Introduction

How are multilingual communities of practice being considered in language assessment? A language ecology approach

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Bringing together six original research papers representing North America, Asia and Europe, this Special Issue of the *Journal of Multilingual Theories and Practices* (JMTP) provides timely, much-needed contributions around multilingualism and assessment. Aligned with the aim and scope of JMTP, this Special Issue ‘showcase[s] diverse perspectives and methodologies in the research of multilingualism’. Shohamy (2011) drew increased attention to the area of multilingual assessment. In the ten years following this seminal article, scholars from across the globe have been developing innovations in multilingual assessment research, uncovering and beginning to address myriad issues at play. Within this work, this Special Issue brings together studies that report on research by/with/for local, multilingual stakeholders in educational assessment. Leung and Valdés (2019:364) call for applied linguists to work toward more ‘conceptual clarity’ around multilingualism and recommend empirical efforts based within emic or grounded views of languaging practices (cf. Swain, 2006) that include the positioning of multilingual approaches in relation to different social, political, historical, economic and geographic contexts. The introduction here and rejoinder by Dr Janna Fox present holistic frames to contextualise further the contributions of these research projects. Together, this content serves to inform further scholarship in multilingual assessment and validation frameworks for researchers, policy-makers and practitioners.

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Adhering to current validation practices often fails to capture the realities and idiosyncrasies embedded in multilingual settings. A problem with many current approaches to validation that recommend global and broad guidelines is that such calls for standardised definitions implicitly or explicitly focus on monolingual test constructs. These approaches often provide insufficient guidance on multilingual constructs, which are operationalised by tests and other modes of assessment. The inferences, decisions and actions taken in relation to these test scores hold consequences for all those who have a stake in assessment outcomes (Messick, 1989a, 1989b). Current approaches to validation need more robust, socially-situated use-specific models (Kane, 2021) that suggest the kinds of necessary evidence and how such evidence should be collected, analysed and presented to support the interpretation and uses of scores in multilingual contexts. Current emphases on these forms of validity evidence are, at their best, not fully informed by social factors that are key in this arena, and at their worst, are dismissive.

The situatedness of multilingual contexts and individuals in these communities, in particular, calls for innovative approaches that can provide opportunities for the co-construction of assessment work, including the co-construction of validation frameworks. For these reasons, this Special Issue draws on socio-theoretical perspectives of *Communities of Practice* (CoP) and Bronfenbrenner's *Ecological Systems Theory* to bring to the forefront the positions and values of multilingual communities. For us, CoP, particularly for multilingual contexts, means communities that are self-identified and/or delineated by the individuals who have a shared goal or shared value system, and their day-to-day realities (Eckert, 2006; Lave and Wenger, 1991). CoPs are often understood as multilingual for encompassing multiple socially-politically defined named languages (e.g., German, Korean, Arabic) or language varieties (e.g., Singlish in Singapore, Karntnarish in southern Austria), but also include contexts with more fluid understandings of languaging (see also Canagarajah and Liyanage, 2012 for a discussion on limitations of the constructs of monolingualism and multilingualism). Additionally, ecological systems theory speaks to the complex and dynamic relationships that exist at multiple levels of the surrounding environment of the test-taker in multilingual settings (e.g., school and home environments, cultural and social values). Bronfenbrenner's (1979) ecological systems theory has implications for assessments and validation practices in multilingual settings because the theory can help describe validity evidence that should be marshalled to support the interpretation and uses of test scores specific to these contexts (see also Hornberger and Hult, 2008 for a discussion of language ecology in multilingual contexts). In research, we bring these theories together through *transdisciplinary* practices where stakeholders/participants from different backgrounds (disciplines, life experiences,

workplaces, etc.) work together to achieve shared goals in collaboration (cf. Fox and Artemeva, in press; Moss, 2016).

