1 Are We Overlooking Language? An Applied Linguistics Perspective on the Role of Language as a Social Determinant of Health

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Introduction

In this chapter, we examine the power of language in healthcare and public health communication from our perspective as applied linguists and language educators. We begin by recalling the words of linguist James Gee, "In socially situated language use one must simultaneously say the "right" thing, do the "right" thing, and in such saying and doing also express the "right" beliefs, values, and attitudes" [1] (p. 168). Without a doubt, understanding the socially situated expectations of language use in the healthcare context is essential to our ability as patients and caregivers to advocate for ourselves and navigate healthcare systems. Language can contribute to both healing and harm: our ability to understand our healthcare options and access quality care lies, in part, on our ability to engage in productive, meaningful conversations with clinical providers. We are especially concerned that the lack of understanding about language can lead to dangerous assumptions about language users, including minoritized groups that do not speak the dominant language of the healthcare system.

In this chapter, we invite you to explore the complexities of language, and in so doing, to consider new possibilities for the way we communicate and interact in healthcare settings. We hope that exploring applied linguists' views on language in healthcare is akin to trying out a new pair of glasses. While we do not claim that the glasses of applied linguistics offer the only or best perspectives, we argue that they can help to sharpen our view of language use and communication in health and public health settings with linguistically minoritized groups, including migrant and refugee communities.

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We begin this chapter by sharing a bit about ourselves as applied linguists to provide context for our thinking about language in healthcare. We then address two areas of scholarship – social determinants of health and health literacy (HL) – to highlight how research can challenge and at times reinforce deficit assumptions on language and language users. We also show how debates in these areas reveal competing views on language – as an individual trait versus a social phenomenon – which has implications for the way we think about the underlying causes of health outcomes. The heart of our chapter is organized around six persistent assumptions (we will refer to them as myths) about language and language users that arguably make it hard for applied linguists and clinical/public health researchers to find common ground. Interdisciplinary collaboration is vital to tackling health disparities [2–4], but without shared background knowledge on language, language use, and language communities, potential collaborators are not likely to understand each other or readily agree on intervention priorities. We hope this chapter provides readers with an opportunity to fuel their curiosity and reflection about language, with the ultimate goal of supporting stronger interdisciplinary collaborations that promote health equity in multilingual communities.

Who we are

Our insights are anchored in nearly three decades of experience working in community-based adult language education, as classroom teachers, teacher trainers, and HL experts, primarily in the United States and Germany. We work in a variety of settings that serve large numbers of immigrant and refugee adults, including community centers, church basements, public schools, workplaces, or public libraries. These settings have proven to be strategic venues to work with immigrant and refugee communities who are often considered hard to reach [5, 6]. While there are important differences in funding structures and enrollment requirements between Germany and the United States, a common denominator is that programs are organized in response to local identities and integration needs in a particular country, region, or locale [7, 8].

Additionally, we focus on adult learners, and thus our pedagogical mandate is to ensure a strong connection between classroom learning and adults' real-world communicative needs. As we highlight throughout this chapter, adult learners' everyday healthcare needs and experiences represent an essential contextual resource for planning language teaching and learning: the significance of this contextualized approach, indeed, distinguishes adult learning from child learning [9]. We are particularly passionate about working with adult language learners who are in the process of becoming print-literate and have completed little-to-no formal education, a relatively understudied sector of the adult learner population both in applied linguistics and public health [10, 11]. For this population, a contextualized approach is imperative as it can reveal areas of learner competence and social practice that do not show up in conventional measures of proficiency, such as vocabulary or reading tests. We strongly identify as teachers who view people's efforts to stay well and live well as *a lifelong learning process* that builds on what we learn in formal classrooms, in informal (everyday) settings (e.g., navigating a patient portal on our laptop while sitting at our kitchen table), and through social interaction.

Based on our classroom work with immigrant and refugee learners, we argue that it is unproductive to treat language learning and HL learning as separate domains [12]. We also worry that this false divide assumes that adult learners can simply absorb new

skills, practices, and knowledge with little attention to the role that language and context play in meaning-making processes [13]. An alternative view sees learning as arising from the "sum of all interactions" [14] across contexts (classrooms, clinics, communities, etc.). From this view, all of us (whether we work in applied linguistics or health) play a role in the way our learners/patients make meaning. We all bear responsibility for understanding the linguistic demands of our healthcare systems and addressing sources of linguistic inequities.

In sum, we have seen first-hand that critical interrogation of the linguistic demands of healthcare language opens new possibilities for interventions aimed at dismantling linguistic inequities in healthcare. Some readers may wonder, *hold on, are you asking healthcare professionals to think like an applied linguist or even a language teacher?* Clearly, healthcare providers rightfully must consider themselves first and foremost in the role of protecting and maintaining good health [15]. At the same time, when we say we want our patients to understand their healthcare choices, what do we really mean? Clearly, our expectations for "understanding" extend beyond simply the patient "doing" a healthcare task or "knowing about" the task. Understanding is an active process of meaning-making, and the role of language as the medium for that meaning-making cannot be ignored [13, 16]. Critical reflection on the linguistic demands of healthcare has prepared us to integrate health topics and healthcare navigation skills into our classroom teaching. With this chapter, we signal our hope that practitioners across disciplines view this kind of critical praxis as a collectively owned responsibility.

