



Developing Madrasah Teachers' Academic Writing Competence through Digital Literacy: An Application of the SCONUL Seven Pillars Model

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ABSTRAK

Bagi guru madrasah di Indonesia, penyusunan karya tulis ilmiah, khususnya Penelitian Tindakan Kelas, merupakan komponen formal Pengembangan Keprofesian Berkelanjutan (PKB) di bawah Kementerian Agama. Penelitian ini mengevaluasi program pelatihan literasi digital yang diselenggarakan oleh Perpustakaan UIN Sunan Ampel Surabaya (UINSA) untuk mendukung kewajiban tersebut. Terdapat dua tujuan: mengetahui tingkat implementasi model SCONUL Seven Pillars oleh guru madrasah dalam kegiatan literasi digital untuk meningkatkan kompetensi menulis, dan menganalisis dampak kegiatan tersebut terhadap kompetensi menulis berbasis IMRaD. Penelitian menggunakan desain campuran deskriptif (convergent). Data kuesioner dikumpulkan dari 100 di antara 177 guru peserta yang tersebar di tiga kabupaten di Jawa Timur (Tuban, Gresik, dan Lamongan) dan dianalisis menggunakan rumus persentase; bukti dokumentasi berupa 42 karya yang dikumpulkan, 27 di antaranya memenuhi kelengkapan IMRaD; serta wawancara dengan peserta berprestasi dan pimpinan yang dipilih secara purposif. Temuan pertama, seluruh tujuh unsur berada pada kategori tinggi (60-80%)-identifikasi 79%, plan 80%, gather 79%, manage 77%, present 79%-kecuali scope (81%) dan evaluate (83%) yang sangat tinggi (80-100%). Kedua, kompetensi menulis tergolong tinggi karena 27 dari 42 karya (64%) tuntas dalam format IMRaD. Kontribusi penelitian ini adalah mengusulkan pilar kedelapan, Product, agar model SCONUL berorientasi luaran, serta memetakan tipologi peserta-pasif, adaptif, dan produktif-pada konstruk knowledge-skills-abilities (KSA) Hellriegel dan Slocum.

ABSTRACT

For madrasah teachers in Indonesia, the production of scholarly writing (karya tulis ilmiah), especially classroom action research, is a formal component of Continuing Professional Development (Pengembangan Keprofesian Berkelanjutan, PKB) under the Ministry of Religious Affairs. This study evaluates a digital-literacy training programme delivered by the UIN Sunan Ampel Surabaya (UINSA) Library to support that obligation. It pursues two objectives: to determine the level at which madrasah teachers implement the SCONUL Seven Pillars model in digital-literacy activities aimed at improving writing competence, and to analyse the impact of those activities on IMRaD-based writing competence. A descriptive, convergent mixed-methods design was used. Questionnaire data were collected from 100 of the 177 participating teachers across three regencies in East Java (Tuban, Gresik, and Lamongan) and analysed using a percentage formula; documentary evidence comprised 42 submitted works, of which 27 met IMRaD completeness; and interviews were conducted with purposively selected high-performing participants and programme leaders. The study found, first, that all seven elements fell in the high band (60-80%)-identify 79%, plan 80%, gather 79%, manage 77%, present 79%-except scope (81%) and evaluate (83%), which were very high (80-100%). Second, writing competence was high, as 27 of the 42 collected works (64%) were completed in IMRaD form. The study's contribution is to propose an eighth pillar, Product, that renders the SCONUL model output-oriented, and to map the resulting participant typology-passive, adaptive, and productive-onto Hellriegel and Slocum's knowledge-skills-abilities (KSA) construct.

KATA KUNCI

Literasi Digital; Kompetensi Menulis; SCONUL Seven Pillars; Guru Madrasah; Pengembangan Keprofesian Berkelanjutan

KEYWORDS

Digital Literacy; Writing Competence; SCONUL Seven Pillars; Madrasah Teachers; Continuing Professional Development

A. Introduction

Digital literacy has become a decisive condition for participation and success in contemporary life. Because information technology is now inseparable from everyday activity-used both to meet needs and to solve problems-digital media have reshaped human behaviour and mindsets.¹ Through digital literacy, people gain the capacity to select, exploit, and anticipate digital transformation while remaining productive, and they cultivate the knowledge and skills that raise personal competence and quality of life.² Digital literacy also fosters a critical citizenry that is better protected from misinformation and legal harm,³ whereas its absence can expose people to harms such as online gambling and predatory lending.⁴

Within education, digital literacy is a learning resource that helps teachers obtain information efficiently and discharge their professional duties.⁵ Among those duties is writing. Every Indonesian teacher is expected to produce scholarly work (karya tulis ilmiah), commonly in the form of classroom action research (Penelitian Tindakan Kelas, PTK), as a route to professional advancement and welfare; a professional teacher is therefore not only an instructor and motivator but also an author.⁶ For teachers serving in madrasah, this expectation is institutionally specific. Under the Ministry of Religious Affairs (Kemenag), scholarly writing and PTK are formal components of Continuing Professional Development (Pengembangan Keprofesian Berkelanjutan, PKB), and need-analyses of madrasah teachers repeatedly identify academic-writing training as a priority.⁷ Yet teachers across the system continue to perceive such development as demanding and

¹Muhamad Ngafifi, "Kemajuan Teknologi dan Pola Hidup Manusia dalam Perspektif Sosial Budaya," *Jurnal Pembangunan Pendidikan: Fondasi dan Aplikasi* 2, no. 1 (2014): 33–47, <https://doi.org/10.21831/jppfa.v2i1.2616>.