Multilingual CoPs and validity frameworks

As stated above, we are focusing on emic perspectives within multilingual contexts as comprising multilingual CoPs. Wenger (2010) has conceptualised CoPs as social learning systems. As a social system, CoPs are continually produced through acts or practices of engagement, imagination and alignment. Each CoP is dynamic and ever-adapting, shifting in terms of various boundary processes and how the identities of members are conceived of and perceived. As a learning system, Lave (1991:65) positions learning as ‘the process of becoming a member of a sustained community of practice’. The role of language or languaging in mediating these practices is one reason why the concept of CoP has been particularly taken up in applied linguistics and sociolinguistics. Eckert (2006) foregrounds the shared practices – with languaging being a central practice – made by group members in relation to themselves and other people, places, systems and structures, and the participants as ‘collaborat[ing] in placing themselves as a group with respect to the world around them’ (Eckert, 2006:1). Across the literature on CoPs, there is an understanding that CoPs exist from self-determined positionalities, are committed to mutual engagement inclusive of conflict, discomfort and tension, in addition to consensus building and agreement. The shared values and behaviours enacting these values and the accountability across the CoPs add to the conceptualisation and realisation of the CoP (Lave and Wenger, 1991; Li et al., 2009). Yet critiques of CoPs – specifically issues around the conceptualisation of community and the scope of shared common goals (e.g., Gee, 2004; Prior, 2003; Scollon, 2001) – aid us in refining our understandings of CoPs in relation to what practices bring people together, akin to Gee’s notions around affinity spaces. For example, Rea-Dickins (1997) has described community or stakeholders as a group of individuals who have common interests at stake in relation to a shared goal. Different stakeholders may not be in complete agreement on all aspects of what it means to be in the CoP but, instead, find the necessary and sufficient common ground to identify with one another. Overall, we find CoP helpful in capturing the multitudes and diversities within multilingual contexts and how – within these differences – there are spaces, practices and feelings of togetherness.

One of our aims with this Special Issue is to put forth theories, methods and evidence for moving beyond addressing multilingual contexts as CoPs in principle, as a task on a checklist, so to speak. Rea-Dickins (1997) has paid particular attention to substantive engagement with different CoPs and

cautions that, within these endeavours, we need to understand ‘what the real relationships between the stakeholder groups consulted are, and whether there is a danger of paying lip service to the whole undertaking’ (304). For assessment, such shifts mean that the process of collecting evidence to support the interpretation of score meaning and the justification of test use must include bottom-up endeavours, which makes it necessary that CoPs in local contexts co-construct assessments. The situatedness of multilingual CoPs – and as we discuss below Bronfenbrenner’s ecological systems – also serve to blur dualism such as top-down or bottom-up, giving more embedded, nested layers that foster efforts centring co-construction. As such, we focus on multilingual CoPs in particular as integral to validity frameworks across assessment design, development, interpretation and use. CoPs, we argue, need to play a pivotal role in improving the implementation of educational assessments and delineating their purposes and limitations. In looking at the topics and issues that surface in these areas, our introduction to the Special Issue is guided by the question: *How are multilingual CoPs being considered in assessment?*

In assessment, CoPs are important, but their role in existing validation frameworks is highly neglected. This disconnect creates various challenges when developing validity arguments for interpreting scores and test use because it excludes the voices from CoPs. In this sense, validity arguments are partial at best and promote the use of frameworks that are arguably accessible to only an elite class of scholars – those trained in assessment-centred communities (e.g., educational measurement, psychometrics, measurement and quantitative psychology). Traditionally, mainstream measurement validity theory and validation frameworks have been articulated in the form of argument-based approaches to validity (e.g., Bachman and Palmer, 2010; Chapelle, 2020; Chapelle, Enright and Jamieson, 2008; Kane, 1992, 2006, 2013) or the sources of validity evidence in the *Standards for Educational and Psychological Testing* (AERA, APA and NCME, 2014, hereafter the *Standards*). Their perspectives on assessment view the process of gathering multiple sources of validity evidence as a top-down, prescriptive and individualist endeavour in which CoPs are urged to adhere to recommendations of best practice to ‘support the interpretation of test scores for proposed uses based on evidence and theory’ (*Standards*:11). Although this definition is not free from contentious debates (see Cizek, 2020), it is considered the dominant definition and consensus view of modern validity theory. The dominant view of validity has contributed to characterising the processes to document validity evidence. However, the recommendations in the *Standards* and argument-based approaches to validity do not bestow an explicit role to context, and the voices of CoPs are relatively weak when it comes to developing validity arguments to promote defensible testing. In addition, although argument-based validation (Chapelle, 2020;

Kane, 1992, 2006, 2013) is an enticing and intricate idea, it is broadly defined and provides implementation examples that are still only accessible to the same elite group. How can important features of this framework permeate validation research in local contexts? The answer to this question is not simple but certainly exposes the top-down and elitist nature of argument-based validation.

