Corpus-driven genre pedagogy of English for research publication purposes: Toward an ELF-referenced critical teaching framework

Arif Husein Lubis

Korean Language Education Department, Universitas Pendidikan Indonesia
lubis_ah@upi.edu

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Abstract

Ever since the non-native English speaker (NNES) and novice writers became actively engaged with international publications, the pedagogy of English for research publication purposes (ERPP) has received considerable attention from the EAP/ESP scholars using corpus-driven genre pedagogy. However, the quality of its implementation is still understudied. This study, therefore, critically reviews the qualitative milestone of corpus-driven genre pedagogy of ERPP. Nineteen (19) relevant research-based articles on corpus-driven genre pedagogy in the last 15 years from 2004 to 2019 were selected from Google Scholar and three top-tier journals in this realm: Journal of Second Language Writing, English for Specific Purposes, and Journal of English for Academic Purposes. Three stages were conducted: preparation, screening and validation, and content review. The findings encompassed: 1) the materials development process, 2) the learners’ engagement, and 3) the development of learners’ research writing competencies and certain soft skills. The findings become the bases for proposing a framework of ELF-referenced critical corpus-driven genre pedagogy of ERPP.

Keywords: corpus-driven genre pedagogy; critical pedagogy; ELFA; English for research publication purposes; systematic review

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INTRODUCTION

The realm of academic writing has witnessed the notable transition from teaching English as a second/foreign language to English as a global lingua franca in conjunction with the growing influx of participation and contribution of non-native English speaker (hereafter NNES) writers (Hyland, 2016; Hynninen & Kuteeva, 2017) in international scholarly publications. English as a lingua franca is being embraced to eliminate the linguistic boundaries pertaining to knowledge dissemination and acquisition in all sciences; in other words, English as a lingua franca in academic settings (hereafter ELFA) (McDowell & Liardét, 2018). Such circumstances lead the NNES writers to consciously accept English as the medium of disseminating their works to not only reach wider audiences (J. Flowerdew, 2013) but also seek recognition as part of the circle of international academics (Ingvarsdóttir & Ambjórnssdóttir, 2018). The significance of ELFA also gives effects on the stakeholders of the journals. Many reputable journals have started to reframe the language norms and standards in processing the manuscripts (Kuteeva & Mauranen, 2014; Mauranen, 2012; McKinley & Rose, 2018). They initiate more tolerance on the ELF varieties, but are still concerned with the quality of the generic conventions.

The existing consensus about embracing ELF in the realm of academic writing and its pedagogy is associated with the evolving mantra in the world of academia from “publish or perish” (Huang, 2014) or “go public or perish” (Feng & Shi, 2004) to “publish internationally or perish.” The pressure of publications in the international and reputable journals has been articulated over thirty-five years (Li & Flowerdew, 2009; Salager-Meyer, 2014), causing double burdens for the NNES and/or novice writers. The academic contribution through high international publication rate can elevate the reputation of the universities, including in non-Anglophone countries (Li, 2016, 2019). More educational advancement can, therefore, be achieved and more financial prosperity for the country, universities, and individuals can be gained.

The growingly blatant pressure of publications in international journals raises some challenges of the NNES or multilingual or novice writers in the effort of disseminating their research. Discursive challenges (language-related) encompass lack of understanding of the expected genre conventions from the journals and
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 reviewers, i.e. generic structure, rhetorical structure, lexicogrammatical features, and vocabulary repertoire (Cargill, 2019; Huang, 2010, 2017; Hyland, 2016; Ma, 2019; McDowell & Liardét, 2018) or the acceptable standards (not emphasized on the native-like standards) of highly proficient academic writing (McDowell & Liardét, 2018; McKinley & Rose, 2018). Meanwhile, non-discursive challenges (non-language-related) pertain to lack of support of national research and publication spending, which decreases the journal publication rate of the writers (Huang, 2010). Last but not least is plagiarism issue (Huang, 2014; Li & Casanave, 2012). The lack of understanding about plagiarism such as citation and paraphrasing rules results in the unintentional practice of academic frauds.

The teaching of English for research publication purposes (TERPP): A corpus-driven genre pedagogy

The emergence of inquiry on TERPP is, therefore, motivated by the needs to enhance the awareness and repertoire of discursive practices of NNES and/or novice writers in multi-disciplinary discourses and across professional communities. Referred to its historical trajectory, ERPP is a branch of English for academic purposes (EAP) and/or English for specific purposes (ESP). It encompasses the description of language system utilized in the domain of research output presentation (Cargill & Burgess, 2008; McKinley & Rose, 2018). Hence, TERPP can be conceptualized as the pedagogical concerns to deliver the materials of ERPP. Its main goal is to mediate the development of research articles (hereafter RAs) writing in English (Cargill, 2019) and the whole process of international publications of NNES and/or novice researchers and academics as well as postgraduate learners (Cargill & Burgess, 2008; Chen & Flowerdew, 2018a; McDowell & Liardét, 2018) so that their international publication rate can be elevated. The implementation of TERPP can be in the forms of the accommodation of region-wide or university-based scientific writing courses/coaching programs in the countries within the outer and/or expanding circles (Cargill, 2019; Salager-Meyer, 2008), the train-the-trainer (ToT) workshop (Cargill et al., 2017) or the embedded research writing coaching within the university courses (Cahyono & Amrina, 2016).

