Editorial

Learner Listening: New Insights and Directions from Empirical Studies

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Introduction

Listening is a critically important skill for personal, academic and professional success. Yet it is an area of language development that many learners find most challenging. School and college students have to listen throughout the day because instruction is still largely conducted in the aural-oral mode. Young learners in schools frequently listen to teachers reading stories and passages aloud to them, learn to follow teachers’ instructions and participate in show-and-tell sessions, while high school and tertiary level students continue to find listening critical for their academic learning. Much of academic listening involves learning through listening to lectures. Even in technology-enabled learning contexts where students watch video recordings of lectures and other kinds of interactions, listening is still key to their comprehension of subject matter. Students also frequently learn by listening to one another in teacher-class discussions, small group discussions, student seminars and oral presentations, as well as interacting with their professors and peers both formally and informally. As working adults, individuals would still need to continually hone their ability to listen well. In some professions, such as public and healthcare services, the ability to listening effectively is key ensuring that the people they serve will benefit from service they provide; in others, such as aviation, accurate listening comprehension is vital to maintaining safety and averting disasters.
Much has been written and researched on the topic of listening for academic and professional purposes, yet more is needed to understand the factors that influence core listening comprehension development that directly affects the ability to listen well in these contexts (Goh, 2013). In academic listening contexts, challenges to effective listening comprehension are faced by both first language (L1) and second language (L2) listeners. Although students listening in the L1 listeners do not always face challenges related to general language proficiency, their comprehension and retention of lectures, for example, may be affected by external factors such as linguistic features (e.g., discourse signals) in a lecture (Rickards, Fajen, Brett, Sullivan, & Gillespie, 1997). L2 listeners, on the other hand, face challenges arising from both inadequate language mastery as well as myriad other factors, including lack of background and cultural knowledge, internal or environmental distractions and speaker factors such as accents and speech rate (Miller, 2009). To manage some of these difficulties, learners in academic contexts would also need to employ good listening strategies. To ensure that students whose first language is not English can engage effectively in academic learning, universities require minimum scores on international standardized tests of English such as Testing of English as a Foreign Language (TOEFL), International English Language Testing Service (IELTS), and Michigan English Language Assessment Battery (MELAB). Applicants are accepted partly based on such results and their passing scores in listening are seen as indicators of their potential for participating in academic or academic-related discourse.

Owing to the impact of listening on language acquisition, communication and academic learning, there is a strong interest in investigating the nature of second language listening and the factors that influence learners’ listening processes. These factors have been examined over the past decades in terms of internal and external factors (Dunkel, 1991) and the effects of text, speaker / interlocutor, task, listener and process characteristics (Rubin,
1994), as well as according to the categories of cognitive, social and psychological factors (Vandergrift, 2007).

Similar to other fields in learning sciences, L2 listening research in academic and educational contexts—in its post-positivistic form—has adopted various approaches to investigating the nature of listening and its constituent structure: qualitative approach such as think-aloud protocol analysis (Goh, 1998, 2000), quantitative approach such as (a) latent trait and latent class modeling (Aryadoust, 2015a; Goh & Aryadoust, 2015; Vandergrift & Baker, 2015), (b) regression analysis of self-report questionnaire data (Goh & Hu, 2014; Vandergrift, Goh, Mareschal & Tafaghodtari, 2006), and (c) data mining techniques (Aryadoust, 2015b; Aryadoust & Goh, 2014), and mixed-method approach merging the aforementioned approaches such as Lee and Sawaki’s (2009) application of think-aloud protocols and a class of cognitive diagnostic assessment called the fusion model as well as the mixed-method study by Vandergrift and Tafaghodtari (2010), which investigated improvement in listening performance resulting from metacognitive instruction over a 13-week period.

**Articles in the Special Issue**

The articles in the present special issue attempt to address various questions in learner listening comprehension, for which cognitive mechanisms such as perception and word recognition, as well as interpretation and utilization of auditory input are key. By ‘learner listening’ we refer primarily to listening carried out by language learners and speakers of English as a second or additional language in various contexts. In bringing these articles together in a special issue, our goal was to provide new insights and directions into learner listening research in three ways.
The first was to provide readers with fresh opportunities to consider the roles of various factors that affect learners’ listening comprehension and issues related listening pedagogy and assessment. The factors examined in this collection consist of those that were listener-related such as age and background knowledge, working memory and concentration, speaker-related such as degree of accentedness, task-related such as frequency of listening stimulus presentation, as well as the result of interactions among various factors.

The second was to invite readers to consider paradigms and approaches that could be adopted for researching learner listening. As it turned out, however, the final collection of articles was dominated by the quantitative approach although we would have liked to present a more balanced picture with empirical qualitative studies. Nevertheless, the researchers in these articles have offered further insights into the quantitative approach by the array of techniques used to investigate their respective questions which we will elaborate on.

