

## International Writing Collaboration Strengthens Publishing: New policy and Ethical Guidelines for Co-Authorship

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**Abstract:** There are several successful ingredients to publishing a manuscript in a top-level scientific journal including solid laboratory or field skills, excellent writing and management skills, and choice of journal. This paper focuses on the second aspect. In Asia, Africa, South America and the Middle East (and even in supposedly native English-speaking countries), there are numerous scientists who face serious language- and writing skill-based difficulties when writing scientific manuscripts. English and writing skills are, after the scientific base of an experiment, the most essential skills for success in science publishing. This manuscript shows and emphasizes how international writing collaboration can serve as one simple but effective solution that could result in scientific publishing success without ethical hurdles provided that strict rules and values are adhered to.

**Keywords:** collaboration, partnerships, science writing, English skills, passion for science

### The birth of a manuscript

In a recently published paper (Teixeira da Silva 2011a), I considered several aspects of how to write a manuscript for successful publication in an international scientific journal of repute. In that manuscript, I indicated that trial and error, and development of a writing skill would define a scientist's style and sense of interpretation of scientific facts, factors that can strongly influence the success of science publishing. In a vast sea of print and online journals, it is becoming increasingly difficult to make the correct choice, and very often submission is erroneously spurred by the speed and ease of publication, dictated by weak or poor editorial or managerial policies. Nonetheless, in any field of study there are always the corner-stone journals that define quality and prestige and these, for now, should serve as the guiding beacons for publication in a scientist's field of study. Other journals of lesser quality or unknown stature can be considered, but, particularly at the nascent stage of a scientist's career, these should generally be avoided, despite giving one a sense of false satisfaction when a paper is accepted for publication.

## **Making an omelet from an egg**

A manuscript is not born from fresh air. An idea is born, perhaps even inspired from another, and based on a clearly defined hypothesis, leads to a series of tests that lead to data that is interpreted to either verify or disprove the original hypothesis. A well-designed experiment and solid, well-thought-of hypothesis are essential factors for a good experiment while sound statistical analyses bring confidence to a data set. The analogy: Provided a chicken is consistently healthy and productive, without a good quality egg, there is no savoury omelet.

Originality is essential. Local studies are important but generally restrictive in their target audience and application and hence more difficult to publish. Persistence, desire, passion and ambition are all personal qualities, among others (Teixeira da Silva 2011a), that will help drive the experiment forward, particularly in times of duress. Faith to some is a must.

Publishing is increasingly competitive, and over time it is becoming progressively more and more difficult to publish in top level journals, despite a strong experimental design, execution, analysis and/or originality. Even research groups that have demonstrated consistently high levels of excellence struggle. Struggle, a universal truth for all manuscripts, is a basic ingredient for the search for excellence in science publishing. In essence, an extension of human nature. Living or working in a comfort zone stimulates apathy and passion is easily lost, for it has lost its essential nature. In most cases, however, to maintain a position or gain a salary, there is some level of pressure to publish and excel. However, excessive stress can lead to serious mistakes such as the incorrect choice of journal or plagiarism, all strong realities in the world of publishing.

In order to meet the challenges of today's world of publishing, scientists are left with few choices that allow them to excel beyond their personal and professional intellectual capacity. Those who have pot-bellied budgets can invest in top technology, labour and skills to ensure that they occupy the top echelon of the science publishing world. However, to most, particularly in developing countries, such funding is merely the topic of dreams. Funding is usually the number one limitation. Limited funding can result in limited studies, weaker data and restricted scope and application. And thus, a deep and wide chasm has emerged between rich and poor, developed and developing, both in society and in science. How then can those who feel the pressure of this gap, and who occupy its lower strata, become more competitive without compromising quality and ethics? And how can those privileged minority occupying the higher strata, give credit for those "below" them in ways that maintain ethical rigour while achieving scientific excellence through a spirit of true understanding?

In this paper, I propose one possible universal solution and answer to these two questions.

