

Reporting—the final phase of scientific research—can and should be supported. A case for integrating language professionals into the research setting

V. Matarese*

Abstract Writing for peer-reviewed research journals is difficult and requires specialized skills and knowledge—in language, logical argumentation, data presentation, publication ethics and more. The task is especially challenging for researchers who use English as an additional language. In this discussion paper, I illustrate how research writing in non-anglophone settings can usefully be supported by three types of language professional: teachers of academic writing, authors' editors, and academic translators. Reviewing the situation in Italy, I observe that Italian researchers have limited access to the best forms of writing support, in part due to misconceptions and complex hiring rules. Finally, and based on the higher educational trends in northern Europe, I envisage a future scenario for Italy where university-wide academic writing centers will be established, language professionals with disciplinary knowledge will become part of research institutes' staff, and researchers will have facilitated access to the services of authors' editors and academic translators on a per-manuscript basis. As research writing support becomes integrated into the university setting, Italian researchers' productivity will increase and the profile of Italian reporting in the international literature will be raised.

Keywords scientific writing, English for academic purposes, researcher training, core facilities, didactic editing, individualized instruction, economic activity, Italian Classification of the Professions

1. Introduction

In the natural sciences, it is common for institutes to establish central facilities providing technical services of value to researchers from diverse specialisms. The support offered ranges from routine yet indispensable functions, such as animal handling, to specialized services like graphic design and technologically advanced operations for, say, genomics, microscopy and nanofabrication. These core facilities employ staff with specialized skills who provide technical expertise and advice and who

*Independent biomedical editor, writer and information researcher, Vidor (TV), Italy, vmatarese@uptoit.org

ensure that the services operate according to standards. While researchers could undoubtedly learn the skills needed to run particular services themselves, a do-it-yourself approach to research is an inefficient use of time and money. Core facilities free researchers from having to be concerned with basic operations, and allow them to focus on the intellectual aspects of their work. Thus, the quality of the research is enhanced, researchers' productivity is optimized, and the institute's profile is raised.

One form of technical support that would greatly benefit natural science research, as outlined above, but that is rarely offered in an organized, institutional form is that concerning scholarly research communication. Writing for publication in peer-reviewed research journals requires specialized skills and knowledge. It asks for mastery of English grammar and the ability to structure and present a convincing, logical argument. It needs a clear understanding of the technical requirements of the research paper genre and of international norms governing their production. And, it is a time-consuming activity that often leads to the frustrating experience of repeated submissions, revisions and rejections. Researchers in many countries come to the job without a formal preparation in academic writing and, although they do acquire such skills with the help of their mentors and peers, the learning process is long and daunting.

Across Europe, as in many research-oriented nations worldwide, numerous efforts have been made to support research writing. The approaches vary greatly and include the establishment of writing centers serving the academic staff, the offer of courses in academic English and scientific writing, and the reliance on an external network of language professionals. These efforts are not universally adopted, and anecdotal evidence suggests they are rare in Italy. Nonetheless, there now exists a wealth of knowledge about academic writing support, especially for researchers who use English as an additional language. This knowledge can serve as a guide to administrators who set research policy and to research directors who wish to establish writing support services that meet the publishing needs of their staff.

A first attempt to comprehensively define and describe the range of writing support for non-anglophone researchers was made with the recent publication of *Supporting Research Writing: Roles and challenges in multilingual settings*.¹ This edited volume, written by experienced language professionals working across Europe, emerged from discussions held over the years at the meetings of Mediterranean Editors and Translators, an international professional association based in Barcelona. The book advances the notion that effective writing support in the non-anglophone research setting requires input from three professional areas: the teaching of academic writing; author editing; and academic translation. Here, I use this book as a guide in outlining the roles, educational background and work organization of these three types of language professional. I then look at how academic writing support is currently considered in Italy, and contemplate a future in which Italian researchers are better served in the final phase of research, namely reporting their discoveries to the international scientific community.