Exploring perspectives on language and health

We now turn our attention to perspectives on language and health in two research domains: the work on social determinants of health, and the work in HL. These domains have helped to shape the conceptualization of language in healthcare, at times helping to bring complexity to the linguistic demands of our healthcare systems, and other times reinforcing narrow views on language and language users.

Language as a social determinant of health

Understanding the link between language and health relies on an understanding of health and the factors that contribute to differences in people's health outcomes. According to the World Health Organization (WHO), "health is a state of complete physical, mental, and social well-being and not merely the absence of diseases and infirmity" [17]. This definition of health is both comprehensive and radical as it aims for complete well-being. Using this definition as the ultimate goal, we immediately notice that people's health status worldwide is far from "complete" and moreover, there are immense differences in health status, and certain groups are worse off than others. The reasons for these differences are manifold and lie in the genetic makeup of the individual person, the individual health behavior, but also the life context of respective social and environmental determinants of health [18]. The social and environmental determinants of health are all nonmedical influences on health such as income, education, housing, social inclusion, and structural barriers and opportunities. The United States Department of Health and Human Services (HHS) defines social determinants of health (SDOH) as "the conditions in the environment where people are born, live, learn, work, play,

worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks." [19]. Although genetics and health behavior play a role in health, long-term studies showed that two-thirds or even three-quarters of all health differences between people are due to social determinants of health [20, 21].

While the WHO has long acknowledged the role of contextual factors in health outcomes (e.g., as prerequisites of health in the Ottawa Charter [18]), Michael Marmot's studies on health inequalities initiated the specific focus on the various social determinants of health [22]. The WHO Commission on Social Determinants of Health does not list language or literacy as separate determinants but stresses their important role in education, early childhood development, and understanding the healthcare needs of indigenous peoples and other minoritized groups [23]. The United States HHS, however, gives language and literacy skills a more prominent role and considers them part of the SDOH "education access and quality" [19].

This prominent role of SDOH in health challenges us to look not only at a person's physical constitution and behavior but also at the dynamic interaction with various sociodemographic characteristics, such as language background or communication skills. The SDOH framework prompts us not to exclusively focus on a patient's language skills but also on the conditions that enable or constrain the deployment of those skills. The focus on SDOHs also challenges us to reconsider the ways we develop these language skills in informal and formal learning settings and how we can ensure equitable access to learning resources and opportunities for linguistically minoritized children and adults.

But what then do we know about the relationship between language and health? Empirical evidence points to various concrete examples here, such as research on language concordance, that is, when a patient and the healthcare provider speak the same language and/or share the same linguistic resources. Language concordance has been shown to lead to greater trust, patient questions, and shared decision-making, as well as better quality of care and less confusion and frustration [24–26]. Studies also report that people labeled as "limited English proficient" are less likely to receive adequate treatment and preventive health services, have lower vaccination rates, are less likely to participate in health-promoting activities, have more extended hospital stays, and have less often a full informed consent documentation [27–31]. These examples show how language and literacy are fundamental in health communication, decision-making processes, behavior, and consequently health outcomes. To improve health and health communication, one can therefore either focus on an outcome and develop interventions geared at bringing about that outcome, or one can focus on the antecedent "upstream" conditions – the social determinants of health – that foundationally constrain or support well-being.

Given the pervasive influence of language, researchers label language a "super social determinant of health" [3]. Despite this undeniable great influence, we argue that at least three further thoughts are necessary to be taken into account. First, these results are often based on linear association and neglect other factors that can mediate or moderate this association, for example, language preferences, use, and intersubjective processes [3]. Second, these findings rarely analyze the status quo and discuss whether it is fair and equal or whether it contributes to the reproduction of these inequalities and work counter to our best efforts to intervene. And third, the social determinants of health perspective even challenge us to ask how society and educational offers can be used to avoid these preventable health disparities from occurring.

Views on language in health literacy research

In 2004, a seminal report, *Health Literacy: A Prescription to End Confusion*, defined health literacy (HL) as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" [32]. In HL research, language has often been regarded as the key barrier to an individual's ability to function in these critical areas of healthcare navigation, which in turn can impact the quality of the health communication, treatment, and health outcomes [33, 34]. Further, the coupling of "linguistic minority status" with low HL is tied to a sizable empirical base [12, 35, 36]. Linguistically minoritized groups, newcomer groups, and people speaking another language than the prioritized language tend to be associated with lower HL levels, poor health outcomes, and inadequate comprehension of health knowledge [37].

Language and literacy scholars have rejected the conflation of "low literacy" with people's intelligence, educational potential, or quality of life, emphasizing that any evaluation of a learner's skills cannot be separated from the social meanings and values placed on specific language and literacy practices [38, 39]. The social view on literacy emphasizes the language experiences and needs of people and communities in real-world contexts of use, a paradigmatic shift that has contributed to new thinking in many areas, such as the role of language education in schools, the assessment of proficiency, debates about linguistic norms and standards, specialized uses of language in acts of translation/interpretation, to the protection of disappearing languages, as well as the interrogation of monolingual biases in the assessment of language-related disabilities [40–47].

