An Article Review: Revisiting the Moderating Effect of Speaker Proficiency on the Relationships among Intelligibility, Comprehensibility, and Accentedness in L2 Spanish

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Abstract. The current article review summarizes the main points and comments on Huensch and Nagle (2022)'s article published in Studies in Second Language Acquisition. Huensch and Nagle (2022)'s study is a replication of their research in 2021, exploring the moderating effect of speaker proficiency on the relationships among intelligibility, comprehensibility, and accentedness in L2 Spanish. Although lack of innovation, the study enjoys linguistic, logical and methodological strengths, as well as theoretical and practical significance. It also provides implications for L2 pronunciation research and classroom teaching.

Keywords: Review; proficiency; intelligibility; comprehensibility; accentedness.

1. Summary

Huensch and Nagle (2022)'s article entitled Revisiting the moderating effect of speaker proficiency on the relationships among intelligibility, comprehensibility, and accentedness in L2 Spanish consists of five parts: Introduction, Method, Results, Discussion and Conclusion.

1.1 Introduction

The introduction part includes rationale and literature review. In terms of the rationale part, four elements can be recognized: the current situation, what has been done, what has not been done, what their study will do. First, the current situation can be summarized as a shift of L2 pronunciation teaching and learning goals away from nativeness principles toward intelligibility principles. Second, what has been done is, on the one hand, the limited work exploring the relationships among intelligibility, comprehensibility and accentedness, which has demonstrated strong relationship between intelligibility and comprehensibility than the relationship between intelligibility and accentedness, implying that L2 pronunciation teaching goals are wiser to focus on improving comprehensibility rather than accentedness, and on the other hand, the relatively larger amount of studies focusing on comprehensibility ratings only, with the justification that, compared with intelligibility, comprehensibility rating is not only more intuitive and subjective, thus more likely to mirror real-world judgement, but also quicker and easier by using Likert or sliding scales, instead of transcription tasks in intelligibility measurements. Third, what has not been done is the exploration of factors influencing the intelligibility-comprehensibility relationship. Finally, Huensch and Nagle (2021) was the first attempt to fill this gap by including measures of all three speech dimensions and considering varying proficiency but using a single type of speaking task. Thus, Huensch and Nagle (2022) improves the former attempt by modifying the speaking task. In terms of the literature review part, after discussing the previous studies in three areas, namely relationships among the global speech dimensions, proficiency as a moderator of the relationship among intelligibility, comprehensibility, and accentedness, task effects on measurements of comprehensibility and accentedness, the authors arrive at the first gap of limit of generalizability of

findings for the reason that much has been done about global dimensions of L2 speech, but the evidence has primarily come from a single data source in a single target language, and the second gap of the uncertainty of how speaking task might impact intelligibility-comprehensibility relationships. To fill the gaps, their study was designed to answer two research questions:

1. To what extent are intelligibility, comprehensibility, and accentedness related to one another in L2 Spanish speech elicited using a prompted response task?

2. To what extent does proficiency affect relationships among intelligibility, comprehensibility, and accentedness in L2 Spanish?

1.2 Methods

The section of Method displays details of participants, materials and procedure, as well as scoring and analysis. In their study, i.e., Huensch and Nagle (2022), speech samples were elicited from the same 42 instructed L2 learners of Spanish of varying proficiency as Huensch and Nagle (2021)'s study but using a prompted response speaking task instead of the picture narrative task in 2021. Like the study in 2021, two utterances per speaker were extracted from the beginning of the prompted response and used as stimuli in an online transcription and rating task using Amazon Mechanical Turk (AMT). Eighty native speakers of Spanish (different from the eighty listeners in 2021) completed the AMT task. These listeners were recruited from five countries representing the major dialect zones learners reported being most exposed to.

