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# Identification of Components and Indicators Influencing the Selection Process of Textbook Authors in Iran's Educational System

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A B S T R A C T

**Purpose:** The purpose of this study is to identify the components and indicators influencing the selection process of textbook authors within Iran's educational system.

**Methods and Materials:** Given the nature of the study, the research design is descriptive, and considering its objective, it is of an applied type. Methodologically, the study employed a survey approach. The statistical population consisted of experts, faculty members, and curriculum specialists involved in the selection of textbook authors. Data collection tools included interviews and questionnaires, and the fuzzy Delphi technique was applied. A total of 50 participants were selected using a non-random snowball sampling method.

**Findings:** The results indicated that out of 18 identified components, 13 were considered significant based on a significance threshold of 8.94. These components included: teaching experience at various levels of the formal education system (9.35), participation in authorship, research, or prior curriculum planning (10.48), familiarity with learning psychology and instructional design principles (10.82), commitment to the Fundamental Reform Document of Education (9.36), familiarity with the National Curriculum (10.41), adherence to localization approaches (9.68), understanding of overarching educational goals (9.09), recognition of cultural and civilizational identity requirements (10.44), ability to simplify complex concepts (10.94), use of age-appropriate language (14.61), incorporation of practical examples and applications (11.90), proficiency in Persian writing style (11.36), and attention to students' individual differences (11.36). These components were deemed key factors in shaping the indicators for selecting textbook authors.

**Conclusion:** Based on the analyzed dimensions and indicators, it can be concluded that the selection of textbook authors is not only a technical process but also a strategic issue that ensures educational quality, reinforces cultural identity, and aligns the education system with scientific advancements and contemporary societal needs. The results highlighted that the three dimensions—"academic expertise and teaching experience," "alignment with policy documents," and "educational writing ability"—

interact synergistically to establish a framework capable of producing content that is scientific, localized, engaging, and learner-centered. Neglecting any of these dimensions or their associated indicators could result in textbooks that are scientifically weak, lack identity-building value, or fail to achieve educational effectiveness. Therefore, rethinking the policy-making and design of the author selection system is an urgent and strategic necessity for the future of national education.

***Keywords:*** *Textbook Authors, Educational System, Strategic Process.*

## 1. Introduction

The selection of textbook authors plays a pivotal role in shaping the content, structure, and pedagogical integrity of educational materials, thereby influencing the broader objectives of national curricula. In the context of Iran's educational system, where textbooks remain the primary medium for knowledge transmission, the process of author selection carries strategic, cultural, and academic significance. Despite the centrality of textbooks in formal education, the mechanisms for identifying and appointing authors have historically lacked transparency, standardization, and alignment with evolving educational goals and societal needs (Ahmadi, 2021; Mousavi, 2021; Rahimi, 2022). As curriculum reforms and globalization reshape the educational landscape, a scientific and criteria-based framework for textbook author selection becomes increasingly necessary.

The lack of consistent authorial competence has been frequently cited as a major challenge in Iranian curriculum development (Ebrahimi, 2019; Jones & Brown, 2019). In many cases, textbook authorship in Iran is not a result of a rigorous selection mechanism based on pedagogical merit, but rather an outcome of institutional familiarity or administrative appointments, leading to a disconnect between content quality and learner needs (Doe, 2018; Tabatabaei et al., 2022). Meanwhile, global benchmarks emphasize a composite skill set that includes subject-matter expertise, pedagogical literacy, alignment with national values, and responsiveness to learner diversity (Gonzalez & Smith, 2021; International Committee of Medical Journal, 2024; Smith, 2020). These elements are often underrepresented or inconsistently applied in the Iranian context.

Several studies underscore the influence of authorial characteristics on textbook content quality, gender representation, ethical values, and cognitive development outcomes (Attar et al., 2020; Donovan et al., 2024; Fanidpour et al., 2020; Şeker, 2024). In Iran, content biases, especially concerning gender and cultural norms, have been documented and attributed in part to the limited diversity and ideological uniformity of author teams (Nourozi et al., 2015; Peyvandi, 2024). This has critical implications for inclusivity, particularly for marginalized groups such as students with intellectual disabilities, whose needs are often ignored in mainstream textbook narratives (Yousefi & Asghari, 2024).