Over the past several decades, significant amounts of research have focused on the measurement of HL levels, and the association between low HL levels and poor health outcomes [48–54], but relatively less on exploring the contexts of use and the meaning-making strategies used by individuals with low print literacy or beginning English skills (e.g., seeking out help from others), their sources of resilience, and problem-solving skills [55–57]. This latter micro-view has been described as the *social practice view on health literacy* [58–60], "a framework for understanding how the social contexts, purposes shape health literacy skills, and relationships within which reading, writing, math, or speaking skills are put to use" [59]. This social view does not discount the importance of an individual's language and literacy skillset but rather emphasizes what multilinguals actually *do* with language in specific healthcare contexts; moreover, the social view seeks to understand how our ability to be well and live well is a function of the quality of our social connections with our healthcare system and providers.

Healthcare providers and public health specialists have endeavored to compensate for low HL by focusing on improving language access: for example, such as providing interpreters and language mediators, and translating material into migrants' and minorities' languages [33, 61–63]. These strategies are effective in enabling people to better access health information, but they often fail to account fully for the social conditions that enable people to feel safe, welcomed, and heard in their healthcare encounters. In this regard, Don Nutbeam's three-part HL framework usefully accounts for ways that individuals access health information (functional HL), as well as their ability to manage communication with different kinds of healthcare providers (interactive HL), and their ability to use their skills to problem-solve and advocate for themselves (critical HL) [64].

Despite the existence of policies regulating access to interpreters and translated materials, we see the need for more attention to linguistic encounters in healthcare; in

other words, the healthcare contexts in which language is put to use such as when bilingual patients interact with monolingual providers, or when bilingual patients work across languages to make sense of oral and written health information. We see the need for greater curiosity about the ways that HL is a translingual competence, referring to the ways that multilinguals routinely draw on knowledge and skills across languages to navigate our healthcare system [65–67]. Accordingly, we also see value in re-thinking HL within the sociolinguistic realities of particular countries (e.g., as a monolingual or multilingual country, a country with one or multiple dominant languages). For example, while English is the major and dominant language in the healthcare sector in the United States, other countries use two or more languages in healthcare encounters (e.g., English, Swahili, and local languages in Kenya). Moreover, while written health information is very relevant in the United States, oral communication of health information (e.g., through community health workers or radio) can be of far greater importance in countries with high illiteracy rates, such as Afghanistan.

We value the scholarly work on social determinants of health and HL that has elevated awareness of the linguistic demands of healthcare. We also suggest that insights from applied linguistics can offer some course-correcting commentary on the characterizations of language itself and language users from minoritized backgrounds. If we are to take seriously the premise that language shapes health outcomes, we (regardless of discipline) will need to develop a deeper awareness and knowledge base about the role of language in healthcare and health communication.

Re-thinking six myths about language in healthcare

Reflecting on our decades of interdisciplinary work as adult educators, we have selected six popular myths about language in healthcare and public health debates. For each myth, we present empirical evidence and ideas of how language teaching responds to these challenges and introduce concepts that are already long-established in applied linguistics but have yet to gain ground in healthcare and public health. We apply the concepts and insights to healthcare and public health contexts and thus demonstrate the practical implications of interdisciplinary research and action. By unpacking these myths, we hope to help practitioners in applied linguistics, healthcare, and public health (re)discover the contributions of each discipline to health equity and renew their commitment to interdisciplinary work.

One note of caution: we have somewhat exaggerated the myths to illustrate the different approaches in applied linguistics as distinguished from public health. We also acknowledge that many health professionals do not hold these assumptions in the strongest terms and that there is a wide spectrum between the myth and the path taken in language teaching and health communication. Through this exaggeration, we would like to raise awareness of the inadequacy of these myths and invite you to discover alternative approaches and apply them in your everyday professional life.

Myth #1: Migrants and people with low literacy will always have low language and health literacy levels

We begin by examining the frequent characterization of language and literacy levels, and by extension, HL levels, in migrant communities as "low" [6]. Concerns about inadequate skill levels prompt efforts to adapt the language, involve a translator if

necessary, and make communication as easy as possible [63]. These well-intentioned responses often perpetuate the assumption that "low-skilled" is an immutable characteristic of migrants and people who do not speak the dominant language. This assumption can obscure the fact language and literacy skills shift across the lifespan, and language and literacy learning are lifelong enterprises [68]. This myth can be found in public health reports, such as the WHO report "health literacy solid facts" that states that "[m]igrants generally score lower on literacy and health literacy measures" [37] or the Robert Koch Report on women's health that reports lower HL for migrant women [69]. In addition, the reliance on cross-sectional studies of HL makes it hard to appreciate how our HL skills evolve as we age and experience different healthcare circumstances [60].

In our classrooms, we strive to embrace a lifelong learning perspective on skill development [70]. We work with language learners whose skills dynamically emerge as they experience and engage with new situations for using language, for example, at work, in healthcare, and in their children's schools [60, 71]. Two examples derived from German-as-a-second-language courses focused on literacy acquisition illustrate this development. A female student of Iraqi origin was working on improving her vocabulary related to health and children because she was strongly motivated to take care of her children. In another course, two students of Syrian origin approached us to make a phone call to the family doctor; instead of calling for them, we practiced common communication patterns when calling a doctor. The student called the doctor on her own, on speakerphone, so that the teacher could support if necessary. The learner was all smiles when she successfully made the call and later supported other students to make calls themselves.