²Deri Firmansyah, Dadang Saepuloh, and Dede, "Daya Saing: Literasi Digital dan Transformasi Digital," *Journal of Finance and Business Digital* 1, no. 3 (2022): 237–250, <https://doi.org/10.55927/jfbd.v1i3.1348>; Bambang Yuniarto and Rivo Panji Yudha, "Literasi Digital sebagai Penguatan Pendidikan Karakter Menuju Era Society 5.0," *Edueksos: Jurnal Pendidikan Sosial & Ekonomi* 10, no. 2 (2021).

³Fikriyah Asyifa Salsabilah, "Analisis Pemanfaatan Akun Instagram @DiskominfoPontianak sebagai Media Literasi Digital Masyarakat Kota Pontianak," *LIBRARIA: Jurnal Perpustakaan* 12, no. 1 (2024): 145–170, <https://doi.org/10.21043/libraria.v12i1.17233>.

⁴Firdaus Fillia Rossa et al., "Peningkatan Literasi Digital melalui Sosialisasi Bahaya Pinjaman Online Ilegal dan Judi Online di Desa Boto Kabupaten Wonogiri," *Jurnal Intelek dan Cendekiawan Nusantara* 1, no. 4 (2024).

⁵Evi Fatimatur Rusydiyah, Eni Purwati, and Ardhi Prabowo, "How to Use Digital Literacy as a Learning Resource for Teacher Candidates in Indonesia," *Jurnal Cakrawala Pendidikan* 39, no. 2 (2020): 305–318, <https://doi.org/10.21831/cp.v39i2.30551>.

⁶Muhammad Adek et al., "Yang Terampas dan Yang Terputus: Guru dan Menulis Ilmiah," *Lingua Susastra* 3, no. 2 (2022): 126–135, <https://doi.org/10.24036/ls.v3i2.96>.

⁷Yayah Rahyasih, Nani Hartini, and Liah Siti Syarifah, "Pengembangan Keprofesian Berkelanjutan: Sebuah Analisis Kebutuhan Pelatihan Karya Tulis Ilmiah bagi Guru," *Jurnal Penelitian Pendidikan* 20, no. 1 (2020): 136–144, <https://doi.org/10.17509/jpp.v20i1.24565>.

unevenly supported,⁸ and madrasah teachers in particular often lack structured access to the digital resources and tools that scholarly writing now presupposes.⁹

Two considerations make this an Islamic-education problem rather than a generic library-science one. First, writing is the mechanism by which madrasah teachers convert classroom experience into transferable knowledge: PTK and related genres allow them to narrate and evaluate their pedagogy systematically, feeding a continuous improvement cycle in Islamic schooling.¹⁰ Second, strengthening madrasah teachers' writing enlarges the scholarly base of Islamic education itself. Workshops that build academic-writing self-efficacy have measurable effects on Indonesian instructors,¹¹ instructors in religious institutions face distinctive obstacles to publishing,¹² and the national research output to which madrasah scholarship contributes remains comparatively thin.¹³ Developing madrasah teachers as writers is thus a contribution to Islamic educational scholarship, not merely to individual careers.

University libraries are well placed to support this work. By providing technology-rich collections, services, and literacy activities, the academic library acts as a learning-resource centre and helps its parent institution fulfil the tri dharma of higher education-teaching, research, and community service.¹⁴ Equipping librarians with digital-literacy competence is, in turn, a precondition for serving teachers' information needs.¹⁵ The programme examined here was delivered in this spirit by the UINSA Library: a knowledge-transfer effort, organised theoretically

⁸A. Widayati, J. MacCallum, and A. Woods-McConney, "Teachers' Perceptions of Continuing Professional Development: A Study of Vocational High School Teachers in Indonesia," *Teacher Development* 25, no. 5 (2021): 604–621, <https://doi.org/10.1080/13664530.2021.1933159>.

⁹Sukino et al., "Pelatihan Karya Tulis Ilmiah untuk Meningkatkan Kompetensi Profesional Guru Madrasah di Kota Singkawang," *Turast: Jurnal Penelitian dan Pengabdian* 11, no. 1 (2023): 45–62, <https://doi.org/10.15548/turast.v11i1.5870>.

¹⁰Sri Astutik, Subiki, and Singgih Bektiarso, "Pelatihan Penelitian Tindakan Kelas (PTK) bagi Guru SMAN Panarukan Situbondo," *Jurnal Inovasi Penelitian dan Pengabdian Masyarakat* 1, no. 1 (2021), <https://doi.org/10.53621/jippmas.v1i1.5>; Muhammad Kristiawan et al., "Penulisan dan Publikasi Penelitian Tindakan Kelas bagi Guru," *Jurnal Basicedu* 6, no. 1 (2022), <https://doi.org/10.31004/basicedu.v6i1.1787>.

