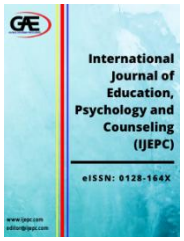
International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 63 (June 2026) PP. 25-49



INTERNATIONAL JOURNAL OF EDUCATION, PSYCHOLOGY AND COUNSELLING (IJEPC)
https://gaexcellence.com/ijepc

TRACING PROCESS WRITING INSTRUCTION REFORMS IN PRIMARY ESL EDUCATION: A TIME-STRUCTURED REVIEW

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Article Info:

Article history:
Received date: 29.03.2026
Revised date: 15.04.2026
Accepted date: 10.05.2026
Published date: 03.06.2026

To cite this document:

Manoharam, S. R. D. T., & Khaja, F. N. M. (2026). Tracing Process Writing Instruction Reforms in Primary ESL Education: A Time-Structured Review. *International Journal of Education, Psychology and Counselling, 11*(63), 25-49.

Abstract:

Process writing instruction is known as a developmental and recursive, rather than product-based, pedagogy for writing. The theories of this pedagogy are well articulated. However, there are differences in classroom practices and with the increased use of digital technologies, we also have fragmented knowledge about how process writing is practised and how it evolves in the classroom, especially in primary English as a Second Language (ESL) classrooms. This research seeks to resolve this problem by mapping the chronology of process writing teaching, including the evolution in the focus of research, teaching practice and research methodology. The search terms include: "process writing," "primary education," and "English as a second language." After careful screening, 133 primary studies were identified. We divided the findings into three time periods: (1) Emergence and Conceptual Grounding (1997–2012), (2) Pedagogical Expansion and Classroom Integration (2013–2019), and (3) Acceleration, Digital Mediation, and Pedagogical Reframing (2020–2026). The trend in the numbers shows a gradual increase in the first period, a moderate increase in the second, and a sudden increase in the final period, suggesting increasing interest in the topic. The review shows that the initial investigations focused on establishing theoretical principles of recursive writing processes, and later the emphasis shifted to classroom practice, collaboration, and multimodal approaches. In the last step, findings show a strong focus on digital mediation, a technology-enhanced writing environment, and teacher cognition in the construction of teaching quality. Overall, the paper shows a strong shift from basic theory to a refined, context-

International Journal of Education, Psychology and Counseling
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EISSN : 0128-164X
Volume 11 Issue 63 (June 2026) PP. 25-49

sensitive pedagogical practice, demonstrating that contemporary process writing pedagogy is more about creativity and the changing classroom environment.

DOI: 10.35631/IJEPC.1163002

Keywords:

English As a Second Language, Primary Education, Process Writing.

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Introduction

Over the past two decades, writing instruction in primary English as a Second Language (ESL) classrooms have shifted from tightly controlled product models toward more process-oriented, genre-based, and hybrid approaches. This evolution reflects growing recognition that young learners must simultaneously develop English proficiency and writing as a literacy skill, making instructional design particularly complex (Bhowmik & Kim, 2021, 2022; Selvaraj & Aziz, 2019; Susser, 1994; Vejayan & Md. Yunus, 2022). In many systems, such as Malaysia, China, and English-dominant systems, reforms have sought to update curricula while catering to high-stakes assessment, institutional pressures and teachers' lack of training in Second Language (L2) writing instruction (Bai & Zhou, 2024; Bhowmik & Kim, 2021, 2024; Shukri & Hj Salam, 2024).

In this reform environment, the process approach has become a mainstay but not yet mainstream. Systematic reviews suggest that process, product, genre, process-product, and process-genre approaches now co-exist in ESL writing classrooms, with process-oriented models more common at secondary and tertiary levels than in primary settings (Selvaraj & Aziz, 2019; Vejayan & Md. Yunus, 2022). In K-12 and elementary contexts, research highlights tensions between “learning to write” and “writing to learn language,” and proposes SFL-informed genre and process-genre pedagogies as a way to integrate both aims (Bhowmik, 2023; Bhowmik & Kim, 2021; Williams et al., 2025). Studies in Malaysian and other Asian primary classrooms show that teachers often prefer product approaches for their practicality under time and exam pressure, even while acknowledging the benefits of process strategies such as brainstorming, drafting, feedback, and revising for fostering independent writers (Guo et al., 2021; Lara, 2018; Oblaqulova, 2024; Shukri & Hj Salam, 2024; Thulasi Palpanadan et al., 2023; Wang & Kew, 2025). Recent literature, therefore, positions primary teaching of ESL writing as a place where policy goals for process-based, genre-based, and blended approaches

to teaching writing meet classroom constraints of training, resources, and time (Bhowmik & Kim, 2021, 2022; Hussin & Abdul Aziz, 2022; Rizdaka et al., 2025; Zohbie & Bhowmik, 2024).

This review is structured to trace the chronological evolution of process writing instruction, followed by a systematic analysis of methodological trends and pedagogical shifts, culminating in a synthesis of key findings and implications for future research.

Literature Review

The literature on reforms in process writing instruction in elementary ESL education indicates dynamic development influenced by pedagogical, sociopolitical, and technological conditions. The trend in research over the decades has shifted from traditional product-based research to more student-centred, process-based research. Nevertheless, poor teacher training, a lack of fit between the curriculum and other issues, and sociopolitical opposition have always been barriers to successful implementation in a multilingual setting such as Malaysia (Azman, 2016). Nevertheless, programme like the Standard-Based English Language Curriculum (SBELC) and the Malaysia English Language Roadmap have shown these limitations, yet show some inconsistent yet encouraging potential to enhance literacy achievement (Azman, 2016).

