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Feedback practices in journal peer-review: a systematic literature review

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ABSTRACT

Feedback provided by peer reviewers plays a pivotal role in any journal peer-review model. Peer-review feedback helps authors reconsider their manuscripts in a new light and improve their work before it is published. While there is a wealth of knowledge and empirical evidence focusing on effective feedback practices in educational settings, there is a dearth of research on journal peer-review feedback, especially in some academic disciplines including the social sciences and education. To better understand 'good' and 'bad' peer-review feedback practices across academic disciplines, we conducted a systematic literature review, informed by grounded theory, that aimed to identify the feedback features and factors that exert an impact on quality of peer-review feedback. Findings from 20 publications indicate a list of good and bad features of peer-review feedback pertaining to content, language, tone, structure and timeliness. We also identified a number of internal and external factors that influence how peer reviewers provide feedback such as academics' expertise, language skills, motivation and seniority, as well as external influences such as anonymity in peer-review, and interactions between editors and peer reviewers. Implications for researching and practising peer-review are discussed.

KEYWORDS

Peer-review; journals; research evaluation; feedback; reviewers; systematic literature review

Introduction

'Peer-review' is a term with a long history. The first documented use of the term was found in a manual of professional practices and ethics for visiting doctors published over a thousand years ago (Spier 2002). When the term was first coined, peer-review was a process used to evaluate doctors' practices and ensure that they were on par with professional and ethical standards. At that time, visiting doctors completed a peer-review report, a written record of their observations about the patient. This record was examined by a board of doctors after the treatment of the patient was completed to determine whether the doctors had followed professional practices (Al Kawi 1997). The gatekeeping function of peer-review was retained when it was introduced to academic publishing, becoming the 'gold standard' for the creation and dissemination of scientific knowledge. Peer reviewers, as gatekeepers for academic journals, assess the quality of submitted manuscripts following a set of parameters. Although these assessment criteria vary across disciplines and types of research, they concern primarily manuscripts' originality, methodological rigour and contribution to new knowledge.

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The degree of success of peer-review in fulfilling its role of assuring the quality of academic publications is contestable. A long line of research on journal peer-review has repeatedly observed that judgements made by peer reviewers are often subjective and biased (Bakanic, McPhail, and Simon 1987; Bornmann 2011). Judgements between editors and peer reviewers are also not always in alignment (Hargens and Herting 2006). To reduce subjectivity and raise the standard of peer-review, various models of peer-review have been proposed, including double-blind, single-blind, open (non-blind) and post-publication. Double-blind peer-review, which is by far the most common model in the discipline of education (where the authors are based), refers to a review system where the identities of authors and peer reviewers are hidden from each other. Proponents of the double-blind model argue that anonymity in the peer-review process enables peer reviewers to evaluate a manuscript fairly, focusing solely on the quality of the produced work, not the academic stature or career stage of the authors (Roberts and Verhoef 2016). Some, however, contend that it is unrealistic to hide the identity of authors entirely; for example, author identity can be inferred by referring to self-citations. Single-blind peer-review is another model that is practised, referring to a review mechanism where the identity of the author is known to the peer reviewer but not vice versa (Justice et al. 1998). Open peer-review is by far the most transparent, with the identities of both the author and peer reviewer known to each other. In some cases, open peer-review is used to denote the practice of publishing peer-review reports alongside a publication (Ross-Hellauer 2017).

While the effectiveness of these peer-review models is subject to debate, it is irrefutable that feedback provided by peer reviewers is at the core of journal peer-review, regardless of the model a journal adopts. Studies focusing on peer reviewer feedback have revealed some negative findings in relation to the usefulness of peer reviewer feedback (Resnik and Elmore 2016). Instead of focusing on the quality of the manuscript, these unprofessional comments target author attributes such as gender, nationality or affiliation, while some are based on reviewers' personal bias or stance towards a research topic or method (Lee et al. 2013). Focusing on the fields of science, technology, engineering and mathematics (STEM), Silbiger and Stubler (2019) found that precarious groups of researchers, including early career researchers, first-generation academics and users of English as a second or foreign language, are most likely to be adversely affected by improper reviewer feedback, leading to emotional issues and short-term reduction of academic productivity.