¹¹Herri Mulyono et al., "Developing an Academic Writing Creativity and Self-Efficacy among Indonesian TVET Instructors: Evaluating an Online Genre Analysis-Based Academic Writing Workshop," *Cogent Education* 10, no. 2 (2023): 2237319, <https://doi.org/10.1080/2331186X.2023.2237319>.

¹²S. Leo, E. W. Suryaningsih, and G. Nugraeni, "Obstacles of Instructors in Writing and Publishing International Journal Articles: A Study of Theological Schools in Indonesia," *Teaching Theology & Religion* 27, no. 1–2 (2024): 37–44, <https://doi.org/10.1111/teth.12666>.

¹³Prakoso Bhairawa Putera et al., "Increased Number of Scopus Articles from Indonesia from 1945 to 2020: An Analysis of International Collaboration, and a Comparison with Other ASEAN Countries from 2016 to 2020," *Science Editing* 9, no. 1 (2022): 62–68, <https://doi.org/10.6087/kcse.265>.

¹⁴Budi Handari, "Perpustakaan Perguruan Tinggi sebagai Prime Mover Peningkatan Kompetensi Literasi Informasi Mahasiswa," *LIBRARIA: Jurnal Perpustakaan* 5, no. 2 (2017): 277–304, <https://doi.org/10.21043/libraria.v5i2.2777>; Kadek Rai Suwena, "Menciptakan Layanan Perpustakaan yang Berkualitas sebagai Pendukung Pelaksanaan Tri Dharma Perguruan Tinggi," *Media Komunikasi FPIPS* 11, no. 1 (2013).

¹⁵Sandely Leginda Yus, Fransiska Timoria Samosir, and Lailatus Sa'diyah, "Analisis Literasi Digital Pustakawan di Perpustakaan UIN Fatmawati Sukarno Bengkulu," *AL Maktabah* 8, no. 2 (2023), <https://doi.org/10.29300/mkt.v8i2.2652>.

and practically, that introduced participants to e-resources, to the use of artificial-intelligence and reference-management tools for drafting and citation, and to strategies for digital publication.

To gauge the competence that such activity builds, the study draws on two complementary frameworks. The first is the knowledge-skills-abilities (KSA) construct from Hellriegel and Slocum, in which competence is the combination of what a person knows, can do, and can accomplish in completing professional tasks.¹⁶ The second is the SCONUL Seven Pillars model of information literacy-identify, scope, plan, gather, evaluate, manage, and present-which provides a structured map of the capabilities a writer mobilises in recognising an information need, locating and judging sources, and using them to create new knowledge.¹⁷ Prior work has applied the Seven Pillars to library programmes and to student inquiry; a Sheffield study, for instance, showed that the model helps learners evaluate and compare sources critically when completing academic tasks.¹⁸

Studies of digital literacy and writing are by now numerous. Research in East Java has documented teachers adapting the Seven Pillars fully or partially through literacy activities, with uneven results attributed to the absence of a shared information-literacy curriculum across the region's state Islamic universities. Training for coastal primary-school teachers has improved writing through guided use of applications and publication strategies,¹⁹ and digital literacy has been shown to raise the productivity of small-business actors as well.²⁰ Reviews of teachers' digital competence likewise stress that technology benefits professional development only when it is harnessed through deliberate pedagogical design.²¹ Against this background, the present study is distinguished on three counts: its population (madrasah teachers under Kemenag), its dual theoretical lens (the SCONUL Seven Pillars together with the KSA construct), and its competence indicator (the IMRaD structure as a tangible written output). From these, the study advances its central contribution-proposing an eighth pillar, *Product*, that reorients the SCONUL model toward

¹⁶Don Hellriegel and John W. Slocum Jr., *Organizational Behavior*, 13th ed. (Mason, OH: South-Western Cengage Learning, 2010), 4–18.

¹⁷Isna Fistiyan, "Analysis of Information Literacy Programs in Libraries Based on the SCONUL Seven Pillars Model," *Record and Library Journal* 9, no. 1 (2023): 77–91, <https://doi.org/10.20473/rli.v9-i1.2023.77-91>; Ane Landøy, Daniela Popa, and Angela Repanovici, *Collaboration in Designing a Pedagogical Approach in Information Literacy* (Cham: Springer, 2020), <https://doi.org/10.1007/978-3-030-34258-6>.

¹⁸P. McKinney, M. Jones, and S. Turkington, "Information Literacy through Inquiry: A Level One Psychology Module at the University of Sheffield," *Aslib Proceedings: New Information Perspectives* 63, no. 2–3 (2011): 221–240, <https://doi.org/10.1108/00012531111135673>.

¹⁹Taufik et al., "Literasi Digital untuk Guru Sekolah Dasar di Wilayah Pesisir Kabupaten Dompu," *Jurnal PkM (Pengabdian kepada Masyarakat)* 6, no. 5 (2023): 543–553, <https://doi.org/10.30998/jurnalpkm.v6i5.19584>.

