

# A Case Study on Application of Integrated Linguistic Strategies to Discipline-Based Scholarly Writing

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## Abstract

Scholarly writing and publication challenges facing EAL (English as an additional language) researchers worldwide are intensified with the lack of access to efficient third-party support. This paper reports a case of a local university English teacher who collaborates with diverse research teams to shape EAL scientists' manuscripts for publication. Based on the survey and text-oriented ethnographic approach, the study shows that the teacher succeeded in facilitating international publications by the adoption of the genre-analyzing model and corpus-driven strategies. The findings suggest that text mediations empowered by EAP (English for Academic Purposes) teachers can assist scientists to mobilize resources more effectively in scholarly writing and this group of language specialists can be a valuable source in scholarly writing and publication.

## Keywords

Scholarly Writing, Text Mediation, Genre Analysis, Corpus-Based Strategy, EAP Teachers, The CARS Model

## 1. Introduction

According to statistics from U.S. National Science Foundation (NSF)<sup>1</sup>, China produced the largest number of scientific publications in the year 2017, overtaking nations including the United States and the European Union and maintain-

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<sup>1</sup><https://www.nsf.gov/statistics/2018/nsb20181/>

ing its top status since then. Though the trend of the sheer volume is obvious, studies have shown that writing research papers in English remains a major problem for Chinese scholars (Cargill & O'Connor, 2006; Li, 2006a, 2006b). Commonly characterized as EAL (English for Additional Language) writers, many scientist authors in the mainland of China find it painfully challenging to publish in English as writing and publication success for peer-reviewed journals lies in the combination of skills and endeavors to achieve qualified language, logical argumentation, submitting and publication skills etc. (Curry & Lillis, 2007). Despite their ability to achieve qualified science, they are often urged by editors and reviewers of international journals to approach L1 editors for language support (Li & Flowerdew, 2007). However, such collaborations are often impeded by the inaccessibility to disciplinary-literate L1 language editors and the high cost of language editing, undermining their potential to satisfy the high volume of publication needs. To cope with the challenge, Chinese writers more often turn to other brokers, individuals or institutes that provide either text editing services (usually focus on translation, manuscript editing, etc.) or submitting services (assists authors with response to reviews and the publication process) and in some cases the combination of the two (Luo & Hyland, 2017). For Chinese scholars (novice scientists and postgraduate students), commonly characterized as EAL writers, their intention for international publication especially in high-profile English-medium journals (e.g. SCI) has been the subject of a growing body of research (e.g. Luo & Hyland 2016, 2019; Li et al., 2018).

Consequently, this group of professionals originates one of two backgrounds: discipline specialists in an academic field who gain skills and experience in providing content and language support, and language specialists (e.g. language teachers, translators) who gain experience in working with highly specialized texts and the authors who produce them. The latter of the group, generally known as language professionals or specialists, largely influence the success of English-medium academic article production, and their role in scientific publications has gained increasing attention (e.g. Li & Flowerdew 2007; Luo & Hyland 2017).

To our knowledge, however, the specific strategies and methods adopted by these language experts to improve the text quality of journal articles have been barely discussed. In addition, how original manuscripts develop during the mediation process has rarely been recorded. As a result, the enormous work done by these experts has been undervalued.

To legitimize the role of language specialists in international publications by examining their adoption of linguistic strategies and recording the dynamics of text development during the process, this paper reports on a case study of a local English teacher implementing corpus-based genre analysis to mediate research articles from various disciplines. Our work attempts to address two research questions:

- 1) What strategies does the focal English teacher adopt in mediating scientific manuscripts of diverse disciplines?

2) How do the target manuscripts develop at lexical, syntactic and other linguistic levels?

## 2. Literature Review

### 2.1. Language Professionals—Expertise and Interaction in Text Mediation

In non-Anglophone contexts, many cases have recorded EAL science writers' efforts to write English-medium scholarly articles with extensive interventions by language specialists. (e.g. Burrough & Matarese 2013; Lillis & Curry 2006). Researchers gave this group various titles to reflect on the roles they play, namely author's editors (Burrough-Boenisch, 2003), proofreaders (Harwood et al., 2009), article shapers (Burrough-Boenisch, 2003; Li & Flowerdew, 2007), literacy brokers (Curry & Lillis, 2010) and other writing consultants (Li & Flowerdew, 2007). They support research publication in various ways and to a multi-degree of extent, but the full scope of their work "remains largely unexplored" (Burgess & Lillis, 2013). Drawing from the notion of "mediated authorship" made by Prior (1998); Luo & Hyland (2016) defined the local English teachers who have worked on scientific research article manuscripts as "mediators" (p. 44) as this title vividly highlights "the role of university English teachers in seeking to work with authors to negotiate a safe passage for their papers through the review process, making direct textual interventions by way of corrections, changes, or suggestions in texts for publication."

The role of local English teachers as mediators is rapidly becoming a valuable resource for turning the enormous number of manuscripts into publishable papers. In terms of merits and benefits, it was reported to help grow their "agentive power" i.e. researching capacity as well as academic communication opportunities through contact with journal editors (Luo & Hyland, 2016). Also, this group has been claimed to be professionally empowered by shaping and mediating texts with their teaching and researching skills (Burgess & Lillis, 2013; Shashok 2001). However, more research has focused on the dilemma and failure confronted and experienced. By examining the role played by local English teachers as "text mediators" to assist Chinese scholars writing for publication in English, Luo & Hyland (2016) pointed out that the sustainably cooperative relationship between Chinese scholars and local English teachers as their language professionals is challenged by the lack of institutional funding for language mediation and by the common lack of credit for this work. As an English teacher once taught in a key university in mainland China, Li found herself outside the disciplinary communities of her scholar coworkers, "the writers would email her their manuscripts or, occasionally give her a print-out copy of a manuscript, leaving her to work alone and struggle to figure out uncertainties lying in sentences and what seemed to be the logic between them" (Li & Flowerdew, 2007).

Obviously, intervention in the scholarly writing process turned out to be a double-edged sword for local English teachers. How they would harness the relations towards a mutually beneficial direction required further investigation.

## 2.2. Process Mediation in Science Writing

The fact that the writing and publishing support provided by language professionals, as pointed out by Burrough-Boenisch (2003: p. 229), can be “interactive and instructive” to EAL writers. When scientist writers came to their language specialists, they commonly engage in either of the following three stages: 1) prior to submission, aiming to improve the chances of acceptance by the target journal(s); 2) in-review, the manuscript is judged inadequate and thus aiming at major or minor revisions and resubmit; 3) being rejected, editing to improve their chances of acceptance by another journal.

To document the dynamic relationships, scholars usually base their efforts on years to record how scholarly writers cope with their publishing challenges and how they get along with their language assistants. Since 2001, Curry and Lillis have been conducting a study of the academic writing and publishing practices of some 50 psychologists and educationists from Europe and focusing on their efforts to write for English-medium academic journals (Curry & Lillis, 2004, 2010). In the context of China, Li and Flowerdew tracked the publishing process of several novice Chinese scientists i.e. Ph.D. students and young academics to discuss their positions and the possible relationships with their editors, in most cases, local English teachers (Li et al., 2007, 2018).

These documents significantly justified the roles of language professionals in either of the above-mentioned three stages. However, under the performative culture of tertiary education, discussions on writing outputs far outweigh the process of producing them. Compared to the constant attention received to text mediators’ status and positions, knowledge of how the professionals i.e. university English teachers equipped with genre and discourse knowledge apply those strategies to cope with various writing challenges can hardly be found. This gap is particularly significant, nevertheless, for the development of local English teachers engaging with diverse and discipline-engaged co-authors.

## 2.3. Corpus-Based, Genre-Analytic Approach to Discipline-Specific Text Development

The past two decades of applied linguistics have produced fruitful results with respect to the genre development of scientific research articles. Much attention has been paid to making explicit the rhetorical structures of discipline-based texts (e.g. Kawase, 2018; Saricaoglu et al., 2021), the communicative purposes of established in-text rhetorical move (Dong & Lu, 2020), and linguistic resources used to construct the text (Johns, 1997, McGrath & Liadet, 2022). In contrast to the abundant evidence of what is acceptable and applicable to help students from the pedagogical side, few has recorded the genre construction process concerning the teacher perspective.

Recent years have also witnessed a coherent trend for blending the findings of corpus linguistics and genre studies in writing research. However, for EAP researchers and practitioners, literature on the integration of self-compiled corpus

and genre analysis to develop academic writing is limited to date. Successful practices tend to be applied within one discipline. Poole et al. (2019) constructed a specialized, diachronic corpus pertaining to a very focused biochemical field to indicate a consistent decrease in the use of epistemic stance items indexing uncertainty and doubt, along with clear increases in boosters marking higher levels of confidence. Dong & Lu (2020) explored the potential of integrating corpus-based and genre-based approaches to teaching rhetorical structures of Introduction in RAs to engineer postgraduates at a Chinese university. While a wealth of literature discusses on corpus-supported, genre-analytic approach to developing manuscripts within a certain discipline, the inclusive application of the mode to various disciplines has not been well understood.

