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Research Article

Promoting Health Literacy Among Migrant Populations: Implications for Adult Literacy Education

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Abstract

In the 21st century, individuals – particularly migrant populations – require a range of skills to adapt to new circumstances, cope with change, and lead fulfilling lives. To effectively achieve this, good health literacy is beneficial and adult basic education is an ideal setting to promote health literacy among migrant populations. There is great diversity in the published literature around health literacy interventions for migrants globally, including specific regional contexts, target migrant populations, various health topics, and multiple intervention structures. These levels of diversity make it challenging to synthesize what is known about the health literacy needs of global migrant populations and the pedagogical effectiveness of the interventions that aim to promote health literacy. To understand this diversity we conducted a scoping review in the migrant health literacy intervention literature. We analyzed the articles according to the contexts and structures of the interventions, whether they employed formal, non-formal, or informal learning approaches, and whether they describe the linguistic and pedagogical features of the interventions. From this analysis, we derived recommendations for the planning and reporting of migrant health literacy interventions, and for increased exchanges between applied linguists, health care professionals, and adult educators to fill in the gaps.

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Keywords: health literacy, migration, scoping study, educational intervention

The intersection of migration and health literacy (HL) is a critical area of inquiry with profound implications for individuals, communities, and societies at large. Over the past several years, the confluence of the global pandemic, climate change, political violence, and humanitarian crises has resulted in mass displacement, driving millions of people to leave their homes and seek refuge and resettlement elsewhere (Hattem, 2024). Within this context, the need to promote the HL levels of migrants, defined by the International Organization for Migration (IOM, 2019) as "a person who moves away from his or her place of usual residence, whether within a country or across an international border, temporarily or permanently, and for a variety of reasons" (n.p.), which can include refugees, asylum seekers, and both permanent and temporary migrants, has become increasingly urgent to facilitate integration and adaptation, and mitigate disparities in health care outcomes (Fox et al., 2022).

The number of HL interventions focused on migrant

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populations has increased in recent decades, in a variety of settings including clinics, resettlement agencies, adult education programs, and community centers (e.g., Harsch & Bittlingmayer, 2024). Despite this proliferation, we lack a clear understanding of the range of educational approaches used in these HL interventions, and the extent to which the educational approaches meet the particular needs of a migrant community.

As an interdisciplinary research team with backgrounds in linguistics, adult education, and public health, we recognize that adult educators are in a key position to facilitate HL education that supports migrant communities. This article is a scoping review of published migrant HL interventions globally and uses this data to develop and discuss recommendations for planning and implementing HL interventions for migrants. We underscore the importance of migrant health literacy and show why it is important to contextualize this work according to local needs. In other words, who we teach, what we teach, and where we teach matter. We describe the process and findings from the scoping review, focusing especially on how the fields of adult education and linguistics can add to the rigor of migrant HL intervention research. We focus on migrant HL not only because numerous studies have shown that migrants often have low levels of HL, but also because of the increase in migration worldwide. According to the IOM (2021), 281 million people migrated across international borders in 2020. That amounts to about 3.6% of the world's population and that percentage has been growing each year since the IOM started producing the world migration reports in 2000. Additionally, studies have shown that migrants experience disproportionately greater health disparities than other social groups. In response, public education and health systems must coordinate their efforts to address the HL needs of migrant communities and ensure high-quality interventions (Kickbusch et al., 2013; Rudd et al., 2015). Findings from previous literature reviews are constrained either by limiting the target language to English (Chen et al., 2015) or limiting to only randomized controlled trials (Fox et al., 2022). This scoping review casts a wider net to include any target language and any research method analyzing empirical data about a migrant HL intervention.

We follow the World Health Organization's (WHO, 2021) definition of HL as "the personal knowledge and competencies (...) that enable people to access, understand, appraise and use information and services in ways that promote and maintain good health and wellbeing for themselves and those around them" (p.6.). While adult education is a strategic context to advance the HL of migrants, many HL interventions for migrants occur outside of traditional adult education classes – in community centers, places of worship, clinics, and online. In this contextual diversity, we see the promise of Reder's (2015) "busy intersections" view of teaching adult literacy which emphasizes meeting learners where they are and giving them ample opportunities to link new skills/ knowledge and real-world practices.

