

“Disciplinary and Paradigmatic Influences on Interactional Metadiscourse in Research Articles”: A Critique

1. Introduction

The journal article under review is “Disciplinary and Paradigmatic Influences on Interactional Metadiscourse in Research Articles” by Guangwei Hu and Feng Cao, published in *English for Specific Purposes*, volume 39, 2015. In Hu and Cao’s study (2015), to see whether disciplinary and paradigmatic influence the use of interactional metadiscourse in research articles (RAs), the authors drew the post-method sections of 120 RAs from three social science disciplines (applied linguistics, education and psychology) and two research paradigms (quantitative and qualitative research). Based on the analytical framework adapted from Hyland’s model of metadiscourse (2005a), the authors detected and interpreted different cross-disciplinary and cross-paradigmatic features in using interactional metadiscourse. Overall, the article made contributions to the metadiscourse field, though having some weaknesses in reference sources and research design. In this critique, I try to analyze the article’s transition from theory to research questions, discuss the methodology, and examine the results and discussion.

2. From theory to research questions

2.1 Theoretical orientation

Hu and Cao made a clear theoretical orientation, laying foundations for their research. They identified the guiding theoretical framework of metadiscourse at the beginning, with quotes from some seminal sources in this realm (e.g., Hyland, 2005a, 2005b, 2009). Within the theoretical orientation, two essential elements in their study were justified and supported by sources from established researchers in this realm (e.g., Hyland, 2005a; Peacock, 2006). One element is the focus on a part of Hyland’s metadiscourse model (2005a): interactional metadiscourse, and the other is the choice of RA as research material.

In terms of theoretical framework, as a broad approach to studying metadiscourse, Hyland’s metadiscourse model (2005a, 2010, 2017) is recognized as one of the most

widely applied models in research. Hyland (2005a) proposed two dimensions of metadiscourse in academic communication: interactive dimension and interactional dimension. Regarding discourse as a form of social engagement, Hu and Cao emphasized the function of the latter – interactional metadiscourse to involve potential readers collaboratively in textual construction, which was essential for RA. For this key element – RA as research material, the authors acknowledged its significance in knowledge construction and knowledge communication.

Overall, the authors clearly presented the guiding theory and linked it to their own study. They started from a general topic of metadiscourse with an increasing specificity till their own focus of interactional discourse in RAs, managing to “establish a territory” (Swales, 2004, p.230) in a neat and well-organized way.

2.2 Research gaps and research questions

In the “established territory”, the authors did a literature review along the disciplinary and paradigmatic themes, which offers a critical analysis of previous studies by comparing and contrasting findings of them. The authors indicated research gaps during the review and ended naturally with research questions. Through this, the authors showed the rationale and significance of their own study, trying to “establish a niche” (Swales, 2004, p. 230) in the territory. What should be noted here is that in the research questions, the authors indicated their focus on the post-method sections of RAs, which diminished their corpus size greatly, but they well justified the choice by stating their intention to avoid structural variation and increase instance richness.

In summary of strengths, the Introduction section of Hu and Cao’s article is well-organized following the moves of “establishing a territory” to “establish a niche” (Swales, 2004) with clear theoretical orientation, critical analysis of literature and logically presented research rationale. The specification of essential elements such as interactional metadiscourse, RA and post-method sections are convincingly justified. The research questions are naturally and succinctly proposed.

Weaknesses in this part may be length and some outdated sources. The authors squeezed all contents into the Introduction section rather than divide them into several sections with subtitles. This seems to make the section lengthy and draggy. But it is understandable considering the possible imposed requirements from journal’s editor or publication guidelines (Vance *et al.* 2013, p.74). And the authors managed to make the

paragraphs logically linked through explicit transitional markers to guide the readers. In terms of reference materials, normally it would be ideal if most of them are recent within the past five years (Coughlan *et al.* 2007, p. 660; Boswell and Cannon, 2009, p.327), but many sources in this part are in the early 2000s. Some of them are acceptable since they are classic and seminal studies (e.g., Hyland, 2005a, 2005b), which continue to contribute even decades after publishing. But considering the fast progress in this realm, it would be better if the author cites more recent sources (e.g., Ädel, 2010; Hyland, 2012).