### 3. Methodology

#### 3.1. The Focal Participant

Yang<sup>2</sup>, the co-author of this article, has been a lecturer teaching at the College of Languages and Culture at an agriculture university in northwest China since 1996. The university is a national key University that currently has about 30,000 students and 4500 academic staff, with more than 2000 professionals teaching and researching in agriculture and forestry.

His collaboration with scientists in the university can be traced back to 2013 when he made the first attempt to help a scientist friend Li (Author 1 in Table 1) from the College of Water Resources and Architectural Engineering with manuscript translation and revision. He then assisted Author 1 continuously from 2013 to 2016 with 5 articles published in English-medium journals until Author 1 left the university and worked at another institution. For the first three years of his editing experience from 2013 to 2015, Yang never offered to ask for money or authorship rewards. As far as he was concerned, money had not been his main interest, and more importantly, he had been uncertain of his individual effort to the publication's success. These works were more of friendly gestures with a commitment to text quality than professional editing jobs. During this period, he had a few opportunities to revise manuscripts for one or two other researchers. To reward his assistance in his writing and publishing process, Author 1 offered to credit him the second authors of two published articles in 2016.

His 5-year experience as scientists' mediator constructed Yang's confidence. It also unexpectedly gained him some reputation as a professional article shaper within the university territory. Between the years 2016 and 2017, he worked on manuscript editing for scientists from varied disciplines. This was the period when he started to adopt various strategies in applied linguistics to cope with various discourse and genre patterns. His expertise was highly credited by Author 2, who offered Yang co-authorship for his significant contribution to an article in ecology published in 2018.

<sup>2</sup>Yang is a pseudonym in the article.

**Table 1.** International publications Yang co-authored or be credited (2016-2021).

Article No.	Type	Publishing Year	Journal Name for Publication	SCI/EI Indexed (yes/no)	5 Year IF <sup>3</sup> (2021-2022)	Author Code	Discipline	Yang's Credit
RA1	Original Article	2016	Ceramics International	yes	4.39	A1	engineer	2nd Author
RA2	Short Communication	2016	Ceramics International	yes	4.39	A1	engineer	2nd Author
RA3	Original Article	2018	Ecological Indicators	yes	5.172	A2	environmental science	1st Author
RA4	Original Article	2019	Journal of Geographic Information System	yes	1.55	A2	geographic information	2nd Author
RA5	Original Article	2019	International Journal of Biological Macromolecules	yes	6.772	A3	Chemical biology	3rd Author
RA6	Original Article	2019	Microscopy and Microanalysis	yes	1.682	A4	engineer	Author for Correspondence
RA7	Original Article	2019	BMC Genomics	yes	4.016	A5	genetics	Acknowledgment
RA8	Original Article	2021	BMC Genomics	yes	4.016	A5	genetics	Acknowledgment

The years from 2019 to 2021 turned out to be a productive period for him with his name appearing in the list of authorship or acknowledgment in 5 published articles (**Table 1**). When he was interviewed in 2022, Yang have been credited with publications of 8 articles in multiple disciplines in SCI/EI-indexed journals (**Table 1**), responsible for multiple roles in manuscript preparation from translation, editing, revision, and rewriting to managing the submission process.

It is important to note that his early work, mostly from the year 2013 to 2016, was not well documented, and many publications he facilitated were not with his name on the list.

### 3.2. Data Collection and Analysis

Data for this study has comprised:

1) Observations of participants' activities in their contexts. The first author obtained ethical approval as well as informed consent from the scientist authors to observe Yang and his/her face-to-face communication with audio recorded. She transcribed the video recordings and make references to relevant contextual information by adding her observation notes.

2) One Semi-structured interview with Yang in Chinese using a parallel set of questions. The interview lasted about 60 minutes to better understand the complexities of the text development and the dynamics of his status during the me-

<sup>3</sup>Source for IF: <https://academic-accelerator.com/https://w>.

ditating process.

3) 4 sets of collections of scholars' manuscripts and 1 correspondence from a journal reviewer.

4) ongoing communication with focal participants by email, post, and telephones.

### 3.3. Research Procedures

Semi-structured face-to-face interviews were initially conducted with the focal English teacher (see questions in Appendix 1) and all 5 authors in Chinese using a parallel set of questions. The interviews lasted about an hour with A2 and A4 being interviewed a second time to better comprehend the developmental complexities of their manuscript amendments.

Subsequently, the synchronous communication between the focal subject and Author 3 (A3) was observed and recorded. Recorded interviews were transcribed and translated into English. Then, MAXQDA, a qualitative data analysis software was adopted for the coding of interviews, follow-up inquiries, together with the first author's recount and reflection.

In addition, a "text-oriented ethnographic" approach (Curry & Lillis, 2004, 2010; Lillis & Curry, 2006) was developed to entail ethnographic and textual data for text production and publication in their contexts. The histories of the four texts studied are drawn from three distinct disciplines—ecology, genetics, and engineering covering completely different target communities and journals.

## 4. Major Findings

### 4.1. Constructing Genres into the Editing of "Introduction"

To construct a successful introduction, Swales (1990) developed the Creating a Research Space [C.A.R.S.] Model based upon his analysis of a variety of scholarly research articles (Table 2). The model proposes three actions [Swales calls them "moves"], accompanied by specific steps. These "moves" and "steps" can be used as a template and the CARS schema has been used to examine introductions in RAs from a variety of fields (Maher & Milligan, 2019; Samraj, 2002), across different languages, and in masters' and doctoral theses (Samraj, 2008; Hirano, 2009; Joseph et al., 2014; Ozturk, 2007; Sheldon, 2011). However, scholarly writers have often developed little knowledge of the conception of "genre" and "rhetoric" when they develop manuscripts. According to Yang, none of the scientists he collaborated have had the knowledge of the C.A.R.S. Model or built their organization of introductions on this.

This section will present how Yang adopted the CARS schema to help scientists rebuild their research domains.

#### 4.1.1. Setting up Research Domain by Locating at Reasonable Centrality

For RA4, a manuscript co-authored by Yang and a scientist (A2) specializing in resources and environment, the draft was revised 2 times before publication.

**Table 2.** Rhetorical moves and steps in research article introductions (adapted from Swales (2004)).

Move 1 Establishing a Territory	Move 2 Establishing a Niche	Move 3: Presenting the Present Work
Step 1: claiming centrality	Step 1a: indicating a gap	Step 1: announcing present research descriptively and/or purposively
Step 2: Making topic generalizations	Step 1b: Adding to what is known	Step 2: presenting the present work
Step 3: Reviewing Previous Research	Step 2: presenting positive justification	Step 3: definitional clarifications
		Step 4: summarizing methods
		Step 5: announcing principal outcomes
		Step 6: stating the value of the present research
		Step 7: outlining RA structure

Prepared independently by A2, Draft 1 was rejected after the first submission. As the title “Effect of tillage, slope and rainfall on soil surface microroughness quantified by geostatistical and fractal indices during sheet erosion” indicated, the original article intended to cover three influential factors to soil surface microroughness, tillage, slope and rainfall. The reviewers’ feedback pointed to the critical weakness of the research as being too ambitious to arrive at a unified research objective.

A4 turned to Yang for language and content editing when he tried a new journal for submission. As the title in the published version “Effect of Slope Gradient on Erosion Evolution Process at Microtopographic Tillage Soil Surfaces” indicates, the research target was eventually narrowed down to one factor: soil surface microroughness, slope. To understand the changes and adaptations well, the overall language adaptations made to the introduction section are shown in **Appendix 2**.

Each sentence of the Introduction is separated into numbered Information Blocks (IB) for easy identification and tagged with a particular move and step of the CARS Model. Though many language revisions and content adaptations can also be witnessed in the version updating, the findings and discussions in this section would focus on the logical flow and structure changes.

**Table 3** demonstrates the rhetorical structure change of the first sentence in the Introduction of RA4. Based on the new research topic, Yang suggested the first move in Introduction with a more focused research territory. In Draft 1, “soil erosion” was adopted as the starting point to claim the research context, and “Chinese Loess Plateau” indicates a targeted research scope. In both Draft 2 and published versions, slopping farming land of the Loess Plateau in China was taken as the initial stage of Introduction to set up a more confined territory of research being complied with the title and new research target.

RA 6 is an article that was rejected once before publication. The corresponding author (A4) came to Yang with the manuscript as well as the reviewer’s comments (**Appendix 3**). The first author of this paper Wang observed the mediating process and recorded the conversations made between the two parties. The overall changes in logical flow and rhetorical structures can be found in

Appendix 4 with the conversations being recorded in the Comment Box (CB).

