

<AT>Inclusion of research materials when submitting an article to *Language Learning*

<ArtType>EDITORIAL

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The promotion of robust methodologies and Open Science practices at *Language Learning* continues thanks to the combined efforts of a series of editorial teams and, most recently, Professor Pavel Trofimovich, the previous Journal Editor. We are also very grateful to the *Language Learning* Editorial Board and to Wiley for their sustained support for a range of initiatives.

<ABS>ABSTRACT

Building on initiatives to promote high quality methodologies and Open Science practices in the language sciences, *Language Learning* will request, as of January 1, 2020, that all submissions to the journal include, whenever possible, the full materials used in the study for peer review. This includes materials used to elicit and code primary and secondary data (such as questionnaires, language tests, interview or observation schedules, and coding schemas). These materials will be shared with reviewers to better inform the peer review process and ensure rigorous evaluation of the methods

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used. If the manuscript is accepted, authors will then be encouraged to make their materials available on an open, sustainable repository, though there is no requirement to do so. In this Editorial, we outline the benefits of this policy for the advancement of the language sciences and discuss some potential concerns that authors may have.

<KWG>KEYWORDS research methods; transparency; peer review; publication

<A>Introduction

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Over recent years, *Language Learning* has been promoting practices to improve transparency and methodology by, for example, requiring the reporting of effect sizes (Ellis, 2000); encouraging authors to make materials and data fully transparent by holding them in a publicly accessible repository, such as IRIS (Marsden, Mackey, & Plonsky, 2016; <https://www.iris-database.org>), OSF (<https://osf.io>), or Dataverse (<https://dataverse.org>); producing guidelines for transparent reporting of quantitative research (Norris, Plonsky, Ross, & Schoonen, 2015); awarding Open Science badges to encourage authors to make materials and data available on a sustainable open repository and to preregister their studies (Trofimovich & Ellis, 2015); joining the Centre for Open Science preregistration award scheme in 2016 (<https://cos.io/prereg>); engaging in the IRIS Replication award in 2017 (https://www.iris-database.org/iris/app/home/replication_award); and introducing the article category Registered Reports (Marsden, Morgan-Short, Trofimovich, & Ellis, 2018). The journal has also improved accessibility to research by asking authors to write openly available, non-technical summaries of their articles (Marsden, Trofimovich, & Ellis, 2019). *Language Learning* is now building on this trajectory by asking authors to make their full materials available for reviewers as of January 1, 2020.

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Materials is intended to be a broad term that refers to all materials, including any instructions to participants, that were used to collect and code primary or secondary data, no matter how large or small the materials are and no matter the approach to research taken. (For example, a few bullet points used to conduct semi-structured interviews are important for understanding the interview process.) However, we acknowledge that the need for materials may be less relevant to epistemologies or methodologies such as some discourse analytic or ethnographic approaches where data elicitation is not applicable. Nevertheless, even in such cases, materials for scoring, coding, or analysis, such as thematic coding schemas, can usefully be made available on submission.

This policy to submit materials will not reduce the need to describe in full the methods, procedures, and how the materials were used within the submitted manuscript.

Full details of the practical steps needed at the point of submitting manuscripts will be given in the Author Guidelines published on the *Language Learning* website in December 2019. This Editorial serves to alert our potential authors of this policy, to explain the benefits, and to allay any concerns.

<A>Benefits of submitting materials on submission

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Allowing reviewers to see all materials used in a study affords multiple benefits to the advancement of science and the publication process itself. In the past, it has not been unusual for *Language Learning* to request to see materials because, at some stage in the review process, reviewers have often asked to see the materials to inform their evaluation of the validity and reliability of the methods. The main aim of broadening this policy now is to enhance methodological transparency for

our reviewers, making it systematic and equitable across all submissions. Because our methods determine the validity and reliability of the claims we make, the long-term goal is to enhance the quality of research published. Indeed, one of the more frequent requests that reviewers make is for greater methodological clarity (as noted by DeKeyser & Schoonen, 2007), and reviewers' concerns are sometimes simply due to confusion caused by having access to only a small sample of materials. These problems would be almost entirely addressed by making full materials available for review, likely streamlining the review process. Access to the materials used to gather data will allow reviewers to understand more precisely what the researchers did, the kind of data that might have been elicited, and, where relevant, what the participants experienced. Further, reviewers and editors would be in a stronger position to reduce the chances of occurrence of one type of questionable research practice whereby researchers may not be sufficiently explicit about having selected data from only subparts of their instruments (Chambers, 2017). When evaluating replication research, reviewers would be able to better evaluate the extent of similarity or change between the initial research and the replication, thus serving to reduce and clarify levels of (often unacknowledged or unjustified) heterogeneity that have been observed between self-labelled replications and the studies on which they are building (Marsden, Morgan-Short, Thompson, & Abugaber, 2018). With materials available, reviewers will be better placed to evaluate comparability with previous research, thus improving the systematicity of research agendas.