Previous research on ESL writing reform has focused on the issue of product-based to process-based instruction as a key pedagogical issue. In this development, process-genre pedagogy was identified as an important methodology, which is a combination of planned writing procedures and genre consciousness. The example of Hong Kong suggests that this strategy might help to increase student motivation, writing skills, and teacher consciousness (Lee & Wong, 2014). Nevertheless, the literature also emphasises that these benefits do not always manifest themselves in a similar manner in different contexts. Practices based on products tend to prevail and sometimes refer to linguistic correctness at the expense of creativity, resulting in formulaic products by the students. Therefore, researchers have proposed a more enduring and holistic use of process-based methods to promote greater involvement and more rewarding writing progress (Lee & Wong, 2014; Shah, 2020).

Recent studies have been examining the contributions of technological innovations to changing the nature of teaching writing. Use of digital tools, including e-book writing software, has been linked with academic writing performance, specifically in aiding the process of drafting, revising, and publishing academic writing (Li et al., 2023). Although these tools can be closely associated with process-based pedagogies, their effectiveness seems to be conditioned by their implementation in the instructions. Technology, on most occasions, is only employed to boost participation as opposed to promoting long-term pedagogical assimilation throughout the writing process. Likewise, Artificial Intelligence (AI)-based solutions have been asserted to increase student engagement, deliver individualised feedback, and improve the quality of writing. However, issues of excessive reliance and decreased learner autonomy are still pronounced (Chung & Nguyen, 2026).

In addition to the pedagogical and technological advances, recent research has laid more emphasis on motivational and self-regulated learning techniques. The students with high achievement can be described as having better self-efficacy, more interest and a growth-oriented mindset, which has been linked to more common self-regulated writing strategies and higher writing competence (Bai et al., 2022). Nonetheless, these results indicate that these

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 63 (June 2026) PP. 25-49

advantages might not be equally shared among all learners, whereby the socio-cultural and contextual variables are important to inform writing development.

Generally, there is a definite trend in literature toward more process-based, technology-enhanced and learner-centred writing instruction. Still, in various settings and time frames, implementation is unequal, and it can be determined by factors, including assessment requirements, teacher readiness, and institutional factors (Azman, 2016). This implies that, as much as pedagogical innovations keep on changing, their success is highly dependent on the way they are implemented in the actual classroom.

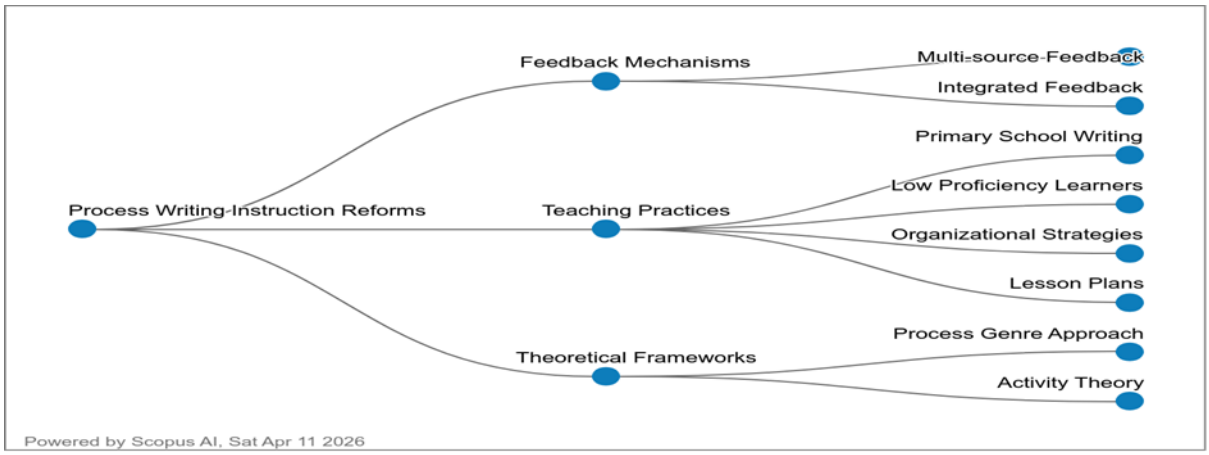


Figure 1: Concept Map for Process Writing Instructions Reforms

Methodology

Data Collection

Data collection is a crucial activity of any review study since it defines the credibility, transparency and reliability of the findings produced. Within the framework of the current research, aimed at exploring the development of process writing teaching in ESL teaching between 1997 and 2026, systematic data collection will ensure that the analysis will be based on a rich and representative literature. Through the use of a systematic and clear search strategy, the study can locate pertinent research on the different pedagogical methods. This includes process, product, genre and hybrid writing instruction, as well as other new research on digital and multimodal writing.

Intensive data collection also minimises selection bias and enhances sampling consistency, enabling comparisons of different writing instruction approaches and their development. This is particularly important when examining the shift in process writing from a mainly theoretical basis to a classroom-oriented, technology-based practice, especially in primary ESL practice. Ultimately, a systematic data collection approach strengthens the validity of the review by ensuring that conclusions are based on reliable evidence. This, in turn, supports a clearer understanding of trends, shifts, and emerging directions in process writing instruction.