**Table 4** shows the first two sentences of the Introduction. The initial setting (Draft) was established with the introduction to the geographical distribution of *J. rigida* in China (IB1). In the published version, medicinal properties of the genus *Juniperus*, the importance of the phenols and terpenoids (IB2) were suggested as the starting point. The deletion of IB1 was based on the comments of the journal reviewer 2 which reads “In the introduction, the first paragraph is not necessary (it’s just a generality on the geographical distribution of *Juniperus* species)”.

When discussing on this deletion, A4 was a little confused by the reviewer’s comments here:

*“reviewer 2 suggested that the first paragraph is unnecessary because ‘it’s just a general introduction to the geographical distribution of Juniperus species’. Isn’t it true that the writing begins with general facts about my research target and scope?”*

**Table 3.** Changes in rhetorical moves and organizational structure in introduction (RA 4 Move 1 S1-S2).

Information Block (IB)	Draft 1	Draft 2 and Published	Moves & Steps
1	<u>Soil erosion</u> is a major worldwide environmental problem, which mainly occurs on <u>tilled sloping land</u> , and causes serious ecological deterioration in highly susceptible regions such as the Chinese Loess Plateau.	<u>Slopping farming land</u> accounts for nearly two-thirds of the total land of the Loess Plateau in China, and the average annual erosive modulus is as high as 25,000 t·km <sup>-2</sup> ·a <sup>-1</sup> .	<b>Move 1:</b> establishing a territory <b>Step 1:</b> claim to the centrality

**Table 4.** Changes in rhetorical moves and organizational structure in introduction (RA6 Move 1 S1-S2)).

IB	Draft	Published	Move/Step
1	<u>J. rigida</u> is endemic to East Asia, it is widespread cold temperate regions, including North and Northeastern China, Korea, and Japan, which is listed in the Red book of the China as a protected plant in the Loess Plateau. Some populations are growing in strongly disturbed areas, subjected to felling and fires in China. <i>J. rigida</i> is distributed among Heilongjiang, Jilin, Liaoning, Inner Mongolia, northern Hebei, Shanxi, Shaanxi, Gansu and Ningxia in China.		<b>Move 1:</b> Establishing a territory <b>Step 1:</b> claiming centrality
2	To the best of our knowledge, the <u>genus Juniperus</u> has a high commercial value and many important medicinal properties, <u>the phenols and terpenoids</u> play a very important role, which have effective antibacterial and antioxidant activity including anti-inflammatory, anticancer, and antiviral activities	To the best of our knowledge, <u>the genus Juniperus</u> has a high commercial value and many important medicinal properties, <u>the phenols and terpenoids</u> play a very important role, which have effective antibacterial and antioxidant activity including anti-inflammatory, anticancer, and antiviral activities.	

Yang explained what “centrality” means to A4 based on its linguistic principle (CB1 **Appendix 4**).

*“well, your introduction should begin with introducing the centrality of your study –as indicated in your title, the phytochemical, anatomical and histochemical characteristics and why it is important to evaluate this features. So the reviewer’s suggestion makes sense. If you really think that the geographical factors matter, you can add these in your following introduction when necessary.”*

When they arrived at the phase of editing IB2 (**Table 4**), Yang suggests:

*“I think this is the good starting point of your introduction by stating the commercial, especially the medical use of genus *Juniperus*. And then you continue to narrow down the research focus to the activities and functions of phenols and terpenoids.”*

The above two cases draw upon the fact that scientists are conscious of introducing a research territory to lure their readers to a certain extent, they fail very often to define a reasonable boundary for it, which usually tends to be too broad. In the interview with Yang, he summarized this as one of the common difficulties encountered by science writers. Yang also admitted that instructing scholarly writers with genre knowledge can be very challenging, especially in his early editing career, as he was considered to lack professional knowledge.

*“the process is more like a negotiation, they (scientists) offered me the central ideas of their research, trying to ‘sell the idea to me. In most cases, I won’t accept the offer immediately without ‘cutting the price down, moving out unnecessary elements or points. When they bargain on or cast doubts on these adaptations, I will convince them with tools and facts like CARS Model in applied linguistics, often with the support of reviewers’ comments”.*

#### **4.1.2. Stating Clear Research Gaps and Aims with Signaling Expressions**

In fact, most scholarly writers are aware of the principle of constructing a clear statement on its research purposes and aims. However, Yang was convinced that their weakness lies in the failure to state research objectives with decent language. In **Table 5**, IB5 tracks Move 2 of RA4 according to the author(A4)’s rhetorical design and the modification made by Yang thereafter. As can be seen in Draft 1, though IB5 explicates an intention to establish a research niche, the text layout and syntax were poorly designed to make information redundant and confusing (the real move was actually presenting positive justification). In Draft 2 and published versions, by adopting the signaling sentence pattern “however, ... remains unidentified”, a research gap was explicitly indicated. Similarly, IB 7 records the design of Move 3 under the CARS Model. Both Draft 2 and published versions follow the steps of 1 and 6 of Move 3 to indicate research purposes whereas in Draft 1, only Move 3 Step 1 was stated. By comparison, one can identify the changes in research focus easily as Draft 1 indicates three factors of the original research, rainfall, slope and tillage while the updated version concentrates on “slope gradient” only.

**Table 5.** Changes in rhetorical moves and organizational structure in introduction (RA 4 Move 2-Move 3).

IB	Draft 1	Draft 2	Published	Moves/Steps
5	How to quantify the processes through the change of surface roughness <u>will has important practical significance</u> for understanding of the relationship between microtopography and erosion, and weighing tillage practice options.	<u>However</u> , the optimal critical slope for appropriate tillage <u>remains unidentified</u> .		<b>Move 2:</b> establishing a niche <b>Step 1:</b> Indicating a gap
7	<u>So, the aim of this paper is to</u> characterize the change of surface roughness of microtopographic sloping land in the process of sheet erosion, which is affected by factors of rainfall, slope and tillage.	<u>The purpose of this effort is to</u> shed light into the microroughness and hydrological responses during the evolution of erosion, so as to generate soil erosion models on the microtopographic scale and examine the critical slope value,  which will <u>be instrumental in</u> land protection, soil erosion prediction and land suitability classification.	<u>This work approached only one factor</u> i.e. slope gradient and we anticipate more factors and indices will be covered in our future research.	<b>Move 3:</b> Presenting the present work <b>Step 1:</b> Announcing present research descriptively  <b>Step 1:</b> Announcing present research purposefully  <b>Step 6:</b> Stating the value of the present research

For RA6, **Table 6** presents the logic flow of information rearranged with the development of Move 2 and 3 under the CARS Model. IB4 shows that when indicating the research gap, the published version selected signal words like “there are no previous studies”, “... is limited” and “no research has been done ...” Yang instructed on how to establish a “niche” to facilitate potential readers with grasping the research significance by explaining the word “niche” and scaffolding on sentence templates A4 can adopt (CB 4 Appendix 4).

#### 4.2. Corpus-Driven Guidance in Content Editing

Yang’ work as an author’s editor begins after a manuscript has been drafted and, in some cases, rejected, and finishes when it has been accepted (Matarese, 2013). As discipline-based writing varies greatly in terms of structures and content, his success to adapt successfully among different disciplines lies in his guidance to scholarly writers for improving paper readability in terms of reporting accuracy.

*“those scientists usually see my role in mediating process beyond a language specialist as I often offer them suggestions on contents and scientific facts as well.”*

The following section will report on how Yang adopted corpus-based approaches to improve the content accuracy of manuscripts in his mediating process.

**Table 6.** Changes in rhetorical moves and organizational structure in introduction (RA 6 Move 2-Move 3).

IB	Draft	Published	Move/Step
4	Preliminary studies showed that there is a close relationship between plant structure and chemical composition. To explore the relationship between structural development and anatomical structure of <i>J. rigida</i> needles, and increasing the extraction rate, ensuring the quality of <i>J. rigida</i> needles, the histochemical study was <u>extremely essential</u> .	<u>There are no previous studies on</u> the anatomy of the needles of <i>J. rigida</i> species, so the diagnostic and morphoanatomical characterization of this plant drug <u>is limited</u> . In addition, studies on the phytochemical profiling of the <i>J. rigida</i> species have been done in some general ways with a focus on the chemical composition in needles of <i>J. rigida</i> species, <u>but no research has been done to</u> reveal the dynamic of altitudinal change.	<b>Move 2:</b> establishing a niche <b>Step 1a:</b> Indicating a gap
5	<u>A lot of research for other plants has been done on</u> the histochemistry of phenols and essential oil. The histochemistry of phenols in <i>Baccharis spicata</i> showed that the phenols present the phloem and the fiber caps. Thereby, <u>it is very necessary for</u> the histochemical study of phenols and terpenoids, the research results can provide information for the accumulation of secondary metabolites of <i>J. rigida</i> , and <u>provide a scientific basis for</u> the comprehensive utilization of <i>J. rigida</i> .	<u>Preliminary studies</u> showed that there is a close relationship between plant structures and chemical composition. To explore the relationship between the structural development and anatomical structure of <i>J. rigida</i> needles, increase the compound extraction rate, and ensure the quality of <i>J. rigida</i> needles, the histochemical study is extremely essential. <u>A lot of research for other plants has been done on</u> the histochemistry of phenols and essential oil. The histochemistry of phenols in <i>Baccharis spicata</i> shows that the phenols are present in the phloem and the fiber caps. Therefore, a histochemical study of phenols and terpenoids <u>is very important</u> in that the results can provide information for the accumulation of secondary metabolites in <i>J. rigida</i> and thus <u>add to the literature for</u> the extensive utilization of this plant.	<b>Move 2:</b> establishing a niche <b>Step 1b:</b> adding to what is known <b>Step 2:</b> presenting positive justification

#### 4.2.1. Using Google-Scholar to Achieve Evidence-Based Text Translation and Revision

Resources available on Google Scholar (GS) virtual corpus are literally larger than any existing discipline-based corpus of academic writing (Brezina, 2012). According to Google, GS virtual corpus is updated several times a week which enables it to grow on a regular basis and provide the latest trends in academic language more accurately. Brezina (2012) reported a case on GS-search result comparison on reporting verbs in Applied Linguistics and Physics, proving that it can be employed effectively in EAP research.