¹ I conceived and edited this volume, published by Chandos Publishing in 2013

2. Research writing and the support of language professionals

Research writing can be painfully challenging. The ability to distill new knowledge into a clear, concise and convincing report, which is fluid to read and accurate down to the last detail, rarely comes naturally. The requirement to publish in English places an extra burden on researchers who use English as an additional language. These scholars must become proficient in English for academic purposes (EAP) and in the rhetorical conventions typical of the genres (text types) of their disciplines [Burgess and Pallant 2013]. In other words, they must learn to present their content and argue for its validity according to the expectations of the editors, reviewers and readers of the international journals in which they aim to publish.

It would be naive today to sustain that students enter the university with all the writing skills they need to succeed in their chosen professions or that, when they become researchers, they can learn academic writing by mimicking the literature of their discipline. Rather, experience in both anglophone and non-anglophone settings has shown that the skills of academic writing can be learned in courses designed specifically for undergraduate students, doctoral students or young researchers. The learning process continues when these researchers receive feedback on the first manuscripts they draft by themselves. This feedback may come from senior academics who take on the responsibility of training their younger colleagues, but it may also be provided by language professionals who dedicate themselves to the task

2.1. Formal writing instruction by EAP teachers

As explained by Burgess and Pallant [2013], the teaching of academic writing has a long history in the United States, where university-level writing instruction has been provided to undergraduate students, mostly native English speakers, for decades. Research into the effectiveness of this instruction led to the “writing in the disciplines” movement, where students are taught the requirements of academic text production specific to the subjects they are studying. In the United Kingdom, a similar movement called ACLITS recognized the existence of different “academic literacies” as opposed to a single literacy for all contexts, and emphasized that universities can and should provide students with the literacy skills required of their chosen field. In mainland Europe, academic writing training in English, based on the models developed in anglophone contexts, has received substantial attention in the north (see, for example, Björk et al. [2003]), but only recently have accounts been emerging of similar initiatives in the south, for example in Spain [Solé et al. 2012].

EAP teaching is more demanding than teaching English in general. To guide the professional development of EAP teachers, the British Association for Lecturers of English for Academic Purposes has recommended a framework of eleven core competencies to be reached at the master’s level.² EAP teachers can also mature their skills by joining associations such as the European

² <http://www.balcap.org.uk/projects/eap-teacher-competencies>

Association for the Teaching of Academic Writing and the European Association of Languages for Specific Purposes. To support the continuing professional development of their members, these organizations publish society journals and hold conferences. Active participation in these associations allows language professionals to share their ideas and approaches, and to refine them according to best practices.

EAP courses may be offered by applied linguistics departments, EAP units and academic writing centers. Such instruction may be incorporated into the curriculum of PhD programs, as has been done for scientific writing at Erasmus Medical Center and Helsinki University Faculty of Medicine [Burrough-Boenisch 2013a]. External consultants may also be hired on an occasional basis to give scientific writing courses to a research team or a class of students (see, for example, Matarese [2013a]). These ad hoc courses provide a satisfying solution to a real problem but, if continuity is missing, the instruction will be insufficient. If universities are serious about training researchers, there can be no excuse today to not incorporate academic writing instruction of high quality into educational programs on a regular basis.

2.2. Individualized writing assistance

The further along researchers are in their training, the less time they have for formal study. So, to assist young investigators who did not have academic writing instruction earlier in their studies, an individualized approach is appropriate. Indeed, academic writing has traditionally been taught this way, with knowledge being passed on from mentor to student during manuscript conferences. Individualized instruction is advantageous in that it offers greater time flexibility and addresses writing difficulties as they present. But, considering how research is conducted today (with research teams spread over many sites, multiple authors per paper, stiff competition for journal space and increasingly complex demands from publishers), the limited time that mentors can dedicate to teaching writing skills is inadequate. This problem presents itself in my own activity of editing in the biomedical sciences, where clients send me manuscripts written by their younger colleagues, acknowledging that the text “needs work” but that they do not have time to dedicate to it themselves. In these cases, the novice writer can receive individualized writing assistance from an authors’ editor.

