoming technocratic and the item indicating the need for paradigmatic reorientation. (Betha, 2026a; Betha, 2026b).

Table1. Key diagnostic items on pharmacy education

Item	Mean	SD	Interpretation
Dominance of technical competence	3.68	1.01	Relevant
OBE risks becoming technocratic	4.10	0.79	Relevant
Patient safety is strongly emphasized	3.97	0.71	Relevant
Holistic dimension is not yet integrated	4.03	0.66	Relevant
Value integration remains additional	3.55	0.99	Relevant
Paradigm reorientation is needed	4.45	0.85	Relevant

Source: Expert validation data processed by the researcher.

The highest mean score appears in the item "paradigm reorientation is needed" with a mean of 4.45. This is an important finding because it indicates that experts do not merely see the issue as a matter of adding Islamic content, but as a deeper need to rethink the educational paradigm. The item "OBE risks becoming technocratic" also received a relatively high mean score of 4.10, suggesting that expert respondents are aware of the potential limitation of learning-outcome systems when they are used primarily as technical measurement tools rather than as instruments for holistic formation.

This finding is consistent with the Islamic educational critique developed by al-Attas. For al-Attas, the fundamental problem of education lies not merely in the absence of information or skill, but in confusion and error in knowledge that leads to the loss of adab. Education, therefore, should not be reduced to instruction or training; it must be directed toward ta'dib, the formation of a good and properly ordered human being. Applied to pharmacy education, this means that competence and outcome measurement are necessary but insufficient. They must be subordinated to a higher educational aim: the formation of a professional who understands the proper place of knowledge, medicine, patient care, and moral responsibility. (al-Attas, 1979a, 1993; In'ami et al., 2025; Setiawan et al., 2025.

B. Expert Validation of Worldwide, Adab, and Tibb An-Nabawi Dimensions

The expert validation assessed three proposed dimensions for reorienting pharmacy education: Islamic worldview, adab/ta'dib, and Tibb an-Nabawi. The descriptive analysis shows that all three dimensions were evaluated within the moderate-to-relevant range, with adab/ta'dib receiving the highest mean score. (Yusoff, 2019; Madadizadeh & Bahariniya, 2023; Betha, 2026b).

Table2. Expert validation by dimension

Dimension	Mean	SD	Category
Worldview	3.47	0.64	Moderate–Relevant

Adab/ta;dib	3.60	0.60	Relevant
Tibb An-Nabawi	3.53	0.59	Relevant

Source: Expert validation data processed by the researcher.

The results show that the adab/ta'dib dimension was the strongest dimension in expert validation. The mean score of 3.60 indicates that experts generally considered adab relevant for pharmacy education. This finding is significant because it confirms that the language of adab is more immediately acceptable to experts than more abstract philosophical categories such as worldview. In professional education, adab can be connected directly to integrity, responsibility, honesty, patient safety, ethical communication, and professional trustworthiness. (al-Attas, 1979a; In'ami et al., 2025; Araújo-Neto et al., 2024).

The worldview dimension received a mean score of 3.47, slightly below the adab and Tibb dimensions. This suggests that although worldview is conceptually important, it may still be perceived as abstract or difficult to operationalize by some respondents. This does not weaken the framework; rather, it indicates that worldview requires careful translation into curriculum language, learning outcomes, teaching strategies, and assessment indicators. In other words, worldview must not remain as a philosophical slogan; it must be operationally connected to how students understand the human person, health, illness, evidence, medicine, and professional responsibility. (al-Attas, 1995; Irham, 2025; Fitriyawany et al., 2022).

The Tibb an-Nabawi dimension received a mean score of 3.53, indicating general relevance but also the need for clarification. The qualitative responses indicate that Tibb an-Nabawi is the most sensitive dimension because it can be misunderstood either as an uncritical list of prophetic remedies or as an alternative therapeutic system intended to replace modern pharmacy. Therefore, this study positions Tibb an-Nabawi not as a substitute for modern pharmaceutical science, but as a value framework and health paradigm that must remain compatible with scientific validation, quality assurance, safety, and pharmacovigilance. (Ibn Qayyim al-Jawziyyah, 1998; Fadhlina et al., 2025; Hamdan et al., 2025).

The CVI analysis further supports this interpretation. The scale-level CVI average was 0.624, indicating acceptable content validity at the model development stage. The universal agreement score was 0.00, which is understandable in expert judgment involving respondents from diverse academic and professional backgrounds. Rather than indicating failure, the absence of universal agreement reflects the complexity of the proposed framework and the diversity of expert perspectives. This is particularly

relevant because the framework combines Islamic educational philosophy, pharmacy education, and health sciences. (Yusoff, 2019; Madadizadeh & Bahariniya, 2023; Gupta et al., 2025).