Unhelpful feedback from peer reviewers is caused by a number of reasons, including excessive workload of academics (Silbiger and Stubler 2019), the lack of training about peer-review and how to provide constructive feedback (Chong and Mason 2021; Chong 2021a; Mason and Chong 2022). Despite the indispensable role of feedback in journal peer-review, relatively little is known about feedback practices of academics when serving as peer reviewers. It is, therefore, of paramount importance to understand good and bad practices of feedback, as well as the factors influencing the quality of peer reviewer feedback, as documented in published studies.

Method

This review was conducted following a bottom-up, literature-informed methodological framework for conducting a systematic literature review (Chong, Lin, et al. 2022). This framework is developed based on 160 systematic literature reviews published in higher education journals and comprises six stages: background information, search strategy, screening and selection, data extraction, data synthesis, and comments by external parties. Table 1 provides more details on each stage. This framework was used in lieu of others because it is one of the first methodological frameworks that was developed by synthesising methodological practices of published systematic literature reviews. This review is guided by three research questions:

Table 1. A methodological framework for conducting systematic literature review.

Methodological stage	Description
Background information	Information such as the research questions and methodological framework that guide the review.
Search strategy	A search string containing keywords joined by Boolean Operators is created, piloted and revised if necessary. Databases that will be used to conduct the literature search are specified and the decision justified.
Screening and selection	First-level screening is conducted to screen the titles and abstracts of search results. Then, the full texts of the included publications from the previous round of screening are reviewed (second-level screening) to determine publications to be included in the review. All decisions made at this stage are based on the inclusion and/or exclusion criteria developed by the reviewers and documented using PRISMA.
Data extraction	A data extraction form is developed, piloted and revised if necessary. The form is used to extract information relevant to the research questions from the included articles.
Data synthesis	Coding is performed on all data extraction forms to identify themes and sub-themes relevant to the research questions.
Comments by external parties	Synthesised findings of the review are shared with relevant stakeholders (in this case, journal editors, peer reviewers and authors) for feedback to enhance ecological validity of the findings.

1. What are the features of good peer-review feedback?
2. What are the features of bad peer-review feedback?
3. What are the factors that influence the quality of peer-review feedback?

Article selection and analysis

The search was conducted in November, 2021 using this search string: ('journal' OR 'scholarly' OR 'academic') AND ('peer review' OR 'peer review report' OR 'peer reviewer'). Since the focus on this review is on peer-review in academic journals, only journal publications were included. To locate suitable journal publications, the search was conducted on two databases: Scopus and Web of Science. Regarding inclusion and exclusion criteria, we included all types of journal publications including editorials, primary studies and commentaries. We excluded articles that discuss aspects of peer-review other than peer reviewer feedback (e.g. models of peer-review) because of the scope of our review. From the search (see [Figure 1](#)), 1,272 records were located after removing duplicates. 1,144 publications were excluded after title screening and a further 77 were excluded after abstract screening. At this stage of screening (first-level screening), Author 1 reviewed the records found on Scopus while Author 2 reviewed the records found on Web of Science. We discussed the records that we recommended discarding and the reasons thereof in a virtual meeting. During second-level screening, both authors screened the remaining 51 full-text articles independently. Then another online meeting was held to discuss our views on each article. After the discussion, only 20 articles met the inclusion criteria. The excluded 31 articles predominantly focused on giving instruction and guidelines to reviewers on how to provide good feedback, which did not report on how peer reviewers actually go about giving feedback. A PRISMA diagram of the selection process is shown in [Figure 1](#), including the reasons for exclusion and the division of labour between the two reviewers in this study.

Data extraction and data synthesis were performed on the 20 included articles. A data extraction form was prepared by the two authors. Author 2, who was responsible for extracting and synthesizing data, piloted the extraction form on five studies. Author 1 then reviewed the extracted information. Afterwards, both authors met virtually to discuss the extraction results and resolve any disagreement. After piloting, Author 2 continued to complete data extraction on the remaining 15 studies. After the data extraction forms were completed, Author 2 synthesised the extracted data on NVivo, adopting a grounded theory approach to qualitative data analysis (Charmaz 2014). Thematic categories were developed inductively, based on the author's understanding and interpretation of the extracted data. The analysed data underwent the same peer appraisal mechanism with Author 1.