2.3. Authors’ editors

An authors’ editor is a language professional “who, by working closely with authors, improves a document to make it fit for its final purpose” which, for research papers, is publication in a peer-reviewed journal [Burrough-Boenisch and Matarese 2013]. The work of an authors’ editor begins after a manuscript has been drafted and ends when it has been accepted, at which point other editors employed by the publisher are engaged. Authors’ editors do both language editing and substantive editing (editing of substance, content). Where needed, they improve grammar, style and readability, and they guide authors in improving structure, methodological documentation, data

presentation, reporting accuracy, and argumentation. As the quality of the writing varies greatly from manuscript to manuscript and different authors have different publishing goals, there is no standard procedure for author editing. Author editing is therefore a professional service, i.e. one that responds individually to problems that cannot be standardized and is guided by professional values and ethics [Matarese 2013b].

While researchers request editing to have a manuscript improved prior to submission, the experience can also be educational [Burrough-Boenisch 2013a]. Simply by reading their edited texts, they take note of where their writing was amended and learn from the modifications. The changes activate their passive language knowledge, bringing to the fore terminology and phrasing they could not recall while writing. Editing can also be explicitly educational, when editors annotate the modifications to explain why they were necessary. These annotations point out grammar errors and comment on aspects of style, such as jargon and formality. They also provide guidance on good scholarship (e.g. genre requirements, citation practices) and on publication ethics (e.g. proper documentation of ethical animal handling and conflicts of interest, avoidance of text recycling). This use of editing, called didactic editing by Burrough-Boenisch [2013a], is a powerful way to teach not only academic English but also academic writing in the wider sense.

2.4. Academic translators

Researchers who do not write in English but wish to publish in an internationally read journal cannot be served by an authors' editor but require a translator. The task of academic translation is complex and goes beyond the production of a copy of the text in another language. The academic translator is charged with the task of producing a new original that will be well received by journal editors, reviewers and readers, and that will portray its authors as being equally authoritative in English as they are when writing and speaking in their native language [DiGiacomo 2013]. This means that the translated text must adhere to the discourse style and cultural norms of English writing in the particular discipline, and must be free of non-anglophone rhetorical patterns or assumptions. However, when the traditions that guide scholarly writing in the source language are substantially different from those of the target language, as when a Romance language is translated into English, the translator must negotiate a solution that is as faithful as possible to the authors' intentions while maximizing the chances that the translated text be accepted by a journal. Thus, as Bennett [2013] has argued, the academic translator is a cultural mediator.

Translators, too, can have an educational role. With their knowledge of the discourse norms that guide writing in two languages, they can help authors (and journal editors) understand the disjunction that exists between the two academic cultures and that could cause a paper's rejection if not adequately mediated [Bennett 2013]. Like authors' editors, academic translators who establish close working relationships with authors can teach them about research writing in English: for example, how to structure a text, frame an argument, or present data. They can also help authors adhere to norms of good scholarship and publication ethics, as difficulties in these issues are not limited to texts drafted in English.

2.5. Professional profile of authors' editors and academic translators

Some authors' editors and academic translators come to the job with a degree in linguistics or translation (there currently is no standard training for author editing³). Others, like myself, enter the language profession after preparing for a career in scientific research or health care. Indeed, prior studies or work experience in the field in which one edits or translates is an advantage, as understanding the subject is fundamental to a meaningful edit or translation. What matters is that those who come to the profession from the world of research develop their skills in language, while those with a linguistic background acquire deep familiarity with the terminology and topics of the field in which they work. Whether the language professional has a grounding in linguistics, a science or another academic discipline, he or she usually works on texts from a narrow academic field: a disciplinary focus is necessary if one is to understand and follow developments in that field's publishing paradigms, ethical issues and editorial standards. To hone and update their skills, authors' editors and academic translators can join associations like the European Association of Science Editors, the Society for Editors and Proofreaders, Mediterranean Editors and Translators, and the national member societies of the International Federation of Translators. These associations provide continuing professional development activities (conferences, workshops, newsletters and mailing lists) on topics that span from publication ethics to grammar and language technologies. Active membership in one or more of these associations is a sign that the language professional has access to debate on the latest issues in research writing and publication—one qualification necessary for serving the academic community.