The "low-skilled" attribution often fails to reveal the multifaceted nature of language development, referring to the idea that learners need to be competent with an increasingly complex array of modalities (spoken, written, digital, visual, audio, gestural, and spatial) for different communicative purposes and audiences (e.g., describing symptoms to a nurse in a clinic visit, navigating a patient portal, seeking a second opinion). In language education courses, we know that the language skills of learners are quite heterogeneous and do not develop unilaterally across these modalities and domains. We work with immigrants whose oral communication skills are better developed than their written skills. These people's abilities would not adequately be captured in a single written skills assessment, and the conclusion drawn would be far from what the person can actually do and express.

The "low-skilled" myth also distracts from the learning conditions that are essential to increasing confidence and competence with new skills. Skilled language teachers understand that language can be continuously developed through meaningful practice opportunities. In language courses, we use pedagogical strategies to foster language development, such as:

- using real-world materials so learners see the relevance of new skills to their own lives [72, 73],
- problem-posing dialogue that invites learners to connect new knowledge and learning goals with prior experience [67, 74],
- scaffolding opportunities for learners to transition from imitative to independent use of skills [75, 76],
- an emphasis on reflection that supports learner awareness of their own learning strategies and progress [77], and
- frequent opportunities to give and get feedback, from teachers and peers [78–80].

These pedagogical strategies aim to close skills gaps and support new practices that lead to meaningful differences in our ability to thrive in the real world.

Myth #2: Written information is reliable information

Written communication is so ubiquitous today that for many of us, a world without print is unimaginable. Suppose you wake up one day and all printed forms of language have disappeared – no books, forms, labels, and signs; you would frantically grab your phone, only to discover there are no text feeds or news chyrons helping you to make sense of the chaos. That thought experiment reminds you how much we rely on printed information to make sense of – indeed, to impose order on – our everyday environments. We may not read in detail every label on the products we buy, or every word on the forms we sign, but the fact that such labels and forms exist affords us some sense of security that what we are buying or signing is legitimate. Although technology has migrated much of our communication experiences onto digital platforms and repositories, we continue to live in a world where physical printed artifacts, like your Covid-19 vaccination card, official forms of identification, or financial forms (e.g., loan agreements), carry authoritative weight. This conferral of authority and legitimacy to the printed word is not a universal fact about language itself [46], but rather these properties reflect the tremendous social, political, and economic power of written communication in many modern-day contexts [38, 39, 81].

We say "many" because there are people in the world whose lives are not print-mediated as described in the above scenario. For example, over 773 million adults are not print-literate [82]. In United States adult education, we have seen an increase in the number of adult learners with limited print literacy (in any language) and minimal to no prior schooling in publicly-funded programs [83], which reflects patterns in cross-border migration from countries where schooling is not a given. In Germany, the last literacy study revealed that 12.1% of all adults (6.2 million) have limited literacy; among these, 47.4% do not have German as their first language [84]. Another 20.5% of the adult population has challenges writing correctly. For many of these adults, the challenges of navigating a new linguistic environment, including healthcare, are complex and onerous. Their human stories are already part of the public imagination – recently resettled refugees, women in particular, with no access to school while in exile; adults who arrive as unaccompanied minors with interrupted schooling histories; and adults who, after residing in the new country for several years, develop sufficient oral English skills but cannot read/write well in any language [83, 85, 86]. The literacy experiences of these populations remain unaccounted for in HL research [10, 87]. Because these subpopulations sources tend to be lumped under broadly applied labels "low skilled," "limited English proficient," or "low educated," we have yet to account for the diversity of experiences that give rise to HL competence [88]. Moreover, if we treat familiarity with print-communication practices as a primary indicator of ability, we are likely to overlook important sources of resilience and strategies (e.g., use of trusted helpers, assistive technologies, and oral communication) deployed by adults with emergent literacy skills.

A growing body of applied linguistics studies on these subpopulations should kick-start a research agenda on HL practices among adult language learners with emergent print literacy. For example, Leong [10] has documented important shifts in desired autonomy among refugee and immigrant women, who recently arrived in Calgary, Canada, as they navigated healthcare bureaucracies around insurance enrollment or specialist referrals. In another study of women who had recently immigrated to Canada,

Wall [57] documents the cultivation of social and cultural capital (as well as structural barriers to access) in response to "documentation-heavy lives" (p. 57). Studies of visual graphic interpretation, such as iconic images like speech bubbles [89] and multimodal assessment designs [90], among adults with emergent print literacy lay important groundwork for more inclusive research designs in HL.

The bias toward written communication is reinforced by the fact that there is often no distinction between what we think of as written communication and written communication in the dominant language of healthcare. Consider this scenario: adult literacy teachers were asked to describe their students' "literacy levels," and for the students in their English-as-a-Second-Language (ESL) classes, the teachers "would answer (. . .) as if the question were being asked about being literate in English (. . .) despite the explicit re-quest to comment on the students' literacy levels in both their native languages and in English" [91]. Moreover, the ESL learner participants in the study "often described themselves as nonliterate or low literate," even though some read and wrote in their first language but could not read in English very well (p. 90).