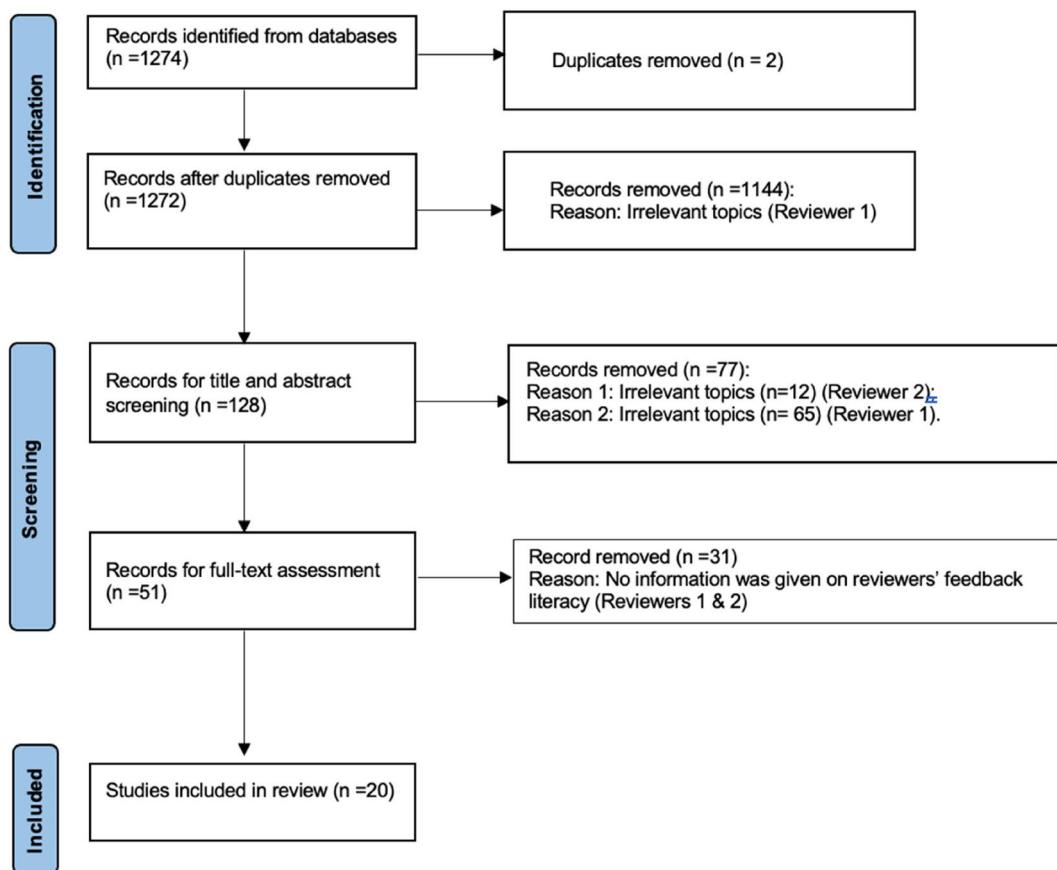


Figure 1. Selection process of the included studies.

Given the interpretivist nature of grounded theory and qualitative research approaches in general, it is important to acknowledge the backgrounds of the researchers because their experiences influence the way data were extracted and synthesised. Author 1 is an associate editor of two highly-ranked international journals, a regular reviewer for over 30 international journals, and a researcher with a sustained track record of publications in international journals. Author 2 is a PhD student who has experience in journal peer review as an author (e.g. Author 2 co-authored with Author 1 on a methodological paper on systematic literature reviews in higher education published in a leading educational research journal). Both authors are insiders of the journal peer-review process in different capacities. Having both authors involved in the data extraction and synthesis process is crucial because the perspectives of established and junior researchers lead to a more holistic view of journal peer-review and the interpretation of research findings on the topic.