Academic translators and authors' editors may be employed by universities and research centers, in a variety of settings. They may belong to discipline-specific units, such as the Department of Scientific Publications at M.D. Anderson Cancer Center⁴ [Pagel et al. 2002] and the Medical Editing Services facility at Cleveland Clinic Foundation [Mundy 2000]. Alternatively, they may work within the broader framework of a university language center (e.g. at the Universitat Autònoma de Barcelona⁵ [Owen 2012] and the University of Groningen⁶ [Harvey 2012]), or serve a single department as staff editor⁷. However, as highlighted in the opening paragraphs, universities do not commonly offer academic writing support. Therefore, many language professionals work independently and are available for direct hire, manuscript by manuscript. They may contract directly with researchers or receive assignments from university facilities (when these exist and are permitted to outsource to freelance workers).

The services of editors and translators are amenable to distance work, with communication by email and telephone. Ideally, they work on repeated occasions with the same clients. Through long-

³ But see Burrough-Boenisch [2013c] for a description of the skills these language professionals should acquire

⁴ <http://www.mdanderson.org/education-and-research/departments-programs-and-labs/departments-and-divisions/scientific-publications/index.html>

⁵ <http://www.uab.cat/servlet/Satellite/translations-1196343269616.html>

⁶ <http://www.rug.nl/science-and-society/language-centre/translation-correction-and-editing/>

⁷ <http://www.rug.nl/research/genetics/staff/jackie-senior?lang=nl>

term collaborations, authors learn what to expect from the editing or translation process and how to participate in it. As they internalize the editorial feedback received on their texts, their writing improves, so their successive drafts are more easily edited or translated and have better chances of being accepted by their target journals. At the same time, editors and translators learn about the research topic, so their work improves too [Burrough-Boenisch and Matarese 2013]. They also become attuned to a particular author's voice (a linguistic term referring to one's style of writing and how one shows authenticity, authority and intent), and thus can strive to make it resonate in English as it would in the author's native language [DiGiacomo 2013].

3. Support for research writing in Italy

3.1. Language services that universities offer

The offer of writing support to Italian students and researchers has not been comprehensively surveyed and there are few written accounts of such services. Regarding the teaching of academic writing, there were no Italian contributions to the seminal volume *Teaching Academic Writing in European Higher Education* [Björk et al. 2003] nor in the recent *Writing Programs Worldwide: Profiles of academic writing in many places* [Thaiss et al. 2012]. At the 2013 conference of the European Association for the Teaching of Academic Writing,⁸ just two of about 170 abstracts came from Italy (from the University of Trento and the European University Institute).

The Italian association that seems closest to the teaching of academic writing is AICLU, the Association of Italian University Language Centers. As explained on the association's website,⁹ university language centers are dedicated to teaching foreign languages (including Italian as a foreign language for international students); their responsibilities do not specifically include academic writing instruction or writing support for researchers. That these latter activities are not a priority is supported by the fact that none of the 32 Italian presentations at AICLU's eighth national conference¹⁰ addressed the writing needs of researchers publishing in English. Nonetheless, a perusal of the online presentations of the 47 AICLU members listed on the association's website revealed that four language centers do organize relevant courses for doctoral students and researchers—in academic writing at the Universities of Parma¹¹ and Urbino¹² and in academic English at the Universities of Padua¹³ and Udine¹⁴. Writing courses are also occasionally given by

⁸ http://www.eataw2013.eu/program_grid.php

⁹ http://www.aiclu.it/aiclu_info.html

¹⁰ <http://www.unifg.it/en/AICLU/Abstracts/69/>

¹¹ <http://www.cla.unipr.it/cla/standardpage.asp?ID=386>

¹² http://www.uniurb.it/cla/corsi_di_lingua_inglese/

¹³ <http://www.cla.unipd.it/cetest-firstpage/corsi/dottorandi/>

¹⁴ <http://www.clav.uniud.it/English-for-Academic-Purposes.515.0.html>

visiting professors (e.g. from Tampere University of Technology, for PhD students in food biotechnology at the University of Milan) or by external consultants (such as myself, for doctoral programs in molecular medicine and oncology in Milan). Since these courses are outside of university curricula, a complete listing is not available.

Regarding the provision of editing and translating services within the university setting, when I reviewed the AICLU members' online presentations I found that three centers offer *revisione* (editing) and nine offer translation. In most cases, though, there is little information about how the services work, suggesting that they are not widely used by researchers. Moreover, in the European associations in which I am active, none of the 15 Italian members in Mediterranean Editors and Translators (total, ~160 members) and only 3 of the 13 Italian members of European Association of Science Editors (total, ~830 members) list an affiliation with a research institute (data from July 2013). These findings lead to the conclusion that Italian universities provide only limited support for academic writing and publishing.