Martinez [92] documents a similar bias toward English literacy – or what he aptly describes as the "deliteracization of Spanish" – in United States healthcare. In this study, several Spanish-English bilingual patients described interactions in which the medical provider provided an oral translation in Spanish of written medical directives in English because no print version in Spanish was available. Patients felt the brief oral translations in Spanish served as a "surrogate" version of the more extensive medical information available only in printed English. Martinez observes that portrayal of Spanish as the "nonliterate language" has both ideological and practical consequences: we see the "ubiquitous privileging of English literacy" (p. 356), which leads to the "fractured and non-reinforced transmission of health information" (p. 357) to the patient. Particularly concerning about both examples is the potential for bilingual speakers to view their own bilingualism through the "dominant gaze" [93] of English-based literacy. What may appear on the surface to ensure linguistic access, in fact, serves to reinforce the elevated status of English as the desired language of healthcare communication.

A coordinated research agenda on adult emergent, bilingual/biliterate populations is fundamental to our understanding of what it means to be *print-literate* in our healthcare communication landscape. We share Alterr Flores' [90] concerns that any new knowledge about bilingual, emergent adult readers' "unexpected ways of making meaning (. . .) may not be valued by text designers or other such people in power" (n.p.). We call attention to mantras from two leading applied linguists: "Get literacy off the page" from literacy expert Patsy Egan [94], and "put English in the backseat" from bilingualism expert Alison Phipps [95]. We appeal to readers to adopt both mantras in their HL research and practice: by getting HL "off the page" and "putting English in the backseat," we open up new avenues in thinking about HL as a socially-situated, multilingual, and multimodal phenomenon.

Myth #3: Sending information is enough

This myth originates from mass media communication and the belief that the provision of written information leads to people reading, understanding, and ultimately using it. This assumption implicitly underlies mass media health communication and the creation of brochures, as well as many clinical encounters. However, numerous studies have repeatedly shown that this causal relationship is not always present and is much more

complex. A greater focus should be placed on the actual ability of individuals in response to the linguistic demands of health information. This focus has recently been taken up in the HL debate, with HL scholars and health promotion specialists critically examining the interdependence of patients' skills, the skills of those who create health materials, and the demands of the healthcare environment [36, 64, 96–99]. The expertise of applied linguistics with the study of language in context can be particularly useful in developing strategies for facilitating engagement with health information and improving skills.

Overall, the assumption that providing information leads to successful uptake follows outdated, wrong learning theories. Applied linguistics (with adults) shows that both listening and reading are not passive but active processes in which the listener/reader draws on their linguistic and content knowledge to understand the presented information [58, 100, 101]. Likewise, the process of understanding is not a passive intake but an active construction process. As an action model, applied linguistics further describes this process by highlighting different steps such as *input, intake, output, and uptake*. Input refers to any information such as *language that encodes meaning* [102] provided by teachers, instructors, and media. Intake is the reception of what is presented, whereby the process from input to intake is influenced by selection, emotional filters, and whether the information presented can be linked to any previous knowledge and making a form-meaning connection, etc. [103–105]. Output is what the individual has learned and can proactively produce [106]. Lastly, uptake refers to processing information, which is often facilitated through corrective feedback [107, 108]. Applying the knowledge on input, intake, output, and uptake results in better learning as it is absorbed through different channels and better processed by transferring it to other modes.

We offer two insights for health professionals. First: turning from the mere presentation of information toward developing and facilitating interactive tasks that help patients/learners to engage with the information in multiple ways. While the teach-back method, which is part of the core HL method repertoire, already turns the gaze away from the mere presentation of information to a higher activity of the individual, it should not be assumed that the mere repetition of information (understood as output) has already stimulated a process of understanding. It may also be merely due to the individual's ability to reproduce heard speech. Activities that imply a deeper engagement with what is heard are instructions such as "Repeat it in your own words," "How would you explain it to your partner?", "Please try to describe it to a child." Another core component is *building background*, or the practice of introducing important words or concepts before engaging with a topic or a text [109]. Thus, learners are not confused and distracted by unknown words and can follow the topic easily. *Building background* can be linguistic or content-related, for example, by introducing that stroke is called apoplexy or using the example of a key that fits exactly into a lock (key-lock-principle) to explain the mechanism behind the screening for viruses. It is important to make sure that these words or concepts are not just presented but that the learner actively uses them with known and unknown contexts [110].

Myth #4: The bilingual patient is two monolingual patients in one

We draw inspiration from bilingualism researcher Francois Grosjean, who in 1989 cautioned, "Neurolinguists, beware! The bilingual is not two monolinguals in one person!" [111]. Grosjean demonstrates that people's confusion of what constitutes a

"bilingual" stems from flawed thinking about the nature of language itself and a "monolingual bias," the assumption that monolingualism is the normative, prevalent condition in the world and that what monolinguals do with language is the best reference point against which all other language use profiles can be understood. We invite readers to consider the extent to which this "monolingual bias" pervades our interactions in healthcare, particularly with linguistically minoritized groups.