International Journal of Education, Psychology and Counseling
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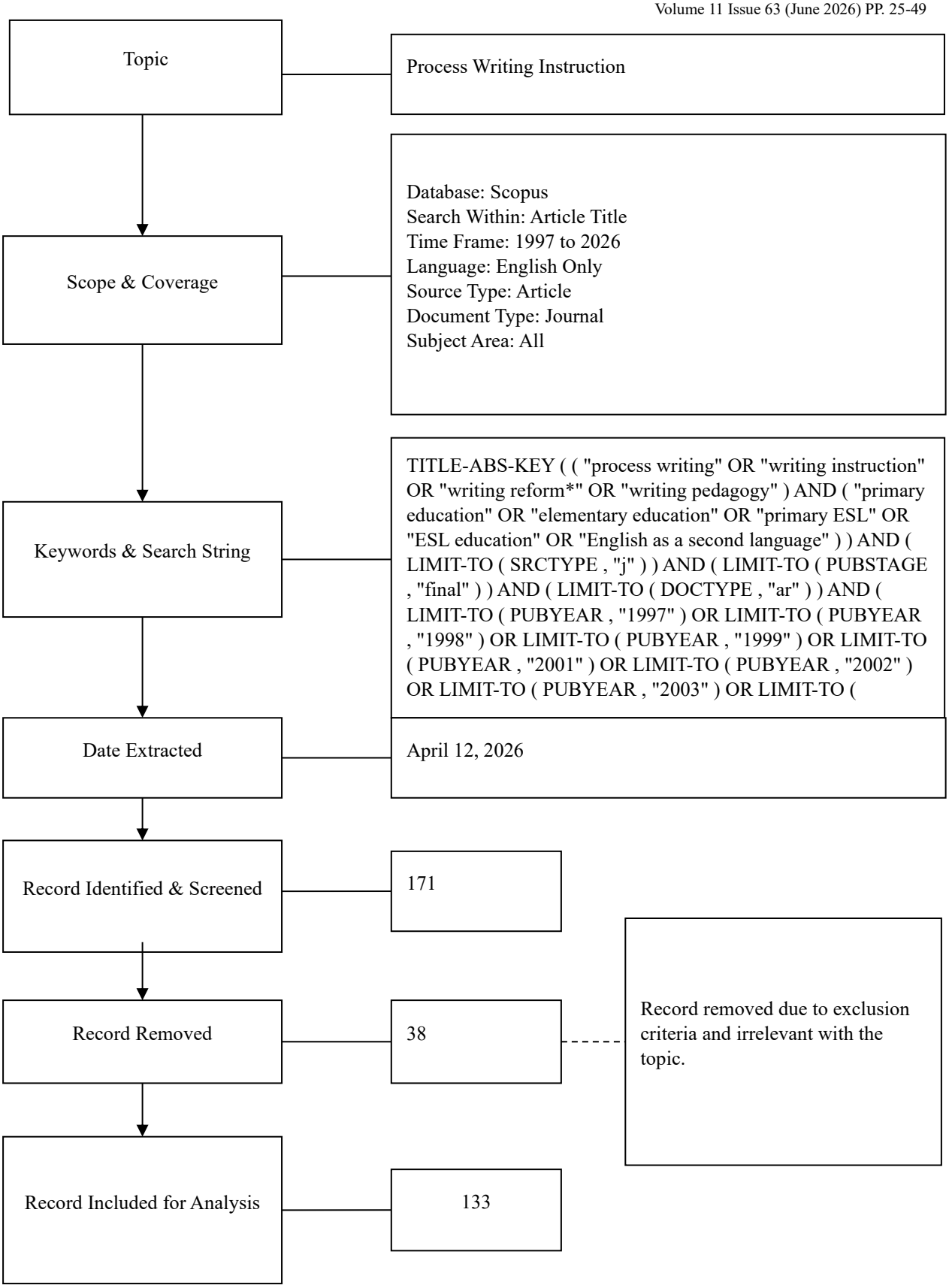


Figure 2: Flow Diagram of the Search Strategy

Source: (Moher et al., 2009; Page et al., 2021)

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The data collection process of this chronological review was performed by means of a single-step, systematic search of the Scopus database, which was chosen due to its extensive coverage of high-quality and peer-reviewed international journals and strong indexing standards. This, in turn, contributes to the scholarly authority of the corpus of the review. The search plan was developed to reflect development of process writing instruction in primary and ESL-related settings using the combination of main conceptual terms of writing pedagogy, i.e., "process writing," "writing instruction," "writing reform*," "writing pedagogy," "primary education," "elementary education," "primary ESL," "ESL education," and "English as a second language." The search was limited to the title of articles to achieve the level of accuracy and relevancy, and to give preference to the studies that have a direct focus on the phenomenon under review instead of being mentioned in abstracts or keywords in a peripheral or incidental way. The search was narrowed down further with the inclusion parameters being journal articles only, English language only, final publication stage, and source type restricted to journals, with the review to run between 1997 and 2026. Though the Scopus query string covered the indexed years of publication on a wide scale, the analytical period of the review was specifically set to the period between 1997 and 2026 in order to match the desired chronological context. This search resulted in 171 records to be identified. After title-based and relevance screening, 38 of the records had to be culled as they did not adequately fit the conceptual, contextual or methodological areas of the review, which left 133 articles to analyse. Systematic data collection is important in a chronological review to ensure the reliability of the analysis, as the search is transparent, repeatable, and consistent. The dataset is highly relevant to the purpose of the review. Observations of the shifts, continuities, and patterns in process writing instruction can be viewed as evidence-based historical change rather than sampling bias. In this respect, a judicious choice of databases, clear search limits, and a systematic screening process constitute the methodological basis of the generation of a credible description of the evolution of process writing teaching throughout the years.