The third was to highlight the importance for researchers to be cognizant of and draw from one another’s work and contributions to the field of listening. A unique feature of this special issue is that the studies focused predominantly on performance in listening tests involving (very) large samples. Research into listening by assessment experts appears, at least to us, to have largely progressed independently of the broader field of listening development research and practice. Featuring assessment-related listening studies in a non-assessment/testing journal signals the need for further confluence of ideas in L2 listening.

From these perspectives, we view these five articles as shedding new light on the ongoing discussions about how learners’ listening performance can be affected by myriad factors and providing useful illustrations of the tools that researchers can use to pursue related goals. Together, these articles help to expand the discourse space for learner listening research by helping to fine-tuning the research agenda on factors influencing learner listening. By bearing in mind our three-fold goal for this special issue, readers will be able to
appreciate the value of not only each individual study in illuminating the roles of specific factors but also how the articles collectively speak to concerns in L2 listening development. Where possible the authors have identified pedagogical implications and research directions, and we encourage readers to do the same for their own contexts.

Listener-Related Factors

Recognizing the effects of prior knowledge and experience on listening performance, Banerjee and Papageorgiou explore in the first paper the interactions between listeners’ age and the topics in listening test items. The researchers proposed a confirmatory differential item functioning (DIF) framework where they postulated that some items engaging listeners’ background knowledge from the occupational domain were likely to be more difficult for younger listeners because of their limited knowledge and understanding of the world of work. DIF (in listening assessment) occurs when two groups of listeners of the same listening proficiency belonging to different subgroups (e.g., gender and age) stand different chances of answering some or all of the test items correctly (Andrich & Hagquist, 2015). Banerjee and Papageorgiou tested their hypothesis across various listening test forms of the Michigan English Test (MET) administered to 2,861 test takers primarily from Latin America, who were divided into three age groups. The study highlights the need for DIF analysis across different listening test forms and samples of listeners as a way of evaluating test quality, but at the same time points to one of the lingering concerns in establishing confirmatory DIF frameworks in listening research, which is the inconsistency between hypothesis and actual findings. The researchers offered suggestions to listening assessment developers to improve the generalizability of listening test scores across different language use domains.

The second paper by Wolfgramm, Suter and Goeksel investigated the role of learners’ cognitive and linguistic capacities comprising concentration, working memory, vocabulary
knowledge, alongside factors such as academic self-concept in listening, L1 and gender. They established a complex theoretical framework informed by research into psychology of comprehension and memory, as well as studies of listening in applied linguistics. They distinguished between attention and concentration, and operationalized the ability to concentrate as a latent variable consisting of both concentration and attention. The researchers postulated that these variables can also affect reading comprehension, and accordingly they use reading comprehension in their model. Structural equation modeling (SEM), a statistical model to test correlations and predictions, was used. They tested two models and results showed that concentration predicted listening comprehension reasonably well, but had only a marginal effect on reading comprehension. Furthermore, vocabulary predicted both listening and reading significantly, but working memory and academic self-concept did not influence any of the endogenous variables. The researchers further showed that concentration and working memory to be correlates; accordingly, when one is present in a linear model, the other one is rendered redundant, likely due to the high interdependence or multicollinearity of the variables (Hair, Black, Babin, Anderson, & Tatham, 2006). In a post hoc regression model analysis, however, they did not find a significant effect for working memory. One important implication that we draw from this study is the need to consider the relative merits of linear models as well as the challenges in validating language comprehension models (see Aryadoust, 2015a). Finally, unlike listeners’ L1, the effect of gender on different tests was either non-significant or marginally significant, which is what the following article also shows.

Seo, Taherbhai, and Frantz examined a number of listener-related factors in the listening comprehension of high school English language learners in the US. These included gender, grade/year, ethnicity, chronological age, home language, performance levels and performance in other language skills. They drew on DIF analyses to identify the items that
exhibited no evidence of content bias but had significant DIF that could have occurred due to other reasons. The researchers used a latent class or mixture Rasch model (MRM) to group learners into qualitatively different classes, and then estimated item difficulty and listener ability for each. The results of the study showed two latent groups of listeners with different profiles and that listening comprehension of learners was not associated with gender or grade, whereas chronological age had some significant effect on latent class membership. The study also suggested the influence of strategic processes that might have occurred when the candidates answered the test questions. Listening comprehension was also shown to be closely related to other language skills, specifically reading comprehension. High ability listeners had a high reading proficiency whereas none of the low ability listeners was found to have a high reading proficiency.

