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Methodological innovation in applied linguistics research: Perspectives, strategies, and trends

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1. Introduction

This invited colloquium, organized by Shaofeng Li (Florida State University, USA) and Matthew T. Prior (Arizona State University, USA), took place on 20 March 2023, at the annual meeting of the American Association of Applied Linguistics (AAAL) in Portland, Oregon, USA. The colloquium consisted of an introduction to the session, four paper presentations, and comments by a discussant, followed by audience participation. The aim of the colloquium was to promote innovation in applied linguistics (AL) research, enhance methodological rigor and accountability, and generate new insights for practice and theory building. With the perspective that innovation in research takes various forms, the colloquium sought to provide a platform to discuss and understand different configurations of innovation across diverse research areas, paradigms, methodologies, methods, and approaches. The colloquium is the first academic venue that brings the topic of methodological innovation to the fore in the field of AL.

2. Papers

2.1 Methodological innovations in applied linguistics: A framework and an exploratory study

In the first talk, Shaofeng Li (Florida State University) framed the colloquium in relation to four characteristics of methodological innovation. First, innovation represents ORIGINALITY in that methodological innovations enable researchers to carry out research that generates new evidence for knowledge building. Second, innovation leads to BETTER QUALITY research by overcoming existing limitations and obtaining more robust evidence. Third, research on innovation is instructive by providing valuable insights into best practices for conducting, evaluating, identifying, and benefitting from innovative research, thereby increasing the METHODOLOGICAL LITERACY of the field. Fourth, innovation embodies a particular SPIRIT OR MINDSET. An innovative researcher is therefore many things, not least of all well-informed, open-minded, critical, progressive, adaptable, reflective, and ethical.

Li then reported the preliminary findings of his open-ended survey asking researchers across the field (39 responded) to define (1) what constitutes methodological innovation in AL and (2) what methodological innovations have occurred in AL. Three major themes were identified in response to the first research question: nature of innovation, form of innovation, and aspects of research for innovation. Concerning the nature of innovation, respondents asserted innovative methods must be NOVEL, demonstrably IMPROVED, and VALID (i.e., quality cannot be compromised). Forms of innovation refer to ways innovation may occur, including creating a new method, adapting an existing method,

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adopting a new epistemology/theory/approach, and combining multiple methods. Aspects of research that can be innovated include research questions, research design, data collection, data analysis, and meta-research (i.e., research on research), including study quality, ethics, open science, and dissemination.

To answer the second research question, Li presented recent methodological innovations identified by the respondents. One recurrent form of innovation is method combining, such as combining data collection methods, types of data analysis, theoretical approaches, quantitative and qualitative methods (i.e., mixed methods), and different variables. Li highlighted two frequently mentioned innovative methods for data collection. The first is eye-tracking, which has been used to capture second language (L2) learners' cognitive processes or triangulate with data collected via other techniques, such as stimulated recall and keystroke logging. The second is technology, which falls into five categories helping researchers conduct remote data collection, enhance authenticity, capture invisible processes, facilitate learning and teaching, and collect data in online platforms. Other innovative data collection methods included idiodynamic methods, interdisciplinary methods, longitudinal research, multi-site research, Q-methodology, and corpus approaches. Regarding data analysis, two recurring themes were statistical sophistication and conversation analysis, which has been applied to examine new topics, combined with other methods, and modified to generate new variants. Respondents also referred to multimodal analysis, social network analysis, and natural language processing as innovative methods for data analysis. Recent topics and trends included "EDID" (equity, diversity, inclusion, and decolonization), individual difference factors, translanguaging, complexity perspectives, usage-based models, and research ethics. Finally, two prominent genres of meta-research emerged from the participants' responses: research synthesis (i.e., meta-analysis, systematic narrative review, and bibliometric studies) and open science (e.g., open data, open methods, open resources, and open evidence).