1.3 Results and discussion

The section of Method displays details of participants, materials and procedure, as well as scoring and analysis. In their study, i.e., Huensch and Nagle (2022), speech samples were elicited from the same 42 instructed L2 learners of Spanish of varying proficiency as Huensch and Nagle (2021)'s study but using a prompted response speaking task instead of the picture narrative task in 2021. Like the study in 2021, two utterances per speaker were extracted from the beginning of the prompted response and used as stimuli in an online transcription and rating task using Amazon Mechanical Turk (AMT). Eighty native speakers of Spanish (different from the eighty listeners in 2021) completed the AMT task. These listeners were recruited from five countries representing the major dialect zones learners reported being most exposed to. After examined the reliability of the ratings by two-way, consistency, average-measure intraclass correlation coefficients, the data of both Research Question One and Two was analyzed by different models, displaying respective results, with reasonable explanations.

Research Question One explores the relationship between intelligibility, comprehensibility and accentedness. First, the analysis process includes distribution of the three scores (i.e., a logistic mixed-effects model to the binary intelligibility outcome, a linear mixed-effects models for comprehensibility, etc.), as well as the random effects of covariates at listener-level and utterance-level. Second, the results of descriptive statistics characterize the utterances as "highly intelligible" (heavily left-skewed), "moderately comprehensible" (even distribution), and "strongly accented" (moderately right-skewed), showing "a strong and stable relationship between comprehensibility and intelligibility and a strong but variable relationship between comprehensibility and accentedness" (p.10). Finally, compared with Huensch and Nagle (2021)'s study, the only coefficient that changes slightly is that the estimate of the relationship between accentedness and comprehensibility was "slightly smaller in the present study". The possible explanation from the authors is that compared with a picture narrative task, the prompted response samples in their study may not produce what the listener expects, thus "additional processing resources might be required to address the mismatch" (p.11).

Research Question Two explores the moderating effect of proficiency on the global dimensions. First, the analysis process includes proficiency x comprehensibility and proficiency x accentedness for intelligibility model, as well as proficiency x accentedness for comprehensibility model. Second, the results find that relationship between comprehensibility and intelligibility and accentedness and

intelligibility "do not appear to vary much at all as a function of speaker proficiency", and that the relationship between accentedness and comprehensibility "does not appear to vary with speaker proficiency, at least not in a practically significant way" (p.11). Finally, this finding is consistent with Huensch and Nagle (2021)'s study. The tentative explanation of the authors is that proficiency has little to no impact on the relationships between the listener-based dimensions, across different speaking tasks.

1.4 Conclusion

The conclusion of the paper puts forward four directions of future work: the effect of "having raters transcribe the speech on ratings of comprehensibility and/or accentedness and thus potentially the strength of their relationship as well"; potential impact of "methodological differences"; the inclusion of "task as part of a moderator" in future meta-analytic work examining the global speech dimensions; and the effect of "complexity and predictability of the speaking sample on listener-based ratings and the linguistic variables that predict them" (p.13).

2. Comments

Based on the understanding of their study, the section of Comments tries to summarize the strengths, limitation, as well as implications for future studies.

2.1 Strengths

Linguistically, formal expressions and hedge words can be easily witnessed in the writing, such as "it would be fair to say", "do not appear to vary much", "closely align with", etc. (p.11).

Structurally, it involves all the major parts of a research paper, each of which is developed in a logical, hierarchical way, normally with an overview paragraph or a topic sentence, the body paragraph(s), and a summary. For instance, the introduction part follows an order of situation of research, what has been done, what has not been done, and what their study will do. In addition, Literature Review of the paper first discussed the previous studies incorporating measurements of intelligibility, comprehensibility, and accentedness, arriving at the gap that work is needed to examine the factors moderating these relationships, and the two focuses of their study: speaker proficiency and task. From this conclusion of the first part of Literature Review, the latter part reviews respectively previous studies on effects of speaker proficiency and effects of task type. Furthermore, the section of Results and Discussion follow the logic of research questions, from general conclusions to specific aspects, from descriptive statistics to model construction, followed by tentative explanations. Therefore, it is reasonable to say that the whole article is tightly structured in a professional and reader-friendly manner.