Adult educators' pedagogical expertise and the contextualized instruction they provide may already be harnessed in the HL literature to some extent, but how is it described and where is the cross-disciplinary overlap? Applied linguistics and public health have a parallel history of evolution that has guided both towards whole-person and systemic orientations to the field. Studies of language acquisition have moved toward understanding emergent multilingualism through translanguaging (e.g., Canagarajah, 2013), with acknowledgement of the resources learners use in and outside of class as they navigate multiple languages. Similarly, health fields have been evolving to include more patient-centered objectives and a greater understanding of the social determinants of health (e.g., Schillinger, 2021). So, how are these trends and other theories of learning – such as adult learning theories described by Knowles or Freire (Freire, 1970/2005; Knowles et al., 2020) or language learning theories like interactionist or cognitive theories – integrated into HL interventions for migrants?

The disciplinary differences are one piece of the puzzle when trying to capture a global understanding of migrant HL interventions. Teachers of multilingual adults have been integrating health topics and teaching HL as a regular part of their job, and the field of education has many learning theories that undergird these practices (Sarkar et al., 2019; Schecter & Lynch 2011). We want to look at the ways that diversity is captured and how local interventions situate themselves in larger theoretical frameworks through their reports in academic publications. Although much is known about HL for migrants, generalizable findings remain elusive and complicated by a lack of clarity and consistency in reporting practices.

We set out to review the academic literature on studies of HL interventions for migrants which address HL and/or embed their work in HL debates explicitly. We systematically identified articles that promote migrant HL from academic databases. In analyzing these articles, we explore four research questions:

1. What are the general characteristics of interventions that promote migrant HL?
2. What are the most commonly used categories of learning approaches to promote migrant HL?
3. How do these articles describe the linguistic features of their target migrant populations and their sociolinguistic contexts?
4. How do these articles describe the pedagogical approaches and characteristics of the interventions?

Methodology

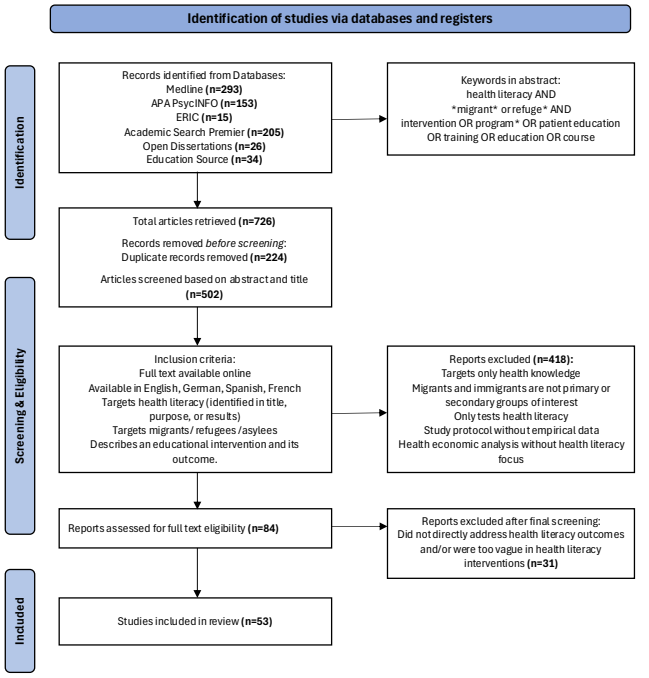
We followed Arksey and O'Malley's (2005) five steps for conducting a scoping study: (1) identifying the research question; (2) identifying the relevant studies; (3) selecting the studies; (4) charting data; and (5) collating, summarizing, and reporting results. Step 1 is outlined in the introduction. We describe steps 2 to 4 in the methods section, while step 5 is discussed in the findings and discussion sections.

Identifying and Selecting Relevant Studies

To identify relevant studies, we searched six academic databases: Medline, APA PsycINFO, ERIC, Academic Search Premier, Open Dissertations, and Education Source in October 2022. We followed the Joanna Briggs Institute's PCC (population, concept, and context) recommendations of search string generation (2015) using "migrants" and its synonyms (i.e. refugee, asylee, asylum seeker, immigrant) for population, "health literacy" for concept, and synonyms for "intervention" (i.e program, patient education, training, education, course) as context. Although we only used these search terms in English, we did not limit our search to articles written in English, but included articles written in any language that the research team was proficient in, including English, Spanish, French, and German. We did not limit our results to a specific time period. We acknowledge that the concept of health literacy is used in a variety of ways and signaled by terms such as health information, knowledge, skills, and use. Nevertheless, we opted not to explore alternative terms as synonyms, but rather to adhere to the original wording, thus focusing exclusively on research that aligns with the health literacy discourse. This approach obviates the necessity for interpretative determinations concerning the definition of health literacy.