### **A step towards publishing success**

From experience, many scientists who are not native English speakers tend to rely on pot-luck chance and submit their manuscripts to journals in a less-than-suitable state, both in terms of scientific quality and writing style. In their minds, they have felt that some limit in personal and professional capacity has been reached, and there is a reluctance to try and excel. For them, the journal that publishes instantly is the medium of choice. No effort, few problems, some reward. Enough to scrape by. Others, however, who know their inherent weaknesses, seek to improve them. This is not easy and may involve a long and gradual process of dedicated English classes, TOIEC or TOEFL tests, or private lessons to try and master writing or scientific skills. In cases related to English and scientific writing deficiencies, scientists are left with three main basic choices: 1) contact a friend to assist freely; 2) contact an English teacher or unknown native English speaker to assist freely; 3) pay for professional services to improve the manuscript. There are inherent problems with each of these. In case 1), friends generally do not have the same concern as scientists and thus tend to give very superficial and non-technical comments, which might not improve the quality at all. It is not a long-term solution. After all, how many times can you bother a friend, unless they are considerably altruistic? In many cases, friends who are also professionals have their own busy schedules and private lives, and may be reluctant to assist more than once. In case 2), English teachers on the whole are not scientists, have poor understanding of the basics of science or science writing, and can give poor or oft insufficient advice. They are the cuckoos of the science publishing world and constitute an important, but dangerous masquerade that can damage science writing through a false sense of quality, both for the scientist and the target journal. Well, I guess it is better than nothing. Many commercial text editing services often advertise their personnel as PhD graduates or master's students who are native English speakers, but this is a far cry from what is required by learned professionals who need a professional service that tackles both language and scientific rigour. In case 3), not everyone can afford professional services. On average, it will cost between \$US 150-300 for a 3000-word paper that requires revision within a 10-14-day period. Naturally, more expensive services exist and higher prices for faster services. And also cheaper services, which tend to be suspect and should be altogether avoided. In many developing countries, such as in Indonesia, \$US 150-300 is the equivalent of a scientist's one-month salary thus professional text editing services remain way out of reach of possibly 50-75% of the world's scientists. How then, can a scientist who is convinced of the quality and depth of their study and research

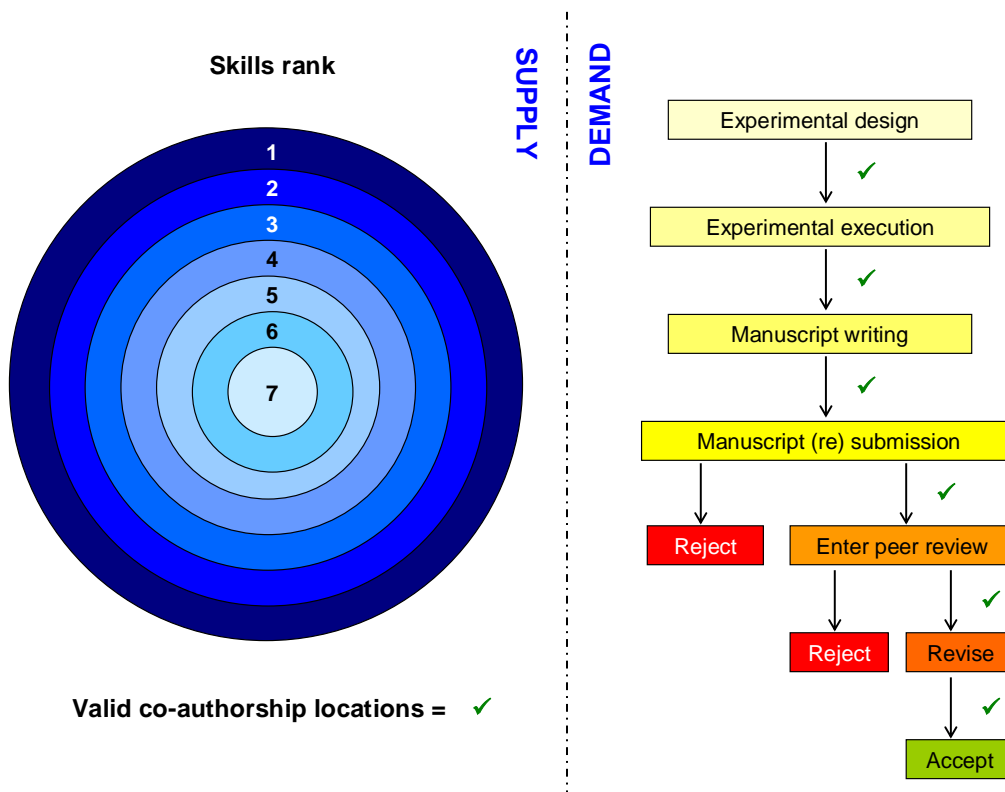
abilities, reach for the stars?