Methodologically, two innovative moves are worth mentioning: the justification of research questions, and data analysis method. Firstly, after stating the two research questions, the authors explain in detail two independent variables, namely comprehensibility and accentedness, and the dependent variable, intelligibility, as well as the moderating factor, which is proficiency and task type. Based on the explanation and previous findings, the authors then justify the research questions by revisiting research gaps, after which theymake predictions of both research questions. Only a few research articles bother to providing justification, explanation and prediction of research questions, and their study is one of those considerate, creative studies. One might argue that the purpose for justifying the research questions is to differ their study from Huensch and Nagle (2021)'s, but to a large extent this attempt demonstrates the rigorousness of academic writing. Secondly, in data analysis, models are built with great care. For example, for comprehensibility scores, which display even distribution, linear mixed-effects models are fit. However, as the authors found that the intelligibility data showed extreme left-skew, they transformed the scores into a binary measure (1 for perfect, 0 for not perfect) and fit a logistic mixed-effects model to the intelligibility outcome.

Thus, From the justification of research questions and the carefully fit models, the strength of methodology is evident.

From a macro perspective, their study contributes to fields of L2 learning, especially speaking or pronunciation development. Theoretically, their study not only clearly clarifies the global speech dimensions of intelligibility ("the extent to which a listener has understood a speaker's message"), comprehensibility ("the ease or difficulty a listener encounters trying to understand a speaker's message") and accentedness ("the strength of a speaker's foreign accent as perceived by a listener") (p.2), but also provides evidence for a significant, positive, and consistent relationship between comprehensibility and intelligibility. Practically, it provides implications and pedagogical recommendations for L2 pronunciation teaching and learning by confirming the goal of language learning, which is "successful communication of messages", from which L2 pronunciation teaching ought to "focus on improving comprehensibility, as opposed to accentedness" (p.2). So, the theoretical and practical contributions also add to the strengths of their study.

2.2 Limitation

One limitation of their study can be recognized after reviewing the previous studies on L2 pronunciation teaching: it might not be innovative.

First, when it comes to the matter of time, the earliest attempt to explore the validity of measuring comprehensibility, intelligibility and accentedness might date back to almost thirty years ago (Derwing & Munro, 1997; Munro & Derwing, 1995). Second, in terms of quantity, during the past decades, a large number of studies have already explored the relationship between the speech dimensions (e.g., Huensch & Nagle, 2021; Munro & Derwing, 2020; Uchihara. 2022). Third, the findings of those studies are reasonably consistent and have revealed the relationships between speech dimensions from many perspectives. For instance, substantial research has supported the significant, positive relationship between comprehensibility and accentedness (Crowther, Trofimovich, Saito & Isaacs, 2018; Isaacs & Thomson, 2013; Isbell, Park & Lee, 2019; Saito, Trofimovich & Isaacs, 2016). Finally, Given the accumulated evidence for the relationship between intelligibility, comprehensibility and accentedness, the only research gap, as recognized in the literature review part by the authors, might be the moderating effect of task and proficiency. However, Huensch and Nagle (2021) has already examined how proficiency affect the global speech dimensions. Even though Huensch and Nagle (2022) argues that their study modifies the speaking task, from a picture narrative task to a prompted response task, they included the same L2 Spanish learners for sample collection, and adopted the same methodology, which might, to some extent, account for the limited differences between the two studies' findings. Therefore, considering the time, the amount, the consistent findings of the research exploring relationship between speech dimensions, and the similarities between the two studies of the authors, it is fair to say that compared its predecessor, Huensch and Nagle (2022)'s study is not so innovative.

2.3 Implications for future studies

Despite this limitation, their study provides three implications for L2 pronunciation researchers. The first implication is to replicate previous studies or revisit the same research topic of one's own. While innovation may be a valuable quality for research articles, beginners of research or researchers of a new topic will benefit from adapting a model. The second implication is that researchers measuring L2 pronunciation performance should consider shifting from nativeness, accuracy of phonetic or phonological features, manners of phoneme articulation to comprehensibility. The third implication is to design research with ample consideration of task type. Although covariates are impossible to avoid in most studies, modifying task type, for example, adopting spontaneous speaking tasks rather than controlled tasks, can help direct raters' attention to the comprehensibility of speech samples, thus improve the validity of comprehensibility as the representation of intelligibility.

Acknowledgement

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