3. On methodology

3.1 Corpus

Hu and Cao's study is a qualitative one based on corpus. Generally, the construction of the corpus is meticulous in validity and reliability. As we can see, the independent variable in this corpus-based study is three disciplines and two paradigms, and the dependent variable is the use of interactional metadiscourse. To achieve high validity, first, the authors focused on a subfield in the three disciplines: language teaching and learning in applied linguistics, learning and instructional science in education, and counseling and clinical research in psychology. Hence the probable discursal or rhetorical variation among subfields of the same discipline was avoided. To a large extent, this ensured that the independent variable in question in fact induce the effects (Wen, 2004) with little influence from intervening variables. Admittedly, such control of discipline and subfield affected external validity to some extent. As acknowledged by the authors (Hu and Cao, 2015), findings in this research may not be generalized to other subfields of the three disciplines. But considering that there is normally a trade-off between maximizing internal and external validity and that the absolute balance is a "myth", the priority to internal validity is understandable. Besides, the selection of target journals referred to opinions of disciplinary experts, previous researches and five-year impact factors. The demarcation of qualitative and quantitative research followed the characterization from authoritative sources (e.g., Creswell, 2009). The articles in the corpus were randomly selected. Taken all these measures together, the internal validity of constructing the corpus was kept at a relatively high level.

What should be noted here is the reliability of coding the RAs in the target pool as

“qualitative” or “quantitative”. As indicated by Artstein and Poesio (2008), if different coders produce consistently similar results, we can infer that they have internalized a similar understanding of the coding scheme. But in Hu and Cao’s study, the second author of the article coded the major part of the RAs independently. This is to some extent acceptable given that the coding between “qualitative” and “quantitative” is not complex in most cases, and that the second author and a PhD student did a subset coding previously and reached perfect inter-coder agreement in the subset. But to reach higher level of reliability, we would expect that the second author and the PhD student code all the RAs in the target pool and then run the inter-coder agreement to prove that the whole process of coding is reliable. After all, reliability is the prerequisite for validity of a coding scheme, demonstrating that the coding scheme captures the “truth” of the phenomenon being studied (Artstein and Poesio, 2008).

3.2 Analytical framework

The construction of the analytical framework is not that rigid with some problems in reference sources and the categorization of main types and subtypes. To begin with, the authors noted below Table 2 that the types/subtypes of the analytical framework were adapted from Hyland (2005a). However, they neither pointed out where the adaptations lie nor justified them. If there is synthesis, refinement or consolidation of established models, it is worth demonstrating, whereas the article made no attempt to do so.

In fact, Hyland’s model (2005a) did not subcategorize the main type “engagement” into five subtypes as shown in Hu and Cao’s Table 2. Hyland (2001) did not do so either, which contradicts the statement by Hu and Cao. It is actually in the article on stance and engagement (Hyland, 2005b) where Hyland clearly subcategorized “engagement” for the first time, and he made another main type of “stance” parallel to “engagement”, degrading four main types in previous models to be subtypes under “stance”. Obviously, Hu and Cao want to synthesize Hyland’s models from different researches, but there was some misinformation of the reference sources. Besides, the final working analytical framework is not that satisfactory. There are five main types but only one of them comprises subtypes, which makes the framework seem rough and unbalanced. Though having weaknesses in constructing the framework, it is undeniable that the authors did a good job in defining terms – all the types and subtypes are clearly defined with

reference to seminal sources (e.g., Hyland, 2005a; Peacock, 2006) and pertinent examples.