Demographic characteristics

Country/origin

The greatest number of the included studies were conducted in the US ($n=8$, 40%), followed by Canada ($n=3$, 15%), and the UK and Australia ($n=2$, 10%). The remaining studies were conducted in France, Croatia, Spain, Hong Kong, mainland China, Pakistan and New Zealand.

Year

The included studies were published from 1995 to 2020, with 7 (35%) published between 2016 and 2020, followed by 2010 and 2015 ($n=6$, 30%), 2006, 2010, 2000 and 2005 ($n=3$, 15%), and 1995 and 2000 ($n=1$, 5%).

Discipline

The included studies were categorised by discipline, with studies that did not clarify their disciplines categorised as 'general'. The majority of the included studies were conducted medicine ($n=11$, 55%), education ($n=5$, 25%), general ($n=3$, 15%) and psychology ($n=1$, 5%).

Table 2 shows the demographic characteristics of the included studies.

Findings

Good feedback features

Various features have been considered as merits of reviewers' feedback. These features were summarised in terms of content, language and tone, structure and review process.

Most of the included studies focused on the content of reviewers' feedback. First, good reviewer's feedback should be corrective and constructive. Corrective feedback points out errors or shortcomings reported in the manuscript, while constructive feedback refers to the inclusion of comments that intend to help authors improve their manuscript rather than equating feedback with criticisms. Second, reviewers' feedback should demonstrate professionalism, which requires reviewers to give evidence-based comments with high level of expertise (e.g. Lovejoy, Revenson, and France 2011; Glonti et al. 2019; Gravett et al. 2020), showing that reviewers keep abreast of the latest developments in the field (Mutch 2009). A good reviewer is expected to

Table 2. Demographic characteristics of the included studies.

	Number of studies	Percentages
Country/origin¹		
US	8	40%
Canada	3	15%
UK	2	10%
France	1	5%
Croatia	1	5%
Spain	1	5%
Hong Kong	1	5%
Mainland China	1	5%
Pakistan	1	5%
Australia	2	10%
New Zealand	1	5%
Year		
1995–2000	1	5%
2000–2005	3	15%
2006–2010	3	15%
2010–2015	6	30%
2016–2020	7	35%
Discipline		
General	3	15%
Education	5	25%
Psychology	1	5%
Medicine	11	55%
Total	20	100%

Note ¹Country/ Origin: 1 study was concurrently conducted in US, Australia and Canada; 1 study was concurrently conducted in Canada and France.

be open-minded towards new topics, research techniques and writing styles (e.g. Ho et al. 2013; Gerwing and Rash 2020).

Third, good peer-review feedback should give precise description and specific recommendations to avoid ambiguity (e.g. Janke, Bzowyckyj, and Traynor 2017; Köhler et al. 2020). Fourth, reviewers were expected to be as objective and neutral as possible, and to offer grounded evaluations instead of basing their judgements on personal preference (e.g. Mutch 2009; Gerwing and Rash 2020). Good reviewers should demonstrate transparent and explicit arguments. When they raise their doubts, they are suggested to quote from the work under review and indicate specific locations in the work for authors' information (Emden 1996; Lipworth et al. 2011). Last but not least, reviewer feedback should focus on major concerns instead of covering every single aspect of the article (Shashok 2008; Janke, Bzowyckyj, and Traynor 2017; Köhler et al. 2020).

The included studies also shed light on reviewers' language and tone. Being respectful is one of the most desirable features. In addition, being clear and lucid in their language is another merit appreciated by authors. A few studies pointed out that using accurate English is a good reviewing competency so that comments and suggestions can be clearly communicated to authors (e.g. Mutch 2009). Other than content, language and tone, studies also indicated that good feedback should be characterised by a logical structure (Lipworth et al. 2011; Lovejoy, Revenson, and France 2011). Last but not least, an efficient review process is another feature appreciated by the included studies, suggesting that reviewers should give their feedback in a timely manner (Mutch 2009; Janke, Bzowyckyj, and Traynor 2017; Gerwing and Rash 2020).