Previous literature has reported some important points to be taken into account, comprising the elements of TERPP (Huang, 2017; Li, Flowerdew, & Cargill, 2018; Morton, 2016; Tardy, 2009) and the mediating approaches to succeed the teaching process (Cargill, 2019; Cotos, Link, & Huffman, 2017; Huang, 2014, 2017; Poole, 2016). The first element pertains to the learning materials encompassing the exploration of the texts, the writers, and the target discourse communities (Cotos et al., 2017; Tribble & Wingate, 2013). They are translated into four facets of genre knowledge (Huang, 2014; Tardy, 2009): 1) Formal knowledge (the repertoire of the generic structure, the rhetorical organization, and the lexicogrammatical features of the genre), 2) Process knowledge (the understanding of all stages of the publication process from analyzing the target audiences prior to writing the research article, finding the suitable journal, corresponding with the journal editors during the submission, revision, and editing process, and responding to the reviewers’ feedback), 3) Rhetorical knowledge (the correspondence strategy with the journal editors and reviewers so that the writers can convince the journal editors and reviewers of the significance of their research), and 4) Subject-matter or content knowledge (the understanding of the disciplinary contents in general and the topic-related contents in particular).

Consequently, the cognition of the literacy brokers in TERPP, especially the instructors, needs to be seriously taken into account. Teacher’s cognition entails the knowledge of the professional status, the experiences in the field of expertise, the beliefs of the target knowledge, and the understanding of the contextual factors (Borg, 2003). Ding and Bruce (2017) and Cheng (2015) asserted that EAP teachers are required to delve into and have an adequate repertoire of the specialized knowledge of the target genre including the writing cultures and the epistemological nature of the genre. Last but not least is the awareness of sociolinguistic and ideological variations. The knowledge of politics of international scholarly publication and English as the global lingua franca in academic settings as previously discussed needs to be obtained (Ding & Bruce, 2017; Hadley, 2015; Melander, Swales, & Fredrickson, 1997) since genre conventions may differ not only across genres and disciplines but also across journals.

There are two renowned approaches to conduct the TERPP programs: Data-Driven Learning (hereafter DDL) and Genre Pedagogy (hereafter GP) or the combination of both namely corpus-driven genre pedagogy. The former was firstly put forward by Johns (1990), while the latter was inspired by the notion of learning genre from Systemic Functional Linguistics perspective (Derewianka & Jones, 2012; Hyland, 2007).

The former teaching approach, DDL, is conceptualized as “the use in the classroom of computer-generated concordances to get learners to explore the regularities of patterning in the target language, and the development of activities and exercises based on concordance output” (Johns & King, 1991, p. 3). The main goal of DDL is to make the learners familiar with the direct exposure of the corpus data (usually in the form of electronic massive data of language use and patterns) (Johns, 2002), typically about certain focused lexicogrammatical features in writing classrooms (Chambers, 2005; Cotos et al., 2017; Poole, 2016; Tribble & Jones, 1990). The learners are also trained to be capable of operating the corpus tools, such as WordSmith, AntConc, and AntMover.

The latter teaching approach, genre pedagogy, entails explicit instructional strategies to maximize learners’ understanding of the analyzed genre (Huang, 2014; D. Lee & Swales, 2006). Two underlying theories of the implementation of GP are text-oriented and writer-oriented. The text-oriented GP aims to provide ample guidance in the process of elevating learners’ communicative competence of the genre by dealing with in-depth explorations of generic structure and linguistic...
features (from SFL perspective) of the genre. The writer-oriented GP involves two traditions: new rhetoric and academic literacy. In this theory, learners are encouraged to criticize the prescribed systems of language use in the analyzed genre.

A considerable body of research has reported the successful stories of using the combination of both approaches to TERPP, i.e. corpus-driven genre pedagogy in an independent coaching program or embedded program in the academic writing course in China, Hong Kong, Indonesia, Spanyol, Taiwan, United States (International classes), and Vietnam (Cahyono & Amrina, 2016; Cai, 2016; Cargill, 2004; Cargill, Gao, Wang, & O’Connor, 2018; Cargill et al., 2017; Cargill & O’Connor, 2006; Charles, 2007, 2018; Chen & Flowerdew, 2018b; Corcoran, 2018; Cotos et al., 2017; L. Flowerdew, 2015, 2016; Friginal, 2013; Huang, 2014; Li, 2019; Li et al., 2018; Q. Luo, 2016; Tribble & Wingate, 2013). The findings generally demonstrate that the development of genre awareness of learners is considerably mediated by the integration of top-down and bottom-up approaches in the genre analysis process. Additionally, the focus on the four facets of genre knowledge driven by authentic learning materials can elevate learners’ rhetorical consciousness. Third, the team-teaching method involving the content specialists and the EAP instructors allows dialogic and in-depth supervisions in the genre analysis process and in the independent construction process.