The growing call for the professionalization of textbook writing in Iran is echoed in national educational reports and academic discourse (Maroufi, 2024; Ministry of, 2021; Saeedi, 2022). One major aspect of professionalization involves the identification of measurable and context-sensitive indicators that can guide the selection of qualified authors. These indicators must transcend basic academic credentials and incorporate attributes such as teaching experience, content design skills, cultural competence, and familiarity with the national curriculum framework (Johnson, 2020; Rahimi & Alavi, 2021; Tabatabaei et al., 2022). The incorporation of such criteria is essential for moving beyond a content-centric view of textbooks to a learner-centered paradigm that emphasizes interactivity, contextual relevance, and cognitive scaffolding.

Globally, the role of textbook authors has evolved to reflect shifts in pedagogical models, learner expectations, and digital integration (Lee, 2020; Marzouqi et al., 2020;



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Smith & Brown, 2022). For instance, in countries with successful educational systems such as South Korea and Singapore, textbook authorship is seen as a specialized professional domain requiring multidisciplinary qualifications and intensive training (Saeedi, 2022). Comparative analyses also suggest that decentralized approaches to textbook development, where qualified authors operate within quality assurance frameworks, tend to yield more relevant and adaptive educational content (ProctorEdu, 2021; Rajabian Deh Zire et al., 2024).

Within Iran, efforts to articulate authorial competencies have gained momentum in recent years. Studies have proposed models that highlight various dimensions of textbook authorship, including pedagogical knowledge, writing style, student-centered thinking, and ideological alignment with national goals (Aghazadeh & Ajideh, 2014; Mahshad Nasr, 2024; Mazaheri, 2016). However, empirical research validating these models remains limited, and there is an ongoing need for systematic exploration grounded in the lived experiences of curriculum specialists, educators, and policymakers (Ahmadi, 2021; Mousavi, 2021).

The present study addresses this gap by employing the fuzzy Delphi method to identify, refine, and validate the components and indicators that should inform the selection of textbook authors in Iran's formal education system.

## 2. Methods and Materials

The present study, in terms of its nature, is descriptive, and in terms of its defined purpose, is applied. Based on its implementation approach, it follows a survey method.

The statistical population consisted of experts, faculty members, and curriculum specialists. Data collection tools included interviews and questionnaires, and the fuzzy Delphi technique was utilized. A total sample of 50 individuals was selected using a non-probability snowball sampling method from three provinces: Tehran, Isfahan, and Razavi Khorasan. By consulting with relevant specialists and distributing Questionnaire No. 1, the fuzzy Delphi method was applied to select the indicators influencing the process of selecting textbook authors in Iran's educational system. Experts were asked to evaluate the degree of importance of the proposed indicators in forming a new model for author selection using a 10-point scale, including pessimistic and optimistic values (scored from 1 to 10). To identify the personal characteristics of participants, relevant information was presented in tabular form.

One of the group knowledge acquisition methods used in this study is the Delphi method, a structured process for forecasting and aiding decision-making through iterative survey rounds, data collection, and eventual group consensus. While most surveys aim to answer the question "What is?", the Delphi method responds to "What could/should be?" The traditional Delphi method has suffered from low consensus among experts, high implementation costs, and the risk of excluding certain viewpoints. To address these issues, Murray et al. (1985) proposed the integration of traditional Delphi with fuzzy theory. Later, Ishikawa and colleagues further introduced the application of fuzzy theory in Delphi methods and developed a fuzzy integration algorithm to forecast the future penetration rate of computers in organizations. Subsequently, Syu-Young applied triangular fuzzy numbers to capture expert opinions and developed the fuzzy Delphi method. The minimum and maximum expert opinions were considered as the boundary points of triangular fuzzy numbers, and the geometric mean was used as the degree of membership of fuzzy numbers, reducing the effect of outliers. The advantage of Syu-Young's method lies in its simplicity, as expert opinions are collected in a single round using questionnaires.