**Task-related Factors**

The issue of whether test candidates should be allowed to listen to a recording once or twice is a concern for both teachers and test designers. In the fourth paper, Ruhm, Leitner-Jones, Mlakar, Kiefe and Itzlinger-Bruneforth investigated the effect of playing a listening text once or twice on listeners’ comprehension. Using logistic regression modelling, they grounded their study on a multicomponential framework informed by arguments of test authenticity, test economy, limitations of test situation and time, and listening test item difficulty. Data was collected from a field test among English learners in Austria where the Common European Framework of Reference (CEFR) is applied. The items were aimed at A2/B1 performance levels which are at the lower half of the range of six levels. The researchers found that listening twice to the text can help listeners answer short items, likely because these items are minimally contextualized and the lack of a well-defined context can have adverse impacts on listening processes, so the opportunity to listen again can enhance
comprehension. Listening twice also had other positive effects such as decreasing item difficulty, but the effects are less clear because other factors could also have been at play. Listening twice, however, made little meaningful difference when the items were easy while the findings were mixed for difficult items, as it only had an effect on a subgroup of these difficult items. The items that remained persistently challenging to the learners after the second round of listening seemed to contain less accessible vocabulary; hence a suggestion of the influence of vocabulary on listening specifically in difficult test items. This is consistent with Wolfram et al.’s study (this volume) where vocabulary predicted listening comprehension. This study by Ruhm and colleagues has provided new insights into the debate of listening once or twice that will serve as important considerations for test developers and teachers. Their observations about differences in the duration of test stimuli are also worth careful consideration.

**Speaker-related Factors**

Speakers’ accent has featured in many discussions about listening comprehension difficulties but to date there have been still few empirical studies that examine its quality and effect. In the final paper of this special issue, Ockey, Papageorgiou, and French investigated the effect of speaker accent on listeners’ ability to comprehend interactive lectures. Drawing on recent listening research, Ockey and colleagues argued that interactions with interlocutors could help listeners compensate for the adverse effects of unfamiliar accents, since they could use the communication strategy of asking for clarification. The researchers used the Strength Accent Scale (Ockey & French, 2014) to rate interactive lectures used in the Internet-Based Test of English as a Foreign Language (TOEFL iBT) administered to 21,726 listening test takers. Using the Rasch model, they linked listening test items and measured their difficulty on a common metric. The results showed little effect of accent on performance and the
researchers suggested that accents that were considered stronger on the scale could still be used in L2 lecture comprehension inputs without unduly affecting test scores. They speculated that other cognitive factors could have mitigated against strong accents. Ockey and colleagues recommended that a variety accents be represented in the inputs. In regions where English is spoken in different accents, assessing listeners’ proficiency by using one accent cannot represent the target language use domain, and this could minimize the generalizability of test scores.

**Conclusion**

The articles in this special issue have examined the role of a number of factors in listening performance, as well as highlighting the relationships between some of these factors. These include listener characteristics such as age and background knowledge of content, gender and years of schooling, cognitive and linguistic features such as working memory, concentration and vocabulary knowledge, task characteristics such as frequency of exposure to listening stimuli related to assessment method and techniques, and speaker characteristics such as accent. These factors in themselves are not new as they have been suggested in previous research as well as debated in commentaries, but the authors of the studies presented in this special issue have provided fresh and valuable perspectives by using rigorous empirical methods of investigation on large amounts of data. Although the results do not provide definitive answers to many of our questions concerning the effects of internal and external factors on listening, the researchers have provided new evidence-based insights and pointed to further research possibilities.

The studies have also provided useful insights into the strengths and limitations of the quantitative tools employed, and show how listening research can benefit from psychometric and statistical modeling techniques such as Rasch measurement DIF analysis, latent class
DIF, logistic regression modeling and SEM. These techniques can aid in theory postulation of the L2 listening construct and the validation of assessments. One possible avenue for future research would be the application of non-linear models such as artificial neural networks and genetic algorithms, as they are not typically limited by, for example, high correlations between the independent variables—an issue that arose in some of the studies in this special issue.

More research could certainly be carried out using the tools suggested here in the form of new or replication studies. These lines of inquiry into factors affecting listening will also benefit from in-depth qualitative studies of smaller groups of L2 listeners in different educational and sociocultural contexts. Findings from such studies can offer complementary insights into the influence of listener, task, speaker and other factors reported here.

We conclude this introduction with a reiteration of the importance of stronger collaboration and communication between researchers in assessment, in particular testing, and those in L2 listening development and instruction research. Very often the two do not meet and may have little motivation to do so. It is important that at the heart of L2 listening research is a determination to understand how teaching and assessment processes can support learners in their development of a skill that many find challenging even after many years of learning a language. What we have attempted to do in this special issue is to begin this conversation, as there can only be benefits to the field when research and practice in one area of the field is informed and enriched by another, and vice versa. Compared to the other L2 skills of reading, writing and speaking, the field of listening is the youngest in terms of research. It is our hope that as the field matures further, we will see a stronger confluence of ideas from listening researchers across the areas of teaching and assessment.
References


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**In Memoriam**  
**Professor Laurens Vandergrift (November 10, 1946 – Nov 1, 2015)**

The field of second language learner listening has lost a great scholar. Larry, as he was known to many, touched the hearts and minds of fellow listening researchers, graduate students and listening teachers all over the world. His work is read, discussed, applied and debated, and many young researchers have been inspired by it to study second language listening. In Larry Vandergrift’s work shone a brilliant mind and a great heart. He will be deeply missed.