Li concluded his talk by identifying six mega-themes (i.e., intellectual bases) underlying methodological innovations in AL. The first is MULTIPLICITY, which is reflective of the multidimensionality of the constructs examined in AL research; endeavors to reveal a fuller or bigger picture of the examined phenomenon; a trend toward triangulation; and attempts to examine the intricate relationships between variables. The second is INDIVIDUALITY, which is suggestive of the recognition of the importance of examining individual variation; a greater focus on humanity and the wellbeing of stakeholders; and the contributions of learner-internal factors to second language development. The third is the investigation of the PROCESS aspects of an examined phenomenon, referring to features, events, or events that lead to outcomes but are not outcomes per se. The fourth is SOCIAL JUSTICE, which underlies themes relating to underrepresented, marginalized, minoritized, or ignored languages, speech communities, and sociolinguistic phenomena. The fifth is the need for increased PRACTICAL RELEVANCE of research given the applied nature of the discipline. The sixth is QUALITY AND RIGOR, the primary driving force behind all methodological innovations.

2.2 Interdisciplinary methodological innovation as an outcome of collaborative climate skeptical research

In the second presentation, Shondel Nero (New York University) discussed interdisciplinary methodological innovation that emerged from collaborative research between herself (an applied linguist) and Raul Lejano (New York University), an environmental policy scholar on CLIMATE SKEPTICISM (i.e., "anti-scientific" narratives skeptical of climate change discourse).

Nero began by introducing the main issue – climate skepticism – noting that 38% of the US population are climate skeptics (Leiserowitz et al., 2018) and that most of them are politically conservative. In their co-authored book, Lejano and Nero (2020) sought to answer the question: How has the climate skeptical narrative of a MINORITY of US citizens emerged, sustained itself, and become an ideology over time? Nero reported that Lejano and Dodge's (2017) narrative analysis work on the four properties of an ideological narrative – AUTOPOIESIS (self-reinforcing), DECONTEXTUALIZATION, INVARIANCE, and SATURATION – offered a methodological entry point to examine their data, which

were selected publicly available climate skeptical texts over a 20-year period in the US from 2000 to 2020. Narrative analysis, however, proved insufficient to explain how the typical elements of narrative – plot, characters, audience, context – can become a powerful ideology from a minoritized position over time. A methodological shift with a critical lens was necessary to filter these elements so they could see how IDEOLOGICAL DISCOURSE is constructed and reinforced through narrative. This led to Nero's employing critical discourse analysis (CDA) (Fairclough, 2010) to examine how social structures, discourses, and power mutually determine each other, reflected in LANGUAGE at the micro (textual evidence of claims), meso (voices and audience), and macro (the larger sociopolitical context) levels.

Nero created a Venn diagram showing the overlay of the common elements of narrative with properties of narrative analysis and CDA on either side, then filtered the analysis of Lejano and Nero's study data by asking critical questions, for example: What is the political affiliation and degree of power of the characters and audience? What specific semantic and rhetorical strategies are employed to tell the story, and for what purpose? How is the story disseminated? Through this combined analysis, Nero and Lejano found textual evidence of an evolving skeptical narrative over time that began with the questioning of scientific facts, then critiquing and fighting back against the perceived moral and financial dimensions of climate activism, then questioning the integrity of scientists themselves, and finally formulating a grand conspiracy around scientists' intent to take away freedom from skeptics and "us" – a deeply entrenched ideology. Nero emphasized that the climate skeptical narrative is framed strongly in binary (i.e., "us vs. them") terms, which turns out NOT to be about science, but about deep social fracturing in society – a frame that could be applied to any politically contentious issue (e.g., gun rights, immigration, abortion). She concluded that the novel interweaving of narrative and CDA thus offered a richer and more nuanced lens for data analysis, centering language across disciplines, and revealed a tangible benefit of interdisciplinary collaboration.