By establishing a professional writing collaboration. This is the focus of this paper.

### **How can it work?**

Without a doubt, finding the right partner is close to – but not – impossible. A search through major data-bases could result in suitable matches of leaders who would fit the profile of a scientist's research. However, many or most of them would probably be reticent to such an idea because: a) they follow in the traditional steps of their predecessors and thus believe that such an approach is wrong, but never question why it is considered to be wrong; 2) they have no idea how to approach the issue or how to establish the contacts; 3) they are afraid of the potential consequences because nowhere have suitable guidelines been established that authenticate or demonize it. This paper would bring the scientific community one step closer to authenticating the concept of international writing collaboration.

So, in my mind, the first step required to finding a suitable writing co-operation partner is to lose these three misguided and conventional misconceptions and to start with a fresh way of thinking. If a scientist knows that their research is honest, if they feel that they have fully complied to basic scientific principles in experimental design and execution, if they feel that what they have – in terms of results – is unique and original, but they recognize their personal and professional limitations in language expression and scientific writing skills, then they should seek help. If a scientist has been able to find a suitable person (professional) who they feel matches their research profile, then that person should be actively sought to recruit them in an open and transparent way. If initially that person accepts and only makes minor or superficial improvements or suggestions, then they can (and should) simply be acknowledged. If however, they make vast and significant edits and improvements to the interpretation of the data and study, to the writing and structure, and to the overall quality of science and language, even if they were not involved in experimental conception, design or execution, I am of the sincerest and strongest opinion that such a person should be a co-author without absolutely any ethical dilemmas. In other words, if a scientist is absolutely unable to write or text edit their own manuscript or feels that by inviting a high level scientist would significantly improve the quality of their text, then do so. In essence, such a professional would allow (or at least maximize the possibility) a scientist who feels that they have limitations in language or writing skills to cross the threshold between submission and acceptance. Figure 1 provides a flow diagram of how to reduce the redundant options and try to find individuals who would fit the perfect profile to achieve the task.



**Figure 1.** A “bull’s eye” scheme of how to track and identify the ideal international CPC through seven levels of selection: a self-appraised analysis of why the author would be the ideal candidate. Most likely the supply (of CPCs) would always be grossly exceed by demand (of authors requiring a CPC) at an estimated ratio of 1000: 1. 1) All scientists. 2) Plant scientist, including experience from multiple fields, including agronomy, agriculture, horticulture, genetics, botany. 3) Scientist with > 20 years research and/or publishing experience. 4) Scientist with over 400 international peer-reviewed publications, including journals and books and with a cumulative IF<sup>®</sup> score > 165. 5) Scientist with multicultural and multilingual (3-5 languages) experience and who is also a native English speaker. 6) Editing and reviewing of > 7500 manuscripts. 7) Editor in Chief of > 20-25 journals. Validity = validity (ethically, philosophically and otherwise) of a scientist with all 7 ranked qualifications to become a co-author when providing significant linguistic and scientific support to a research team as a international writing CPC. In other words, the CPC must be a validated, well-accredited and well-established peer.

Of course, the reader will know that this is most likely a hot bed of contention and will be subject to very strong and polarized opinions, no doubt. However, to those for whom such a co-operation brings genuine improvement at no cost, and a true chance to excel and publish in a level of journal that might have previously seemed unimaginable, a new spark of hope will be born. What will emerge is a new generation of scientist with a novel level of partnership, fortifying science through excellence in writing. A new class of ethics in science writing will develop, subject to challenges and criticisms in parallel to its powerful team-building capacity. Ideally, it may give a scientist – even an established scientist who has reached a plateau in writing ability – greater confidence, through learning, as to how to

better improve their own writing skills until they are confident enough to complete this task on their own. At that point, the co-operation might even cease to exist, and a new-born scientist will emerge. This is very different to the *neo-cientista* or *pseudo-cientista* (pseudo scientists) – terms coined by the author – discussed elsewhere (Teixeira da Silva 2011a).