3.3 Data coding and analysis

Methods of data coding and analysis were well controlled mostly, but again with some minor weaknesses in crosschecking. Two steps demonstrated the authors' attempt to rigidly control data coding. The first was to do preliminary coding drew on the inventory of interactive metadiscourse in previous researches and tailor the list as the coding scheme. The second was to manually code the instances while checking their contexts and multifunction. Given that the corpus is not large with 120 articles around 550,000 words, manual coding has its advantage in precision with not much more labor than automated search by software. Precision in coding scheme and coding process set solid foundation for data analysis. ANOVA and post hoc comparisons were used for statistical analysis, which suited the research questions.

However, the major part of coding was again carried out by the second author alone. Though inter-coder agreement was achieved with almost perfect agreement in the preliminary coding, there was no comprehensive guard against the impact of coder's subjectivity (Babbie, 2014) in the whole process. The coding would have been more reliable if the second author and the PhD student had done all the coding separately and made crosscheck afterwards.

In all, Hu and Cao's study is a quantitative one and the research design fits the research questions. If time and conditions permitted, it would be better that the authors conduct interviews with experienced researchers from the target disciplines (best with writers of articles in the corpus). By gaining insiders' insights into the text data and preferences on disciplinary or paradigmatic practices (Hyland, 2010), we can gain more explanatory power regarding the use of metadiscourse. Admittedly, this qualitative part might be very demanding considering potential barriers such as time, energy and subjects.

4. On results and discussion

The authors logically presented results and discussion supported by two tables. They first analyzed how the types/subtypes of interactional metadiscourse distributed (with descriptive statistics in Table 3) and functioned across disciplines and paradigms.

During the process, they found statistically significant differences in using certain types/subtypes across disciplines: applied linguistics and education RAs deployed more boosters than psychology RAs; applied linguistics RAs used more reader references but fewer self-mentions than psychology RAs. Meanwhile, compared with the qualitative RAs, the quantitative research articles used hedges, boosters, attitude markers, engagement markers more frequently as a main type, and directives as a subtype. These statistical significances were displayed in Table 4 and explained in the Discussion section through the knowledge-knower structures characteristic of the disciplines and the epistemologies underlying the paradigms (Hu and Cao, 2015). Thus, the answers to the two research are both positive supported by statistical data: disciplines and paradigms do have influences on employing interactional metadiscourse in RAs.

Overall, the empirical cycle which links data, research questions and theory in Hu and Cao's study is clear and logical. To begin with, the findings linked back to the theory. As indicated in the theoretical orientation, writers in different discourse communities, with their understandings of the communities' convention to make the intended meanings clear to community insiders, may display different features in using metadiscourse. Such variation has been observed in different disciplines (Hyland, 2005b), cultures (Abdollahzadeh, 2011), genres (Hyland, 2004), postgraduate degrees (Hyland, 2010) and so on. The results of Hu and Cao's study supported this part of theory. They added to this known territory with more controlled and specific research in the disciplinary perspective and novel insights in the paradigmatic perspective. In addition, the authors analyzed the functions of different types/subtypes of interactional metadiscourse through instances from the corpus, some of which had never been mentioned by other researches before. In this way, the study contributed to the theory with supplement and refinement for the theoretical model.

As regards the closing part, practical pedagogical implications are put forward, but there is no attempt to point out limitations (e.g., the focus on the subfields of the disciplines may constrain the generalizability of the findings, the lack of in-depth qualitative methods). Some of the limitations may be tempered with practical explanations, but it is the researchers' obligation to make such limitations known to readers (Babbie, 2014), which is also helpful for community insiders in further research.

5. Conclusion

In conclusion, Hu and Cao's article offered clear theoretical orientation and convincing study rationale and constructed corpus and coding system meticulously. The empirical cycle linking data, research questions and theory is logical. There might be some weaknesses in reference sources, division of types/subtypes and crosscheck in coding instances, but most of them can be tempered to some extent considering the authors' pursuit of certain balance or practicability. It is important not to dismiss the value of the study based on some limitations (Vane *et al.* 2013). Overall, the article managed to fill gaps in the field of metadiscourse and provide valuable pedagogical implications.

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