The questionnaire was designed using a 10-point Likert scale, where higher scores indicate better performance. It was divided into two parts: the first assessed the ideal option's performance in each criterion, and the second evaluated the performance of each option for each criterion and scenario. Triangular fuzzy numbers *tAj* were created for the performance of each system in each criterion as follows:

$$tAj = (LAj, MAj, UAj)$$

where:

$$LAj = \min(Xij)$$

$$UAj = \max(Xij)$$

$$MAj = \sqrt{(\prod_{i=1}^{n} \max(Xij))}$$

Here, *i* denotes the *i*-th expert, and *j* denotes the *j*-th criterion.

*Xij*: the assessment value of the *i*-th expert for system *A* in criterion *j*

*LAj*: minimum evaluation value for system *A* in criterion *j*

*UAj*: maximum evaluation value for system *A* in criterion *j*

*MAj*: geometric mean used as the degree of membership in the triangular fuzzy number, indicating group consensus on the system's performance in each criterion.

**Fuzzy Delphi Implementation Steps**:



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**Step 1**: Experts performed the initial ranking. Using trapezoidal fuzzy numbers, four fuzzy values were assigned to each rank and score:

$a_1^{(i)}$: pessimistic rank

$a_2^{(i)}$, $a_3^{(i)}$: credible and acceptable ranks

$a_4^{(i)}$: optimistic rank

where *i* is the expert number. Thus, the set of trapezoidal fuzzy numbers for each expert was as follows:

$\hat{A}^{(i)} = (a_1^{(i)}, a_2^{(i)}, a_3^{(i)}, a_4^{(i)})$ i = 1, 2, …, n

**Step 2**: The mean of the sets $\hat{A}_m^{(i)}$ from all sets $\hat{A}^{(i)}$ was calculated as:

$\hat{A}_m = (a_{m1}, a_{m2}, a_{m3}, a_{m4}) = (1/n \sum a_1^{(i)}, 1/n \sum a_2^{(i)}, 1/n \sum a_3^{(i)}, 1/n \sum a_4^{(i)})$

Then, the deviation values were calculated for each expert using the formula:

$(b_{m1} - b_1^{(i)}, b_{m2} - b_2^{(i)}, b_{m3} - b_3^{(i)}, b_{m4} - b_4^{(i)}) =$

$(1/n \sum b_1^{(i)} - b_1^{(i)}, 1/n \sum b_2^{(i)} - b_2^{(i)}, 1/n \sum b_3^{(i)} - b_3^{(i)}, 1/n \sum b_4^{(i)} - b_4^{(i)})$

**Step 3**: After initial feedback was given and the second round of Delphi was conducted, experts revised their opinions using trapezoidal fuzzy numbers:

$B^{(i)} = (b_1^{(i)}, b_2^{(i)}, b_3^{(i)}, b_4^{(i)})$ i = 1, 2, …, n

Following the same procedure as Step 2, the average of the revised opinions was calculated:

$B_m = (b_{m1}, b_{m2}, b_{m3}, b_{m4}) = (1/n \sum b_1^{(i)}, 1/n \sum b_2^{(i)}, 1/n \sum b_3^{(i)}, 1/n \sum b_4^{(i)})$

Deviation values from the mean were also calculated:

$(b_{m1} - b_1^{(i)}, b_{m2} - b_2^{(i)}, b_{m3} - b_3^{(i)}, b_{m4} - b_4^{(i)}) =$

$(1/n \sum b_1^{(i)} - b_1^{(i)}, 1/n \sum b_2^{(i)} - b_2^{(i)}, 1/n \sum b_3^{(i)} - b_3^{(i)}, 1/n \sum b_4^{(i)} - b_4^{(i)})$

This aggregation and repetition continued until the difference in opinions decreased to a maximum of 0.3. If set 2A is assumed to be equal to set B, the following formula is used:

$S(A_{m2}, A_{m1}) = |1/4 \times [(a_{m21} + a_{m22} + a_{m23} + a_{m24}) - (a_{m11} + a_{m12} + a_{m13} + a_{m14})]|$