The quantitative findings therefore suggest a nuanced conclusion. The proposed framework is not rejected by experts; it is conceptually accepted, especially in the adab dimension. However, it cannot yet be considered fully operational without further refinement. This finding is important for curriculum development: the challenge is not whether adab is relevant, but how adab can be translated into teachable, observable, and assessable elements within pharmacy educationis.

C. Adab as the Strongest Accepted Dimension

The strongest expert acceptance of the adab/ta'dib dimension is one of the most important findings of this study. Several items within this dimension received consistently high scores, including adab as a foundation, adab and professional trust, integration of adab in learning, adab as a basis for humanistic professionalism, lecturers as mu'addib, and ta'dib as academic culture. (al-Attas, 1979a; Araújo-Neto et al., 2024; Kellar et al., 2023).

Table 3. Expert Validation of Adab/ta'dib items

Item	Mean	SD	Interpretation
Adab as a foundation	3.84	0.37	Relevant
Adab and professional trust	3.81	0.40	Relevant
Integration of adab in learning	3.84	0.37	Relevant
Adab toward humanistic professionalism	3.81	0.40	Relevant
Lecturer as mu'addib	3.77	0.43	Relevant
Ta'dib as academic culture	3.77	0.43	Relevant

Source: Expert validation data processed by the researcher.

These scores show that expert respondents did not view adab merely as a religious ornament. Instead, they perceived adab as relevant to professional formation. This is consistent with al-Attas's view that adab is not simply etiquette or external moral behavior, but the proper recognition and acknowledgement of the right place of things in the order of knowledge, being, and action. In pharmacy education, this means recognizing the proper place of pharmaceutical knowledge, evidence, medicine, patient autonomy, professional authority, and divine dependence. (al-Attas, 1979a, 1993; In'ami et al., 2025).

The relevance of adab becomes especially visible in practical pharmacy contexts. For example, honesty in reporting laboratory results, accuracy in compounding, transparency in clinical recommendations, and humility in interpreting evidence are not merely technical behaviors. They are expressions of adab toward knowledge, patients, and professional responsibility. This is why adab can provide a deeper educational foundation than procedural ethics alone. Professional ethics may regulate behavior

externally, but adab aims to form the inner orientation from which ethical behavior emerges (Andersson et al., 2022; Araújo-Neto et al., 2024; Richter et al., 2024).

The interview with Prof. Elfahmi strengthened this interpretation. He explained that adab in pharmacy can be embedded in technical courses and laboratory practice, not only in religious or ethics courses. In sterile dosage form technology, for example, students must understand that failure to maintain sterility can harm patients. Falsifying reports or pretending that a product is sterile when it is not is not merely a technical violation, but a serious violation of adab. This example illustrates that adab can be operationalized in very concrete professional situations. (Elfahmi, 2026; Andersson et al., 2022).

The same interview also emphasized that adab includes responsibility toward natural resources and environmental conservation. When medicinal plants are harvested or explored for drug development, adab requires conservation, replanting, and ecological responsibility. Exploiting natural resources without preservation is a violation of adab toward creation. This broadens the meaning of adab in pharmacy education: it includes scientific integrity, patient safety, environmental ethics, and professional accountability. (Elfahmi, 2026; Ibn Sina, 2012).

These findings suggest that adab-based pharmacy education should not be designed as one additional course only. Rather, adab must be embedded across the curriculum. This means that each course should include not only cognitive and technical outcomes, but also adab-related outcomes. Pharmacology may include adab in interpreting evidence responsibly; pharmaceutics may include adab in ensuring quality and safety; pharmacognosy may include adab toward natural resources; clinical pharmacy may include adab toward patients and interprofessional teams. In this way, adab becomes a curriculum-wide formative principle (Kellar et al., 2023; Araújo-Neto et al., 2024; Richter et al., 2024).

D. Professional Tibb An-Nabawi Wothin Pharmacy Education

The Tibb an-Nabawi dimension received a generally relevant score but also showed conceptual sensitivity. Two items in the Tibb dimension were categorized as "moderate" rather than fully relevant: the risk of Tibb labeling and interdisciplinary relevance. This indicates that experts were open to Tibb an-Nabawi but also cautious about its potential misinterpretation. (Ibn Qayyim al-Jawziyyah, 1998; Fadhlina et al., 2025; Hamdan et al., 2025).