²⁰Fadjarini Sulistyowati and Fransiska K. Agustina, "Literasi Digital dalam Meningkatkan Kemampuan Wirausaha Online Literasi Digital dalam Meningkatkan Kemampuan Wirausaha Online pada Ibu-Ibu KKPA (Komite Kesejahteraan dan Perlindungan Anak) Dusun Jodog Desa Gilangharjo Pandal Kabupaten Bantul," *Share: Journal of Service Learning* 7, no. 2 (2021): 67–72, <https://doi.org/10.9744/share.7.2.67-72>; Teddy Setiawan, Dwinanto Priyo Susetyo, and Eka Pranajaya, "Edukasi Literasi Digital: Pendampingan Transformasi Digital Pelaku UMKM Sukabumi Pakidulan," *J-ABDI: Jurnal Pengabdian kepada Masyarakat* 1, no. 7 (2021): 1599–1606, <https://doi.org/10.53625/jabdi.v1i7.692>.

²¹José María Fernández-Batanero et al., "Digital Competences for Teacher Professional Development: Systematic Review," *European Journal of Teacher Education* 45, no. 4 (2022): 513–531, <https://doi.org/10.1080/02619768.2020.1827389>.

output-and it sets two objectives accordingly: to establish the level of madrasah teachers' digital literacy on the Seven Pillars, and to assess their IMRaD-based writing competence as an outcome of the programme.

The study adopts a descriptive, convergent mixed-methods design, combining quantitative and qualitative evidence to answer the research questions more comprehensively than either strand could alone.²² The qualitative strand is phenomenologically informed, attending to participants' accounts of their own experience in the training and its perceived effects on their writing;²³ the design as a whole, however, is descriptive rather than a full phenomenological study, since the quantitative strand reports the distribution of competence across a defined group using a percentage-based instrument.

The programme was delivered to madrasah teachers across three regencies in East Java-Tuban, Gresik, and Lamongan-drawn from four institutions: MTs Manbail Futuh, MA Manbail Futuh, MTs Al-Musthofawiyah, and MTs Miftahul Ulum. The population comprised the 177 teachers who attended. Three data sources were used, each with a distinct sampling logic. Questionnaire data were obtained from 100 of these participants, who completed a self-report instrument built around the seven SCONUL elements. Documentary data comprised the 42 written works that participants uploaded to a shared drive as their training deliverables. Interview data were obtained from purposively selected key informants-high-performing participants together with madrasah leaders and the supervising authority-chosen for their capacity to illuminate the programme's effects. The questionnaire and documentary strands thus describe the wider group, while the interview strand deliberately targets information-rich cases.

Three instruments operationalised the framework: an interface-and-content questionnaire, a review of the written deliverables, and semi-structured interviews. The questionnaire indicators for each of the seven elements are set out in Table 1.

²²Ifah Rofiqoh and Zulhawati, *Metode Penelitian Kuantitatif, Kualitatif, dan Campuran* (Yogyakarta: Pustaka Pelajar, 2020).

²³Abdul Nasir et al., "Pendekatan Fenomenologi dalam Penelitian Kualitatif," *Innovative: Journal of Social Science Research* 3, no. 5 (2023); Arief Nuryana, Pawito, and Prahastiwi Utari, "Pengantar Metode Penelitian kepada Suatu Pengertian yang Mendalam Mengenai Konsep Fenomenologi," *Ensains Journal* 2, no. 1 (2019): 19–24.

Table 1. *Elements and indicators of the SCONUL Seven Pillars*

No	Element	Indicators
1	<i>Identify</i>	Determining the topic required; identifying types of information and data; searching efficiently.
2	<i>Scope</i>	Knowing the information format needed (print/digital); the search engines available (Google, Google Scholar, e-journals, e-books, repositories, websites); and source formats (PDF, HTML, Word).
3	<i>Plan</i>	Selecting appropriate keywords; choosing and grouping search terms; and selecting the device used for searching.
4	<i>Gather</i>	Using search menus; using advanced search; and accessing full text.
5	<i>Evaluate</i>	Filtering required sources; filtering by source authority; and judging the quality and relevance of sources critically and evaluatively.
6	<i>Manage</i>	Using citation applications (Zotero, Mendeley, EndNote); choosing an appropriate citation style (APA, full note, Turabian); and using anti-plagiarism software (Turnitin, DrillBit, Plagiarisma).
7	<i>Present</i>	Using information and data to answer the research question; applying the IMRaD structure (Introduction, Methods, Results, Discussion); and selecting an appropriate venue for publication.