Poor feedback features

The included studies indicated various features of poor peer-review feedback that could hinder authors' improvement. These features were also presented regarding content, language and tone, structure and review process.

In terms of content, poor feedback 'hijacks' the original work of authors by imposing irrelevant references authored by reviewers, suggesting that authors should rewrite something different rather than something better (e.g. Shashok 2008; Ho et al. 2013; Köhler et al. 2020). Another feature of poor peer-review feedback is being too brief: reviewers give their feedback without offering any specific suggestions on how to improve the manuscript (Baker 2002).

In terms of language and tone, reviewers' feedback could be considered poor quality if it conveys demeaning and negative appraisals towards authors. Demeaning appraisals are shown by pejorative language (e.g. Lovejoy, Revenson, and France 2011; Gravett et al. 2020; Köhler et al. 2020), while negative appraisals are given with unnecessarily hostile criticisms on non-major issues such as typos and formatting, causing authors to feel distressed (e.g. Thomas 2011; Manchikanti et al. 2015; Köhler et al. 2020). Some included studies attributed poor feedback to the lengthy review process during which reviewers spent an extremely long time on giving feedback, causing delays in publication (e.g. Thomas 2011; Manchikanti et al. 2015). Last but not least, poor feedback is usually found to be poorly structured, and full of subjective and inconsistent opinions (Shah et al. 2019).

Factors that affect feedback quality

Based on the discussion of the included studies, we categorised the factors that affect reviewers' feedback practices into four themes - professional competence, internal forces, external forces, and demographic backgrounds of reviewers.

In terms of reviewers' professional competence, the majority of the included studies pointed out that expertise in domain knowledge affects reviewers' feedback quality the most. Language skills are an essential component of reviewers' professional competence as they dictate whether

reviewers can convey their messages clearly (Shashok 2008; Ho et al. 2013). Internal and external factors that drive reviewers' feedback practice are also discussed by the included studies. Internally, reviewers' feedback represents their sense of authority to make judgements (e.g. Lipworth et al. 2011), the altruistic moral obligation of being supportive academic peers (e.g. Gravett et al. 2020), motivation for personal development (e.g. Köhler et al. 2020) and their personal biases (e.g. Hojat, Gonnella, and Caelleigh 2003). Externally, reviewers' feedback quality is highly contingent on the policy of anonymity (e.g. Snell and Spencer 2005), the interaction between editors and reviewers (e.g. Thomas 2011), and the monitoring and scrutiny by the public and academics (Li 2011). Finally, in terms of demographic factors, one study stated that the quality of reviewers' feedback possibly gets poorer by age due to their increasing commitments (Emden 1996). The same study also found that reviewers with higher faculty positions and prolific publications are more likely to give hasty and superficial feedback (Emden 1996).

Discussion

Feedback of journal peer reviewers

Peer reviewers demonstrate different levels of feedback quality. The included studies pay most attention to the content, language and tone of reviewers' feedback. In terms of content, the most desirable features are being constructive, objective and professional. Good feedback should play a scaffolding and educating role (e.g. Lovejoy, Revenson, and France 2011; Gravett et al. 2020), and should help authors to strengthen the quality of their research by offering opinions based on expertise (e.g. Mutch 2009; Glonti et al. 2019; Köhler et al. 2020).

Poor peer review feedback is also reported in the included studies. Some peer reviewers insisted that authors rewrite their manuscripts to meet their own preferences (Shashok 2008; Köhler et al. 2020). For example, instead of providing constructive comments to improve the quality of authors' work, some reviewers take the opportunity offered by peer-review to demonstrate their own intellect and experience (Köhler et al. 2020). Personal preferences are usually found to get in the way of being objective in the review process, which would further restrict reviewers from being constructive and professional (Lipworth et al. 2011).