The following section will briefly outline how GS can be employed as a linguistic search engine for the purposes of Yang's sustentative editing.

Many of Yang's early editing involved translation. As shown in Figure 1, the scientist author provided an incomplete draft with one sentence in Chinese. Yang's first-step editing involved turning the sentence into English. Whenever he encountered technical terms (e.g. “高速球磨工艺”), he tended to GS to check the accuracy of his translation. Yang sees the value of web concordancing tool

alumina grains followed by sintering at higher temperature [19,20]. 这种方法虽然工艺简单, 但是原料中的 ZrO<sub>2</sub> 和氧化铝都是以颗粒的形式存在, 而且 ZrO<sub>2</sub> 含量又很低, 即便是采用高速球磨工艺将二者混合足够长的时间, 少量的 ZrO<sub>2</sub> 颗粒仍然难以与大量的氧化铝颗粒完全接触。 During sintering process, uneven distribution of ZrO<sub>2</sub> grains throughout the bulk results in non-uniform growth of alumina grains, which all the same reduces the performance and causes failure of alumina ceramic implants during prolonged ageing.

and sintering at higher temperature [19,20]. Although the previous methods are technologically simple, and the mixture of ZrO<sub>2</sub> and alumina powder has already been prepared by ball milling for sufficiently long, it is still hard for a small amount of ZrO<sub>2</sub> to be fully in contact with a large amount of alumina powder, since both ZrO<sub>2</sub> and aluminum are in the form of grain, and ZrO<sub>2</sub> content is very low. During sintering, uneven distribution of ZrO<sub>2</sub> grains throughout the bulk results in non-uniform growth of alumina grains, which all the same results in worse performance of alumina ceramic implants and even causes failure during prolonged ageing.

**Figure 1.** A screenshot of translation in material and method (RA1).

like GS beyond providing language accuracy as it is also the reliable source for him to collect evidence on phrasal collocations and in some cases logical flow and thus the basis of modification on scientific facts.

**Table 7** shows content adaptations made from draft to published versions to a sentence in the Discussion section of RA1. Draft 1 of the manuscript contains a sentence:

“However, due to absence of PyC at its surface, Si<sub>3</sub>N<sub>4</sub> ceramic with gradient distribution of PyC (Gradient-PyC-Si<sub>3</sub>N<sub>4</sub>) has not only good ability to absorb electromagnetic wave (EMW), but also demonstrates the presence of less surface impedance break.”

When examining this sentence initially, Yang’s attempt to revise the sentence was to nounize the expression *good ability to absorb electromagnetic wave* into *good electromagnetic wave absorption* to tailor it to the scholarly writing style. Being uncertain with the collocation of *electromagnetic wave absorption* and the related scientific facts, he went to Google Scholar with key words “Si<sub>3</sub>N<sub>4</sub>, electromagnetic wave”. For result screening, citation frequency was the major factor in Yang’s choice of good-impact references. The top 2 articles GS provided as shown in **Figure 2** are both highly-cited ones (more than 20 times). The results were taken to be reliable as targeted keywords are professionally specialized to guarantee that the findings are confined to the domain of EMW of Si<sub>3</sub>N<sub>4</sub> ceramic. Simply seen from the research finding interface, Article 1 indicates a fact:

*reflection and absorption are TWO WAYS in attenuating EM radiation*

In Article 2, one can learn:

*Schematic views of scattering and absorption of EM...*

*this paper develops an effective way to improve EM absorption property of Si<sub>3</sub>N<sub>4</sub>*

**Table 7.** Content adaptations in discussion of RA1.

	Draft 1	Draft 2	Published
(has) not only	good ability to absorb electromagnetic wave	good electromagnetic wave attenuation	shows strong attenuation of electromagnetic wave
but also demonstrates	the presence of less surface impedance break.	weak surface impedance break.	demonstrates weak surface impedance mismatch.

**Figure 2.** GS search findings on EMW absorption.

Based on the GS search findings, Yang learned the fact that *EM absorption* is rather “a way or property” than being an “ability”. With the reference, he came to his scientist coworker with a new option, *EM attenuation* as a potential replacement for *good ability to absorb EM* in Draft 1 evidenced by GS search findings. Consequently, Draft 2 and published versions (**Table 7**) see *good/strong EM attenuation* as a replacement to “good ability to absorb EMW”.

Similarly, when evaluating the use of *surface impedance breaks*, Yang did his search with “surface impedance Si<sub>3</sub>N<sub>4</sub> Ceramic”. **Figure 3** shows that both the top 2 search findings of *surface impedance* go with *mismatch*. The result raises a collocation choice between *surface impedance break* and *surface impedance mismatch*. The decision not only involves the consideration of language accuracy but logical flow which sets out to agree with the *not only* part of the sentence as well. With access to the text of Article 1, Yang found the fact “*SiC is modified ... to decrease the impedance mismatch*”, indicating *less impedance mismatch*. This fact agrees with the author’s original fact as shown in Draft 1 *the presence of less surface impedance break*. Then in Draft 2, *weak surface impedance mismatch* is seen as a replacement. The Published version in **Table 7** presents the final stage of the sentence updating:

At language level: From *ability to absorb EMW* to *EM attenuation*

From *surface impedance break* to *surface impedance mismatch*

At the logic level:

to make *strong EM attenuation* and *weak surface impedance mismatch*



**Figure 3.** GS search findings on *surface impedance break*.

#### 4.2.2. Constructing Self-Compiled Specialized Corpus to Precise Content

As Gavioli (2002: p. 294) noted, small specialized corpora do have a role to play in both ESP (English for Specific Purposes) and disciplinary genres, Yang's editing proficiency and confidence grow over the recent years assisted by linguistic tools. In practice, he spent some time building up "a small bibliography of 10 - 30 articles before he engages in content editing," (Appendix 1) to fit him into the disciplinary context with the well-accepted and fundamental findings of the field. He takes the reference list of the manuscript to be a guide to his bibliography (if the scholar author doesn't include the reference list in the manuscript, he will ask for one), but his reference list often contains quite different articles from the manuscripts. "Their bibliography lays emphasis on the latest development of the field and mine values fundamental facts and well-established agreements in the context" (Appendix 1). All the chosen articles need to be indexed (e.g. Science Citation Index) following a search on Google Scholar to check citation frequency, "Usually, I select articles that have been cited at more than 50 times, indicating a good level of impact" (Part II Appendix 1).

Subsequently, he would often select two to five articles in the bibliography that are quite close to the discourse patterns and text layout of the manuscript and spend time on in-depth reading.

Author 6 (A6) is a successful geneticist and leading figure in her field who has international publication experience and is very confident in the facts and data of her research. RA 7 is the first article they produced together. She came to Yang for some language consultancy as she attempted to submit for journals with a higher impact factor. When dealing with authors with strong research fundamentals and language proficiency, Yang's profession lies in his application of corpus tools. Whenever solid evidence is required for content or scientific facts, he would compile a specialized corpus to edit. **Table 8** records the first sentence of the Introduction section of RA7. Draft 1 and 2 in **Table 8** show the starting point of the author's research setting is "F. velutipes" as "most edible fungi". Being aware of the common downside of "over-broad territory" set by scientist authors, Yang asked about a possibility of a more confined research set-

ting, the biological category of this fungi species. A6 provided information on the genera of *F. velutipes*, i.e. basidiomycete.