Table4. Expert validation of Tibb an-Nabawi items

Item	Mean	SD	Interpretation
Tibb as a value framework	3.65	0.49	Relevant
Relationship between Tibb and modern science	3.55	0.57	Relevant

Medicine as an instrument of effort	3.55	0.57	Relevant
Prevention and balance	3.58	0.56	Relevant
Risk of Tibb labeling	3.45	0.59	Moderate
Interdisciplinary relevance	3.45	0.59	Moderate

Source: Expert validation data processed by the researcher

The moderate scores on the risk of labeling and interdisciplinary relevance show that experts were concerned about the possibility of reducing Tibb an-Nabawi to a religious label attached to herbal products or alternative therapies. This concern is important and must be taken seriously. If Tibb an-Nabawi is reduced to a list of products, such as honey, black seed, or certain herbs, without proper scientific validation, the framework may unintentionally encourage unverified therapeutic claims. This would contradict both the scientific standards of pharmacy and the ethical responsibility of Islamic education. (Fadhlina et al., 2025; Hamdan et al., 2025; Putra, 2024).

The interview with Prof. Elfahmi provided a crucial clarification. He emphasized that Tibb an-Nabawi should be understood broadly and philosophically, not merely as the use of certain materials mentioned in prophetic traditions. According to him, one of the central meanings of Tibb an-Nabawi is that healing belongs to Allah, while medicine and treatment are means of human effort. He also emphasized that Tibb an-Nabawi can be understood as part of the history of pharmacy and as an inspiration for drug discovery, especially in relation to natural products. (Elfahmi, 2026; Ibn Qayyim al-Jawziyyah, 1998; Bhikha, n.d.). This position helps avoid two extremes. The first extreme is to reject modern pharmacy in the name of prophetic medicine. The second is to reject Tibb an-Nabawi as irrelevant to contemporary science. The more balanced position is to recognize Tibb an-Nabawi as a value framework and source of scientific inspiration, while maintaining modern standards of evidence, quality, safety, standardization, dosage, toxicity assessment, and pharmacovigilance. Prof. Elfahmi explicitly stated that claims related to prophetic remedies and natural products should be investigated scientifically to understand their activity, mechanism, and proper context. (Fadhlina et al., 2025; Hamdan et al., 2025; Seselja Perisin et al., 2021).

This interpretation is also compatible with the adab framework. Adab requires that each thing be placed in its proper position. Modern pharmaceutical science has a proper place in validating safety, efficacy, and quality. Tibb an-Nabawi has a proper place in providing a moral-spiritual orientation, a holistic concept of health, and inspiration for research. Problems arise when either one is misplaced: when modern science is absolutized as the only source of meaning, or when Tibb an-Nabawi is used to justify unvalidated therapeutic claims (al-Attas, 1979a, 1993; In'ami et al., 2025).

Therefore, the proper educational implication is not to replace pharmacology or pharmaceutics with Tibb an-Nabawi, but to teach pharmacy students how to understand medicine as an instrument of effort, how to study natural products responsibly, how to avoid exaggerated claims, and how to maintain humility before the limits of human knowledge. In this sense, Tibb an-Nabawi can enrich pharmacy education without weakening scientific rigor (Ibn Sina, 1999, 2012; Fadhlina et al., 2025; Seselja Perisin et al., 2021).

E. Toward an Adab Based Islamic Education Framework for Pharmacy

The combined findings from document analysis, expert validation, and expert interviews indicate that Indonesian pharmacy education needs a framework that can preserve the strength of modern pharmaceutical science while correcting its technocratic limitation. The adab-based Islamic education framework proposed in this study offers such a direction (Koster et al., 2017; Henman, 2020; Rhoney et al., 2023).

First, the framework redefines the aim of pharmacy education. Pharmacy education should not only produce graduates who are competent in drug formulation, pharmacotherapy, clinical reasoning, and pharmaceutical services. It should also form graduates who understand knowledge as an amanah, patients as whole human beings, and professional practice as khidmah. This does not contradict professional standards; rather, it deepens them (al-Attas, 1979a; Kellar et al., 2023; Richter et al., 2024).

Second, the framework repositions evidence-based practice. Evidence remains necessary, but it should not be absolutized. Evidence must be interpreted with ethical responsibility, patient context, and wisdom. This is particularly important in clinical decisions where guideline-based recommendations may not automatically answer all moral, social, and spiritual dimensions of patient care (Andersson et al., 2022; Seselja Perisin et al., 2021).

Third, the framework requires lecturers to function not only as instructors but also as mu'addib. Expert validation and interview findings both indicate that lecturer readiness is a major challenge. Therefore, implementing adab-based pharmacy education requires lecturer training, academic discussion, curriculum workshops, and continuous improvement. Without lecturers who embody adab, adab will remain a slogan rather than an educational reality., (al-Attas, 1979a; Araújo-Neto et al., 2024; Richter et al., 2024).