3.2. Language services available to Italian researchers

Considering the limited provision of writing support by university facilities, Italian researchers can be assumed to rely (to a variable extent depending on the discipline) on the informal exchange of manuscripts among colleagues and on external services. Peer editing is certainly an important part of the scholarly writing process, but experience shows that it is not always sufficient. Outside of university settings, broadly speaking, writing support services are provided, on the one hand, by self-employed professionals and agencies that focus on serving one national or linguistic community, and, on the other, by large online editing firms with a global reach (depending on the firm, one's editor may be an American graduate student working part-time for pocket money, a trained researcher working freelance, or an English-speaking scientist residing in a developing nation [Appiah 2009; Cerejo and Rajan 2012]). In Italy, given current spending regulations, it is easier for universities to contract with companies than to hire independent operators. This situation effectively excludes an entire category of service providers and results in many Italian researchers turning to the highly visible global firms (which, however, are unlikely to have specialized knowledge of the Italian language and of Italian discourse).

Online editing firms that offer a quick and relatively inexpensive service performed on the other side of the globe are suitable for correcting grammar, adjusting style and pointing out small errors. This sentence-level work, which involves both copy-editing and language editing (see Burrough-Boenisch [2013b] for definitions), was once performed by publishers on texts already judged by peer reviewers to have adequate structure, logical argumentation, accuracy and completeness. If instead the text has substantial linguistic or content problems—as manuscripts written by young researchers often do—polishing the grammar and style is premature. Such a draft requires author editing, where author and editor discuss the writing (through in-text comments, email and telephone if not in person) and collaborate through multiple rounds of substantive editing until the research is presented clearly and accurately. The goals are not only to help the paper get into peer review but also, perhaps more importantly, to increase the value of the published report as one that is intelligible and reproducible. These goals are more readily achieved when the editor knows the

author's language and writing culture and is predisposed to edit successive versions of a text—a condition more likely to be met with a language professional working locally than a contractor employed by a global editing firm.

Even when there is an explicit desire to hire locally, some researchers (or their administrators) are unsure how to choose a language professional. Reviewing recent announcements for short-term university assignments, I found unfamiliarity and misconceptions regarding language professionals' educational background, skills and work organization. For example, when editing services are needed, calls may require that candidates have a degree in languages and work experience in translation, thereby excluding candidates who trained in the sciences and specialize in editing. Some calls ignore that different skills are needed for different types of language services. For example, a single person may be sought to edit, translate (bidirectionally between English and Italian) and teach scientific English at different levels: while it is common to combine a few activities (e.g. editing and translating into English), a professional is not a jack-of-all-trades. Moreover, calls frequently require candidates to be available full-time for a short period, implying that they are assumed to be idle, precarious workers rather than “minipreneurs” with ongoing collaborations. Finally, calls require the submission of an application that is evaluated by a jury, resulting in a contract to sign—disproportionately complex when the assignment is worth a few hundred euro, the price of one reagent for a biology experiment. Thus, when universities do attempt to hire a local editor or translator, they may fail to attract qualified persons.

4. Editors and the profession of editing

The confusion about author editing, highlighted above, is already understandable when we look at the etymology of the words editor and editing. As explained by Burrough-Boenisch [2013b], “editing is the processing of communicative material”, not only text but also sound and film. Broadly speaking, editing involves correcting, standardizing, trimming and improving. Someone who edits is called an editor, but not all editors do, in fact, edit: for example, a production editor manages the editorial process in preparation for printing, while a journal editor determines editorial policy and oversees peer review. For historical reasons, the Latin root of editing (*edere*) has generated words meaning publisher in some languages, i.e. *editore* in Italian [Burrough-Boenisch 2013b]. Thus, native Italian speakers may confuse editing with publishing and they may refer to the work I do—author editing—as translation for lack of a better Italian word.