This search yielded 726 articles. After removing duplicate articles and screening according to our criteria, 53 articles remained (Supplement A). The full process is summarized in Figure 1.

FIGURE 1: PRISMA Flow Chart



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71

For more information, visit: http://www.prisma-statement.org/

Charting the Data

We developed a coding scheme for extracting and analysing data, including article details, general information (e.g., country, target group), general features (e.g., HL definition, language(s), partnership), characteristics of the intervention (e.g., provider,

context, topic), and evaluation of the intervention (e.g., study design, research method, evaluation design and outcomes) (Alasbahi 2024; Alnimr & Feuerherm 2023; Sarr 2023). We categorized the health topics in the HL interventions according to categories used in the National Center for the Study of Adult Learning and Literacy (NCSALL) HL study circles: preventing disease and promoting health, navigating health systems, managing chronic diseases, and empowering for health (Rudd et al., 2005).

To describe the educational approaches in the studies, we categorized articles based on the following three approaches to learning (Johnson & Majewska, 2022).

- **Formal**: Learning occurs in a traditional classroom environment focused on organized learning (i.e. structured curriculum with linear objectives, assessments, and includes a mandated dimension or certificate).
- **Non-Formal**: Learning occurs outside of a school but is intentional. Non-formal learning is organized with consideration for the learner's needs and expectations and may include a curriculum and assessments.
- **Informal**: Learning occurs outside of a traditional learning environment and is not structured by a curriculum, nor is it mandated. The focus is not on learning intentionally, rather learning is incidental and arises from involvement in activities.

To explore how the sociolinguistic features are reported in the study sample, we adapted Surrain and Luk's (2019) coding scheme for examining how bilingualism is operationalized in studies comparing monolinguals to bilinguals. Thus, we coded for the presence/absence of reported features including home language use, language(s) of instruction, participants' history of language learning, and the community's sociolinguistic contexts (Table 1). We added new codes to inventory the tools used to assess language proficiency and HL levels.

Additionally, we coded for the presence/absence of six features of pedagogical rationale/design: adult learning theories, language learning theories, communicative competence, scaffolding, a feedback loop for assessment, and cultural adaptation (Table 2). Our goal was to understand whether these six features were being reported, not whether specific theories and pedagogies were most prevalent. We were interested in whether there was any reporting about the theoretical grounding in adult learning or language learning theories because of its value in describing and understanding practice. We looked for reports of developing skills in communicative competence, including the reporting on language forms, social interactions, language for different purposes, and strategies that are important for effective communication in a target language (for example, see the discussion of communicative interactions in Soto Mas et al., 2015). We explored whether articles incorporated practices such as scaffolding (Walqui & Van Lier, 2010), where the intervention intentionally built upon existing knowledge with supported practice. For assessments, Surrain and Luk's coding system marked the type of assessment (subjective or objective), but we added a code to identify whether a feedback loop was included for assessment because this is an important component for adult learners' knowledge, skills, and situated literacy (Purcell-Gates et al., 2012). Lastly, we investigated whether linguistic and/or cultural adaptations were reported. Cultural adaptations were for example how culturally sensitive issues were addressed through the interventions while linguistic adaptations could be using plain language and/or translations (for more, see Kreuter & McClure, 2004; Parrish, 2019).

Three research assistants individually coded each article, yielding a database of qualitative and quantitative data. Coding discrepancies were resolved through meetings with the entire research team.