Most people describe language users in terms of the number of languages they know: monolinguals know one, bilinguals know two, and multilinguals know two or more. Yet the number of languages tells us very little about how well a person speaks each language they know and the different contexts of use. A "perfectly balanced bilingual" is described as someone who can pass for a "native speaker" in either language. The idea that someone can pass as "native" in all circumstances sets up an untestable illusion: Can they schedule a Covid-19 booster equally well in both languages? Can the person express pain or tell a joke equally well in both languages? Can they write a dissertation in both languages? These questions illustrate that bilingualism is more productively characterized as being able to use different languages in meaningful ways, based on the contexts of desired/expected use.

A related reality check is that bilinguals develop mastery in their languages that reflects their communicative purposes and in response to situational demands. Imagine a bilingual patient whose first language is Spanish and has acquired English as an additional language, largely over several years of living in the United States. The person handles communication needs in English, with no difficulty, when picking up a prescription from the local pharmacy or scheduling a vaccination appointment via their smartphone; the person opts to communicate in Spanish when talking to an advice nurse about their child's painful ear infection. Finally, when searching online for information about administering the Covid-19 vaccine to young children, the person checks multiple social media sources, in English and Spanish, and joins a Twitter feed where they chat in English and Spanish with people around the world, of varying proficiency levels in the two languages. The "monolingual bias" perpetuates several deficit-oriented claims about this person's language use: *communicating in two languages is inefficient and time-consuming; having to choose between language is confusing; when you can't understand something in the dominant language of English, you just fall back on your first language; it's confusing to manage all that information in two languages*. Here, mythic thinking is evident in the assumption that "bilingualism" results in difficulty, confusion, and messiness in healthcare, and "monolingualism" is the easier condition for communication. (If this were true, monolinguals would never have communication problems, and that's just simply false!)

Let us also consider the person's choice to communicate in Spanish when talking to the advice nurse in this scenario. The "monolingual bias" accentuates the idea that the person is unable to communicate their concerns in English so thus must revert to Spanish. The myth-busting counter-claim is that the person chooses the best language to express worry and urgency, and ultimately to ensure the child gets better. This alternative characterization is grounded in a growing body of studies on the emotional life of bilinguals [112–114], suggesting that emotions manifest with different forces, in different languages. Thus, it is quite human for bilinguals to choose the language that best fits the intended emotion. Sadly, the "monolingual bias" tends to strip this basic human function from our characterization of bilingual meaning-making.

Efforts to dismantle monolinguistic bias is now referred to as the "multilingual turn" in the study of language and language users [115]. Now that language is widely regarded

as a social determinant of health, to what extent are we seeing signs that the world of healthcare is experiencing its own "multilingual turn," in its research, policies, and patient interactions? On the one hand, we see evidence of missed opportunities to lift up multilinguality in healthcare: for example, in a study of health and public safety professions, Alarcón et al. [116] found that "fluent bilinguals receive lower average wages than monolingual English speakers, despite their added linguistic asset" (p. 156). On the other hand, we applaud innovation in university training programs. For example, Martínez and Schwartz [117] highlight the benefits of service learning for heritage language speakers volunteering in a health clinic at the United States–Mexico border. Bilingual students helped to translate nutrition educational materials and interpret during diabetes education classes. Students gained important insight into the intermingling of standard and nonstandard varieties of Spanish in clinical interactions and deepened their respect for local varieties of Spanish.

We hope readers of this volume will be part of the cadres of practitioners who advance research on bi/multilingual HL competence: we lack funding streams for this kind of exploratory work, and we lack measures (see myth #6) for documenting multicompetence in healthcare navigation. We also lack the conceptual frameworks and terminology (e.g., keywords used in database searches) for documenting HL as a multilingual phenomenon [59]. These problems could be productively and creatively addressed through cross-disciplinary exchange between researchers of bilingualism and HL.

Myth #5: Reducing language complexity will ensure comprehension and empower people

Communication and dissemination of health information is not an end in and of itself in public health and healthcare but serves to empower people to make and implement health-related decisions and shape their lives in a health-promoting manner. However, migrants often report that they have difficulty understanding the information due to language barriers. Language complexity can be a tremendous obstacle in health communication and in engaging with health information [58, 60]. To simplify understanding, researchers, health professionals, and other practitioners have developed strategies and best practices. The most prominent recommendation to reduce complexity for migrants and nonmigrants is creating health material in plain language [118, 119]. This strategy can reduce cognitive load and facilitate understanding and processing of information (see psycholinguistically informed models of language acquisition) and thus comprehension (see Nutbeam's functional HL [64]). However, health education and literacy interventions focus on simplifying the language with the expectation that people will better understand information and consequently are empowered to improve their health [120]. Much criticism can be directed at this assumption. To support or reject the claim that comprehension leads to empowerment, we first need to clarify what is meant by comprehension, empowerment, and their relationship. While the concept of comprehension is widely theorized in applied linguistics [121], the concept tends to be relatively under-examined in health promotion. Applied linguistics models reveal a multitude of factors influencing comprehension, at the level of the text (e.g., the text's ease of processing) and the individual level (e.g., the degree to which the reader engages in strategic comprehension processes). Moreover, comprehension models often illustrate the complex context-dependent

nature of the comprehension process: individuals need to apply specific competencies across a variety of text types (genres), modalities, and purposes. But even if comprehension has occurred, it does not imply that the person will use the knowledge to act or ultimately "gain greater control over decisions and actions affecting their health." [122] (p. 14). The latter refers to empowerment in health promotion and is reflected in acts of agency and self-determination (e.g., expressing needs, decision-making, questioning strategies, and cocreating policies and services to improve health). The focus on empowerment shifts attention beyond strengthening individual capacities to influencing determinants of health. If we seek to empower people, our HL strategy needs to move beyond text comprehension and support individuals in understanding the complex influence of social determinants on their health and the possibilities for influencing them.