Data Clustering

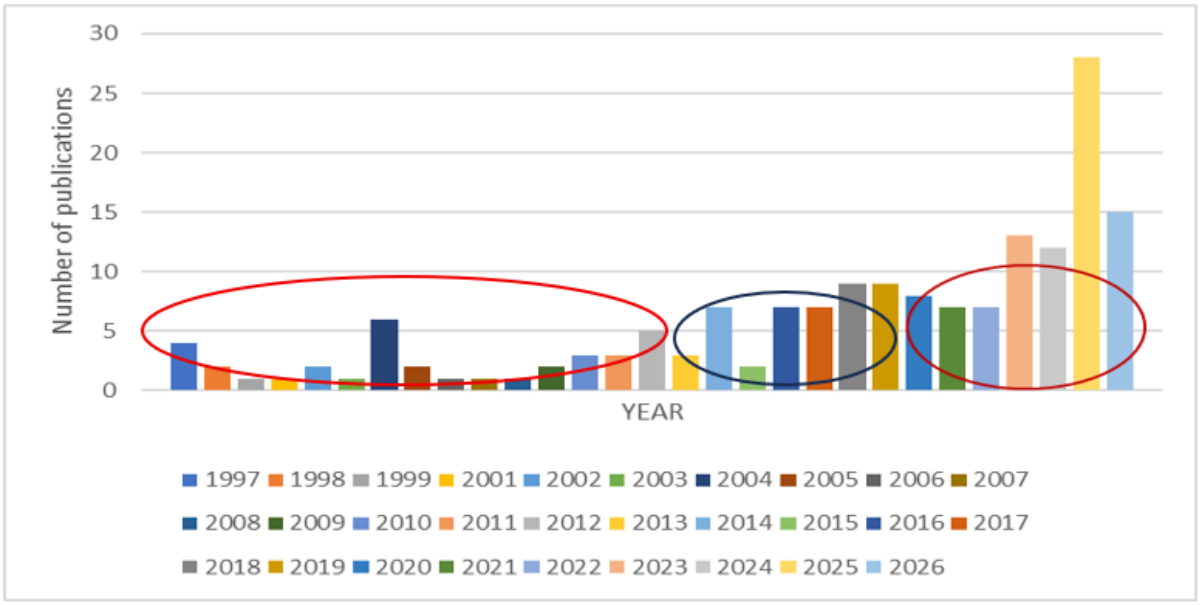


Figure 3: Number of Publications per Year

International Journal of Education, Psychology and Counseling
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Phase 1: Emergence and Conceptual Grounding (1997–2012)

Based on the distribution of publications on Process Writing Instruction, the data reveal clear inflection points that support a three-phase classification, reflecting shifts in research productivity and pedagogical focus over time. The initial phase, Emergence and Conceptual Grounding (1997-2012), is marked by a low and inconsistent number of publications (usually one to five per year, with peaks, such as in 2004 with six studies). This is the emergence and establishment of process writing as a pedagogical paradigm, rooted in theories such as the Cognitive Process Theory of Writing. The studies in this phase were mostly conceptual and exploratory, promoting process approaches over product approaches to writing instruction and stressing the cognitive and recursive nature of writing. The relatively sparse output suggests that the field was still developing theoretical clarity and had not yet achieved widespread empirical traction, particularly within primary and ESL contexts.

Phase 2: Pedagogical Expansion and Classroom Integration (2013–2019)

The second phase, Pedagogical Expansion and Classroom Integration (2013-2019), presents significant growth and stabilisation in research output, with a steady publication rate of three to nine studies annually. This phase highlights a shift from theoretical discussions to pedagogical studies, in which researchers began to explore classroom applications of the writing process. Researchers examined teaching approaches, scaffolding, and curricula alignment, mirroring educational reforms that promoted process-oriented, student-centred writing instruction. The consistent rate suggests the field had matured, and that process writing was not just being discussed but actively implemented and tested in various educational settings.

Phase 3: Acceleration, Digital Mediation, and Pedagogical Reframing (2020–2026)

The third stage, Acceleration, Digital Mediation, and Pedagogical Reframing (2020-2026), is characterised by rapid and sustained growth in publications, reaching a peak of 28 in 2025 and continuing at a high level in the following years. This surge is a response to heightened interest in digital technologies, multimodal approaches, and shifts in education. Studies during this period go beyond implementation to more sophisticated aspects such as digital mediation, process writing and teachers' roles in interpreting and putting into practice process writing pedagogy. The growth in output indicates that the research has transitioned into a period of rapid growth and diversification, where the focus has shifted to contextual practice, innovation and pedagogic decision-making. In general, the categorisation into three phases is warranted by discernible shifts from low, intermittent productivity to consistent productivity and finally to rapid growth, offering a coherent and justified picture of the evolution of process writing instruction research.

Result and Discussion

Emergence and Conceptual Grounding (1997–2012)

The period 1997-2012 can be identified as a pre-history stage of process writing instruction, characterised by an ongoing, yet substantial shift, from conceptual to pedagogical concerns. This progression can be further broken down into a review of the literature across interrelated stages: initial conceptual and contextual issues, then pedagogical coverage, and finally

classroom integration. Over this period, the research focus has changed from broad discussions of the role of process writing in L2 teaching to more specific areas of revision, cognition, instruction, and the use of new technologies for mediation.

In the first phase, the focus of the research was on conceptualising process-oriented writing in relation to current practice and institutional conditions. One of the issues was the gap between classroom practice and pedagogy. While research in varied settings also suggested that process-oriented strategies were mostly supported by teachers, in classrooms, their practice was partial and limited by exam pressure, inadequate training and school demands (Delaney & Hay, 1997; Pennington et al., 1997; Reichelt, 1997; Silva et al., 1997). Such results underscore the fact that initial studies were not as much concentrated on assessing the effectiveness of instruction but rather on the issues of the structural and contextual tensions that influenced the writing pedagogy. Meanwhile, more generalised analyses stressed that writing practices are firmly rooted in socio-cultural and institutional structures, which supported the perspective that writing teaching cannot be interpreted without reference to its context (Lindmark, 1998).

Based on these contextual findings, further research started investigating particular elements of the writing process, especially revision, coherence and cognition of the learners. Studies in this era indicated that learners exhibited improvements in linguistic accuracy with repetition drafts, though the effects of other instructional interventions were frequently small in real practice (Polio et al., 1998). Meanwhile, traditional beliefs about the organisation of text were undermined, and it was shown that the expectation of coherence differed among audiences and educational settings (Allison et al., 1999). The conceptual development was also remarkable, as the focus on cognitive processes increased, especially the role of noticing in language learning. The importance of cognitive engagement in process writing was supported by Qi and Lapkin (2001), who asserted that the depth and quality of learner attention were more crucial to writing development than the surface. This essentially supports the notion that cognitive engagement was important to process writing. These advances represented a change in general advocacy to a more detailed learning of the interaction between learners and writing processes.