Yang compiled a small corpus with AntConC (Anthony, 2008) with selected 9 articles from his bibliography. With the scientist’s suggestion, he conducted his concordance on the term “basidiomycete”. Figure 4 shows that “basidiomycete” is a term being used 7 times in two of the nine articles. The finding ensured him that the statement of the research context can be addressed as ‘*Flammulina velutipes* (*F. velutipes*) has been recognized as a model industrial basidiomycete’ (Draft 3 and Published Versions in Table 8) instead of being *most edible fungi*. (Draft 1 and Draft 2 in Table 8) and he convinced A6 of the revision with the evidence he collected from peer articles.

In addition to narrowing down the research context, Table 9 shows that a self-compiled corpus enabled Yang to provide content adaption from the science side. When reviewing Ergosterol’s physiological functions, Draft 1 and Draft 2 discuss 4 major functions of Ergosterol: *Cell viability, Membrane fluidity, Membrane integrity, and Cellular material transport*.

After a concordancing search, the findings (Figure 5(a), Figure 5(b)) from reference texts suggested *membrane permeability* is also a function discussed by other geneticists. He showed his search finding to A6 and discussed the necessity of adding this function in her manuscript. Then Draft 3 and 4 records *membrane permeability* as an additional function.

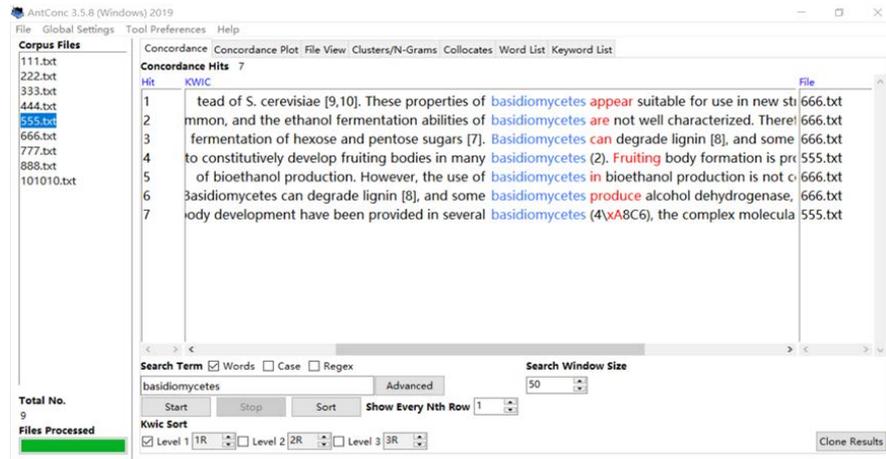


Figure 4. A screenshot of a corpus search by technical term using AntConc.

Table 8. Content adaptations in introduction of RA7.

Edible fungi are the sixth largest crop in China with a total output of 33 million tons in 2015.		
Draft 1	Draft 2	Draft 3 and Published
<i>F. velutipes</i> as one of the <u>most edible fungi</u> .	<i>Flammulina velutipes</i> ( <i>F. velutipes</i> ) has been recognized as a potentially useful model fungal species and it is one of the <u>most commonly used and edible fungi</u> .	<i>Flammulina velutipes</i> ( <i>F. velutipes</i> ) has been recognized as a <u>model industrial basidiomycete</u> ...

**Table 9.** Content adaptations in introduction of RA7.

It displayed multifaceted physiological functions in cells, such as ensuring

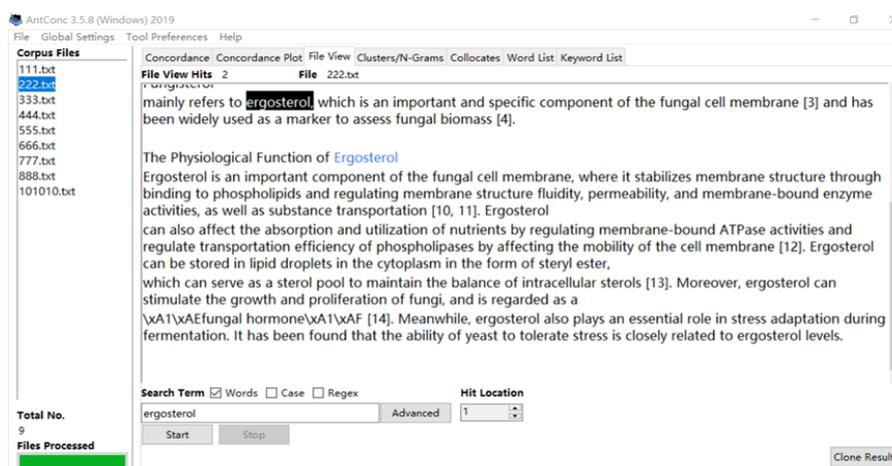
Draft 1 and Draft 2

cell viability, membrane fluidity, membrane integrity, and cellular material transport.

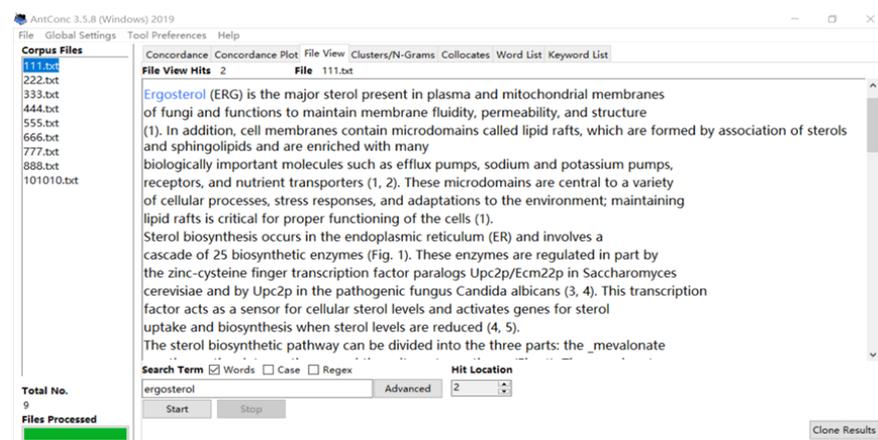
and it displays/contributes multiple physiological functions in cells, such as

Draft 3 and Published

cell viability, membrane permeability, membrane fluidity, membrane integrity and intracellular transport.



(a)



(b)

**Figure 5.** (a) A screenshot of File View of technical term using AntConc; (b) A screenshot of File View of technical term using AntConc.

## 5. Discussions and Conclusion

We acknowledge that our study is a single case study and do not claim that Yang's story is universally applicable. However, by examining the successful support of one local English teacher to different Chinese scientist authors, we hope to have shown the fact that certain linguistic strategies for text and content mediation can be significantly helpful for EAL academics with limited English proficiency.

The major findings of the paper pertinently address our first research ques-

tion: what strategies does the focal English teacher adopt in mediating scientific manuscripts? We illustrated two major strategies employed by Yang, the genre-analysis strategy to help set up proper research centrality and state clear research niche and aims; and corpus-oriented tools to improve language and develop the content. As an EAP practitioner, Yang's demonstration of familiarity and engagement with genres and discourses contributes to his credibility with manuscript preparation in diversified disciplines.

The advantages of such an integrating trajectory for EAP practitioners like Yang lie in its flexibility of application to diverse EAP settings and target groups, so empowering both language professionals and their future scientist coworkers to develop autonomous language capabilities and publishing skills.

Yang's case also underlines the fact that, despite the obstacles and weaknesses faced by the scientists (e.g. Curry & Lillis, 2010), English as the major language of international publication does not necessarily exclude EAL scientists with limited English proficiency. Luo & Hyland (2019)'s recording of a Chinese scientist's regular international publication reveals the impact and importance of manuscript translation in text mediation practice. Matarese (2013) has assisted non-Anglophone European academics with only raw data to publish in English via developmental editing and Morley (2013) with professional writing.

Supports and assistance provided by EAP practitioners further reinforce the fact that EAL authors may not need to produce well-written English manuscripts themselves to publish internationally.

Also, this paper provided valuable text development records to testify the work done by the focal English teacher. These reported text adaptations existed in an all-around way from lexical, syntactic to content levels. The findings contribute to the nature of the given service a language professional can provide and also provoke further discussion on the possible dynamics and limitation of language-content collaboration for scholarly writing.

In conclusion, for science writers in an EFL context like China, especially the novice ones like PhD candidates and young academic staff in general, it is their long-term interest to receive assistance in the local academic community, with systemized collaborations between scholar-native EAP professionals. Distinguished from previous studies on discipline-specific scientist-language professional collaboration, our study reveals the potential of a single language specialist mediating for various research teams. This also illuminates the future career development of EAP practitioners as mediators to explore the opportunity to help EAL science researchers to a greater extent than those serving Yang.