Fourth, the framework must be operationalized through indicators and rubrics. Expert validation identified operationalization and assessment of adab as major weaknesses. The interview with Prof. Elfahmi clarified that although adab, attitude, and moral behavior are qualitative, they can still be assessed through observable indicators, rubrics, and qualitative-quantitative scales. For instance, honesty can be assessed through data reporting, academic integrity, presentation behavior, laboratory discipline, and patient communication. (Yusoff, 2019; Madadizadeh & Bahariniya, 2023; Gupta et al., 2025).

Fifth, the framework requires institutional support. Adab cannot be formed only through classroom instruction. It must be embedded in curriculum documents, learning culture, laboratory practice, academic governance, assessment systems, and lecturer-student relations. Prof. Elfahmi emphasized that not only supporting systems but the whole system should support adab formation. This statement highlights that adab-based education is not simply a pedagogical method, but a systemic educational orientation. (Irham, 2025; Fitriyawany et al., 2022; Wolford et al., 2025).

The contribution of this study lies in showing that the technocratic orientation of pharmacy education can be diagnosed not to reject modern science, but to reorient it. Pharmacy education needs modern science, but it also needs a higher moral and epistemological framework. The adab-based Islamic education framework allows pharmacy education to remain scientifically rigorous while becoming more humane, reflective, and morally grounded. This is particularly relevant for Islamic higher education institutions that seek to integrate science and religion beyond symbolic or curricular addition (Henman, 2020; al-Attas, 1993; Irham, 2025).

In sum, the findings indicate that Indonesian pharmacy education already possesses strong scientific and professional foundations, but still requires deeper philosophical and moral integration. The expert validation confirms that adab is the most acceptable entry point for such integration, while Tibb an-Nabawi must be carefully positioned as a value framework and research inspiration. The next step for curriculum development is to translate this framework into learning outcomes, course-level indicators, case-based learning models, lecturer training, and assessment rubrics. This would allow pharmacy education to move from technical competence toward adab-based professional formation (Cokro et al., 2021; al-Attas, 1979a; Araújo-Neto et al., 2024).

IV. **Conclusion**

This study diagnosed the technocratic orientation of Indonesian pharmacy education and examined the relevance of an adab-based Islamic education framework through document analysis, expert validation, and expert interviews. The findings show that Indonesian pharmacy education is strongly shaped by biomedical, competency-based, and outcome-oriented approaches. These orientations are necessary for ensuring scientific rigor, professional competence, patient safety, and quality assurance. However, when they become the dominant logic of education, pharmacy education risks being reduced to technical training, measurable performance, and procedural compliance. In such a condition, the formation of moral responsibility, human wholeness, wisdom, and adab may become peripheral rather than central to professional formation (Cokro et al., 2021; Henman, 2020; Rhoney et al., 2023).

The expert validation confirms that the proposed adab-based framework is conceptually relevant for reorienting pharmacy education. Among the three proposed dimensions, adab/ta'dib received the strongest acceptance, indicating that experts recognize the importance of moral and professional formation in pharmacy education. The worldview dimension was considered relevant but still relatively abstract, suggesting the need for clearer operational translation into curriculum, learning outcomes, and teaching practice. The Tibb an-Nabawi dimension was also viewed as relevant, but it requires careful conceptual clarification to avoid being misunderstood as a substitute for modern pharmaceutical science or as a justification for unverified therapeutic claims (Yusoff, 2019; Betha, 2026b; al-Attas, 1979a).

The study also demonstrates that Tibb an-Nabawi should be positioned as a value framework, moral orientation, and source of scientific inspiration rather than as an alternative system that replaces modern pharmacy. In this position, Tibb an-Nabawi can enrich pharmacy education by emphasizing healing as part of divine decree, medicine as a means of human effort, prevention and balance as important dimensions of health, and ethical responsibility in the use of natural products. At the same time, modern pharmaceutical standards, including scientific validation, safety, quality assurance, standardization, and pharmacovigilance, must remain indispensable in pharmacy education and practice (Ibn Qayyim al-Jawziyyah, 1998; Fadhlina et al., 2025; Hamdan et al., 2025).

The main contribution of this article is the formulation of an expert-validated diagnostic framework for rethinking pharmacy education from the perspective of Islamic education based on adab. This framework does not reject modern pharmaceutical science, but calls for its reorientation within a higher moral and epistemological order. Pharmacy education should not only produce graduates who are technically competent, but also professionals who understand knowledge as an amanah, patients as whole human beings, and professional practice as khidmah. Therefore, future curriculum development should translate adab into operational learning outcomes, course-level indicators, reflective pedagogy, lecturer training, and assessment rubrics. Such efforts may help Islamic higher education institutions develop pharmacy education that is scientifically rigorous, professionally relevant, morally grounded, and oriented toward human well-being (al-Attas, 1979a, 1993; Kellar et al., 2023; Richter et al., 2024).

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