In their open-ended interviews with 35 journal editors and reviewers, Lipworth et al. (2011) summarised that most of the journal editors prioritise 'being objective' as the key virtue of a reviewer, and they expect peer reviewers to give evidence-based comments focusing on the strengths and weaknesses of a manuscript. Reviewers are expected to only evaluate what the authors have done in a manuscript rather than what reviewers themselves would have done (Glonti et al. 2019; Gerwing and Rash 2020). Ho et al. (2013) echoed this perspective and argued that objective selection criteria should be applied regarding the 'importance, usefulness, relevance, methods, ethics and accuracy' of an article being reviewed (p. 11). Unlike discipline-specific content, it is found that remaining objective is more difficult when it comes to evaluation of language and writing features (Shashok 2008).

Language and tone affect the quality of peer reviewers' feedback. In addition to using concise and precise language, reviewers should keep in mind communicating in a respectful tone. Poor feedback demonstrates the features of using demeaning and negative appraisals targeting the author in lieu of the manuscript. This could impact authors' egos and fuel undesirable emotional turbulence. For example, rather than focusing on major concerns of authors' work, poor feedback might superficially attack typos and format (Köhler et al. 2020), and the ultimate goal of improving academic work could be undermined (Lovejoy, Revenson, and France 2011). Reviewers should carefully choose their words and avoid any threatening tone (e.g. Emden 1996; Köhler et al. 2020). Mutch (2009) touches upon reviewers' empathy, suggesting that, to erase biases and preferences, reviewers should treat authors as they would wish to be treated as an author.

In terms of structure, being methodical and logical are desirable in reviewer's feedback (e.g. Lipworth et al. 2011; Lovejoy, Revenson, and France 2011). Lovejoy, Revenson, and France (2011) proposed that reviewers could number the points of concerns in their feedback so that authors can have a clear picture of what aspects they should focus on in their revision. The practice of numbering reviewers' concerns can also benefit authors by making it easier for authors to refer to specific points raised by each reviewer (Lovejoy, Revenson, and France 2011). Last but not least, efficient and timely feedback is also a merit. Studies indicated that lengthy review process could erode authors' faith and invite unnecessary criticism towards the process (Manchikanti et al. 2015).

Implications for future peer reviewers

First, professional competence has been emphasized the most by the included studies. Expertise in domain knowledge as well as language skill are considered the crucial professional competences for peer reviewers. On the one hand, while great expertise can shape objective, constructive and professional feedback, poor expertise could lead to contentious, superficial and even problematic comments (e.g. Snell and Spencer 2005; Shashok 2008). On the other hand, linguistic competence is indispensable to reviewers as it is linked to the tone and clarity of their feedback (e.g. Gerwing and Rash 2020). As the findings indicated, mastery of feedback language can enable peer reviewers to build up good emotional connection with authors and convey constructive information to authors in a coherent and intelligent manner (Lovejoy, Revenson, and France 2011). In contrast, poor language skills could lead to negative feelings of authors and hinder them in making improvement in their work (e.g. Ho et al. 2013).

Peer reviewer training should focus on developing new reviewers' substantive expertise and language skills. Some studies suggested that reviewers should participate in specific training to enhance the quality of their reviews. However, such training focuses mostly on familiarising reviewers with the review process, such as knowing the assessment criteria but not how to provide constructive feedback (e.g. Snell and Spencer 2005). Researchers found that the effect of such training is contentious (Snell and Spencer 2005; Jefferson et al. 2007; Glonti et al. 2019). For example, Jefferson et al. (2007) found that training did change reviewers' feedback practice, but the effects were very limited and short-lived. Snell and Spencer (2005) indicated that training for the review process might not exert any impact on the quality of reviewers' feedback, especially if the duration is short. It must be acknowledged, however, that, in the current academic landscape, it is challenging enough to find willing reviewers without then expecting them to either prove their worth or undergo training.

Second, internal forces could affect reviewers' feedback practices (e.g. Hojat, Gonnella, and Caelleigh 2003). Hojat, Gonnella, and Caelleigh (2003) summarised various types of bias that could affect the quality of reviewers' feedback in a detrimental way, such as confirmatory bias, bias against authors' academic status, gender and race. Empirical evidence indicates that reviewers' bias could be evoked even if authors' identity is hidden (Manchikanti et al. 2015). Bias could lead to negative and self-centred feedback that could threaten authors' identity and hinder the improvement of work (e.g. Köhler et al. 2020). For example, reviewers who hold confirmatory bias - tending to only accept commonly accepted theories - are more likely to give comments based on narrow views and suggest authors rewrite their manuscripts into something the reviewers are familiar with (Hojat, Gonnella, and Caelleigh 2003).