Analysis proceeded along two tracks. Quantitative questionnaire data, recorded on a five-point Likert scale (very low, low, moderate, good, very good), were converted to percentages using the formula below and then interpreted against established categories.

$$\text{Percentage} = (\text{Total score obtained} \div \text{Maximum possible score}) \times 100\%$$

Following Arikunto, the resulting percentages were classified as very low (0-20%), low (21-40%), moderate (41-60%), high (61-80%), or very high (81-100%).²⁴ Qualitative data from documentation and interviews were analysed through the three concurrent flows of Miles, Huberman, and Saldaña: data condensation, data display, and conclusion drawing and verification.²⁵

A note on positionality is warranted. The first author is affiliated with the UINSA Library, which organised the programme evaluated here. To mitigate the bias inherent in assessing one's own institutional initiative, the study triangulated questionnaire, documentary, and interview evidence; reported participant outputs and verbatim statements transparently; and applied a pre-specified SCONUL-based rubric rather than an ad hoc judgement. The findings should nonetheless be read with this affiliation in view.

²⁴Suharsimi Arikunto, *Prosedur Penelitian: Suatu Pendekatan Praktik* (Jakarta: Rineka Cipta, 2013).

²⁵Matthew B. Miles, A. Michael Huberman, and Johnny Saldaña, *Qualitative Data Analysis: A Methods Sourcebook*, 3rd ed. (Thousand Oaks, CA: SAGE, 2014), 12–14.

B. Implementation of the SCONUL Seven Pillars by Madrasah Teachers

Aggregating the questionnaire scores by element yields the distribution in Table 2. Every element reached at least the high band, and two-scope and evaluate-reached the very high band.

Table 2. Scores and percentages for the Seven Pillars elements, from questionnaire data

Element	Questionnaire score / maximum	Percentage
<i>Identify</i>	1,193 / 1,500	79%
<i>Scope</i>	1,217 / 1,500	81%
<i>Plan</i>	1,202 / 1,500	80%
<i>Gather</i>	1,589 / 2,000	79%
<i>Evaluate</i>	1,653 / 2,000	83%
<i>Manage</i>	1,160 / 1,500	77%
<i>Present</i>	1,181 / 1,500	79%

C. Identify, Scope, and Plan

On *identify*, the three indicators returned 1,193 points (79%, high). The documentary evidence corroborated this: participants derived their research topics from digital searches modelled in the training, drawing on portals such as the UINSA digital library and the Science and Technology Index (SINTA) to locate theses and scholarly articles as sources of inspiration. On *scope* (1,217 points; 81%, very high), participants demonstrated the ability to determine what they needed across format, portal, and document type, with most selecting digital references-journal articles, e-books, repository items, and proceedings-in PDF, a format prized for rendering consistently across devices and for its flexibility of access.²⁶ On *plan* (1,202 points; 80%, high), the uploaded works showed accurate keyword selection: one participant's reference list of eighteen titles, for example, was 78% on-theme, combining sources on inquiry methods with sources on writing skills, indicating effective reduction of the topic to workable search terms.

D. Gather, Evaluate, and Manage

On *gather* (1,589 points; 79%, high), participants' searches yielded the documents they needed, with attention to completeness and currency. The *evaluate* element was the strongest (1,653 points; 83%, very high). Documentary evidence reinforced the score: one participant cited articles from SINTA-accredited national journals and from Scopus-indexed international journals,

²⁶Gever Imanuel Taopan, Meiton Boru, and Adriana Faggidae, "Pengamanan Portable Document Format (PDF) Menggunakan Algoritma Kriptografi Kurva Eliptik," *J-Icon: Jurnal Komputer dan Informatika* 10, no. 1 (2022): 47–54, <https://doi.org/10.35508/jicon.v10i1.5296>.

signalling an ability to judge source authority and relevance-consistent with bibliometric work on digital-literacy research²⁷ and with the standing of Scopus as a curated, high-quality source that has passed rigorous selection.²⁸ On *manage* (1,160 points; 77%, high), 35 of the participants with completed outputs used the Zotero reference manager-five in Chicago style and thirty in APA-while the remainder supplied a bibliography only. Facility with reference managers raises the quality and standardisation of scholarly work²⁹ and eases submission to journals, most of which now require managed citation.³⁰

E. Present

On *present* (1,181 points; 79%, high), 27 participants completed works in IMRaD form, answering a defined research problem with analysis supported by relevant citations. The number and quality of citations are themselves indicators that analysis has been conducted soundly,³¹ since citation evidences the relevance of the marshalled information to the chosen topic and helps determine the quality of the writing.³²

F. Madrasah Teachers' IMRaD-Based Writing Competence

Writing competence was indexed by completion of the training deliverables. In total, 42 documents were submitted by the 177 participants through the shared drive, distributed across the four madrasahs as shown in Table 3-resolving, with concrete figures, the institutional breakdown of participation and output.

²⁷Siti Rina Latifah, Yunus Winoto, and Ute Lies Siti Khadijah, "Analisis Bibliometrik: Perkembangan Tren Penelitian Literasi Digital di Perguruan Tinggi dalam Database Scopus (2014–2023)," *IQRA` : Jurnal Perpustakaan dan Informasi* 18, no. 2 (2024): 230–256, <https://doi.org/10.30829/iqra.v18i2.21627>.