In applied settings, most validation studies tend to favour gathering validity evidence by means of quantitative data analyses and have been mostly concerned with large-scale, standardised testing. Such approaches have predominated in the field of education and have been applied to small-scale, non-standardised testing. This situation has created a mismatch between what is feasible in large-scale testing and what is needed in local contexts. Moreover, mainstream validation practices have rendered the act of gathering validity evidence a highly specialised endeavour, and those who might not have the expertise or training in a quantitative-oriented domain are excluded from what ought to be transdisciplinary focused collaborations. Although quantitative methods provide insightful information that informs test score interpretation and use, neglecting transdisciplinary collaborations and alternative methodologies – which might not be quantitatively oriented – hinders the validation process by neglecting the voices of CoPs. Context, diversity and inclusion for multilingual CoPs especially need to play a pivotal role in validation efforts to promote the decolonisation of mainstream validation approaches by acknowledging the legitimate voices of key stakeholders (Fox and Artemeva, in press; Moss, 2016). This concern has been recently articulated through calls for decolonised forms of validity arguments and quantitative approaches marshalled by transdisciplinary actors vis-à-vis differing, historically excluded assessment contexts (Eizadirad, 2019; Walter and Andersen, 2013). These perspectives urge those in testing and assessment ‘to listen to the arguments of diverse actors, in contexts in which power differentials might otherwise render them unable to make their arguments heard’ (Addey, Maddox and Zumbo, 2020:593). We argue that gathering validity evidence should not only focus on assembling evidence from different sources – as suggested in the *Standards* – but also be explicit about where those sources stem from, including CoPs and emic understandings of context.

Ecological systems and language ecology

Drawing on Bronfenbrenner’s (1979) development ecology theory can shed light on the role local stakeholders play in assessment and how current validity theory and accompanying primarily quantitative methods overlook the intricacies embedded in local assessment contexts. Development ecology theory

identifies four environmental systems that can help us connect or reconcile the *Standards* and modern validity theory with local contexts. These systems include microsystems, mesosystems, exosystems and macrosystems, which provide a level of connected granularity where multilingual CoPs are critical across all systems. We consider these systems in relation to assessment, validity frameworks and multilingual CoPs in the following ways:

Microsystem: at this level, the immediate setting in which the individual resides and interacts is very important and is constituted by a pattern of activities that shape the interactions of a person's family, peers, school and neighbourhoods. In assessment, this refers to the needs and voices of test-takers and their experiences in participating in assessment procedures of some sort and how they are affected by assessment practices. A key question to address at this level would be: 'What are the consequences of assessment on particular CoPs, considering their immediate temporal, spatial, geographic and political environment?'

Mesosystem: this level refers to the interrelations among microsystems or connections among contexts or settings. For instance, the relationship between family experiences (home) and school systems (school) where the person engages in activities in more than one setting provides an example of a mesosystem and multi-setting participation. In assessment, mesosystems can be weakly linked if interconnections are not adequately established, which frames the question: 'How can CoPs, including teachers, schools, students and families, be considered as interconnected settings to inform validation practices in local contexts?'

Exosystem: this level involves the settings where the individual does not have an active role but in which organisational events and decisions occur and have an impact on or affect the setting of individuals and CoPs. In assessment, this includes, for instance, the decisions that are made about using tests for a given purpose. These decisions may be made by local or global stakeholders and affect students in important ways. In other words, 'How can tests be put to good use? Are they necessary? How will they shape learning with regard to multilingual CoPs?'

Macrosystem: This level describes consistencies in society as a whole and contains the belief systems or ideologies of cultures or subcultures. In assessment, this relates to education systems, government ministries and educational organisations. Key questions to address here would be 'How does the enactment of top-down assessment policies affect groups from different socio-economic status, ethnicity, belief systems, etc.? What role should CoPs play at this level?'