### **How is it implemented? Co-operation ABC**

The agreement held between parties must never result in conflicts of interest with co-authors, with the research institute where the research was conducted or with funding bodies. This is a complex and highly sensitive topic and in the current world of science there is a rift as to who agrees or disagrees that such co-operation constitutes ethical practice in science publishing, a so-called grey zone in science publishing. Thus, to avoid confusion and to ensure that the ethics of such a writing co-operation are sound, we need to approach science publishing in this form in a step-by-step manner.

Personally, when such an international co-operation of this type is established, I always recommend setting out the most rigorous ethical policies possible. These are of course only guidelines and should be set to meet the individual requirements of that research group or study, and will need to be adjusted to suit a particular research group, institute or situation. However, this set of guidelines that I propose can serve as an essential skeleton based on which trust is built. One should always insist and request all co-operation partners to agree to each and every single point, without exception. Those points which I most recommend are:

- a) This co-operation exists with an understanding that this work is original, has not been published before, has been executed in the most scientifically rigorous manner possible, and is not been considered for more than one journal.
- b) This co-operation exists with an understanding that there are no conflicts of interest between any of the co-authors, between any of the authors and research institutes and/or funding bodies.
- c) Any possible conflicts of interest that have not been fully and openly declared are and will be the FULL responsibility of the host research author(s) and institute.
- d) Submission is also the FULL responsibility of the host research author(s) unless specifically requested due to difficulties with language or complexity of online submission systems. In that case, I will serve only as the vehicle for submission but the original authors will remain the official authors for correspondence in the manuscript itself.

e) The functions performed by me (upon request) include advice on data analysis, advice on experimental design and analysis, critical assessment and evaluation of scientific content, and language improvement, each to a different extent, but all-inclusive nonetheless.

f) It is understood that such a co-operation is NOT standard BUT constitutes a unique, but not unethical, means of co-operation, as established by all parties concerned. Independent of this co-operation, the ethical guidelines set out by relevant journals, research institutes, funding bodies and publishers will be fully respected.

g) Submission of this manuscript to any and all future journals implies that all conditions a) to f) have been read by all parties and are fully understood.

h) To ensure that all conditions are met, each revision and submission steps will be communicated to all authors by e-mail. This is done to avoid any misunderstandings or conflicts and to promote full transparency and open communication and discussion at each step of the editing process.

i) The choice of journal, publisher and publishing medium (online or print, journal or book), format (open access or paid subscription), and level of quality (with or without Impact Factor<sup>®</sup>) will be decided upon by consensus.

If even as little as one of these requirements is not met, I strongly recommend that the co-operation not take place due to conflicts of interest, personal, or professional, and that other alternatives be sought.

## Practical examples

In general, writing co-operation can also fulfill, in addition to improving limits and gaps in linguistic and science writing skills, other functions. What follows is a small but significant sample of co-operation writing manuscripts that have been written under the umbrella of scientific writing co-operation, fully ethically approved by all authors and under the strictest possible rigor at all levels of scientific execution and editing. These examples are classed under three classes of assessment:

1. If you are sure that the research you have done is unique, you are absolutely unable to find any literature on the topic and you are convinced that your findings are good, not necessarily *Science* or *Nature* level, but you are afraid of your personal limits, then seek a science writing co-operation partnership. By identifying a unique “gap” in science where a new discovery could be made is an extremely important part of science publishing, but being unable to expose it is the worst possible outcome that could face weeks or months of hard lab or field work. Despite the long history of apple tissue culture and biotechnology (Dobrąnszki and Teixeira da Silva, 2010;

Magyar-Tábori et al. 2010), no one had ever attempted to apply thin cell layer technology to apple regeneration (Dobránszki and Teixeira da Silva, 2011). One's own ideas should never be shunned, one should never be shy about a modest dream to discover something (Tanaka et al. 2010), and never be afraid to ask for help, even the leaders of a field of study, in trying to achieve it (Teixeira da Silva et al. 2007).