With the development of the field into the early 2000s, increasingly more pedagogically oriented studies were conducted. They investigated the role of instructional design, genre awareness, and disciplinary practices in the development of writing (Dyer & Friederich, 2002; Levis & Levis, 2003; Spelman, 2002). The early years of digital mediation of writing instruction were also observed during this period. The potential of online communication and technology-mediated interaction to facilitate iterative writing processes began to be researched, even though technology was not the focus at the time. Simultaneously, the results showed that the usefulness of these tools has been strongly dependent on classroom structure, interaction with students, and social interactions (Rose, 2004; Ware, 2004). Linguistic and cognitive views were also enforced by the works which focused on interlanguage development, fluency, and how linguistic knowledge can be applied in writing activities (Hirvela, 2005; Makalela, 2004; Van Gelderen & Oostdam, 2005).

The mid-phase developments are characterised by the evident growth of pedagogical interest, where process writing is becoming more and more associated with strategy teaching, disciplinary literacy, and academic outcomes, in general. The studies have revealed that teaching methods that included the use of cognitive strategies might result in long-term gains in writing performance, as well as in academic achievements and performance on tests (Girill, 2006; Olson & Land, 2007). The results of this research indicate that process writing was no

longer considered a single classroom practice but rather a part of literacy practices across various disciplines. The change can be viewed as a move towards the integration of writing pedagogy into the wider educational aims and requirements of the learner.

The subsequent phase (2009-2012) is more focused on classroom practices, assessment practices, and facilitated instruction. Studies examined the incorporation of digital tools like blogs and online platforms, indicating them to be used in enabling collaborative and iterative writing (Jee, 2009). Concurrently, research supported the significance of explicit strategy teaching and feedback systems to enhance writing performance and accuracy (Hartshorn et al., 2010; Olson & Land, 2007). Notably, it was also shown that the development of accuracy did not always result in the development of fluency or rhetorical level, suggesting the complexity of writing development. It was revealed that collaborative learning conditions would aid in student growth and teacher learning, thus the social aspect of the writing instruction (Fry & Griffin, 2010).

Other advancements in this time frame are more focused on diagnostic examination, metacognitive consciousness and classroom discussion. Research proved that fine-grained assessment methods might give more accurate indications about the writing skill (Kim, 2011). Meanwhile, classroom interaction was proven to be an important factor that contributes to the development of metacognitive awareness and writing identity (Laman, 2011). By 2012, studies were starting to focus on systematic support systems, such as computer-based writing programmes, which were linked to better writing quality, speed, and confidence among learners (Pullens et al., 2012). Simultaneously, more systematic considerations emphasised the necessity of taking into consideration sociolinguistic and contextual diversity in writing instruction (Hirvela et al., 2012; Reichelt et al., 2012).

Throughout the 1997-2012 period, there were a number of major trends which may be singled out. First, the research direction shifted away from general conceptual arguments to the more specific issues of cognitive processes, revision practices, instructional strategies, and digital mediation. Second, methodological strategies grew much more heterogeneous and started to be exploration and descriptive studies, as well as experimental, longitudinal and classroom-based studies. Third, process writing was conceptualised in many new ways, undergoing cognitive, social, and technological aspects. Lastly, an increased awareness of writing instructions being context-specific and mediated by classroom practices, teacher actions, and institutional limits was growing.

Overall, Phase 1 is an important shift in the conceptual exploration towards a pedagogical basis. The enactment of process writing in the classroom, although it instituted process writing as a recursive, cognitively involved and socially situated practice, was still uneven and limited by the contextual realities. These ongoing conflicts of ideals of pedagogy and classroom reality led to the situation where subsequent research was to shift towards more systematised, practice-based research, which preconditioned the next stage of development.

Pedagogical Expansion and Classroom Integration (2013–2019)

The Phase 2 literature (2013-19) demonstrates a distinct era of pedagogical growth where process writing teaching shifted past the wide theoretical approbation and became more integrated into the classroom, strategy teaching, multimodal writing, and online assistance. The findings and discussion sections across these clusters reveal that the focus of research has

moved away from facilitating conducive writing conditions. This pattern suggests that the field was becoming more classroom-centred, more evidence-based, and more sensitive to contextual differences in how process writing was implemented.

The early transition phase, covering 2013 and 2014, is marked by growing interest in expanding the forms and conditions through which writing could develop. Lenters and Winters (2013) discovered that literature-based, arts-infused, and digital multimodal work created a highly supportive writing environment for fifth-grade learners. Raoofi et al. (2014) reported that university students used a range of writing strategies, including pre-writing activities and awareness of writing problems, while more proficient writers demonstrated stronger use of metacognitive strategies such as idea organisation and content revision.

The same 2014 cluster also shows a growing effort to connect process writing with collaboration, technology, and context-sensitive pedagogy. Li et al. (2014) established that a wiki-based collaborative process writing pedagogy had a positive, though not statistically significant, effect on writing ability, while producing a significant positive effect on students' writing attitudes. This is important as it suggests that even when measurable writing gains were modest, process-oriented digital collaboration could still strengthen learner engagement and disposition toward writing (Hendricks, 2014). Link et al. (2014) also demonstrated that automated writing evaluation had pedagogical potential. Zhou et al. (2014) further specified it by showing scant correspondence between the goals of adult learners and teachers regarding grammar improvement in writing. Students were more concerned with formal grammatical correctness, whereas teachers usually tried to achieve more advanced or stylistically correct writing characteristics. This implies that process writing teaching at this level was still grappling with conflicts of expectations by learners and the pedagogic goals in the larger picture. The same was also observed by Hawkins and Certo (2014), who concluded that elementary boys became more willing to engage in poetry writing when the environment allowed voice, choice, mentor texts, and performance.

The 2015-2017 phase of pedagogical diversification is an indication of a broader research focus and instructional design. Dobson (2015) suggested a theoretical framework of creative writing as a response whereby weaker framing in pedagogy might allow identity development and more expressive engagement between Year 6 boys. Poole and Preciado (2016) highlighted that although elementary teachers recognised the importance of touch typing, it was not widely implemented in classroom practice. O'Hallaron and Schleppegrell (2016) identified a discrepancy between the typical assessment standards of voice and the scientific writing requirements and concluded that there was a need to have more refined rubrics.