Findings

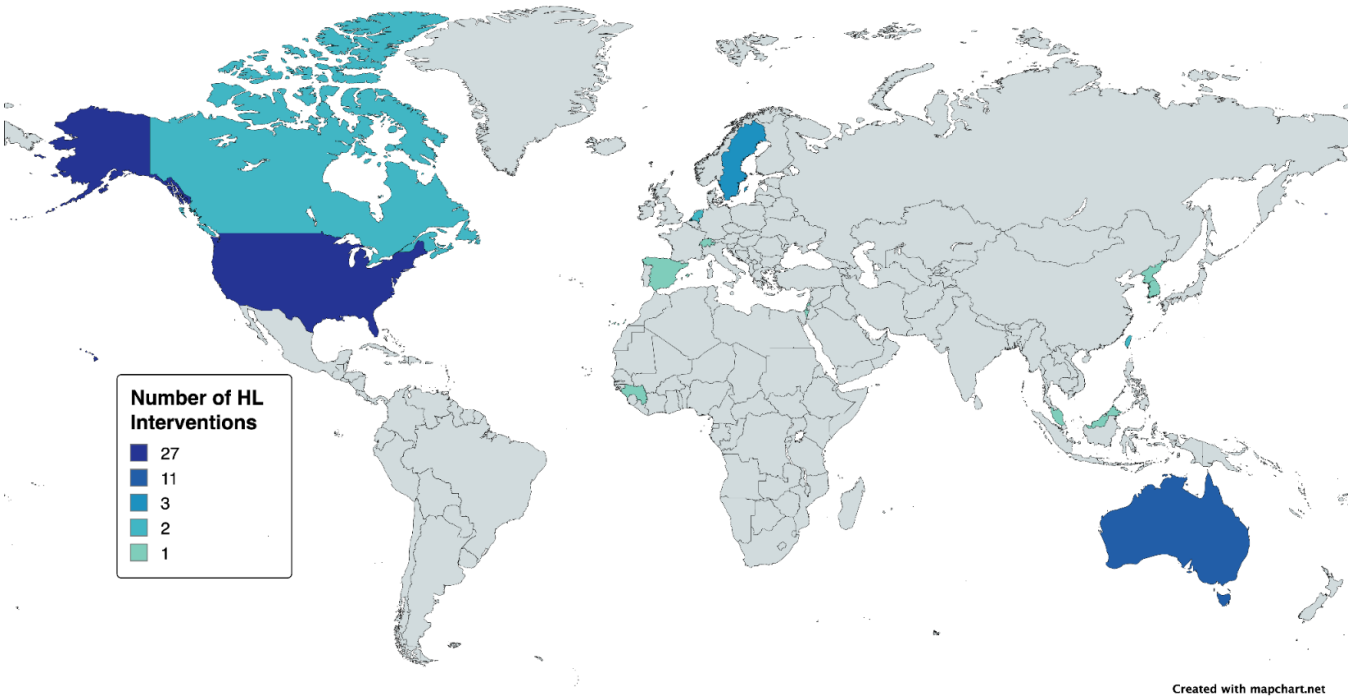
This section presents the main findings of the four research questions, including the general characteristics, learning approaches, and linguistic and pedagogical features.

General Characteristics

When and Where Were the Interventions Conducted?

The articles described interventions from several nations, mapped in Figure 2. Over half of the interventions were based in the United States and Australia.

FIGURE 2: Map of intervention distribution (own figure, created with mapchart.net)



Interventions occurred in several types of locations, including classrooms in formal education settings (*n*=11), clinics (e.g., hospitals or doctor's offices, *n*=5), community (e.g., in religious, non-profit, and cultural organizations, *n*=30), online or through other media (e.g., flyers, apps, *n*=5), and in professional development training (*n*=2).

All but three of the 53 studies were conducted after 2010, pointing to the increasing awareness of HL interventions for migrants in the literature over time but also to the increasing use of "health literacy" as an outcome for health education (Nutbeam, 2000). 2010 is also relevant because it is the year the United States instituted the National Action Plan to Improve HL, bringing HL "to a tipping point–that is, poised to make the transition from the margins to the mainstream" (Koh et al., 2012, p. 434).

Who is Involved in the Interventions?

The target populations of the interventions were migrants, health and education professionals in a position to improve migrants' HL, or a combination of both. Although in the minority, interventions targeting health/education professionals were an important contribution because these studies demonstrated the recognition of organizational HL. According to the U.S. Centers for Disease Control and Prevention, "organizational health literacy is the degree to which organizations equitably enable individuals to find, understand, and use information and services to inform health-related decisions and actions for themselves and others" (2023, n.p.). The move away from only recognizing personal health literacy is important because it distributes the communicative burden to both the health provider and the patient.

In some cases, migrants were differentiated by immigration status, such as for those interventions targeting refugees. In other cases, additional identifying factors such as gender, age, country of origin, language(s) spoken or role in the family were relevant and connected to the intervention's outcomes, community partners, or health topics. For example, Kagawa-Singer et al. (2009) focused on Hmong women, Valenzuela-Araujo et al. (2021) focused on Latino immigrant parents, and Kim et al. (2020) addressed Korean immigrants with Type 2 diabetes. In some cases, migrants were referred to as *limited English proficient* (*LEP*) instead of using asset-based identifiers (for more on this, see Feuerherm & McIntosh, 2023).