2.3 Methodological innovations in studying complex systems in applied linguistics

In the third presentation, Phil Hiver (Florida State University), Ali H. Al-Hoorie (Royal Commission for Jubail and Yanbu), and Akira Murakami (University of Birmingham) discussed methodological innovations in studying complex systems in AL. They began by highlighting the innovative assumptions underlying research methods for studying complex systems – namely, that when researching human and social phenomena, EVERYTHING COUNTS and EVERYTHING IS CONNECTED (i.e., the relational principle), and EVERYTHING CHANGES (i.e., the adaptive principle). The consequences of adopting these principles of complex dynamic systems theory (CDST) leads to new ways of understanding learners, their language development, and the role of instruction. It also leads to entirely new ways of seeing language itself and its use in multilingual and transnational social contexts (Douglas Fir Group, 2016). Methodological innovation in studying complex systems has yielded significant insights, not least because the field is dealing with increasingly "wicked problems" and asking questions that are increasingly complex. To take stock of the advances that CDST research has made in AL and its accompanying methodological innovations, the authors then reported a scoping review of the heterogenous body of research investigating complex systems by looking back at the methodological characteristics of two decades of empirical CDST studies in the field to note trends in designs and analytical choices (Hiver et al., 2022). This review highlighted the many strands of AL research that have been informed by CDST and its innovative assumptions, as well as the substantive contributions this body of research has made to AL. It is clear from this review that CDST research has allowed the field to adopt a TRANSDISCIPLINARY STANCE that is more problem-oriented and that transcends disciplinary boundaries (see also Larsen-Freeman, 2017). Finally, to add to the growing body of practical methodological guidance for studying complex systems in AL, they showcased an innovative analytical method – LOCATION SCALE MODELS – that enables the assessment of systematic change in within-person variability and is useful for modeling between-person volatility, stability, and variation in development. Such models can vary in complexity and include fixed or random effects, as with other conventional analyses. Using a case study of Saudi L2 learners' writing development, they showed that combining

location scale models with Bayesian negative binomial regression also allows researchers to examine nonlinearity in the change in variability. This talk examined ways CDST has expanded the toolbox of research methods available through innovations for studying dynamic change in context and interconnectedness.

2.4 Participatory linguistics in the translanguaging framework: What does it aim to achieve?

In the final presentation, Li Wei (University College London) explored the idea of participatory linguistics from the perspective of translanguaging research. Informed by interpretative phenomenological analysis (Smith & Osborn, 2008), participatory linguistics sees the linguistic analyst's job as trying to make sense of the participants trying to make sense of their world, a "double hermeneutic." What we are observing as linguists is the participants trying to make sense of their world in real-life situations. And in doing so, we are participating in their social world as well. Indeed, their social world becomes part of ours and ours becomes part of theirs. The analyses of what we have observed is, therefore, necessarily subjective, and we should not be afraid to say so. In fact, we as analysts have a responsibility to be open and explicit about our own social, cultural, political and ideological stance in presenting our interpretation and analysis and invite the reader to participate in our ANALYSIS AS A SOCIAL ACT.

Translanguaging as a decolonizing programme aims to transform the way we think and talk about language, cognition, and education. We must recognize that we as linguists have given names to communicative practices in communities and called them Norwegian, Swedish, Hindi, Punjabi, Mandarin, Cantonese, and so forth. Also, we often categorize the speakers/users of different languages as first, second, or foreign language speakers/users. These names and categories carry specific social and political connotations beyond simple linguistic labels. A set of abstract codes is highly unlikely to be accorded any social status without a name or label. And the social status of the users is intrinsically linked to the names and labels of the codes. Describing someone as a second language user of English as opposed to a native speaker of Arabic can have serious social implications for their identity and expectations of their linguistic competence. Whilst focusing on bilingual/multilingual language users' linguistic practices including learning, translanguaging scholars see the linguist's responsibility not simply as describing which language is being used to whom and when, but to participate in a social debate over the value of multilingualism and over the consequences of communities coming together in the era of mobility and superdiversity.