By solely focusing on reducing linguistic complexity, we simplify access to information but miss the opportunity to empower people beyond promoting comprehension skills. Our role as language educators is to develop people's agency with newly acquired language skills, in diverse contexts, including healthcare [79]. Drawing on Paolo Freire's words, to learn to "read the word and the world" [123] means that we learn to navigate the linguistic demands of our healthcare system even as we critically question the system that imposes those linguistic demands on linguistically minoritized communities. To what extent then does reducing linguistic complexity empower people to express their healthcare needs and desires and to advocate for themselves (cf. critical HL [64])? As applied linguists, we would like to see more research and interventions that link linguistic simplifications to patient empowerment outcomes, not only indicators of patient compliance (e.g., following instructions, accepting medical advice) typically reflected functional HL definitions. Tracing the impact of linguistic simplifications to shifts in power dynamics between patients and providers (e.g., in terms of trust, patient-centeredness, and provider humility) seems foundational to the goals of health promotion and health equity [18, 124].

As a concrete recommendation, health professionals can look for opportunities to stimulate engagement with information. Language teachers focus on *message abundancy* in their teaching – the "amplifying and enriching" of meaning in the learning context, "so that students do not get just one opportunity to come to terms with the concepts involved, but in fact may construct their understanding on the basis of multiple clues and perspectives encountered in a variety of class activities" [125] (p. 196). In the healthcare context, both the presentation of information and the stimuli/activities for the active engagement can support multimodal meaning-making: using pictures, films, texts, and various modes of presentation. Furthermore, it is necessary to invite people to apply but even change the information in various modes (what Merrill Swain describes as "reformulation"). An effective method is "see it, do it, and teach it once," in which the individual first observes an action (or process), then performs it under the guidance of another, and lastly teaches it to others [126]. This method facilitates acquisition of new skills and increased independence with those skills. Moreover, health professionals can consider pedagogical models such as the content and language integrated learning approach (CLIL) [127] or language-sensitive health communication frameworks [128]; these models place a strong emphasis on supporting engagement with complex words and concepts, not through replacement with "simpler" words or concepts, but by giving equal priority to language learning and content learning.

Myth #6: Assessing reading is a useful proxy for assessing literacy

Well-established definitions of HL project a broad understanding of competence to include knowing, doing, and problem-solving (e.g., Nutbeam's [64] three-part focus on functional, interactive, and critical HL). Moreover, our understanding of what skilled HL looks like is closely tied to the demands of specific health contexts [129]. This insight has led to a proliferation of *literacy* attributions: for example, *digital HL*, *health insurance literacy, genetic literacy*, *cancer HL, and immigrant adolescent HL* [130]. The use of written and spoken forms of communication in healthcare is hardly new, but the digital transformation of healthcare has only expanded the possibilities around modalities (e.g., speaking with a doctor in person, chatting with a chatbot, asynchronous email communication, and remote interpretation) and genres encountered in everyday healthcare interactions (e.g., consent forms, e-health records, advance directives, and patient support blogs). The health communication landscape, replete with these many *literacies*, often overwhelms even the most savvy among us; navigating that landscape requires far more than good reading skills. For these reasons, the reliance on measures that assess reading in a health context stands out as an area most critically in need of innovative reform. We argue that greater understanding about the contextualized nature of language/literacy, and specifically the variation in language use (e.g., the routine use of more than one language in meaning-making among bilinguals, see myth 4), is an essential key to turning the dial in any measurement reform.

In an appeal for renewed clarity about the alignment of conceptualizations and measurements of HL competence, we offer two insights from applied linguistics. One, any measure of ability is *de facto* a measure of language [131]. In other words, we cannot take for granted the decisions we are making *about* language when we design and administer measures of competence: the kinds of questions we ask, the way those questions are asked, the modality through which we present the questions (online, orally, in print), in what languages, and our expectations about what constitutes a "correct" answer all shape our perceptions of the competence we are hoping to measure [132]. Underperformance on a test thus may reflect lack of competence, or lack of familiarity with the linguistic features of measures, or both. Two, we must recognize the power of our judgments of other people's abilities, whether this takes place formally (e.g., via screener questionnaires or as part of research protocols) or informally, such as in the course of a clinical encounter, we endeavor to quickly take stock as to whether someone understands what we just told them (e.g., in "teach back" moments). In schools, teacher judgments can weightily shape learning pathways for linguistically minoritized learners, such as whether a learner advances to the next grade, is able to access accelerated coursework, or is referred to special education services. In healthcare, judgments about literacy can play an important function in specifying a patients' communication needs: who among linguistically minoritized patients is able to manage the communicative expectations of the healthcare environment, and who needs more support? Fillmore and Snow [133] cede that, while "sorting" learners according to ability levels may help us differentiate support strategies and resources for linguistically diverse groups, the ethical soundness of these judgments can be undermined by the reliance on assessments of limited or questionable validity.