However, those studies extensively sought to investigate the effectiveness of corpus-driven genre pedagogy in the teaching of English for research publication purposes. There is scant attention devoted to qualitatively review its milestone. Thus, this study seeks to address the gap by conducting a systematic review on the implementation of corpus-driven genre pedagogy for TERPP for NNES, multilingual and/or novice writers. To accomplish the research objective, this study is driven by the following research questions.

RQ 1: How is the process of materials development of TERPP conducted?
RQ 2: How do the learners engage with the utilization of the corpora in the process of knowledge telling and knowledge transformation?
RQ 3: How is the development of the learners’ research writing competencies exhibited after the TERPP program?

The findings may offer EAP/ESP literacy brokers (i.e. teachers, practitioners, researchers), particularly for research publication purposes, a better understanding of the strengths and limitations of the teaching approach. This paper also encourages novice writers in international publications to view the findings as a reflective reference prior to the manuscript preparation process.

METHOD

This study adopted Xiao’s and Watson’s (2017) framework as the guideline of conducting the qualitative systematic review by using thematic synthesis method (Thomas & Harden, 2008). The procedure entails three main stages: preparation, screening and validation, content review, and synthesis and report. Each stage comprises several steps as depicted in Fig. 1.

At the first stage, the literature search of published articles was done using the very general keywords such as “research publication”, “academic writing”, “genre pedagogy”, and “data-driven learning”. The articles were obtained from Google Scholar and three top-tier journals in the realm of teaching English for research publication purposes: Journal of Second Language Writing (JSLW), English for Specific Purposes (ESP), and Journal of English for Academic Purposes (JEAP), with the publication time from 2004-2019. Approximately 106 RAs were obtained. Screening and validation processes were conducted afterward by sorting out the relevant and...
irrelevant RAs based on the titles and the keywords. Twenty (20) RAs were discarded because they did not address the issue of TERPP (e.g., DDL for teaching grammar not in an ERPP context) or they were irrelevant for the proposal of ELF-referenced teaching framework, or they were non-original research.

Content review I was done to classify the 87 RAs into two main categories based on the contents of the abstracts: previous studies and relevant studies for the proposal of ELF-referenced teaching framework. In total, there were nineteen (19) previous studies. Although most of the titles did not literally contain the words “corpus-based/corpus-driven genre pedagogy”, the objectives and the findings of the studies addressed the implementation of the pedagogy. Meanwhile, the other 66 RAs were reclassified into smaller units: critical pedagogy and critical academic literacy (hereafter CritAL), ELF and corpora construction, ELF in scholarly publication, ICT use in IR 4.0 era and education 4.0, and corrective feedback.

Content review II was initiated by reading the whole parts of the papers, but focusing on the findings, discussion, and conclusion sections for the synthesis and report stage. First, open coding technique was utilized based on the verbatim meaning of the sentences. Then, the obtained codes were classified into several categories, which directly answered the research questions (e.g., Table 1).

Table 1 Sample of coding and categorization results

<table>
<thead>
<tr>
<th>Author and year</th>
<th>Excerpt</th>
<th>Code</th>
<th>Category</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cai (2016)</td>
<td>The SLA RA corpus comprises empirical research articles.</td>
<td>Discipline-Types of Sources Development</td>
<td>Materials development</td>
<td>Materials development</td>
</tr>
</tbody>
</table>

In the synthesis and report stage, the coherence of the projected information within the codes within each category was re-examined. The results of the re-examination were used to structure the presentation of the findings so that the qualitative state-of-the-art of the three foci of corpus-driven genre pedagogy for ERPP along with the challenges can be clearly obtained.

FINDINGS AND DISCUSSION
This section elaborates on the qualitative information of the implementation of corpus-driven genre pedagogy in the teaching of English for research publication purposes. The three research questions as mentioned in the Introduction section are addressed sequentially. The presentation and discussion of the findings are not literature-based, rather based on the general findings in each cluster as exhibited in Fig. 2 below.

**Figure 2 Main themes of the findings**

**RQ 1: The materials development process**

The content review process resulted in 38 codes (including the recurring codes). Afterward, the existing codes were classified into three main clusters: target information in the needs analysis process, coverage of the materials (genre knowledge), and sources of corpora.