Some internal forces could mitigate the harmful effect of bias and drive reviewers' feedback in a good way. These internal forces include sense of authority, moral obligation and motivation (Lipworth et al. 2011; Köhler et al. 2020). Reviewers may undertake peer-reviewing as a mission to improve the quality of academic publications in the field (Gravett et al. 2020). With this mission, reviewers develop a moral obligation to make constructive and fair judgments (Lipworth

et al. 2011). Therefore, they are more likely to make an effort into harnessing the constructive power of their feedback.

Third, in terms of external forces, the policy of anonymity is one of the major factors that determines reviewers' feedback quality. Most reviewers participate in a double-blind peer review process (Ho et al. 2013). With double anonymity, both reviewers and authors would feel safer to exchange frank opinions, which is of great importance to enhance the constructiveness and objectivity of reviewers' feedback (Ho et al. 2013). Double anonymity could protect against bias (Manchikanti et al. 2015). For example, keeping authors' gender blind to reviewers has been found to decrease unfair comments from reviewers (Ho et al. 2013). However, blinded peer review could also exert adverse influence on reviewers' feedback quality (Manchikanti et al. 2015). For example, according to Jefferson et al. (2007), the concealment of reviewers' identity could affect their language and tone: they found that reviewers' feedback is more courteous when their identities are known to authors.

Other than the concern of anonymity, reviewers' feedback practice highly depends on the interaction between editors and reviewers (e.g. Snell & Spencer, 2005; Li 2011). Many reviewers, especially first-timers, find it difficult to meet editors' expectations and become discouraged (Snell and Spencer 2005; Mutch 2009). This would hinder the communication between editors and reviewers and could lead to perfunctory decisions on authors' work (Li 2011). Conversely, clear expectations and ongoing mentoring could help ease reviewers' concerns and build up their confidence (Mutch 2009; Snell & Spencer, 2005). Last but not least, reviewers' feedback quality could also be determined by monitoring and scrutiny by the public and fellow academicians (e.g. Li 2011). In the absence of formal standards and guidelines of reviewers' ability (Köhler et al. 2020), the review process might largely rely on editors' guidance (Li 2011). Therefore, public and professional monitoring and scrutiny, such as in the form of open peer-review, could be employed as a quality control of reviewers' work, which could greatly decrease subjectivity and conflicts of interest that creep into the review process (Shah et al. 2019). External forces are mostly out of the reviewers' control. Journals and publishers need to create a safe and supportive space for reviewers and authors to participate in peer-review constructively.

Last but not least, although demographic factors are found to be associated with reviewers' feedback practice, they exert less influence when peer reviewers have the right attitude towards journal peer-review (Emden 1996). That is, when an academic is motivated to contribute to the scientific advancement of their discipline through peer-review, they are more likely to provide high-quality feedback despite being more senior in age and position.

Conclusion

Our findings reveal a list of features of good and bad peer-review feedback. Professional peer-review feedback is corrective and constructive, containing evidence-based, manuscript-focused comments and suggestions. Authors appreciate peer-review feedback that is precise and detailed, providing specific and well-justified suggestions that authors can act on. While it is unavoidable that peer reviewers bring with them their own experiences, biases and views, it is important for reviewers to remain objective when providing feedback. It is crucial for peer reviewers to remain open-minded to new conceptualisations and approaches to research. Good peer-review feedback does not focus on every single problem in a manuscript, but points out major concerns. In terms of the language and tone of feedback, peer reviewers need to have a good command of written English to convey their messages accurately; they are advised to write in a respectful and lucid manner. When it comes to the organisation of the peer-review report, feedback needs to be presented logically; for example, following sections of the manuscript. Timely feedback, as expected, is highly appreciated.