Li Wei used two published studies to illustrate how participatory linguistics works in practice. In the first study (Zhu & Li, 2022), three researchers with different positionalities took part in a Scratch (a developing, semi-scripted performance involving audience feedback) by a London-based Polish performing artist, taking on different roles in the performance. The participation led to deeper understandings of the artist's working and thinking, beyond observing her multilingual practices, as well as changes in the researchers' own views on migration and ethnic identities. The second study (Li et al., 2020) concerns Li Wei's engagement with a group of young academics in Hong Kong who are particularly interested in the changing communicative practices amongst young people, especially social media users. The young academics created a Facebook site to collect what they call *Kongish*. Through multiplex (multiple + complex) interactions, views about Kongish shifted significantly, from an inferior variety of English perspective to legitimate translanguaging practices.

The case studies show how multiplex participation not only helps to gain deeper and more holistic understandings of the multilingual practices of communities and individuals, but also achieves transformation of the researchers' own subjectivities.

3. Discussion and conclusion

Lourdes Ortega (Georgetown University) was the discussant of the colloquium. Commenting on the first talk by Li, she highlighted the usefulness of his survey findings in illuminating what methodological innovation looks like in the minds of applied linguists. She noted the six mega-themes of methodological innovation gleaned from Li's bottom-up qualitative approach are particularly useful for

junior researchers learning to attune themselves to the spirit of the times in our discipline. Ortega then offered some highlights of Nero's talk, which chronicled the making of a book about the 20-year formation of the ideology of climate skepticism that won the AAAL Book Award in 2022 (Lejano & Nero, 2020). Ortega noted the research fits method-combining in Li's typology of innovation, in that the book encapsulates a highly original combination of narrative analysis as practiced in the Lejano's field of environmental policy (Roe, 1994) with critical discourse analysis as practice in Nero's field of AL (Fairclough, 2010), but also strong collaborative and interdisciplinary qualities. Moreover, she speculated that much interdisciplinary innovation may also be characterized by serendipity: as Nero noted, the mutual agreement to collaborate was entirely serendipitous. Ortega thus encouraged applied linguists aspiring to innovate, to be attentive and seize unplanned but opportune openings to collaborate across disciplines. Turning to the third talk by Hiver, Al-Hoorie, and Murakami, Ortega commended the authors for their undertaking a much-needed scoping review of the burgeoning research into language learning and learners as complex systems. She also lauded Hiver et al. for their willingness to provide practical methodological guidance on how to study complex systems in AL, present in all their work (e.g., Al-Hoorie et al., 2023), and also in this presentation through their demonstration of location scale models that account statistically for between-person volatility, stability, and variation in development. Finally, the third talk by Li Wei fitted in Li's typology of innovations, according to Ortega, as both illuminating a new trend or topic (e.g., translanguaging) and adopting a new epistemology and approach (i.e., participatory linguistics). Ortega stressed that Li Wei's participatory linguistics is a deep departure from conventional research practices in the field, as it invites applied linguists to blur the lines between participants and researcher and to theorize from and with praxis, engaging in the responsibility of research-as-activism that many decolonial (Mignolo & Walsh, 2018) and Indigenous (Phyak & De Costa, 2021) thinkers call for. Indeed, Li Wei envisions a new research habitus that takes analysis as a social act. Coming full circle back to Li's survey of what 39 applied linguists understand under methodological innovation, Ortega concluded her discussion with the hope that the diversity and excellence of the innovations presented in this colloquium by Li, Nero, Hiver et al., and Li Wei will stand the test of healthy pluralism, so that junior researchers in the field can look forward to engaging in innovative research contributions that are tailored to their diverse talents and interests.

We plan to continue these important discussions around innovation in AL research through a special issue of *Research Methods in Applied Linguistics* (Li & Prior, 2022).

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