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## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

## References

- Anthony, L. (2008). *AntConc* (Version 3.2.2) [Computer Software]. Waseda University. <https://www.laurenceanthony.net/software/antconcl/>
- Brezina, V. (2012). Use of *Google Scholar* in Corpus-Driven EAP Research. *Journal of English for Academic Purposes*, 11, 319-331. <https://doi.org/10.1016/j.jeap.2012.08.001>
- Burgess, S., & Lillis, T. (2013). The Contribution of Language Professionals to Academic Publication: Multiple Roles to Achieve Common Goals. In V. Matarese (Ed.), *Supporting Research Writing: Roles and Challenges in Multilingual Settings* (pp. 1-15). Chandos Publishing. <https://doi.org/10.1016/B978-1-84334-666-1.50011-4>
- Burrough, B. J., & Matarese, V. (2013). The Authors' Editor: Working with Authors to Make Draft Texts Fit for Purpose. In V. Matarese (Ed.), *Supporting Research Writing: Roles and Challenges in Multilingual Settings* (pp. 173-189). Chandos. <https://doi.org/10.1016/B978-1-84334-666-1.50011-4>
- Burrough-Boenisch, J. (2003). Shapers of Published NNS Research Articles. *Journal of Second Language Writing*, 12, 223-243. [https://doi.org/10.1016/S1060-3743\(03\)00037-7](https://doi.org/10.1016/S1060-3743(03)00037-7)
- Cargill, M., & O'Connor, P. (2006) Developing Chinese Scientists' Skills for Publishing in English: Evaluating Collaborating-Colleague Workshops Based on Genre Analysis. *Journal of English for Academic Purposes*, 5, 207-221. <https://doi.org/10.1016/j.jeap.2006.07.002>
- Curry, M. J., & Lillis, T. (2007). The Dominance of English in Global Scholarly Publishing. *International Higher Education*, No. 46, 17.
- Curry, M. J., & Lillis, T. M. (2004). Multilingual Scholars and the Imperative to Publish in English: Negotiating Interests, Demands, and Rewards. *TESOL Quarterly*, 38, 663-668. <https://doi.org/10.2307/3588284>
- Curry, M. J., & Lillis, T. M. (2010) Academic Research Networks: Accessing Resources for English-Medium Publishing. *English for Specific Purposes*, 29, 281-295. <https://doi.org/10.1016/j.esp.2010.06.002>
- Dong J. H., & Lu, X. F. (2020) Promoting Discipline-Specific Genre Competence with Corpus-Based Genre Analysis Activities. *English for Specific Purposes*, 58, 138-154. <https://doi.org/10.1016/j.esp.2020.01.005>
- Gavioli, L. (2002). Some Thoughts on the Problem of Representing ESP through Small Corpora. In B. Kettemann, & G. Marko (Ed.), *Teaching and Learning by Doing Corpus Analysis* (pp. 293-303). Rodopi.
- Harwood, N., Austin, L., & Macaulay, R. (2009). Proofreading in a UK University: Proof Readers' Beliefs, Practices, and Experiences. *Journal of Second Language Writing*, 18, 166-190. <https://doi.org/10.1016/j.jslw.2009.05.002>
- Hirano, E. (2009) Research Article Introductions in English for Specific Purposes: A Comparison between Brazilian Portuguese and English. *English for Specific Purposes*, 28, 240-250. <https://doi.org/10.1016/j.esp.2009.02.001>
- Hyland, K. (2003). Genre-Based Pedagogies: A Social Response to Process. *Journal of Second Language Writing*, 12, 17-29. [https://doi.org/10.1016/S1060-3743\(02\)00124-8](https://doi.org/10.1016/S1060-3743(02)00124-8)
- Johns, A. M. (1997). *Text, Role and Context: Developing Academic Literacies*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139524650>

- Joseph, R., Lim, J. M.-H., & Nor, A. M. (2014). Communicative Moves in Forestry Research Introductions: Implications for the Design of Learning Materials. *Procedia Social and Behavioral Sciences*, 134, 53-69. <https://doi.org/10.1016/j.sbspro.2014.04.224>
- Kawase, T. (2018). Rhetorical Structure of the Introductions of Applied Linguistics PhD Theses. *Journal of English for Academic Purposes*, 31, 18-27. <https://doi.org/10.1016/j.jeap.2017.12.005>
- Li, Y. Y. (2006a). Negotiating Knowledge Contribution to Multiple Discourse Communities: A Doctoral Student of Computer Science Writing for Publication. *Journal of Second Language Writing*, 15, 159-178. <https://doi.org/10.1016/j.jslw.2006.07.001>
- Li, Y. Y. (2006b). A Doctoral Student of Physics Writing for Publication: A Sociopolitically-Oriented Case Study. *English for Specific Purposes*, 25, 456-478. <https://doi.org/10.1016/j.esp.2005.12.002>
- Li, Y. Y., & Flowerdew, J. (2007). Shaping Chinese Novice Scientists' Manuscripts for Publication. *Journal of Second Language Writing*, 16, 100-117. <https://doi.org/10.1016/j.jslw.2007.05.001>
- Li, Y. Y., Flowerdew, J., & Cargill, M. (2018). Teaching English for Research Publication Purposes to Science Students in China: A Case Study of an Experienced Teacher in the Classroom. *Journal of English for Academic Purposes*, 35, 116-129. <https://doi.org/10.1016/j.jeap.2018.07.006>
- Lillis, T. M., & Curry, M. J. (2006). Professional Academic Writing by Multilingual Scholars: Interactions with Literacy Brokers in the Production of English-Medium Texts. *Written Communication*, 23, 3-35. <https://doi.org/10.1177/0741088305283754>
- Luo, N., & Hyland, K. (2016). Chinese Academics Writing for Publication: English Teachers as Text Mediators. *Journal of Second Language Writing*, 33, 43-55. <https://doi.org/10.1016/j.jslw.2016.06.005>
- Luo, N., & Hyland, K. (2017). Intervention and Revision: Expertise and Interaction in Text Mediation. *Written Communication*, 34, 414-440. <https://doi.org/10.1177/0741088317722944>
- Luo, N., & Hyland, K. (2019). "I Won't Publish in Chinese Now": Publishing, Translation and the Non-English Speaking Academic. *Journal of English for Academic Purposes*, 39, 37-47. <https://doi.org/10.1016/j.jeap.2019.03.003>
- Maher, P., & Milligan, S. (2019). Teaching Master Thesis Writing to Engineers: In Sight from Corpus and Genre Analysis of Introductions. *English for Specific Purposes*, 55, 40-55. <https://doi.org/10.1016/j.esp.2019.05.001>
- Matarese, V. (2013). Reporting—The Final Phase of Scientific Research—Can and Should Be Supported. A Case for Integrating Language Professionals into the Research Setting. *RT: A Journal on Research Policy & Evaluation*, 1, 1-13.
- McGrath, D., & Liardét, C. (2022). A Corpus-Assisted Analysis of Grammatical Metaphors in Successful Student Writing. *Journal of English for Academic Purposes*, 56, Article ID: 101090. <https://doi.org/10.1016/j.jeap.2022.101090>
- Morley, G. (2013). The Writer's Approach to Facilitating Research Communication: A Very Different Way of Engaging with Authors. In V. Matarese (Ed.), *Supporting Research Writing* (pp. 101-204). Chandos Publishing. <https://doi.org/10.1016/B978-1-84334-666-1.50012-6>
- Ozturk, I. (2007). The Textual Organization of Research Article Introductions in Applied Linguistics: Variability within a Single Discipline. *English for Specific Purposes*, 26, 25-38. <https://doi.org/10.1016/j.esp.2005.12.003>
- Poole, R., Gnann, A., & Powell, G. S. (2019). Epistemic Stance and the Construction of

- Knowledge in Science Writing: A Diachronic Corpus Study. *Journal of English for Academic Purposes*, 42, Article ID: 100784. <https://doi.org/10.1016/j.jeap.2019.100784>
- Prior, P. (1998). *Writing Disciplinarity: A Sociohistoric Account of Literate Activity in the Academy*. Erlbaum. <https://doi.org/10.4324/9780203810651>
- Samraj, B. (2002). Introductions in Research Articles: Variations across Disciplines. *English for Specific Purposes*, 21, 1-17. [https://doi.org/10.1016/S0889-4906\(00\)00023-5](https://doi.org/10.1016/S0889-4906(00)00023-5)
- Samraj, B. (2008). A Discourse Analysis of Master's Theses across Disciplines with a Focus on Introductions. *Journal of English for Academic Purposes*, 7, 55-67. <https://doi.org/10.1016/j.jeap.2008.02.005>
- Saricaoglu, A., Bilki, Z., & Plakans, L. (2021). Syntactic Complexity in Learner Generated Research Paper Introductions: Rhetorical Functions and Level of Move/Step Realization. *Journal of English for Academic Purposes*, 53, Article ID: 101037. <https://doi.org/10.1016/j.jeap.2021.101037>
- Shashok, K. (2001). Author's Editors: Facilitators of Science Information Transfer. *Learned Publishing*, 14, 113-121. <https://doi.org/10.1087/095315101300059495>
- Sheldon, E. (2011) Rhetorical Differences in RA Introductions Written by English L1 and L2 and Castilian Spanish L1 Writers. *Journal of English for Academic Purposes*, 10, 238-251. <https://doi.org/10.1016/j.jeap.2011.08.004>
- Swales, J. M. (1990). *Genre Analysis: English in Academic and Research Settings*. Cambridge University Press.
- Swales, J. M. (2004). *Research Genres: Exploration and Applications*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139524827>

## Appendix 1

### Interview questions with focal participant (60 minutes)

#### *Part I General Relationship with scholarly writers*

1) How would you describe your early experience of being a translator or editor?