A number of 2016 studies also indicate that digital and ecological views were gaining prominence. According to Barrot (2016), e-portfolios based on Facebook had a positive effect on the writing of ESL students, though there were still practical issues. This result indicates that process-based assessment and reflection may be facilitated in social networking environments, yet the implementation success still relied on the conditions in local classrooms. Kibler et al. (2016) demonstrated that the writing teaching to adolescent English language learners by secondary teachers was influenced by synergistic ecological factors, such as expertise, testing, grading, placement, and disciplinary disconnects. The discussion suggests that process writing did not take place in an unbiased setting; it was constantly mediated by the institutional and professional restrictions. De Smedt et al. (2016) discovered that the self-efficacy to ideation, autonomous motivation, and teacher efficacy were positively related to the

writing performance of late elementary students, whereas the controlled motivation was negatively related to the quality of narrative writing. These findings are significant since they position learner motivation and teacher confidence as meaningful correlates of writing development. Sessions et al. (2016) further revealed that iPad applications supported more cohesive, sensory-rich stories and increased motivation and social engagement during writing instruction. Together, these studies reveal that by the middle of Phase 2, process writing was increasingly examined through the interaction of technology, motivation, teacher agency, and classroom ecology.

The 2017 studies represent an important point of expansion since they bring together discipline-specific writing, genre pedagogy, strategy use, and large-scale school implementation. Mitchell et al. (2017) asserted that writing self-efficacy improved after a discipline-specific writing course in nursing, while anxiety remained stable and negatively related to self-efficacy. Caplan and Farling (2017) indicated that collaborative writing in a genre-based teaching and learning cycle helped make rhetorical, linguistic, and strategic choices visible to learners and supported the transfer of negotiated language into later independent writing. Raoofi and Maroofi (2017) and Raoofi et al. (2017) both established that self-efficacy, task value, motivation, and strategy use were significantly associated with writing performance. At the same time, students with stronger writing ability reported higher use of metacognitive, cognitive, affective, and effort-regulation strategies. Paiz (2017) also stated that online writing labs were widely used in EFL contexts, though mainly as teacher resource tools, with barriers such as linguistic accessibility and cultural appropriateness limiting direct student use.

Rietdijk et al. (2017) provided the largest 2017 intervention and discovered that a full-fledged writing program enhanced the writing performance of upper primary pupils and the degree to which writing strategies were taught by the teachers. The professional development and coaching aspect, in turn, was complementary, increased the number of lessons applied, and, indirectly, enhanced student performance. The discussion notes that the introduction of a program, sustained teacher support, and the quality of implementation were important in improving writing. This experiment represented a significant change toward large-scale, school-based intervention, as process writing instruction was increasingly institutionalised in primary education. Taken together, this stage indicates that process writing was more influenced by the teaching of strategies, the psychology of learners, digital mediation, and classroom ecology, and became entrenched in the realm of applied pedagogy.

The latter consolidation phase, covering 2018 and 2019, reflects a stronger focus on implementation quality, differentiated support, and more explicit instructional frameworks. Lee and Handsfield (2018) argued for code-meshing as an instructional approach that welcomed multiple languages in writing classrooms. Rietdijk et al. (2018) reported that communicative writing, process writing, and writing strategy instruction were poorly implemented in Dutch primary classrooms, despite the beneficial effects of allocated learning time and a focus on active learning. This finding is significant as it suggests that, even in writing-sensitive systems, classroom implementation was limited. Arrimada et al. (2018) revealed that struggling first-grade writers' handwriting and, in most cases, composition quality improved with response-to-intervention instruction in either transcription or transcription and planning. The talk suggests that, in systems that promote process writing, instruction is becoming more nuanced and more responsive to those who are not responding to classroom teaching. Stevens and Ebsworth (2018) highlighted that formative assessment rubrics increased bilingual teachers' awareness of discourse structure and the writing process, and facilitated more targeted instruction, flexible

grouping, and monitoring of students' growth. This suggests that assessment instruments were starting to be used more as diagnostic tools than as evaluative measures.

The 2019 studies show a continuation of the build-up of explicit strategy instruction, transfer, computer feedback, and awareness of affect. Arrimada et al. (2019) asserted that first-grade students who were taught explicit planning strategies showed higher structure, coherence, and quality, and these effects were maintained at follow-up. Teng (2019) noted that both text structure instruction and self-regulated strategy instruction were more effective than traditional writing instruction for sixth-grade ESL students. However, each had a special focus: self-regulated strategy instruction improved writing quality, while text structure instruction led to improved inclusion of main ideas. Cui (2019) stressed the importance of the genre-based pedagogy in helping first-year L2 writers to transfer writing, suggesting that process writing was increasingly tied to transfer across academic disciplines. Chong (2019) reported that students' views of e-feedback provided on Google Docs showed the opportunities and challenges of online feedback in process writing classrooms. On the other hand, Baker and Lastrapes (2019) indicated that a digital writing application led to an increase in the quality and quantity of elementary students' writing, longer writing time beyond the school day, and served special populations.

A further important strand in 2019 concerns learner psychology and feedback interaction. Sabti et al. (2019) reported that writing anxiety was negatively correlated with performance, while writing self-efficacy and achievement motivation were positively related. This indicates that process writing instruction in this later period was becoming more attentive to affective conditions that shape student performance. Li and Razali (2019), reviewing the Malaysian context, argued that persistent low writing performance was linked to problems in implementing the process-based approach, suggesting that longstanding curricular adoption did not guarantee effective classroom practice. Cheng (2019) suggested that ESL graduate students generally valued peer feedback, though they felt less confident about their own reviewer abilities, and the quality of feedback improved over successive attempts. The discussion highlights the importance of teacher guidance and socio-cultural factors in shaping peer response practices. In general, this period is indicative of a more advanced stage where process writing studies were more sophisticated, intervention-based and highly interested in the quality of implementation, factors affecting the learner, and digital integration.