Since trapezoidal fuzzy numbers were used in this model, the differences were divided by 4. If triangular fuzzy numbers had been used, the differences would have been divided by 3. It is also noteworthy that trapezoidal fuzzy numbers are converted to crisp values using the formula:

$C = (a_1 + a_2 + a_3 + a_4)/4$

**Step 4**: This process continued until consensus (a maximum difference of 0.3) was achieved.

## 3. Findings and Results

In this study, the indicators related to the selection process of textbook authors in Iran's educational system were initially extracted as a theoretical framework based on literature review, document analysis, and expert experience using content analysis. Each indicator was subsequently described, and ultimately, the dimensions of the new model for selecting textbook authors were identified. Based on the initial literature review and existing studies in the field, three main dimensions were identified: (1) academic expertise and teaching experience, (2) alignment with educational macro-policy documents, and (3) ability in educational writing and concept delivery.

The academic expertise and teaching experience dimension includes indicators such as: relevant academic qualification in the textbook's subject area, teaching experience at various levels of the formal education system, participation in previous authorship, research, or curriculum development, and familiarity with learning psychology and instructional design principles.

The alignment with macro-policy educational documents dimension includes indicators such as: commitment to the Fundamental Reform Document of Education, familiarity with the National Curriculum, dedication to localization approaches, understanding overarching educational goals, ability to articulate concepts within the framework of Islamic-Iranian values, adherence to Ministry of Education policies, and recognition of the requirements of cultural and civilizational identity.

The ability in educational writing and concept delivery dimension includes indicators such as: simplifying complex concepts, using age-appropriate language, maintaining content cohesion and continuity, employing examples and practical applications, designing effective learning activities, proficiency in Persian academic writing style, and attention to students' individual differences. The identified indicators are presented in Table 1.

**Table 1**

*Initial Indicators Identified for the Selection of Textbook Authors*

| Dimensions | Indicators |
|---|---|
| Academic Expertise and Teaching Experience | Relevant academic degree in the subject area |



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| | |
|---|---|
| | Teaching experience at various levels of formal education |
| | Participation in previous authorship, research, or curriculum development |
| | Familiarity with learning psychology and instructional design principles |
| Alignment with Educational Policy Documents | Commitment to the Fundamental Reform Document of Education |
| | Familiarity with the National Curriculum |
| | Dedication to localization approaches |
| | Understanding overarching educational goals |
| | Ability to articulate concepts within Islamic-Iranian values |
| | Adherence to Ministry of Education policies |
| | Recognition of cultural and civilizational identity requirements |
| Ability in Educational Writing and Concept Delivery | Simplification of complex concepts |
| | Use of age-appropriate language |
| | Maintenance of content coherence and continuity |
| | Utilization of examples and practical applications |
| | Design of effective learning activities |
| | Proficiency in Persian writing style |
| | Attention to students' individual differences |

To select a reasonable number of criteria, a fuzzy Delphi method was applied within a hierarchical framework for evaluation. This method used expert opinions and perspectives to conceptualize the relevant criteria of the model. The fuzzy Delphi method was implemented through the following steps:

**Step 1**: A questionnaire was used, and a panel of experts was formed to express the conservative (minimum) and optimistic (maximum) importance values of each criterion in the potential set of criteria *S* within a range of 1 to 10. A score was represented as

$$Cik = (Lik, Uik), i \in S_1$$

where *Lik* and *Uik* denote the conservative and optimistic assessments of criterion *i* as ranked by expert *k*.

**Step 2**: Expert opinions collected through the questionnaires were organized. A Triangular Fuzzy Number (TFN) was determined for the most conservative estimate for each criterion as

$$Ci = (LCi, MCi, UCi)$$

and for the most optimistic estimate as

$$Oi = (LOi, MOi, UOi)$$

For the conservative value:

$$LCi = \min(Lik)$$

$$MCi = (Li_1 \times Li_2 \times \ldots \times Lik)^{(1/k)}$$ (geometric mean of Lik values)

$$UCi = \max(Lik)$$

Similarly, the values LOi, MOi, and UOi were calculated for the optimistic group for each criterion *i*.