As envisaged, all facets of the genre knowledge as conceptualized by Tardy (2009) and Huang (2014) were identified in the corpus. Preliminary research in the form of needs analysis was conducted to formulate the learning objectives and develop the learning materials. The findings revealed that learners’ backgrounds were important to explore prior to the implementation of TERPP by employing corpus-driven genre pedagogy. Personal identity and institutional power relations were considered valuable to understand the personal information of the learners. Background knowledge about international scholarly publication and research article genre along with the encountered difficulties in writing a research article served as the core information in developing the learning materials. To ensure the congruence of the materials with the learners’ expectations, their preferences on the learning sources were also sought.

The data obtained from the learners’ responses to the needs analysis stage were transformed into learning materials. Indeed, genre knowledge was the learning orientation of the TERPP program. It encompassed discursive and non-discursive lessons. The former lessons were represented in the form of formal knowledge such as the generic structure of an international scholarly article, rhetorical organization, lexico-grammar, and the elements of sentence constructions including linking adverbials, sentence voice, verb tense, and basic grammar. The latter lessons were addressed in the delivery of process knowledge when dealing with publication trajectory and plagiarism issue, rhetorical knowledge in corresponding with the journal editors or reviewers, and subject-matter or content knowledge in shaping the state-of-the-art of the articles.

In order to achieve the expected learning outcomes and to conform to the principles of corpus-driven genre pedagogy, the sources of materials development varied...
depending on the learning objectives. With respect to the bottom-up and top-down approaches to genre analysis in the modeling and joint construction stages of the genre pedagogy, the learners were encouraged to utilize published RAs corpora. Some studies preferred to provide textbooks based on empirical results or prescribed workshop slides and syllabi (Cai, 2016; Cargill et al., 2017; Corcoran, 2018; Friginal, 2013). Only few of the previous studies employed learner corpora as the comparison of the genre conventions with the published RAs written by expert writers (Cai, 2016; Friginal, 2013). From the lens of comparative linguistics, disciplinary corpora were identified in all previous studies. Therefore, the materials became more authentic than the prescribed textbooks or workshop slides, which might not be representative enough to clarify the variations of language use and patterns across disciplines. In the knowledge transformation process, i.e. independent construction, the learners were encouraged to utilize the results of the collaborative genre analysis in the joint construction stage in constructing their own paper (or certain intended sections), or revising their own paper or another anonymous corpus written by novice writers (Cai, 2016). However, no corpora were utilized in the process of enhancing rhetorical knowledge during the correspondence with the editors or with the reviewers in which workshop slides were preferred.

Apart from that, personalized corpora based on the learners’ interests (e.g., corpora of hedging usage) served as a distinguished technique. Cargill (2006) reported that the learners were allowed to construct their own corpora by using the corpus tools based on their interests or intent in a group. Such a learning strategy may lessen the learners’ anxiety and increase their learning autonomy because although the learners are in the same class, the joint construction stage is done based on their rights to gain the expected knowledge from the self-constructed or personalized corpora. However, it must be viewed with caution in the heterogeneous classroom settings. The diversity of language proficiency of the learners might hinder the effectiveness of utilizing personalized corpora if the group’s composition is not equal in the level of English proficiency.

**RQ 2: The learners’ engagement when using the corpus and corpus tools in the process of knowledge telling and knowledge transformation**

The content review process identified 161 codes, which were then classified into three categories: type of activity, impression on the activity, and influential factors toward the manifestation of engagement in the activity. First, the three categories were elaborated within the context of knowledge telling. Second, similar categories were presented within the context of knowledge transformation.

There were three types of activities in the process of knowledge-telling in the modeling stage mediated by the corpus-driven genre pedagogy: understanding the lessons about formal knowledge, process knowledge, and rhetorical knowledge. In the joint-construction stage, the learners’ engagement was also evident during the practice of identifying the aspects of the three facets of genre knowledge.

It was noted that the learners engaged in understanding discourse level of language, rhetorical organization of each section of the research articles, lexico-grammatical features of the rhetorical moves, and sentence construction or sentence templates involving the understanding of lexical choices and language use. The learners perceived those activities as useful, valuable, and enriching to develop their repertoire of formal knowledge. They further clarified that the teaching materials, especially from the use of various types of corpora and the use of relevant corpus tools, assisted them in analyzing the intended generic, rhetorical, and grammatical features of the research articles. Within the format of embedded writing intervention in the Research on Second Language Writing course, Cahyono and Amrina (2016) revealed that the learners found the provided corpus beneficial. In addition to the scaffolding from the lecturer when delivering the lessons, they argued that the representative RAs assisted them to recognize the eligible structure of each section from the abstract to the conclusion. Video lectures were also considered helpful in gaining more understanding about genre conventions. Some of them also argued that the steps in making sense the lessons were detailed. The explicit and guiding instructional steps were exemplified in the Friginal’s (2013) study where the learners were engaged with the tutors’ lectures about linking adverbials. The process continued with the guided hands-on concordancing activities to understand the common usage of linking adverbials in the sample texts.