Over the entire 2013-2019 span, a number of prevailing trends emerge. First, there was a change in the research focus, away from supportive/exploratory writing settings toward a more explicit concern with the instruction of strategy, self-regulation, assessment, teacher enactment, and differentiated support. Second, there was a much greater variety of methodologies, as quasi-experimental designs, mixed-methods research, longitudinal investigation, single-case analysis, correlational investigation, action research, and qualitative investigation of classrooms emerged during the phase. Third, digital mediation became much more salient than during the previous era, as wikis, automated writing evaluation, e-portfolios, iPad applications, online writing laboratories, e-feedback, and digital writing platforms were incorporated into the writing pedagogy. Fourth, primary education emerged as a special area of research, particularly in writing programs in upper primary, first-grade interventions, bilingual formative assessment, and elementary digital composition.

Overall, Phase 2 proposes transitioning from pedagogical expansion to sustained integration in the classroom. Towards the conclusion of this era, there were more organised, contextualised, and closely intertwined instructions in process writing, which were more closely tied to teacher performance, student psychology, and learning environments based on digital technologies.

Acceleration, Digital Mediation, and Pedagogical Reframing (2020–2026)

Phase 3 (2020–2026) reflects a rapid expansion of process writing research, characterised by increased integration of digital technologies, multimodal approaches, and AI-supported writing instruction. Throughout these eras, the findings and discussion sections reveal that the research shifted in the direction of comparing process-oriented instruction with product-based or paper-based instruction to more intricate issues such as digital mediation, teacher beliefs, multimodal composing, peer feedback, transfer of genre, collaborative writing, AI-supported revision, and ethical use of technology. Overall, this phase reflects a field that became more technology-responsive, more intervention-driven, and more attentive to learner agency and classroom realities.

In the early digital-shift phase, 2020 to 2021, studies focused on whether process-oriented writing instruction could be strengthened through digital tools, explicit strategic teaching, and closer attention to teacher and learner mediation. Tablet-based digital writing instruction has been shown to improve primary students' writing quality, increase word production during writing, and enhance writing knowledge. Additionally, blog sharing, multimedia use, and online interaction enrich the instructional experience (Yamaç et al., 2020). Kasim and Ismail (2023), by contrast, revealed that product-oriented teaching remained preferred in practice, resulting in linguistically accurate, yet patterned and less creative student writing, and recommended greater use of process techniques. Squire and Clark (2020) discovered that emerging bilingual fourth graders benefited from more knowledgeable support, two-step graphic organisers, and partner talk when learning opinion writing. Deseures et al. (2020) mentioned that elementary teachers' beliefs about writing and grammar were still centred on sentence-level, posing barriers to integrated writing instruction. Tigchelaar (2020) also revealed that students can engage strategically in process writing without adhering to the teacher-designed steps, demonstrating the need for adaptable teaching. Rodríguez-Málaga et al. (2021) demonstrated that only the comprehensive version of strategy instruction, with explicit writing plans, resulted in long-term gains for compare-contrast writing. Sánchez-Rivero et al. (2021) observed that evidence-based writing strategies were rarely adopted, particularly in high school; teacher efficacy, preparation, and teaching attitudes were related to their implementation. Teng (2021) demonstrated that linking text structure and self-regulated strategy development had particularly robust effects on primary ESL students. In summary, this period has seen a move toward more structured, strategic, and technologically enhanced teaching of writing, as well as the need to consider teacher beliefs and classroom contexts in implementation.

The diversification and repositioning period between 2022 and 2024 represents greater pedagogic diversification. Reid and Moses (2022) established that comic composition exhibited sophisticated multimodal orchestration, suggesting that greater space should be made for more than just language in writing classrooms. Chandrasoma (2022) noted that community service education in ESL writing was tokenised, and championed the importance of experiential learning, application, participation and critical judgement. Morita-Mullaney et al. (2022) indicated that the influence of teachers was crucial for bilingual learners' writing,

especially in better dual-language immersion programs. Wu et al. (2023) discovered that Chinese medical students' academic writing improved over time with peer feedback and that improvements were sustained. Nikbakht and Miller (2023) asserted that teaching reading strategies for making intertextual connections enhanced synthesis writing, particularly in the way students connected the source texts and integrated their ideas with their own voice. Kubokawa (2023) posited that multilingual poetry helped innovative writing strategies and teacher collaboration between ESL and ELA educators. Nguyen et al. (2023) indicated that Vietnamese primary teachers valued writing, though they were challenged by students' lack of experience and imagination, and lack of time in their classrooms. de Abreu Malpique et al. (2023) highlighted that teachers spent little time on writing, focused more on basic skills rather than process skills, and preparation and self-efficacy predicted practice. Moody et al. (2023) demonstrated the lack of L2 writing in pre-service teacher education. Kumar et al. (2024) suggested that dynamic assessment supported grammatical accuracy through mediation, while Green (2024) highlighted that relational literacy coaching boosted the efficacy of a primary teacher as a writing teacher. Rahman et al. (2024) underscored the need for digital support for synthesis writing. This period shows a repositioning of process writing as a multimodal, contextual, and teacher-mediated practice, influenced by institutional readiness, professional development, and individual differences among learners.