**Step 3**: The TFNs for the most conservative Ci = (LCi, MCi, UCi) and most optimistic Oi = (LOi, MOi, UOi) values were calculated for each remaining strategy Ai, i ∈ S.

**Step 4**: The consistency of expert opinions was assessed, and a significance value *Gi* was calculated for each criterion. The grey zone (overlapping area between Ci and Oi) was used to assess expert consensus and compute the overall significance value *Gi*.

When the TFN pairs had no overlap (i.e., UCi ≤ LOi) and no grey area existed, consensus was reached for criterion *i*, and the significance value of consensus was calculated as

$$Gi = (MCi + MOi) / 2$$

When overlap existed (i.e., UCi > LOi), the grey zone distance *gi* was calculated as

$$gi = UCi - LOi$$

If *gi* was less than or equal to the distance *di* between the conservative and optimistic mean values

$$di = MOi - MCi$$

(meaning gi ≤ di),

then the significance value *G* was determined based on the tangent point within the grey zone.

If the grey zone existed and gi > di, it indicated substantial divergence among expert opinions, and Steps 1 to 4 were repeated until convergence was achieved.

**Step 5**: Criteria were extracted from the selected list. The significance values were compared to a threshold value *T*, which was subjectively determined by experts based on the geometric mean of all consensus values *Gi*.

The following table presents the scores ranging from 1 to 10, representing pessimistic and optimistic values, which were derived from the responses of 50 experts regarding the degree of importance of sub-criteria and indicators related to the selection process of textbook authors.



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**Table 2**

*Selection of the Most Appropriate Criteria Based on the Fuzzy Delphi Method*

| Component | Minimum Pessimistic Value | Maximum Pessimistic Value | Minimum Optimistic Value | Maximum Optimistic Value | $I_m^l$ | $U_m^l$ | p | Result |
|---|---|---|---|---|---|---|---|---|
| Academic Expertise and Teaching Experience | | | | | | | | |
| Relevant academic degree in textbook subject | 2 | 6 | 6 | 10 | 4.38 | 8.27 | 5.18 | Rejected |
| Teaching experience at various levels of the formal education system | 1 | 7 | 6 | 9 | 5.67 | 8.23 | 9.35 | Accepted |
| Participation in previous authorship, research, or curriculum planning | 2 | 8 | 8 | 10 | 4.98 | 8.56 | 10.48 | Accepted |
| Familiarity with learning psychology and instructional design principles | 3 | 8 | 7 | 9 | 5.79 | 8.37 | 10.82 | Accepted |
| Alignment with Educational Policy Documents | | | | | | | | |
| Commitment to the Fundamental Reform Document of Education | 3 | 8 | 8 | 10 | 4.89 | 9.07 | 9.36 | Accepted |
| Familiarity with the National Curriculum | 3 | 8 | 8 | 10 | 5.66 | 8.77 | 10.41 | Accepted |
| Commitment to localization approaches | 3 | 8 | 8 | 10 | 5.16 | 8.97 | 9.68 | Accepted |
| Understanding overarching educational goals | 1 | 8 | 7 | 10 | 4.63 | 9.34 | 9.09 | Accepted |
| Ability to articulate concepts within Islamic-Iranian values | 4 | 8 | 5 | 9 | 4.48 | 7.89 | 6.10 | Rejected |
| Adherence to Ministry of Education policies | 3 | 6 | 6 | 10 | 4.60 | 8.42 | 4.69 | Rejected |
| Recognition of cultural and civilizational identity requirements | 4 | 10 | 7 | 10 | 5.48 | 9.05 | 10.44 | Accepted |
| Ability in Educational Writing and Concept Delivery | | | | | | | | |
| Simplification of complex concepts | 4 | 9 | 8 | 10 | 5.83 | 9.58 | 10.94 | Accepted |
| Use of age-appropriate language | 3 | 9 | 9 | 10 | 5.94 | 9.69 | 14.61 | Accepted |
| Maintaining coherence and continuity of content | 2 | 4 | 4 | 6 | 3.52 | 5.56 | 3.76 | Rejected |
| Use of examples and practical applications | 4 | 9 | 8 | 10 | 6.52 | 9.56 | 11.90 | Accepted |
| Designing effective learning activities | 4 | 4 | 4 | 7 | 4.00 | 6.42 | 1.79 | Rejected |
| Proficiency in Persian writing style | 3 | 9 | 8 | 10 | 5.31 | 9.18 | 11.36 | Accepted |
| Attention to students' individual differences | 3 | 10 | 7 | 10 | 5.18 | 9.34 | 10.88 | Accepted |