With respect to process knowledge, the understanding of the nature of the target journals and the strategy to avoid plagiarism became the most engaged activities. Huang (2014) let the learners determine the contents which were potential to be considered as plagiarism in three different types of corpora. Each corpus contained different types of plagiarism. Therefore, the learners felt surprised knowing that all corpora actually contained plagiarism.

Regarding the rhetorical knowledge, the learners were concerned with, multidisciplinary variations of language use and argument construction to convince the readers and editors about the novelty of the research. Similar impressions to those in understanding the formal knowledge were identified as the results of their engagement with those activities.

Such a learning process enhanced their motivation and autonomy to examine the three facets of genre knowledge. It is believed that the explicit instruction from data-driven learning and the guided instruction from genre pedagogy played an important role in elevating the learners’ engagement. Some applicable activities comprised critical engagement questions from the tutors, extensive consultations, discovery learning through hands-on practices, learners’ conferences after the delivery of the lesson, and warm-up activity before the use of corpus tools in scrutinizing the sample corpora.

Furthermore, in the process of knowledge transformation, the findings of the previous studies demonstrated a consensus of consistently positive
engagement with the activities. There were two types of activities: joint and independent construction of writing the research paper and evaluation activity including paper review and revision. In the first activity, the learners performed collaborative and/or independent genre analysis of another sample corpora including discursive features of RA as an academic genre and problems associated with power relation. Interestingly, Cargill (2004) encouraged her learners to construct the papers bilingually so that they could apply their obtained knowledge about the differing linguistic systems between their native languages and English language as the medium of international publication. In the second type of activity, the learners practiced independent writing of each section of the research articles. Afterward, they engaged in the paper review and revision process by giving corrective feedback.

The evidence of learners’ engagement was noticed in their follow-up responses that generally the activities were empowering. Their confidence and motivation level arose to deal with prospective paper writing for international publication. The empowering nature of the activities also triggered more curiosity to challenge their old traditions in writing a research article so that the critical awareness of academic writing, albeit not all studies, was simultaneously elevated as what Cotos, Link and Huffman (2017) reported:

> The annotated corpus affordance of RWT stimulated learners’ immersion in macro- and micro-level analysis of disciplinary texts [...]. This immersion also helped them understand the important relationship between texts, writers, and audience, thus enhancing the dimensions of genre knowledge they were acquiring through corpus exploration (p.117).

Such benefits were notably stimulated by the sequence of interrelated activities from critical reading, independent construction, and paper review from peers, tutors, and the participating editors or referees from the journals. During the three stages, one-on-one consultation was highly recommended to cater to the learners’ questions and problems. However, the use of case studies as in Wingate’s (2012) study could not mediate the development of learners’ critical awareness. The findings confirmed that the learners only attempted to understand the genre conventions, not to criticize the conventions further. At the end of the process, corrective feedback became the driving means of their revision stage.

**RQ 3: The development of learners’ research writing competencies and soft skills**

There were 92 codes identified in the findings. As referred to the focused materials of corpus-driven genre pedagogy in TERPP, i.e. developing genre knowledge, the codes were classified into two clusters: discursive and non-discursive developments. The former comprises formal knowledge and rhetorical knowledge, and the latter encompasses process knowledge and some soft skills in dealing with writing a research article for international publication.

It was noted that the learners performed some developments on the formal knowledge including the manifestation of a better generic structure of the research articles, the more eligible manifestation of rhetorical moves and rhetorical organization of each RA section. In addition to the discourse-level language features, the sentence-level language features were also developed in the forms of proper use of general and move-specific lexico-grammatical features, verb tense, linking adverbials, parallel structure, logical order, and key vocabularies.

With respect to the development of rhetorical knowledge, the studies reported that the proper uses of boosters, bridging sentences to indicate research novelty, and agentic subjects to convince the research novelty were mostly traced in the learners’ revised papers (whether from their own papers or sample papers). Huang (2014) demonstrated that one of the learners’ revised papers projected those rhetorical features in writing the introduction and discussion sections.

Most of the learners asserted that corpora and corpus tools helped them understand the eligible format to be published in the target journals. In other words, data-driven learning is perceived as a valuable learning method because the learning sources are taken from authentic and contextual sources such as expert and learner corpora. Additionally, genre pedagogy was believed to be the contributing method to succeed in the delivery of DDL. This teaching method allows the combination of discovery learning and guided instruction. Some other learners posited that the development of formal and rhetorical knowledge was influenced by continuous support from peers and tutors through the provision of corrective feedback and/or the use of track changes in conducting peer-review process. Wingate (2012) found track changes tool in the Word program useful in the joint reconstruction stage. One of the learners’ RA introduction sections was voluntarily examined and revised by the other learners. Hence, the track changes tool allowed the class to recognize the development of the writing quality as the take-home messages since it displayed both the original and the revised parts simultaneously.