2) How would you describe the role(s) you played in the eyes of your scientist coworkers? Can you recall the dynamic relationships the two parties held in your editing process?

3) How would your scientist coworkers credit you for your work?

#### *Part II Mediating Process of Research Articles*

4) What makes the title change from draft 1 to published version of RA4?

5) What specific adoptions you suggested to make to fit in the new research scope of RA4?

6) Can you recall and briefly describe the dynamic relations you had with A2 in editing process?

7) What criteria you took to select reference from Google scholars?

8) What strategies would you take to use self-built corpora?

#### *Part III Difficulties experienced in scientist-language professional collaboration*

9) What common disadvantages and inefficiencies experienced by scholar writers in terms of genre?

10) What difficulties you often encounter in the collaborative process?

## Appendix 2

### Changes in Rhetorical Moves and Organizational Structure in Introduction (RA 4)

Information Block (IB)	DRAFT 1	DRAFT 2	PUBLISHED	Moves & Steps
1	Soil erosion is a major worldwide environmental problem (Borrelli ...), which mainly occurs on tilled sloping land, and causes serious ecological deterioration in highly susceptible regions such as the Chinese Loess Plateau.	Slopping farming land accounts for nearly two third of the total land of the Loess Plateau in China, and the average annual erosive modulus is as high as 25,000 t·km <sup>-2</sup> ·a <sup>-1</sup> .	Slopping farming land accounts for nearly two-third of the total land of the Loess Plateau in China, and the average annual erosive modulus is as high as 25,000 t·km <sup>-2</sup> ·a <sup>-1</sup> .	<b>Move 1: establishing a territory</b> Step 1: Claim to centrality
2		This situation makes the Loess Plateau a major source of water and soil losses, and slope plays a key role in the evolution of eroded microrelief in this loessial region.	This situation makes the Loess Plateau a major source of soil losses, and slope plays a key role in the evolution of eroded soil surface in this loessial region.	<b>Move 1: establishing a territory</b> Step 2: Making topic generalizations
3	Compared with the geomorphology,	The microtopographic surfaces are created by using farm tillage		

	<p>microtopography means the undulating surface configuration with fewer changes in relative elevation (usually no more than 5 - 25 cm) over a relatively small area under the combined effects of surface covers, rainfall, and tillage treatment.</p>	<p>tools to form undulating terrains which comprise ...</p> <p>When force of rainfall and runoff causes soil detachment and sediment transport, and creates depressions to store water, the surface microroughness changes occur, which have impact on the evolution of soil erosion, so to throw light on the dynamics of surface microtopography is critically important to understanding erosion.</p>		
4	<p>During the erosion process, the elevation of the microtopographic surface varies, and the surface roughness changes, which will affect the hydrological processes temporally and spatially (such as splash erosion, sheet erosion, and gully erosion).</p>	<p>Slope is one of the major factors for modeling soil erosion. Continual scientific efforts have been made to investigate the relationship between slope and erosion, which have been represented by many soil erosion models from the early Zingg from 1940's, to later Smith, Whitt, Musgrave, USLE and WEPP.</p> <p>Some consensus has been arrived at that slope is an important factor influencing runoff, has a correlation with erosion rate and runoff rate, influences the duration of time for each stage of erosion, and governs soil erosion Kinnell &amp; Cummings, ...; and runoff and erosion tend to increase when a rainfall event occurs on a steeper surface at a critical slope ranging between 5° and 25°.</p>	<p>In order to illustrate the erosion processes, continual scientific efforts have been made to investigate the relationship between slope and erosion, which have been represented by many soil erosion models from the early Zingg from 1940's, to later Smith, Whitt, Musgrave, USLE and WEPP.</p> <p>Some consensus has been arrived at that the slope is an important factor influencing runoff, has a correlation with erosion rate and runoff rate, influences the duration of time for each stage of erosion, and governs soil erosion; and runoff and erosion tend to increase when a rainfall event occurs on a steeper surface at a critical slope ranging between 5° and 25°</p>	<p><b>Move 1: establishing a territory</b></p> <p>Step 3 Reviewing items of previous research</p>
5	<p>Sheet erosion is the initial stage occurring in runoff erosion, and it is also the initial form of erosive surface alteration. In the sheet erosion stage, the top layer of surface soil is uniformly removed by the forces of raindrops and overland flows. And the effect of water droplets striking the soil surface can increase the sheet flow turbulence, thereby</p>	<p>Besides, there is a general consensus that contour tillage, as an agricultural farming practice widely used in Chinese Loess Plateau, has favorable soil and water conserving effect. However, the optimal critical slope for appropriate tillage remains unidentified.</p>	<p>Besides, there is a general consensus that contour tillage (CT), as an agricultural farming practice widely used in the Chinese Loess Plateau, has favorable soil and water conserving effect. However, the optimal critical slope for appropriate tillage remains unidentified.</p>	<p><b>Move 1: establishing a territory</b></p> <p>Step 3 Reviewing items of previous research</p> <p><b>Move 2: establishing a niche</b></p> <p>Step 1:</p>



data used in previous studies was either before rainfall events or after rainfall events, there was little research concerning the differences between the initial surface and the surfaces resulting from application of rainfall and slope treatments. And for specific erosion stages, the effects of rain intensity and slope are still not well illustrated. Therefore, it is necessary to carry out a research quantifying the change of surface roughness in sheet erosion. It is also useful for us to improve agricultural management and practices.

The evolution of erosion is a complicated multi-scale profile changing process. The soil erosion patterns show irregularities when they are observed on different scales. For example, DEMs are nowadays used to produce basic data for soil erosion study, and fractal and anisotropic properties could be more prominent and distinct with a higher grid resolution used.

Therefore, the findings and conclusions made based on a macro scale don't apply to solve issues relevant here on a micro scale. And the previous study area was often set on the scale of a watershed and mainly focus on the stage of interrill erosion, but few related studies were carried out on the microtopographic scale.

The evolution of erosion is a complicated multi-scale profile changing process. The soil erosion patterns show irregularities when they are observed on different scales. For example, DEMs are nowadays used to produce basic data for the soil erosion study, and fractal and anisotropic properties could be more prominent and distinct with a higher grid resolution used.

Therefore, the findings and conclusions made based on a macro scale don't apply to solve issues relevant there on a micro scale. And the previous study area was often set on the scale of the watershed and mainly focused on the stage of interrill erosion, but few related studies were carried out on the microtopographic scale, i.e. at an area-limited slope with millimeter resolution DEM data.

So, the aim of this paper is to characterize the change of surface roughness of microtopographic sloping land in the process of sheet erosion, which is affected by factors of

This work approached only one factor i.e. slope and we anticipate more factors and indice will be covered in our future research.

The purpose of this effort is to

This work approaches only one factor, i.e. slope gradient and we anticipate more factors and indices will be covered in our future research.

The purpose of this effort is to shed present

**Move 2:  
establishing a  
niche**

Step 1b Adding  
to what is  
known

Step 1a:  
Indicating a  
gap

**Move 3  
Presenting the  
present work**

Step 1  
Announcing

7

8

rainfall, slope and tillage.	shed light into the microroughness and hydrological responses during the evolution of erosion, so as to generate soil erosion models on the microtopographic scale and examine the critical slope value, which will be instrumental in land protection, soil erosion prediction and land suitability classification.	light into the microroughness and hydrological responses during the evolution of erosion, so as to generate soil erosion models on the microtopographic scale and examine the critical slope value, which will be instrumental in land protection, soil erosion prediction and land suitability classification.	research descriptively and/or purposively Step 6 Stating the value of the present research
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### Appendix 3

#### Reviewers' Comments on draft version of RA6

Ms. Ref. No.: INDCRO-D-18-03657

Title: Anatomical, phytochemical and histochemical study at different age and altitude of *Juniperus rigida* needles: An uncovering potentiality

Journal Name:\*\*\*

Dear Professor \*\*\*,

I regret to inform you that the reviewers of your manuscript have advised against publication, and I must therefore reject it. For your guidance, the reviewers' comments are included below.

#### Reviewer #1: Editor-in-Chief of the journal (\*\*\*)

"... It is important to note, that about this plant, it has been written some articles, where the needles have been studied for the phenolic content of its essential oil and extracts, by different methods. Some articles are ...