Even among native English speakers, the terms authors' editor and author editing are not widely known. Yet the profession is not new, having developed in the American medical publishing context in the 1970s or earlier [Applewhite 1973; Cox 1974]. Notwithstanding its high caliber, editing for researcher-authors has remained a niche service never officially recognized as an economic activity in North America or Europe [Matarese 2013b]. The North American Industry Classification System places the activity of “document editing or proofreading” in the “document preparation” category under “business support services” (NAICS code 561410) [US Department of Commerce 2012]. Similarly, the Statistical Classification of Economic Activities in the European Community lists editing in the category of “photocopying, document preparation and other specialized office support activities” (NACE Rev. 2 code 82.19) [European Commission 2008]. In contrast, translation (with

interpretation) is recognized as an independent activity in both classifications and, in Europe, is grouped among “other professional, scientific and technical activities”. The lack of an appropriate economic activity code at the national level (e.g. in the Italian ATECO 2007) poses practical problems for authors’ editors who work freelance or create small businesses.

In the International Standard Classification of Occupations, editors do not appear but may be presumed to belong to the category “translators, interpreters and other linguists” (ISCO-08 code 2643) [ILO 2008]. Remarkably, in the latest edition of the Italian Classification of the Professions (CP2011),¹⁵ editors appear for the first time (code 2.5.4.4, *linguisti, filologi e revisori di testo*) and are placed at the same hierarchical level as translators (code 2.5.4.3, *interpreti e traduttori a livello elevato*), under the main category of “intellectual, scientific and highly specialized professions”. As ISTAT explains, editors “apply linguistic knowledge for the critical revision of written texts, audiovisuals and multimedia” (my translation) [ISTAT 2013]. This addition is a wise and welcomed step that, if repeated on an international scale, should finally enable the business of editing to be studied as an economic activity. It is hoped that this Italian initiative, which defines editing as a high-level activity where language skills are used to critically improve the communication of content, bodes well for the recognition of this writing support service that has particular value in non-anglophone research settings.

5. The future of research writing support in Italy

In Italy, where English language skills are relatively poor (but improving) and training in academic writing is offered only sporadically, a dedicated effort to increasing researchers’ access to quality writing support is needed. A first step in this direction is for researchers and their administrators to have a better appreciation of the roles, educational background and work organization of language professionals and how to choose them (for guidelines, see Burrough et al. [2008]). An additional step for effective policy-making is to collect national data through, for example, surveys on the services actually used by Italian researchers and how these are funded, and studies into researchers’ real needs and preferences. Research of the latter kind is currently being conducted in Spain¹⁶ [Moreno 2011].

Hopeful that the higher educational trends in northern Europe will literally filter down, we can envisage, in the coming years in Italy, the integration of language professionals into the research setting at multiple levels. There will be the creation of academic writing centers with a focus on teaching EAP and scientific writing to students and young researchers. These writing centers will also provide editing and translation services; to handle requests from researchers from diverse specialisms, the centers will outsource work, as needed, to a network of reputable subject specialists. Bureaucratic procedures for hiring self-employed language professionals will be simplified to match the short-term nature of the assignments. Editors hired this way will also support EAP courses

¹⁵ http://cp2011.istat.it/index.php?codice_3=2.5.4&codice_2=2.5&codice_1=2

¹⁶ <http://blogs.unileon.es/amoreno/?p=195>

through the didactic editing of the students' writings. Additionally, research institutes will establish core facilities employing editors and translators specialized in the relevant disciplines. At these in-house facilities, researchers will meet casually with their editor or translator and ask questions or give instructions; these close personal interactions will enhance the service's editorial impact and educational value. Contemporaneously, as the occupational situation improves for persons providing language services in Italy, there will be increased Italian participation in European associations for language professionals; as a result, Italian initiatives to support research writing will be discussed and perfected on the basis of collegial feedback. In the future, in Italy, the increased availability of quality support for research writing and publishing will improve researchers' productivity, alleviate their stress from peer review, and help raise the profile of Italian reporting in the international literature.

Acknowledgments

Grateful thanks are expressed to all the contributors to *Supporting Research Writing*, as it is upon their ideas, knowledge and experiences that this paper is founded. Two of the contributors, Marije de Jager and Joy Burrough-Boenisch, are also acknowledged for having provided useful comments and criticism to improve this manuscript.

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