²⁸Jeroen Baas et al., "Scopus as a Curated, High-Quality Bibliometric Data Source for Academic Research in Quantitative Science Studies," *Quantitative Science Studies* 1, no. 1 (2020): 377–386, https://doi.org/10.1162/qss_a_00019.

²⁹Nur Asiah et al., "Pelatihan Manajemen Referensi Ilmiah Berbasis Aplikasi (Mendeley & Zotero) untuk Meningkatkan Kualitas Karya Tulis Mahasiswa," *Dedication: Jurnal Pengabdian Masyarakat* 9, no. 2 (2025): 279–286, <https://doi.org/10.31537/dedication.v9i2.2591>.

³⁰Adaninggar Septi Subekti, "Pelatihan Menulis Artikel Ilmiah dan Mengirimkannya ke Jurnal Ilmiah," *Jurnal Pengabdian UntukMu Negeri* 5, no. 2 (2021): 32–38, <https://doi.org/10.37859/jpumri.v5i2.2724>.

³¹Roghayeh Ghazavi, Behjat Taheri, and Hasan Ashrafi-Rizi, "Article Quality Indicator: Proposing a New Indicator for Measuring Article Quality in Scopus and Web of Science," *Journal of Scientometric Research* 8, no. 1 (2019): 9–17, <https://doi.org/10.5530/jscires.8.1.2>.

³²Yicong Liang and Lap-Kei Lee, "A Systematic Review of Citation Recommendation over the Past Two Decades," *International Journal on Semantic Web and Information Systems* 19, no. 1 (2023), <https://doi.org/10.4018/IJSWIS.324071>.

Table 3. *Participating institutions, number of participants, and output documents*

No	Institution	Participants	Documents	IMRaD	Non-IMRaD
1	MTs Manbail Futuh	46	10	6	4
2	MA Manbail Futuh	36	10	4	6
3	MTs Al-Musthofawiyah	63	10	10	0
4	MTs Miftahul Ulum	32	12	7	5
	Total	177	42	27	15

Two readings follow. Measured against the learning contract-a minimum of five titles per session-completion was very high, since the 27 IMRaD-complete works averaged roughly seven per session, about 140% of target. Measured as a proportion of all submissions, 27 of 42 works (64%) met the IMRaD standard, a high level of competence. The remaining 15 non-IMRaD submissions contained a title, introduction, and methodology but stopped short of results and discussion. That an assignment-based scheme produced this volume of completed work supports the view that task-driven training, which compels direct practice on the basis of new knowledge, is more effective than exposition alone.³³ The librarians' own competence in delivering this knowledge transfer was a further enabling condition.³⁴

Participating in literacy activities offers madrasah teachers several benefits: it operationalises their PKB obligation; it builds competence and productivity in writing; and it exercises the reading-and-writing capability that is intrinsic to the teaching profession.³⁵ The supervising authority framed the value of the work in pedagogical terms:

"The most important thing is that knowledge is applied in teaching. If a difficulty arises, research should be done into its cause and solution. When that is applied, the benefits reach not only the teacher but also the students, and it helps the learning objectives to be achieved." (W. HI, 26 July 2025, Tuban)

A madrasah head emphasised the value of in-person mentoring and of disseminating completed work:

"Direct, in-person mentoring rather than Zoom would be even better. Usually it is only curriculum, curriculum-but here there is scholarly writing, which is excellent. What has been

³³Dicky Anggriawan Nugroho, Nurul Hidayati Rofiah, and Imam Prayogo Pujiono, "Pengembangan Keterampilan Digital Guru melalui Pelatihan LKPD Online Berbasis Sistem Terintegrasi," *Jurnal Pengabdian Teknologi Tepat Guna* 5, no. 3 (2024): 157–166, <https://doi.org/10.47942/jpttg.v5i3.1783>; Sudarto and Rukayah, "Peningkatan Kemampuan Guru dalam Membuat RPP Praktis Berkarakter melalui Pelatihan Daring dan Penugasan," *Jurnal Pengabdian Mandiri* 1, no. 8 (2022): 1427–1432.

³⁴Imas Maesaroh et al., "Librarian Expertise, Responsiveness, and Virtual Reference Service Quality: Do Communication Channels Matter?," *TEM Journal* 13, no. 3 (2024): 2036–2045, <https://doi.org/10.18421/TEM133-31>.

³⁵Khodijah Hayati and Fitri Amilia, "Optimalisasi Keterampilan Menulis pada Guru," *Aksiologi: Jurnal Pengabdian kepada Masyarakat* 5, no. 2 (2021): 163–171, <https://doi.org/10.30651/aks.v5i2.4271>; Fahrizandi Abdan, "Problematisasi Pustakawan dalam Menulis Karya Tulis Ilmiah," *LIBRARIA: Jurnal Perpustakaan* 6, no. 1 (2018): 23–50, <https://doi.org/10.21043/libraria.v6i1.2215>.

produced really should be disseminated, since we have been designated a literacy school.” (W. AZH, 26 July 2025, Tuban)