In the present manuscript were studied some of the variables mentioned above, from which the information is not new at all. However, the strength of the study lies in that it was analyzed the relation between phenolic and terpenoids compounds of *J. rigida* with the age and altitude in where the plants are developed.

On the other hand, in materials and methods, information is missing in the sampling of the plants, as well as in the technique for the analysis of total content of phenols, the authors must give an excellent and detailed information, and throughout all the section.

I consider that is an interesting study, but for the purpose of gathering the quality of Industrial crops, needs a complete restructuring.

By all the exposed above, my decision is that this manuscript should be rejected."

#### Reviewer #2: The principal reasons for this decision are:

In general, the major sections of this manuscript are unfortunately poorly written (There are many grammatical and stylistic errors) and not well structured. In fact, the whole manuscript needs to be deeply improved. Also, the results are not well discussed (the discussion is very poor). It's abnormal to find few references in this section??? In the introduction, the first and second para-

graphs are not necessary (it's just a generality on the anatomical structure of *Juniperus* species. The most important point is to indicate the importance of these studies (why it's very important to evaluate the phytochemical, anatomical and histochemical characteristics on the needles of this species. Also the authors should indicate what has been reported on these aspects and what is the new on the present study.

## Appendix 4

### Overall Changes in Rhetorical Moves and Organizational Structure in Introduction (RA 6)

Comment Box (CB)	IB Draft	Published	Move/Step
<p>A4: reviewer 1 suggested that the first and second paragraphs are not necessary because "it's just a general introduction to the anatomical structure of <i>Juniperus</i> species". Isn't it true that the writing begins with general facts about my research target and scope?</p> <p>J: well, your introduction should begin with introducing the centrality of your study, as indicated in your title, the phytochemical, anatomical and histochemical characteristics and why it's important to evaluate this features. So the reviewer's suggestion make sense. If you really think that the geographical factors matter, you can add these in your following introduction when necessary.</p>	<p><i>J. rigida</i> is endemic to East Asia, it is widespread cold temperate regions, including North and Northeastern China, Korea, and Japan, which is listed in the Red book of the China as a protected plant in the Loess Plateau.</p> <p>1 Some populations are growing in strongly disturbed areas, subjected to felling and fires in China. <i>J. rigida</i> is distributed among Heilongjiang, Jilin, Liaoning, Inner Mongolia, northern Hebei, Shanxi, Shaanxi, Gansu and Ningxia in China.</p>		<p><b>Move 1--</b>  <b>Establishing a territory</b>            Step 1: claiming centrality            Step 2 Making topic generalizations</p>
<p>J: I think here is the good starting point by stating the commercial especially the medical use.</p> <p>And you moved to the activities and functions of phenols and terpenoids.</p>	<p>2 To the best of our knowledge, the genus <i>Juniperus</i> has a high commercial value and many important medicinal properties, the phenols and terpenoids play a very important role, which have effective antibacterial and antioxidant activity including anti-inflammatory, anticancer, and antiviral activities.</p>	<p>To the best of our knowledge, the genus <i>Juniperus</i> has a high commercial value and many important medicinal properties, the phenols and terpenoids play a very important role, which have effective antibacterial and antioxidant activity including anti-inflammatory, anticancer, and antiviral activities.</p>	
<p>A4: reviewer 2 pointed out that too few literatures here.</p> <p>J: exactly, you need to report who have explored the medical uses of</p>	<p>3 In medicinal uses, it main treats rheumatic joint pain, gout, nephritis, edema, urinary tract infection and other diseases,</p>	<p>They are used for medicinal products, which can treat rheumatic joint pain, gout, nephritis, edema, urinary tract infection, and other diseases. <i>Juniperus rigida</i> is endemic</p>	<p><b>Move 1 --</b>  <b>Establishing a territory</b>            Step 3:</p>

<p>the species and why</p> <p>A4: what do you mean by “why?”</p> <p>J: Why people tend to adopt this species for the treatment of certain diseases?</p> <p>A4: because it is common</p> <p>J: see, I think you can consider to talk a little bit of the geographical factors of the plant here if you think this is important.</p> <p>A4: yes, that makes sense.</p> <p>J: The major reason of rejection was for reviewer 1 believed that “the information is not new at all” but he/she also mentioned the strength of the study.</p> <p>A4: yes, what’s new in this research is about anatomical analysis of the needles and relation between phenolic and terpenoids compounds of the species with various ages and altitudes.</p>	<p>and plays an important role in the treatment of infectious diseases such as cholera and typhoid fever.</p>	<p>to East Asia and widespread across cold temperate regions, including North and Northeastern China, Korea, and Japan. <i>J. rigida</i> is widely distributed among Heilongjiang, ... in China. The branches and leaves of <i>J. rigida</i> are utilized in traditional Tibetan and Mongolian medicine for the treatment of brucellosis, dropsy, skin disease, and rheumatoid arthritis.</p>	<p>Reviewing items of previous research</p>
<p>J: that is very positive information, if we are moving to a new target journal, then we need to re-orient our research needs and goals.</p> <p>A4: Yes. That’s what we need</p> <p>J: when indicating a gap between what has been done and what is needed, in linguistics, we call this a “niche”, a very interesting word. And the first step we take is not stating the importance immediately, like you mentioned “... was extremely essential” here. Instead, expressions like “there’s on research has been done” or “few reports have been found” ... will be regular in this part for niche ...</p>	<p>4 Preliminary studies showed that there is a close relationship between plant structure and chemical composition. To explore the relationship between structural development and anatomical structure of <i>J. rigida</i> needles, and increasing the extraction rate, ensuring the quality of <i>J. rigida</i> needles, the histochemical study was extremely essential.</p>	<p>There are no previous studies on the anatomy of the needles of <i>J. rigida</i> species, so the diagnostic and morphoanatomical characterization of this plant drug is <u>limited</u>. In addition, studies on the phytochemical profiling of the <i>J. rigida</i> species have been done in some general ways with a focus on the chemical composition in needles of <i>J. rigida</i> species, but no research has been done to reveal the dynamic of altitudinal change.</p>	<p><b>Move 2: establishing a niche</b></p> <p>Step 1: Indicating a gap</p>
	<p>5 A lot of research for other plants has been done on the histochemistry of phenols and essential oil. The histochemistry of phenols in <i>Baccharis spicata</i> showed that the phenols present the phloem and the fiber caps.</p>	<p>Preliminary studies showed that there is a close relationship between plant structures and chemical composition. To explore the relationship between the structural development and anatomical structure of <i>J. rigida</i> needles,</p>	<p><b>Move 2: establishing a niche</b></p> <p>Step 1b Adding to what is known</p>

	<p>Thereby, it is very necessary for the histochemical study of phenols and terpenoids, the research results can provide information for the accumulation of secondary metabolites of <i>J. rigida</i>, and provide a scientific basis for the comprehensive utilization of <i>J. rigida</i>.</p>	<p>increase the compound extraction rate, and ensure the quality of <i>J. rigida</i> needles, the histochemical study is extremely essential.</p> <p>A lot of research for other plants has been done on the histochemistry of phenols and essential oil. The histochemistry of phenols in <i>Baccharis spicata</i> shows that the phenols are present in the phloem and the fiber caps.</p> <p>Therefore, a histochemical study of phenols and terpenoids is very important in that the results can provide information for the accumulation of secondary metabolites in <i>J. rigida</i> and thus add to the literature for the extensive utilization of this plant.</p>	<p>Step 2 Presenting positive justification</p>
<p>J: your research purposes also needs to be restated.</p> <p>A4:</p> <p>J: to emphasize the novel findings of your research, not the active ingredients and active compounds, but something closely related to your topic and to fill in your research gap.</p> <p>A4: yes, the chemical compositions and chemical compounds</p> <p>J: I don't think saying "provide scientific and theoretical basis for the utilization of <i>J. rigida</i> needles" is a good idea as it is too general ...</p>	<p>The main targets of this study were to:</p> <ol style="list-style-type: none"> <li>1) analyze the variations in anatomical, phytochemical and histochemical characterization of <i>J. rigida</i> needles at different ages and altitudes.</li> <li>2) explore the relationship between the active ingredient and structural development, evaluate the presence and localization of active compounds of <i>J. rigida</i> needles.</li> <li>3) provide scientific and theoretical basis for the utilization of <i>J. rigida</i> needles that as the natural products, which were widely used in cosmetics, healthcare and pharmaceutical industries.</li> </ol>	<p>The main targets of this study were to</p> <ol style="list-style-type: none"> <li>1) reveal the variations in anatomical, phytochemical, and histochemical characteristics of <i>J. rigida</i> needles brought by the altitudinal factor;</li> <li>2) explore the relationship between the chemical compositions and anatomical characters;</li> <li>3) investigate the localization of important chemical compounds of <i>J. rigida</i> needles</li> </ol>	<p><b>Move 3</b> <b>Presenting the present work</b> Step 1 Announcing present research descriptively and/or purposively</p>