2. While trying to disprove a null hypothesis, how novel would your results be? Would you consider your own results to be of high international value (Teixeira da Silva, 2003a), high value but geographically localized (Teixeira da Silva et al. 2000), or of low practical value or regional interest because there are too few samples or only a single variety is used (Teixeira da Silva and Tanaka, 2009a), even if molecular work is involved (Teixeira da Silva and Tanaka, 2009b)? In general most journals require results to be tested on more than one cultivar or multi-season trials (Ruan et al. 2010). However, on occasion, plant material is scant, growth is slow and thus results in some journals that pertain only to a single cultivar or single season of data can often be represented as a research note (Ding et al. 2010) because that plant material or research is of value even though the experimental design is simple (Teixeira da Silva, 2005; Teixeira da Silva and Tanaka, 2006).
3. Even if the results are not that interesting or novel, do you have the creative ability to make the story surrounding the data interesting (Teixeira da Silva, 2003b)? Even if the methodology used is not that popular, especially in this day and age of molecular advances, can you still show the effectiveness of simple but powerful techniques (Winarto et al. 2010)? Many top level journals receive dozens if not hundreds of manuscripts a month and often there is a first phase of selection. During this phase, even if the results are fairly simplistic, provided that they can show some futuristic application or provided that they indicate an extension of a concept, the chances of acceptance, even with only a single set of data, are high e.g. (Dobránszki and Teixeira da Silva, 2011). If you feel that something has never been researched before, possibly because the concept would be laughable, ignore those laughs, and follow your gut feeling and scientific base (Teixeira da Silva, 2011b). More often than not, you will be the last one laughing (Teixeira da Silva, 2003c; Mariani et al. 2011).

Based on these three initial assessments, a journal should then be selected that would best correspond to the estimated quality and level of the manuscript's scientific value. Always aim for a slightly higher level journal that you would expect to publish in at first (if time permits) and then downgrade later if necessary. The value of books is rapidly diminishing (in my opinion), and unless the publisher can provide a top-class product on high-quality print medium (Teixeira da Silva and Tanaka, 2011), with a perfect finish, your best bet is to aim for a respectable journal instead.



Nowadays, there is a wealth of online and Open Access journals, all with their merits and demerits, almost springing up weekly, and the scientist's choices, although apparently wider, are also more dangerous, because the risks are much higher. Proceed with caution!

## SUMMARY AND CONCLUSION

Writing a scientific paper for an international journal is for some a pleasant experience while for others it is a stressful one. Most certainly it will contain both aspects but hopefully within the text above you may find at least one point that might lead you closer to having your important research results published more easily and more effectively. Remember that a manuscript that is well written (style-wise) and which contains clear and grammatically correct English, that follows the style of the journal and that proves the hypotheses initially set out in the Introduction will have already fulfilled half of the requirements for publication in any journal. The remainder depends on the quality of the research that was conducted, on the scientific merit and uniqueness and on the strictness of the review process.

Partnerships and collaboration are no longer only limited to intra-lab or intra-institutional group work. Neither are they limited to grandiose and excessive budget-blowing cocktail parties across international lines. The concept of collaboration is simple. Assistance that results in a significantly higher quality constitutes an ethical and acceptable form of co-authorship provided it is done under the most rigorous ethical guidelines and execution possible (Teixeira da Silva, 2011c). Excellence is a two-way street that can only be achieved in an increasingly competitive world of science publishing by establishing partnerships at two primary levels: laboratory skills and scientific writing. There is more than an abundance of evidence suggesting the success of ethical collaborative publishing, independent of culture, creed or country (Zeng et al. 2011; Teixeira da Silva and Muscolo, 2012), even though there continue to be sharp divides as to what constitutes a valid author, at least within the plant sciences (Teixeira da Silva and Van, 2011).

Those who have reached the limits of their professional writing endeavours and are unable to excel despite their efforts need to seek professional assistance. Those who can just pay for it... well, don't even bother to read this paper!

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I wish to thank Pham Thanh Van for all her forms of support. This text is dedicated to all those scientists who are inspired by my passion to make their publishing dreams a reality. This message is for and about you: "Lionel Logue: *Why should I waste my time listening to you?* King George VI: *Because I have a voice!* Lionel Logue: *...yes, you do.*"

(The King's Speech, 2010). About the author: Dr. Jaime A. Teixeira da Silva graduated from The University of the Witwatersrand, South Africa, majoring in Botany and Genetics. He has held research positions, including post-docs, at Lisbon University, Portugal and Kagawa University, Japan. His PhD is in ornamental biotechnology. He has published or co-authored over 75 book chapters and 300 peer-reviewed papers, with between 50 and 70 in review or preparation and has a cumulative IF<sup>®</sup> score of >165. He is the founder, former CEO/CSO and current Editor-in-Chief of Global Science Books ([www.globalsciencebooks.info](http://www.globalsciencebooks.info)).

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