Process knowledge became one of the non-discursive developments. It was represented in the forms of increased understanding about the complexity of publication, increased skill in journal selection, and increased repertoire of academic plagiarism, according to the learners’ responses. However, further textual evidence regarding their increased repertoire of academic plagiarism was not identified in the database. Therefore, it needs a further call to examine the effectiveness of corpus-driven genre pedagogy in TERPP on the learners’ repertoire of plagiarism as viewed from the textual evidence. Another type of non-discursive developments pertains to the learners’ soft skills. They comprise self-confidence, cognitive capacity, autonomy and agency, academic reading sensitivity or awareness, scientific thinking, and reflective thinking.
Similarly, the development of learners’ soft skills was influenced by the implementation of corpus-driven genre pedagogy. Corpus exploration using corpora and corpus tools gives them the opportunity to understand commonalities and variations of rhetorical and grammatical features in writing a research article for international publication. The wide array of alternatives to rhetorical and linguistic choices leads them to be more prepared and reflective in editing their own papers. Moreover, peer review can maintain the confidence level and academic writing empowerment. Hence, the identification of take-home messages as valuable learning inputs can be meaningfully done by the learners.

**Envisioning the ELF-referenced critical teaching framework of corpus-driven genre pedagogy of ERPP**

This section aims to delineate the proposal by reflecting from the previous studies.

**What and whose corpora should be highlighted?**

The idea of embracing ELF as the driving philosophy for materials development of TERPP is inextricably associated with the emerging discussions about ELFA. From the ELFA lens (Mauranen, Hynninen, & Ranta, 2016), academic writing is no longer monolithic in dealing with variations of language use because the acceptability of those variations may vary depending on the contributing factors such as discipline and journal’s characteristics (Hyland & Jiang, 2017; J. J. Lee, Bychkovska, & Maxwell, 2019). However, the embrace of ELF in scholarly writing is not as fluid as in the speaking realm since the inclusion of informal language uses may disadvantage the process of international publication of the NNES writers (Hyland & Jiang, 2017; Jenkins & Wingate, 2015).

The practice of critical needs analysis and rights analysis needs, therefore, to be revisited. The previous studies tended to conduct needs analysis based on the global requirements and the learners’ problems. Even, prescriptive learning materials in the forms of PowerPoint slides and grammar books were still found. Therefore, it is not surprising then that some learners reported that the course materials did not cater to the expected teaching framework (Cargill et al., 2018). The meeting point between critical needs analysis and rights analysis (Serafini, Lake, & Long, 2015 for the complete procedure to conduct rights analysis) is on the reliance of materials development and/or course design on the learners’ exact and actual intents (Crookes, 2012; Huang, 2014). As a result, the learning environment sparks social justice and equitable education for both the learners and the teachers (Benesch, 1999; Helmer, 2013). The traditional approach or so-called accommodationist paradigm (Basturkmen, 2010; Helmer, 2013) results in an unfulfilled or satisfactory outcome as in some of the previous studies because the learning process might require higher-level skills that the learners do not possess; in other words the mismatch between the learners’ strengths and the demands.

In response, the tutors or course designers need to encourage the prospective participants to be co-researchers in exploring their actual needs through critical discussions (e.g., Cheng, 2011). Specifically, the course designers have to consider a number of contributing factors that influence the actual intents of the participating learners including their personal attributes (e.g., proficiency level, writing quality, and major or discipline), the research topics, the research designs, the genre conventions (Chan, 2018; Kuteeva & Mauranen, 2014), motivation and attitudes toward the language lessons of scholarly publication (see also Sung, 2013), and previous experiences in international publications Gea-Valor, Rey-Rocha, and Moreno (2014).

The results of the critical needs analysis or rights analysis can be used for developing the course materials driven by ELF. Indeed, previous studies have demonstrated the importance of elevating the learners' repertoire of the four facets of genre knowledge. However, the debate on to what extent the inclusion of ELF can be realized in the milieu of teaching scholarly writing is still evident. The grammatical and phraseological variations between NES and NNES research articles (e.g., L. Flowerdew, 2016; Römer, 2009) can be embraced as long as it conforms to the very basic rules of academic writing; that is formality and clarity (Hyland & Jiang, 2017; J. J. Lee et al., 2019 for some of the informal ELF variations). Another crucial focus lies on the elements of rhetorical organization and self-voice because they vary across disciplines and even journals. Therefore, the materials about general lexico-grammatical features are not crucial enough to be highlighted, but rather the move-specific lexico-grammatical features. The tutors can train the students to identify the typical and non-typical lexico-grammatical features to convey the rhetorical moves of a particular section of the analyzed research articles. For example, the students are trained to be aware of what lexico-grammatical features constitute the introduction, purpose, method, results, and conclusion moves of a research article abstract. Instead of exploring the usage of verbal verbs followed by that-clause in general, the students are given the opportunity to examine whether the pattern is one of the typical lexico-grammatical features to convey the results move in an abstract (e.g., the students reported that) along with the other possible alternatives. Last but not least is the urge to explore about the conceptualization of errors, standards, norms, and nativeness in general (Serafini et al., 2015) and in the written academic discourses such as in the journals’ author guidelines (McKinley & Rose, 2018). Therefore, the evidence of kinds of ELF manifested in the articles of the target journals becomes pivotal to be understood.