Pleasant's [134] scoping review demonstrates that efforts to conceptualize HL as a socially situated phenomenon have by far outpaced efforts to generate measures that meaningfully document that situatedness: "theoretical understandings and methods of measuring the complex social construct of health literacy have experienced a continual evolution that remains incomplete" (p. 1481) – a reality that largely reflects the kind of research on HL most consistently funded and disseminated over the past 30 plus years. Against this funding/publishing backdrop, our calls for an elevation of applied linguistic expertise in HL measurement feel rather desperate and overidealized. At the same time, we choose to focus on specific areas where positive change is evident. We look to innovative university degree programs that support exchange between preprofessionals in language education and health professions, through cross-disciplinary coursework [135] or service learning opportunities [136]: these efforts may help to ensure the next generation of practitioners has the expertise to support linguistically equitable assessments of HL. We also look to research that adds to the measurement of socially situated HL. For example, Hohn and Rivera [137] explore the nature of *collective efficacy* around health-related tasks that emerges over time among learners and teachers in adult literacy classrooms. Lor [66] explores comprehension strategies in dyadic interactions among pairs of elder Hmong adults and a trusted family helper when filling out a health data form. Another aspiration is to develop HL measures that make multilinguality more visible in every day health navigation tasks, not merely focusing on competence tied to proficiency in the dominant language of healthcare (i.e., English in the United States) [138]. Finally, we invite serious reflection on why comparisons to L1-only speaking monolinguals (e.g., "native English speakers" in the United States) tend to be viewed as the benchmark of methodological rigor in HL studies. A research agenda on multilinguality in HL would invite new insights into HL competence within and across groups of "multilingual natives" [139], not in comparison to a monolingual norm.

Conclusion

We aimed to demonstrate that *new thinking* about language as a social determinant of health or as an indicator of competence in healthcare requires that we (both in applied linguistics and public health) interrogate *old thinking* about the nature of language and our conceptualizations of language users. To guide our exploration, we used the glasses of applied linguistics. We focused on six myths that are central to that interrogation. Most certainly, these are not the only trouble spots worth examining: for example, we did not raise questions about the historical under-representation of multilinguals in leadership roles in the applied linguistics or public health workforce, a trend that may skew our perception of who is championing the fight for linguistic equity in healthcare.

In view of the powerful links between language and health outcomes, we posit that there is a need to advance the *linguistics of healthcare* as a field of study in its own right. Within applied linguistics, the study of language and language-related issues in educational practice (including but not limited to schools and classrooms) is called *educational linguistics*. We would love to debate as to whether the forging of a

subdiscipline we will refer to, for now, as *healthcare linguistics* might open up new channels of interchange, help to formalize provider training, and accelerate problem-solving toward linguistic equity in healthcare, as yet not fully recognized as a vital domain of professional knowledge and training.

Myth-busting work and the resulting need for changes at multiple levels (ideologically, in our regulatory policies around language access, within disciplines, and in daily practice) will require a tremendous investment of time, energy, and resources. That would be majorly unfair to lay at the feet of individual practitioners. We are thinking about organizations and individuals in power (e.g., funders, university researchers, and policymakers) where a leadership commitment to myth-busting and making multilinguality visible [138, 139] should help us imagine whether a "multilingual turn" in healthcare is realizable.

Finally, we appeal directly to practitioners who work in community-based classrooms and clinics: we hope this chapter inspires you to be myth-busters in their own right. Community-based practitioners shoulder some of the most emotionally demanding workloads responding to the needs of linguistically minoritized communities. Our sense of professional/personal accomplishment in these settings is often a function of how confident, entrusted, and efficacious we feel in our *own* capacity as communicators to the people we are trained to support [133]. Practitioners working on the front line with linguistically diverse communities know best the myriad of moment-to-moment adjustments we make in our communication practices to boost that sense of confidence, respect, and self-efficacy. We also know first-hand the pressures of wanting to make the best decision about how and what to communicate considering real constraints in time and resources. We trivialize this work if we see their communication efforts as ancillary to the work of healing, treating, and caring for people. In contrast, we would like to see language work, healthcare, and health equity not as separate from each other but as fundamentally interrelated. We hope this chapter sparked curiosity in the many relevant factors visible when exploring HL through the "glasses" of applied linguistics. Lastly, we hope it provides a working agenda for the creation of dissemination platforms and funding streams that bring greater visibility to the equity work taking place in our classrooms and clinics.

Highlights

- Applied linguistics perspectives are critical to our understanding of the complexities of language in healthcare and to the dismantling of health disparities for linguistically minoritized communities.
- Research and theories on social determinants of health and HL have shaped thinking about language as a mediator of health outcomes.
- There are myths about language and language use that need busting. With the expertise of applied linguists, we can improve our understanding of language, comprehension processes, multilinguality in healthcare, and healthcare environments.
- New thinking about healthcare linguistics can open up new channels of disciplinary interchange, help to formalize provider training, and accelerate problem-solving toward language equity in healthcare.

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