Depending on the CoP, the interplay of the systems might be more or less salient, yet the interactions and layers of understandings are of vital

importance. We see the *Standards* and argument-based approaches to validity as ideological beliefs connected mainly with the macrosystem with limited bridging into other systems. Historically, AERA, APA and NCME have collaborated and produced what can be considered a ‘soft policy’ – which is not forced upon any test user – of testing standards. We argue for opening the dialogue to a more encompassing and transdisciplinary approach that recognises the strengths and weaknesses of current validation frameworks and provides opportunities to advance current validity theory and validation practices. Essential voices from multilingual CoPs have been largely ignored. This disconnection neglects the role multilingual CoPs should/need to play in assessment contexts and highlights the need for a more inclusive environment where all stakeholders are equally considered.

From applied linguistics and sociolinguistics, we turn to language ecology frameworks (also referred to as ecolinguistics, ecology linguistics or ecology of language) that draw from Bronfenbrenner and other related ways of conceptualising interconnected systems or scales to explore further the vital role of multilingual CoPs. In general, language ecology efforts have been used to connect physical, biological and social environments as an understanding of context (Skutnabb-Kangas and Phillipson, 2011), or as Haugen (1972) has explained, as the ‘interaction with other languages in the minds of bi- and multilingual speakers’ in addition to ‘its interaction with the society in which it functions as a medium of communication’ (325). Hornberger and Hult (2008) explain that language ecology research has expanded to encompass social, historical, sociolinguistic and political forces at individual, community and societal system levels. Language ecology functions to develop in language planning initiatives focused on maintaining or maximising circumstances for linguistic diversity. To integrate multilingual CoPs into work on assessment and validity, we also posit this as cultivating pathways to value – rather than flatten – multilingual complexities. That is to say, language ecology frameworks align with our position of integrating multilingual CoPs in assessment and validity frameworks through fostering the expansion of linguistic diversity rather than collapsing it or neglecting it. Mühlhäusler (2000) explained that ‘Ecological language planning differs from most conventional approaches to language planning both in its aims (diversity rather than standardisation) and the means required (community involvement rather than specialist management)’ (306). And with integrating multilingual CoPs within assessment and validity frameworks, there is too the foregrounding of diversity and community.

Although the perspectives within language ecology and Bronfenbrenner’s systems are in many ways incompatible with traditional and current validation methods put forth in the *Standards* or argument-based approaches, that may only be the case when such validation methods are interpreted as inflexible

approaches. To promote an inclusive environment where multilingual CoPs and other key stakeholders are integral to assessment and validity frameworks, we need to bridge all the systems (micro-, meso-, exo- and macro-) in such a way that traditional, exclusionary frameworks are no longer myopically adopted. We aim with this Special Issue to demonstrate how and why multilingual CoPs have much to contribute to validity frameworks and how the field of testing and assessment could be strengthened through expanding the purview of whose knowledges and experiences are valued. We see these contributions as investigating innovation concerning the multilingual CoPs that they impact while accounting for the micro-, meso-, exo- and macrosystem realities in which they exist. The studies, however, still work within some of these very real constraints that are predominant in the field of assessment, and therefore we use the term ‘innovations’ in the title of this Special Issue with an asterisk related to these realities. These explorations of assessment delineate many of the potential possibilities of innovations in intricate, elegant ways that neither idealise nor undermine the desire for necessary shifts in assessment and validity research with multilingual CoPs as a central driving force.

Summary of the Special Issue

Each article showcased in this Special Issue delineates aspects of ecology systems that are important in their own multilingual CoP contexts. Combined, the transdisciplinary approaches employed in the six studies cut across the different layers of the ecology model systems. Our introduction concludes with an overview of each of the contributions (in alphabetical order), which helps to situate the studies individually and collectively in relation to their contributions to research on assessment with multilingual CoPs.

Examining the implications of testing a multilingual child with a monolingual test from micro to macro ecological systems, Chaparro et al. provide an ethnographic case study of the uses of a literacy test in a kindergarten two-way immersion (Spanish/English) classroom in the United States. The early literacy test that was selected reflected monoglossic language ideologies focused on idealised versions of Standard American English. Their study illustrates some of the ways in which bilingualism is invisibilised during a test administration. They explore how these interactions function within structural frames that limit our understandings of bilingual student learning. In speaking back to the power and position that assessments hold in present times, the authors suggest epistemological and ideological shifts for assessment development and practice to reflect better the realities of how learning happens within these multilingual school CoPs.