<A>Addressing potential concerns about submitting materials for review

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We acknowledge that some materials cannot be made available to reviewers due to commercial sensitivity, such as proprietary language proficiency tests or reading test batteries. In these

situations, we will ask authors to explain why they are unable to share their materials in a short letter and in an endnote in the published article. We will request that as many details be provided as possible in the body of the manuscript about the material used, such as information about administration protocol, instrument or rater reliability, types and numbers of stimuli items, time taken to complete the test, along with some actual (or simulated, if necessary) examples of parts of the instruments and information about where the materials could be obtained. Where proprietary materials are used in combination with non-proprietary materials, the latter would be submitted with the manuscript in line with the policy.

Some authors may have ethical or legal concerns about submitting materials (such as whether the materials somehow compromise safety or privacy, as might be the case with photographs used to elicit language or emotions). Again, such explanations would be given in the covering letter and in an endnote, and full descriptions of the materials would be given in the manuscript itself.

If authors are concerned about having materials reviewed post hoc, after data collection, and would prefer a scheme where materials are reviewed prior to data collection, then they may prefer the Registered Report approach to the research process (Marsden, Morgan-Short, Trofimovich, & Ellis, 2018; and see author guidelines at <http://onlinelibrary.wiley.com/lang>). With Registered Reports, authors gain valuable input on their materials from experts at the point that advice can be acted upon—*before* data collection. Once reviewers approve of the plan and materials, in-principle acceptance (IPA) of the manuscript is given by the Journal Editor before data collection commences. This means that reviewers cannot then recommend rejecting the final manuscript on the basis of the materials.

In sum, we emphasize that this policy does not intend to directly or indirectly marginalise submissions in which materials, for good reason, simply cannot be provided, and we continue to welcome all manuscripts that fit the scope and aims of *Language Learning*.

<A>Continued encouragement to make materials (openly) available on publication

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The lack of availability of materials, either within the article itself or openly available online, continues to be a severe problem in our field, threatening the quality and quantity of replication, our ability to scrutinise research, and our capacity to build systematic agendas. For example, Derrick (2016) reported that just 17% of research materials were available for the research published across three journals over the five years 2009-2013; Marsden, Thompson, and Plonsky (2019) found only 27% of self-paced reading tests had been made available, and Plonsky et al. (2019) report that only 36% of acceptability judgment tests had been made available. To continue our attempts to address this problem, once manuscripts are accepted at *Language Learning*, authors will continue to be encouraged (though not required) to publish materials alongside the final article in, for example, appendices or Supplementary Information online.

Furthermore, in the spirit of Open Science, we hope that the act of providing materials at submission will encourage more authors to go the extra step once their work has been accepted for publication and make their materials freely and openly available. We will, therefore, continue to encourage authors to hold their materials on a publicly accessible and sustained platform, such as IRIS (<https://iris-database.org>) and/or the OSF (<https://osf.io>), as we have done for the past eight years. Such practices promote a synthetic (i.e., collaborative, cumulative, and systematic) ethic in our field, facilitate replication (Marsden, Morgan-Short, Thompson, & Abugaber, 2018), and enable

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pre-registered replication research that provides access to larger sample sizes across different contexts (Morgan-Short et al., 2018) or to hard-to-reach and neglected participant populations (Andringa & Godfroid, 2019). During the submission process to *Language Learning*, contributors are currently asked to check a box to indicate whether they intend to make their materials openly available on publication to receive an Open Science badge. We will, as of the January 1, 2020, also ask authors to indicate in the Methods section of their manuscript if their materials will be made openly available if the manuscript were to be published, and if so where. This practice will adhere to Level 1 of the Transparency and Openness Promotion guidelines for research materials (Nosek et al., 2015). If authors do state that they will make their materials openly available but are for some reason concerned about others using their materials before the authors themselves have “finished” with them, embargo dates on materials can be set to release them at a later date. (See Gerrig & Rastle, 2019, and Lindsay, 2017) for examples of language science journals now requiring that materials and data be made available on submission and openly available after publication; and see American Association for the Advancement of Science (2018) and National Academies of Sciences, Engineering, and Medicine (2019) for top-down, national recommendations about materials transparency in the wider sciences.)

<A>Conclusion

The Editorial Board of *Language Learning* believes that requiring materials for peer review is an important and useful step towards helping the field gain confidence in Open Science practices, while giving time for research and training cultures to adapt accordingly. We acknowledge that this policy does not address other issues, and we look forward, for example, to witnessing how the field’s growing confidence and willingness to engage in transparent practices might address other

concerns, such as the poor availability of raw data (Larson-Hall and Plonsky, 2015). We hope that *Language Learning* authors are keen to continue to join our efforts to promote methodological robustness in the language sciences.

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