These accounts align with the questionnaire data, in which participants reported skill in using the Zotero reference manager (item 18: 403 points, 80.6%) and in composing IMRaD-based work (item 22: 387 points, 77.4%). They also align with documented gains in writing and publication competence reported elsewhere in teacher-writing workshops.³⁶ One participant progressed from drafting to publication in a SINTA-4 accredited national journal, with a study rooted in local Islamic tradition-the concept of ukhuwah nahdliyah in a madrasah in Palang, Tuban³⁷-and described the experience in terms of motivation rather than reward:

“I feel grateful and proud of the publication. I hope it pushes me to write more diligently.” (W. PSD, 17 August 2025, Gresik)

The supervisor welcomed the programme while noting that in-person delivery tends to support knowledge-sharing most effectively, since face-to-face interaction shapes the emotional and psychological dimensions of problem-solving in learning³⁸; he added that the activity gave teachers confidence in their capacity to write:

“With the training and the assignments, teachers gain the confidence that they really can produce scholarly work.” (W. HI, 26 July 2025, Tuban)

This echoes Fatmawati’s observation that participating in literacy activities builds confidence in scholarly productivity and publication by furnishing the requisite knowledge and skills.³⁹ A participant likewise reported a marked, practical gain:

“Thankfully I joined the training. The knowledge made it much easier to complete my teacher-certification (PPG) journal assignments 1, 2, and 3. Tools such as ChatGPT, which I had not known before, and finding references through journals became far easier. Without the training I would have started from nothing.” (W. IR, 26 July 2025, Tuban)

Taken together, the interview evidence indicates a significant rise in participants’ competence, useful for present and future professional tasks and for the motivation to write-

³⁶Ana Pujiastuti and Sri Rohyanti Zulaikha, “Kompetensi Pustakawan dalam Publikasi Karya Tulis Ilmiah di Forum Perpustakaan Perguruan Tinggi Muhammadiyah ‘Aisyiyah,” *Berkala Ilmu Perpustakaan dan Informasi* 20, no. 2 (2024): 259–272, <https://doi.org/10.22146/bip.v20i2.11057>; Suharti, “Menulis Wahana Peningkatan Kompetensi dan Pengembangan Diri bagi Pustakawan,” *Buletin Perpustakaan* 5, no. 1 (2022).

³⁷Parsiadi and Hadi Irhamni, “Pengenalan Konsep Ukhuwah Nahdliyah: Studi Kasus di MI Ibrohim Assamarqondi Palang Kabupaten Tuban,” *Jurnal Tarbawi* 12, no. 1 (2023): 19–32.

³⁸Umi Nurofi’atin, “Perbandingan Hasil Belajar Matematika Peserta Didik MA selama Pembelajaran Daring dan Pembelajaran Tatap Muka pada Materi Dimensi Tiga,” *Mitra Pilar: Jurnal Pendidikan, Inovasi, dan Terapan Teknologi* 3, no. 2 (2024): 77–84, <https://doi.org/10.58797/pilar.0302.05>; Nuryulianti et al., “Perbandingan Pembelajaran Tatap Muka dan Blended Learning terhadap Hasil Belajar Ditinjau dari Gaya Belajar,” *Madani: Jurnal Ilmiah Multidisiplin* 2, no. 1 (2024), <https://doi.org/10.5281/zenodo.10591464>.

³⁹Endang Fatmawati, “Pengembangan Profesi Pustakawan melalui Pembuatan Karya Tulis Ilmiah,” *Media Pustakawan* 19, no. 4 (2012), <https://doi.org/10.37014/medpus.v19i4.891>.

benefits that bear directly on teachers' status and welfare through the PPG pathway.⁴⁰ The same pattern appears in independent reports of writing-and-publication workshops for teachers.⁴¹

G. Participant Typology and the KSA Construct

Synthesising the questionnaire, documentary, and interview data-particularly the deliverables uploaded to the shared drive-participants fall into three typologies that map cleanly onto Hellriegel and Slocum's knowledge-skills-abilities construct, as summarised in Table 4.

Table 4. Participant typology in the digital-literacy programme, mapped to KSA

Passive (Knowledge)	Adaptive (Skills)	Productive (Abilities)
Knows the names and types of e-resources; knows the names and functions of reference managers.	Skilled in accessing and downloading e-resources; skilled in downloading, installing, and using a reference manager.	Recognises the demands of scholarly writing; skilled in accessing digital sources and supporting tools; able to complete a scholarly work to standard.

The *passive* typology corresponds to the knowledge level of KSA: participants who acquired understanding from the knowledge-transfer sessions-names and types of e-resources, access procedures, and the function of reference managers-without yet translating it into practice.⁴² The *adaptive* typology corresponds to the skills level: participants who acted on that knowledge as their needs and capacities allowed, accessing and downloading e-resources and installing and using Zotero, so that the writing process became more efficient.⁴³ Fifteen participants sat in this band, evidenced by uploads containing a name, title, introduction, and methodology; they required more time to implement their knowledge and skills comprehensively. The *productive* typology corresponds to the abilities level-competence proper-where 27 participants combined knowledge, skill, and ability to complete scholarly work in IMRaD form, their uploads containing a name, title, introduction, methodology, results and discussion, and a bibliography. Reading the typology through KSA in this way makes the construct analytically substantive rather than merely declarative: each band marks a distinct rung in the conversion of digital-literacy training into completed scholarship.