In her qualitative validation study of a reading test of Mandarin-as-a-second-language for adolescents, Cheong addresses key issues in test validation and gathers validity evidence from a test-takers' characteristics perspective – a piece of validity evidence that is rarely considered, albeit important – and illustrates an example of a microsystem in ecology theory. Using semi-structured interviews and document analysis, the study sheds light on test-takers' needs, literacy and motivation to read Mandarin in a context where several languages occupy an important role in multilingual CoPs (e.g., English, Malay, Mandarin, Singlish and Tamil). The study concludes with a perplexing issue where technology and heavy homework loads play a role in students' lack of motivation to read in Mandarin. To this end, the author calls for serious consideration of test-takers' needs to inform test development in hopes to reduce potential threats to validity (e.g., failing to engage examinees with test content).

De Backer et al. investigated different test accommodations for multilingual students and their impact on how well test scores matched with teachers' predictions of students' performance. As such, this contribution provides a scenario of a mesosystem in ecology theory where schools, teachers and students interact and play a pivotal role in validation research. This study also extends research on test accommodations in populations with diverse and minoritised languages in multilingual CoPs and how teachers conceptualised students' potential for achievement, revealing a mismatch of teachers' expectations and students with minoritised-language backgrounds. The different experimental groups that were constituted showcase issues in validation research, that is, construct-irrelevant variance. Construct-irrelevant variance in multilingual contexts can be described as the use of monoglossic approaches to assessment in populations where multilingual skills do not function independently.

Combining assessment use argument (AUA) and critical discourse analysis (CDA) to develop a framework of validity evidence around test consequences, Shin uses the case of the Test of Proficiency in Korean (TOPIK) to illustrate approaches to more deeply understand the sociopolitical dimensions of assessments. He engages especially with macro- and exosystems with his proposed validation framework. For multilingual immigrant CoPs in Korea especially, Shin highlights how AUA and CDA shed light on the relevance of discursive conflicts within the media, for example, in situating test use in general and specifically the potential consequences of test use of the TOPIK. CDA is used to examine the socially constructed nature of the test as discursive acts, wherein external discourses or claims about the TOPIK are then also used to substantiate different interpretations of use. He uses such data to complicate how we understand validity evidence, which could be extended for other language assessments.

Turkan expands the scope of understanding the validity of set cut scores of assessments within accountability frameworks in examining how English proficiency test scores are used as exit criteria for students classified as English learners in US schools. As a multilingual CoP, these students share the goal of working toward being reclassified from English learners to former English learners and exited from English language development services in schools. Turkan reports responses from 44 states to online surveys or phone calls on their cut score criteria. Framed as a validity issue related to test fairness connected to macrosystems, she discusses the implications for learners of the variety of cut scores used with respect to remaining within or exiting services for English language development, and what that can possibly do, and not do, for improving learning opportunities related to exo-, meso- and microsystems. This accountability policy-level analysis focuses on the macro levels, while also acknowledging how such broad systems fail to capture the complex learning experiences of multilingual CoPs who are classified as English learners.

Van Viegen and Jang provide a review of a language assessment framework used in a large Canadian province, debunking issues associated with the consequences of monolingual ideologies in a context where multilingual learners are on the rise. The article provides a clear example of how macro- and exo-systems reflected in language policies and ideologies can have adverse effects on society when meso- and microsystems in classroom dynamics and diverse multilingual CoPs are ignored. This research also showcases teachers as key stakeholders who have the burden of enacting a curriculum while addressing students' needs. Inevitably, this creates sociopolitical tensions between power dynamics of different stakeholders in education systems. In the context of this research, translanguaging appears to be a partial solution to classroom challenges – given the diversity within the multilingual CoP. A translanguaging policy could make headway on the goal of creating a more inclusive space for historically marginalised groups.

These entry points to unpacking the complexities of understanding assessments in multilingual contexts have provided insights and suggestions of current issues. They have also importantly identified and made space for continued work in the myriad areas where this work is necessary. Current approaches in assessment, as discussed here, are only a small beginning in addressing longstanding issues in these contexts. We conclude the introduction with some optimism about the growing attention and interest in multilingual assessment, and encourage and caution those interested in this area to take seriously some of the ways in which these articles and a language ecology approach may help inform future efforts as well.

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