On the contrary, peer reviewers need to refrain from the following feedback practices. It is unprofessional to 'hijack' the manuscript by inserting comments that impose reviewers' personal views such as asking authors to cite their own work that does not have direct relevance to the

manuscript. Feedback that is too brief and ambiguous is of little use to authors when revising their manuscripts. Regarding tone, peer-review feedback does not benefit authors when it is demeaning, attacking the writers instead of the work done. Authors also detest feedback that is poorly organised; feedback that is severely delayed is disapproved of.

The reported findings show that the majority of the included studies understand feedback as information (Hattie and Timperley 2007), focusing on features of written comments. Feedback as information, in the context of journal peer-review, refers to information presented in the written report that is evaluative and corrective. Conceptualising feedback as information does not, however, fully capture the meaning of ‘feedback’. ‘Feedback’ in its totality comprises two components: *feedback information* and *feedback use*. From the perspective of constructivist and interactionalist theories of learning, feedback is understood as not only information *presented* but information *engaged* (i.e. *feedback use*) (Panadero, Andrade, and Brookhart 2018). In essence, what this new paradigm argues is that feedback information presented does not automatically lead to improvement of the manuscript; what makes a difference is when authors engage with the feedback information presented to them, making a decision about what suggestions to take on board and what not to. Such engagement ought not be behavioural (i.e. making changes to the manuscript based on suggestions); it can also be cognitive (e.g. thinking about alternative ways to present findings based on reviewers’ comments) and emotional (e.g. feeling elated because of reviewers’ positive remarks).

The notion of feedback as information engaged is sometimes referred to as feedback literacy (Carless and Boud 2018; Chong 2021b). Originating from the higher education literature, feedback literacy has been recently introduced and applied to research on journal peer-review (Chong 2021a; Chong and Mason 2021). In journal peer-review, feedback literacy expands the focus of peer-review feedback to written information presented by reviewers to authors’ capacity to engage with such feedback information. Our review suggests that the current state-of-the-art of peer-review feedback focuses primarily and narrowly on feedback information delivered by peer reviewers, analysing the types of information that are helpful to authors to revise their manuscripts. Future research on journal peer-review feedback should focus on the various ways authors engage with feedback information, be they cognitive, behavioural or affective. Researchers can also investigate the forces at work that facilitate or hinder authors’ engagement with feedback, for example, from an ecological perspective focusing on the different contexts academics are situated in (Bronfenbrenner 1977; van Lier 2004; Chong, Isaacs, et al. 2022).

Our review also has some practical implications. Our findings identify some undesirable features of peer-review feedback and indicate that the possession of expert knowledge and seniority do not automatically translate into constructive peer-review feedback practices. This suggests that peer reviewers, both novice and veteran, need to be trained to provide useful and actional feedback. Chong (2021a) points out that while there are training programmes offered by international academic publishers, these online programmes focus on providing a basic understanding of the peer-review process without an explicit and practical focus on providing feedback. Fundamental questions such as ‘what feedback is’, ‘what my feedback should focus on’, ‘what my tone should be when giving feedback’ need to be addressed. Such training, be it initiated by universities or publishers, is especially important to doctoral students and early career researchers who are still grappling with the peer-review process. One helpful way to achieve this is through reading peer-review reports produced by other academics. As part of the open science movement, there are platforms that publish peer-review reports alongside the accepted manuscripts (e.g. F1000) and there is a recent initiative, ‘PublishYourReviews’, by ASAPbio encouraging academics to post their peer-review feedback online.

We are fully aware of the limitations of our review. While we did not intend to focus on a specific academic discipline (see the open-ended search string we used in ‘method’), the studies included are mostly from the discipline of medicine, followed by education. As such, it must be acknowledged that the good and bad peer-review feedback practices reported may be specific to these disciplines and we acknowledge there may be disciplinary variations of peer-review feedback traditions and practices.



Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributor

Sin Wang Chong (SFHEA) is a Senior Lecturer (Associate Professor) in Language Education at the Moray House School of Education and Sport, University of Edinburgh. His research interests include language assessment, CALL, and research synthesis. He is the Associate Editor of Innovation in Language Learning and Teaching, and Higher Education Research & Development.

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