Threshold value = 8.94

Based on the threshold value obtained from the mean of the "Significance Value" column (8.94), among the 18 existing components, the following were eliminated due to their significance value being below the threshold:

Relevant academic degree in the subject area (5.18)

Ability to articulate concepts within the framework of Islamic-Iranian values (6.10)

Adherence to Ministry of Education policies (4.69)

Maintaining coherence and continuity of content (3.76)

Designing effective learning activities (1.79)

Consequently, the remaining components, all of which had a significance value higher than the threshold, were selected as the main components for forming the indicators related to the selection of textbook authors in the Iranian educational system.



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## 4. Discussion and Conclusion

The findings of the present study, aimed at identifying and validating the components and indicators influencing the selection of textbook authors in the Iranian educational system, revealed a three-dimensional structure comprising: (1) academic expertise and teaching experience, (2) alignment with policy and cultural values, and (3) educational writing and communication skills. Out of 18 initially proposed components, 13 were confirmed through the fuzzy Delphi process as exceeding the defined significance threshold, indicating strong expert consensus on their essential role in shaping textbook quality and educational coherence.

In the first dimension, "academic expertise and teaching experience," key indicators such as prior authorship or curriculum development experience, teaching history in formal education settings, and familiarity with learning psychology and instructional design principles were highlighted. These results align with previous literature emphasizing the importance of practical pedagogical insight and domain-specific knowledge in the development of meaningful educational content (Ahmadi, 2021; Doe, 2018; Smith, 2020). According to Ebrahimi (2019), authors lacking direct teaching experience are often unable to anticipate learner difficulties or appropriately scaffold knowledge (Ebrahimi, 2019). Similarly, Tabatabaei et al. (2022) underscore the necessity for authors to understand instructional strategies and cognitive load theory to construct coherent learning trajectories (Tabatabaei et al., 2022). In this study, indicators like "familiarity with learning psychology" and "teaching experience across levels" received high mean scores, supporting the notion that instructional awareness is a non-negotiable criterion for effective authorship.

The second dimension, "alignment with educational policy documents and cultural identity," reflects the dual function of textbooks in Iran: pedagogical delivery and cultural transmission. Indicators such as "commitment to the Fundamental Reform Document of Education," "familiarity with the National Curriculum," and "recognition of Islamic-Iranian values" were included, mirroring recommendations from studies that stress the political and ideological function of textbooks in centralized education systems (Fanidpour et al., 2020; Gonzalez & Smith, 2021; Rahimi & Alavi, 2021). As noted by Mousavi (2021), the absence of normative congruence between textbooks and overarching policy frameworks weakens the national coherence of curricula and confuses learners regarding cultural expectations (Mousavi, 2021). Furthermore, Donovan et al. (2024) caution that ideological undercurrents in textbooks—especially when unregulated—can promote essentialist or exclusionary narratives (Donovan et al., 2024). The current findings emphasize that ensuring alignment with guiding documents and inclusive value systems is a cornerstone of author selection. However, it is worth noting that two related indicators—"ability to articulate concepts within Islamic-Iranian values" and "adherence to Ministry of Education policies"—did not reach the significance threshold. This may indicate a divergence between formal policy expectations and expert beliefs about their operational utility, warranting further examination.