The most recent phase, which is the most disruptive, is the AI-integrated and pedagogical redesign phase, 2025-2026. Malpique et al. (2025) indicated that primary teachers appreciated computer-assisted writing, yet devoted little time to it and lacked the time and confidence to teach it. Zhang et al. (2025) found that continued use of AI learner corpora hinged on teacher efficacy and interest. Madasamy Lingaraj et al. (2025) asserted that mobile-based writing using WordPress and Hemingway Editor enhanced grammatical and stylistic aspects of writing and learner autonomy. Nguyen et al. (2025) noted that AI-mediated informal digital learning supported genre awareness, multimodal rhetorical design, and career-oriented writing. Still, teachers expressed mixed feelings with regard to authenticity. Jaramillo et al. (2025) discovered that integrating Grammarly and ChatGPT into the writing workshop model led to better grammar, coherence, organisation, confidence, and engagement. Gu et al. (2025) stated that the process-genre approach enhanced fluency and complexity rather than accuracy, indicating the need for support with form. Deng and Sitthitikul (2025) observed that the guided dialogic peer feedback improved writing in blended learning. Al-Barakat et al. (2025) posited that blogging improved primary students' written expression. Corcelles-Seuba et al. (2025) indicated that peer tutoring improved almost all dimensions of writing and increased motivation. Yarmi (2025) put forth a system-focused writing instruction model which highlighted the importance of policy, curriculum and teacher training. Moreover, Yeung and Hu (2026) demonstrated that direct and indirect data-driven learning for that-clause use was effective, with different retention and variety. Li et al. (2026) reported that using augmented reality and generative learning strategies improved writing via motivation and metacognition. Al-Othman (2026) found that students liked the use of AI chatbots as writing tutors for lexical, syntactic, semantic, pragmatic, cognitive, and metacognitive development. George and Sharma (2026), Abdeta et al. (2026), and Memon et al. (2025) demonstrated that collaborative writing boosted writing, motivation, confidence, and social development. Rashid et al. (2025) found that ethically integrated generative AI significantly improved writing in resource-constrained settings when embedded in strong pedagogy. González-Laguna et al. (2026) observed that self-efficacy is the best predictor of ICT use for writing instruction. This stage represents a pedagogical redesign, with AI, digital technologies, collaboration and teacher readiness as integral to writing instruction, rather than add-ons.

Over the entire 2020-2026 period, there are three key trends. First, the emphasis shifted from digital delivery and explicit strategy instruction to the holistic redesign of writing instruction through AI, multimodality, collaboration, and data-driven teaching. Second, research designs varied, including quasi-experimental, longitudinal, mixed-methods, corpus, survey, case study, and thematic review. Third, process writing was further reframed as a social, digital, and dynamic process, influenced by teacher efficacy, learner motivation, and institutional factors. In sum, Phase 3 is the period of rapid growth in which the process of writing-to-teach transformed the service of process support in the classroom into a more dynamic mediation of digital support, collaboration, and AI-supported learning.

Conclusions

This temporal review examined the development of process writing instruction in primary ESL education over a specific time frame (1997-2026) by systematically analysing data extracted from the Scopus database. A total of 133 articles were reviewed to understand changes in the research, pedagogical, and methodological approaches to process writing. The systematicity of the three stages of time, Emergence and Conceptual Grounding (1997-2012), Pedagogical Expansion and Classroom Integration (2013-2019), and Acceleration, Digital Mediation, and Pedagogical Repositioning (2020-2026), was applied to systematically understand the way the field evolves.

Synthesis of findings reveals a slow yet steady shift in research on process writing instruction. Initial research was mainly theoretical, with an emphasis on establishing writing as a recursive, cognitively motivated process. This was followed by a period of heightened empirical research exploring classroom practices, instructional strategies, and curriculum alignment. A significant increase in publishing output and a move towards incorporating digitality, multimodality in learning, and more sophisticated pedagogical issues are evident in the latest period. These developments are indicative of technological progress and an increased interest in contextualised and practice-oriented research.

There are some essential patterns to be distinguished throughout the timeline. The emphasis of research has shifted from the conceptual justification to the practical implementation, and more recently to adaptive and technology-mediated pedagogy. There has also been a transformation in methodological approaches, with descriptive and exploratory methods replaced by more varied and sophisticated approaches, such as data-driven, digitally supported studies. The adoption of innovative technologies, such as AI and digital platforms, has also helped transform the concept of writing instruction, signalling greater maturity and diversification in the sector. Chronological organisation of the literature helps provide a clearer picture of the field, as it shows developmental paths that might not be evident in thematic reviews. This method reveals changes in research priorities, identifies periods of development and transformation, and provides a systematic view of how knowledge has been built over the years. It also allows a better understanding of the way in which previous theoretical wisdom has contributed to subsequent pedagogical activities and technological advancements.

The trends observed have significant implications for the practice and future studies. The trend toward digitally mediated and learner-centred further implies that educators should be able to assume more flexible and contextualised teaching methods. Meanwhile, the growing focus on the role of teachers and classroom reality is a sign that the notion of pedagogical enactment is a crucial field that needs to be further researched. Interdisciplinarity and an emphasis on

practical classroom applications in future research can enrich the field by ensuring that theoretical developments have a positive impact on practice.

This review has a number of limitations despite its contributions. Using a single database could have omitted other potential studies indexed in other databases, and using specific keywords could have limited the retrieved literature. Also, the time restrictions and the selection criteria might have affected the depiction of some trends. It is hoped that in the future, more studies will be done to cover more databases, refine search strategies and examine various educational settings to offer a more in-depth insight.

To sum up, chronological reviews provide a worthy method of dynamic development of research. Such analyses generate valuable data on trends in growth, transformation, and innovation by structuring studies in terms of time. When applied to process writing instruction, this temporal view of the process shows that theory, practice, and technology are in a state of constant interrelation, offering a strong foundation for guiding future developments and strengthening evidence-based educational practices.

Acknowledgements:	The authors would like to offer their profound gratitude to Universiti Pendidikan Sultan Idris, which has provided the requisite resources and support during the course of this research. The contribution of colleagues and peers who shared their valuable input and positive feedback is highly appreciated, and it improved the quality of this paper to a great extent.
Funding Statement:	There is no funding for this study.
Conflict of Interest Statement:	The authors declare that they have no conflicts of interest to report regarding the present study.
Ethics Statement:	This study did not involve any human participants, animals, or sensitive data requiring ethical approval. The authors confirm that the research was conducted in accordance with accepted academic integrity and ethical publishing standards.
Author Contribution Statement:	All authors contributed significantly to the development of this manuscript. Sri Roshini Devi d/o Theva Manoharam, was responsible for the conceptualisation, methodology, and overall supervision of the study. All authors handled data collection, analysis, and interpretation of results. Farah Nachiar contributed to the literature review, drafting, and critical revision of the manuscript. All authors read and approved the final version of the manuscript prior to submission.

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