As a result of emphasizing ELF-referenced teaching materials, the types of corpora and the sources of corpora are worth-revisiting. The findings underscore a distinguished limitation in which the corpora have not been able to reach the heterogeneous group of learners across disciplines (Charles, 2007). Native speakers’ writing from reputable journals still becomes the prime choice of corpora in the modeling stage of the genre pedagogy (Cargill et al., 2018; Cargill & O’Connor, 2006; Corcoran, 2018). This tradition only limits the writers to widen their perspectives about the practices of scholarly...
writing in international journals considering the growing interest in dealing with ELFA.

Reflecting on the previous studies, this paper suggests the redefinition of criteria for constructing the specialized corpora as the learning resources. The traditional approach to the construction of specialized corpora merely considers discipline as the prime criterion of texts selection (Burgess & Cargill, 2013; Cargill et al., 2018; Cargill & O’Connor, 2006). More variables need to be included such as types of a research article (i.e. original or non-original research), research topic, research design, target audience, and characteristics of the journal (e.g., indexing and abstracting and/or quartile) as what Kuteeva (2014) also suggests.

On the other hand, Boulton (2011) and Gilquin (2007) posit that the attempt to embrace perfectionism in corpus construction should be diminished. Personalized corpora or localized corpora (J. Flowerdew, 2013; Krishnamurthy & Kosem, 2007) then can be the alternative way of facilitating corpus investigation (Cargill, 2019; D. Lee & Swales, 2006). It is based on the will or interest of the learners to focus on analyzing certain elements of the corpora. The application of making personalized corpora needs to be suited with the TERPP program considering the issues of size, variety, availability, reliability, and flexibility (Boulton & Attiﬁf, 2011).

Another worth-noting domain of corpus construction process is whose corpora should be compiled and highlighted. The ﬁndings demonstrated that most of the corpora were from expert writers, novice writers, and learners and the writers were NESs and/or NNESs. Even, the case of using prescriptive textbooks, e.g. Azar and Hagan for the exploration of the English grammar of the corpora is identiﬁed in Corcoran’s (2018) study. Therefore, this paper suggests two main criteria of corpus selection regarding the attributes of the writers: English proficiency level and level of education. The corpora should not only cover the RA conventions from diverse countries such as Europe, Asia, and Western countries (Galloway & Rose, 2017), but also from novice and/or learner as well as expert writers (Hynninen & Kuteeva, 2017). Additionally, the level of education in compiling learner corpora depends on the diversity of the participants’ levels of education. For example, the learner corpora cover the works written by undergraduate, master, and/or doctoral students.

Reframing the implementation process of TERPP from the perspectives of critical pedagogy and critical academic literacy

The ELF-referenced learning materials of ERPP may not be effectively contributing to the learners’ publication success without a proper teaching framework. Corpus-driven genre pedagogy must, therefore, be empowered by the perspectives of critical pedagogy and critical academic literacies in accordance with the current notion of learning academic writing as a situated, goal-oriented, contested(able), and networked social practice (Lillis & Tuck, 2016).

![Diagram](image-url)

*Figure 3 The entire teaching process of critical corpus-driven genre pedagogy of ERPP*
Critical pedagogy contests the positivist paradigms of accepting knowledge based on objectivity and empirical verification by criticizing the different views toward the accepted knowledge to make meaning (Gustine, 2018; Kumaravadivelu, 2003; Pennycook, 1990). Hence, the goal of critical pedagogy to ERPP or critical pragmatic approach to ERPP (Corcoran & Englander, 2016) corroborates the goal of critical academic literacies pinpointing the encouragement for the writers to challenge or argue the prescriptive norms, traditions, conventions, power relations, and assumptions in academic writing, in this sense research article writing, (Wingate, 2012) from its personal, social, cultural, and political dimensions so that the self-awareness of the writers to bring about positive change can be empowered; in other words social justice (Crookes, 2012).

This paper, therefore, proposes the teaching framework of corpus-driven genre pedagogy empowered by the perspectives of critical pedagogy and critical academic literacies oriented to the development of self-awareness of the writers to be successful in their international publications. Fig. 3 exhibits the complete cyclical framework. The framework can be applied for teaching the individual section or the whole parts of the research article.

In doing so, some principles are formulated as the bases for implementing the teaching framework.

1. The learning process should be oriented to the inculcation of self-determined learning; in other words heutagogy (Tabuenca, Kalz, Drachsler, & Specht, 2015) as the form of Education 4.0 by activating classroom discussion and sharing about their experiences in publishing articles in journals.