⁴⁰Nova Nevila Rodhi, "Upaya Peningkatan Profesionalitas Akademik Guru melalui Pelatihan Karya Tulis Ilmiah," *Jurnal Pengabdian UntukMu NegeRI* 7, no. 1 (2023): 125–129, <https://doi.org/10.37859/jpumri.v7i1.4924>.

⁴¹Y. N. Simorangkir et al., "Meningkatkan Literasi Digital Guru melalui Workshop Menulis Artikel dan Publikasi di Jurnal Ilmiah," *Niswantara* 1 (2024), <https://ejournal.ayasophia.org/index.php/niswantara/article/view/6>.

⁴²Hellriegel and Slocum, *Organizational Behavior*, 8–12.

⁴³Nonny Rulisty Putri Sutikno and Umi Sri Wulan, "Strategi Pembelajaran Adaptif untuk Meningkatkan Keterampilan Menulis Berbasis AI," *Kopula: Jurnal Bahasa, Sastra, dan Pendidikan* 7, no. 1 (2025): 252–259, <https://doi.org/10.29303/kopula.v7i1.6339>; Sabar Budi Raharjo, *Agile: Adaptasi Cepat, Sukses Berlipat* (Lamongan: Detak Pustaka, 2025).

H. Toward an Eighth Pillar: “Product”

The principal contribution of this study is to argue that the SCONUL Seven Pillars, as applied to teacher writing development, are completed by an eighth pillar: *Product*. Two findings motivate the proposal. First, digital-literacy activity here was not confined to accessing and evaluating sources; it extended to critical thinking and to the use of information in production, prioritising the practical procedures by which existing sources become the raw material for new ones through an output-based writing programme. Second, the activity required participants to use technology-applications and software-directly in the service of writing productivity. The existing pillars (identify, scope, plan, gather, evaluate, manage, and present) describe the journey up to the threshold of creation; adding *Product* names the destination, so that information literacy is oriented, from the outset, toward a completed and disseminable work. The participant typology supports the same point: the model becomes fully legible only when its endpoint-an actual product, the marker of the productive, abilities-level participant-is built in. An output-oriented reading of the Seven Pillars thus aligns the information-literacy model with the KSA logic of competence and with the deliverable-based reality of madrasah teachers’ PKB.

I. Implications for Madrasah Teacher Development and Islamic Educational Scholarship

For madrasah teacher development, the findings recommend that digital-literacy programmes be designed around outputs rather than attendance: structured deliverables, deadlines for each IMRaD component, and required citation from quality sources convert exposure into completed scholarship, in line with the eighth-pillar logic above and with evidence that purposeful technology integration-not mere availability-drives professional gains. The standing of madrasah teachers under Kemenag makes this especially consequential, since their PKB is assessed partly through such written work, and the kind of teacher professionalism that technology integration in madrasah is meant to advance depends on the capacity to document and study one’s own practice.⁴⁴ For Islamic educational scholarship more broadly, programmes of this type widen the pipeline of practitioner research from within madrasah: studies grounded in local Islamic tradition and classroom realities-of which the *ukhuwah nahdliyah* article noted above is one instance-enter the accredited literature and enrich the evidence base of Islamic education. University libraries, finally, can read this as a replicable model: an inclusion-oriented service in which the academic library moves from custodian of collections to an active partner in the scholarly formation of the teachers its parent institution serves.

⁴⁴Ghoyatul Qoshwa and Evi Fatimatur Rusydiyah, “Profesionalisme Guru dalam Implementasi Teknologi di Madrasah Aliyah Bustanul Ulum Glagah Lamongan,” *Jurnal Tarbawi* 9, no. 1 (2020).

J. Conclusion

This study examined a UINSA Library digital-literacy programme as a vehicle for developing madrasah teachers' academic writing within their PKB obligations under Kemenag. On the first objective, madrasah teachers' implementation of the SCONUL Seven Pillars was high: five elements fell in the 60-80% band-identify (79%), plan (80%), gather (79%), manage (77%), and present (79%)-while scope (81%) and evaluate (83%) were very high. On the second, writing competence was high: of 42 collected works, 27 (64%) were completed in IMRaD form, containing a title, introduction, methodology, results and discussion, and a bibliography. Conceptually, the study proposes an eighth pillar, Product, to render the model output-oriented, and it grounds the resulting passive-adaptive-productive typology in Hellriegel and Slocum's KSA construct.

Two recommendations follow. For researchers, the study was confined to three regencies in East Java, so its findings are not generalisable; future work should extend the setting and could pursue participants' subjective experience of digital-literacy activity and its effect on writing in greater depth. For libraries and madrasah authorities, the recommendation is to sustain output-oriented digital-literacy programmes focused on writing-training in electronic-resource discovery for scholarly work, reference management, and citation-so that digital literacy becomes, for madrasah teachers, a reliable route from information to authorship and, through it, to the scholarship of Islamic education.

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