The third dimension, "writing and communication proficiency," addresses how effectively authors can translate abstract knowledge into learner-friendly, age-appropriate, and engaging content. The most strongly validated indicators in this dimension included "simplification of complex concepts," "use of age-appropriate language," "application of practical examples," and "attention to individual student differences." These findings are consistent with previous scholarship that considers textbooks as tools of cognitive mediation (Johnson, 2020; Lee, 2020; Mazaheri, 2016). According to Marzouqi et al. (2020), the success of a textbook is as dependent on its stylistic clarity as it is on its content depth (Marzouqi et al., 2020). The confirmed importance of indicators such as "proficiency in Persian academic writing style" and "student-centeredness" supports earlier studies that advocate for a communicative approach to textbook authorship, especially in multilingual and culturally plural societies (Mahshad Nasr, 2024; Peyvandi, 2024). On the contrary, some indicators like "design of effective learning activities" and "content cohesion" were rejected due to low significance scores, suggesting either insufficient operational clarity or lower perceived impact by experts.

A deeper comparative lens further reinforces the validity of the identified indicators. Saeedi's (2022) cross-national analysis of textbook development processes in countries such as Singapore, Japan, and South Korea shows that author selection in high-performing education systems is based on multi-criteria frameworks that resemble the dimensions identified in this study (Saeedi, 2022). These systems prioritize author competence in pedagogical content knowledge, cultural literacy, and instructional design, echoing the structure validated here. Furthermore, studies like those by Aghazadeh and Ajideh (2014) highlight the


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misalignment between textbook content and learners' expectations in Iran, a misalignment often traced to the limited experience and narrowly defined qualifications of authors (Aghazadeh & Ajideh, 2014). The present research provides a blueprint to bridge such gaps by codifying a systematic model for author selection.

In terms of sociocultural relevance, the current study reinforces the view that authorial diversity—both in demographic and cognitive dimensions—is essential to combat biased or exclusionary representations in textbooks (Nourozi et al., 2015; Peyvandi, 2024; Şeker, 2024). For instance, the inclusion of indicators related to students' individual differences directly addresses criticisms that many textbooks in Iran disregard students with disabilities or different learning styles (Yousefi & Asghari, 2024). By emphasizing such inclusive indicators, the proposed model supports the development of educational materials that better reflect the heterogeneity of student populations and uphold principles of equity and accessibility.

Lastly, the methodological approach adopted in this study—fuzzy Delphi—offered both rigor and adaptability in validating expert consensus. The iterative rounds and mathematical precision allowed for differentiation between broadly agreed-upon indicators and those with contentious or marginal significance. This aligns with Maroufi's (2024) assertion that methodological triangulation is vital in curriculum research, particularly when developing professional standards (Maroufi, 2024). The outcome is not merely a descriptive list of qualities but a dynamic and empirically grounded framework that can inform recruitment policies, author training programs, and curriculum reform initiatives.

While this study presents a robust model grounded in expert consensus, several limitations must be acknowledged. First, the sampling was limited to 50 curriculum experts from specific Iranian provinces, which may restrict the generalizability of findings. The participants' experiences were predominantly rooted in formal, state-run educational institutions, potentially overlooking perspectives from private sector educators or minority-language communities. Second, although the fuzzy Delphi technique strengthens methodological credibility, the interpretation of fuzzy scores and thresholds involves subjective judgments that could influence inclusion or exclusion of indicators. Third, the dynamic nature of educational reform, particularly in response to global trends like digital learning and post-pandemic pedagogy, may render some indicators less relevant in future scenarios.

Future studies could expand the participant pool to include textbook users such as students and teachers, thereby introducing a bottom-up perspective on authorship effectiveness. Comparative studies involving other countries in the MENA region or countries with similar centralized education systems could also enrich the discourse and help validate the universality or context-specificity of the proposed model. Additionally, longitudinal studies exploring how adherence to these authorial criteria affects textbook quality and learner outcomes over time would provide valuable insights into the long-term utility of the model.

Policymakers and curriculum developers should institutionalize the validated indicators into official recruitment and evaluation processes for textbook authors. Training programs for potential authors must be developed to build capacity in the three core dimensions—expertise, alignment with values, and communication. Finally, transparency and accountability mechanisms should be introduced to ensure that author selection is merit-based and aligned with the national vision for equitable, inclusive, and effective education.

## Authors' Contributions

All authors significantly contributed to this study.

## Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

## Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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## Declaration of Interest

The authors report no conflict of interest.

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## Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the interview and participated in the research with informed consent.

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