2. Sharing, recounting, and comparing successful stories and vice versa of the learners and the tutors can be done in the Building Knowledge of Field (BKOF) stage to establish the learning context and to enhance the learners’ self-confidence in dealing with international publication (see Li et al., 2018).

3. Considering the growing interest of ELFA and the goal of critical pedagogy and critical academic literacies for TERPP, the inclusion of NESs as the tutors should be re-examined to avoid “unfairly privileges NESs over NNESs as text mediators” or literacy brokers (N. Luo & Hyland, 2016).

4. The good command of critical pedagogy and critical literacy including the awareness of learners’ diverse backgrounds and varieties of language use (sparking tolerance), and the agency to empower the learners to be the agent of change is crucial to possess by the tutors (see Gevers, 2018; Gustine, 2018).

5. Revisiting the mixture of L1 and L2 uses based on the learning objectives is worth-taking. For example, the L1 use might be more beneficial than L2 use when the tutors aim to deliver explanation and clarification of certain complex points of the learning materials or of the given corrective feedback.

6. Critical reading should become the introductory activity through the deconstruction of the given sample corpora to shape the learners’ repertoire of genre knowledge through providing space for expressing own voices and contesting the dominant voices regarding the analyzed corpora; not to shape the learners’ critical awareness first in the Modelling (MOD) stage.

7. The learning process should activate the learners’ critical thinking in exploring their identities and ideologies of academic writing as compared to those of the target discourse communities as well as their positions in the discourse communities (Ingvarsdóttir & Árnbjörnsdóttir, 2018) after critical reading process. Hence, they can recognize their learning goals and manage the strategies to be successful to achieve the goals as the manifestation of their critical awareness.

8. The learners must have the experiences of controlled corpus investigation in the Modelling stage to obtain the target knowledge and self-directed corpus investigation in the Joint Construction (JCOT) and Independent Construction (ICOT) stage to allow as many critics as possible for their own papers to make meaning; in other words, arguing to learn.

**Critical corrective feedback at the forefront**

Apart from those principles, the types of tasks in the Independent Construction stage are important to take into account. The findings reveal the decrease in learners’ confidence level due to limited time to comprehend the materials (Cargill et al., 2017; Corcoran & Englander, 2016). This might be caused by the diverse proficiency level of the learners in understanding the lessons. Peer empowerment through critical peer review to promote critical corrective feedback is worth-taking.

This paper suggests the combination of explicit, critical, and continuous feedback (Cotos et al., 2017) during the peer review process. The highlighted feedback should be able to testify the critical thinking of the participants so that they can recognize not only their improvements and weaknesses on the linguistic aspects after the writing intervention program, but also their understanding of the socio, cultural, and political complexity of rhetorical aspects of scholarly writing in international journals. Prior to the implementation of peer review, the reviewer candidates should be trained by the tutors to conduct the review process. The peer-review process might be best done by senior writers to junior ones (Li, 2019) in which the decision to determine the senior or junior writers is based on the repertoire of genre knowledge of scholarly writing in international journals. Regarding the medium of feedback delivery, 1-on-1 consultation (Li, 2019) seems promising because it promotes critical dialogues between the tutors and the learners or the senior writers and the junior ones. Consequently, the language medium of communication should involve a mixture of L1 and L2 use (Yu & Lee, 2014). The L2 is used to inform the written feedback delivered by using track changes or equivalent tools and the L1 is used to clarify the feedback orally and mediate the process of critical dialogues. Although the learners are proficient enough to perform English speaking, L1...
use allows more open and critical argumentation because they do not worry about language usage; only the contents they intend to criticize.

CONCLUSION
This paper has reported the qualitative milestone of the implementation of corpus-driven genre pedagogy of English for research publication purposes. The findings demonstrate that the complexity of the teaching process is evident. On the one side, the repertoire of the learners’ genre knowledge is elevated by the assistance of the explicit, contextual, and authentic instructions through data-driven learning and the discovery learning or guided instructions through genre pedagogy. Such a learning atmosphere can bring about empowerment for the learners to enhance some soft skills to be successful in their international publication process as well. On the other hand, deterioration of self-efficacy and loss of autonomy to empower themselves after the writing intervention program are still identified. The over-reliance on the technical exploration of genre conventions might lead to the decrease of autonomous critical awareness in examining the socio, cultural, and political dimensions of the genre conventions.

This study might serve as a checkpoint for the literacy brokers of English for research publication purposes. This study, therefore, suggests future calls to examine the influence of the proposed teaching framework on the learners’ critical engagement toward critical awareness and agency of research article writing for international publications. Additionally, more ELFA-driven genre analyses on multi-disciplinary scholarly articles need to be initiated to generate a clearer picture of the now-and-then practice of scholarly writing. The results can be utilized as the bases for making the best use of the proposed teaching framework.

REFERENCES