The intervention providers included adult educators (*n*=5), a partnership between an adult educator and a health partner (*n*=1), health professionals (*n*=12), multi-sectoral

(e.g., community partner with other stakeholders; *n*=15), university researchers (*n*=7), community based workers (e.g., "peer educators," "gatekeepers," "promotoras"; *n*=7), and unknown/not reported (*n*=6). Adult educators have been teaching HL before formal policies guiding HL interventions were established. However, the fact that our corpus of studies did not have adult educators as the top provider of HL interventions reflects the reality of the work of educators – they prioritize teaching and directly engaging with learners over publishing research, which likely contributes to their underrepresentation in academic literature on the subject. Additionally, adult educators are not experts in HL which points to the importance of multidisciplinary collaboration. Of the adult educator interventions, all but one took place in a formal, classroom setting (Supplement B).

What Topics are the Focus of the Interventions?

There were a broad range of health topics covered in the interventions. The NCSALL categories can help to focus the intervention protocol on the desired outcomes.

The topics included:

- Preventing disease and promoting health (*n*=35: including mental health *n*=12, cancer screenings *n*=4, reproductive and sexual health *n*=3, personal health and risk factors *n*=5, parental health *n*=2, oral health *n*=2, or general HL *n*=7)
- Navigating health systems (*n*=9)
- Managing chronic disease (such as hepatitis B and diabetes, *n*=6)
- Empowering for health (such as advocating for equitable health access, *n*=3)

A comparative analysis of the provider and the topic revealed notable discrepancies between adult educators and health professionals. Of the adult educator interventions, five targeted disease prevention/health promotion and one targeted health empowerment. All chronic disease management interventions were provided by health professionals or they were multisectoral (Supplement C).

Formal, Non-Formal, and Informal Learning Approaches

The categories of learning occurred in formal (*n*=11), non-formal (*n*=27), informal (*n*=9), or a biphasic non-formal/informal (*n*=6) learning approach. In the biphasic interventions participants were trained through a non-formal approach (phase 1) to offer HL training to their communities using informal learning approaches (phase 2). For example, Choi (2017) trained bilingual gatekeepers in mental health (non-formal) who then visited clients in their homes to provide mental health services (informal).

Formal learning always occurred in a classroom context, but providers included adult educators, adult educators and health professionals, university faculty, and unknown. All non-formal learning occurred in the community. Informal learning approaches were mostly multisectoral and included online/media contexts as well as community locations (Supplement B).

Adult educators and university-based providers also worked in non-formal settings, demonstrating the breadth of work and collaboration they are involved in. As will be discussed in the following sections, formal learning interventions set themselves apart in some ways when reporting on languages and pedagogy, but the interventions as a whole displayed great variability in how they reported on their linguistic and educational approaches.

Linguistic Features

This section describes learners' target language acquisition (history, assessment, and use), and the larger sociolinguistic context by using the coding system established by Surrain and Luk (2019). Table 1 summarizes our findings.

Only five interventions used an objective assessment of language proficiency, which are not the same as HL assessments. Of the interventions, 21 used an HL assessment (the most commonly used being TOFHLA, both short and long versions). More than half of the interventions reported a subjective assessment of the language proficiency of the learners. While interventions that were classified as formal learning did better at reporting language proficiency than either non-formal or informal learning, three of the 11 formal learning approaches lacked any language proficiency assessment.

The majority (60.4%) of the articles did not explicitly report on home language usage, and only one study discussed home language use proportionately to other

languages. This feature (like the feature for language history) seems of great importance to cognitive studies of bilingualism, perhaps more than for HL interventions. Nevertheless, how much and for what purpose learners use the target language is important when teaching (Menard-Warwick, 2009), especially because it connects to their real lives and improves literacy (Condelli & Spruck Wrigley, 2006).

The school language (language of intervention) was widely reported; only five interventions did not explicitly name the language of instruction. One of those that was coded as not naming the language of instruction was Martin et al. (2018), though because English is the majority language, the reader may assume that the language of instruction is English. It was less common to use just a single language in a HL intervention: only 14 of the interventions used a single language of instruction, while 37 used multiple languages or translations (Supplement D, Table 2).

Language history was not reported in the articles. This may be because of the different purposes this coding scheme was developed, compared to how we use it here. Surrain and Luk (2019) reviewed articles comparing monolingual and bilingual speakers, while our scoping study focuses on HL interventions for migrants. More specifically, Surrain and Luk's (2019) study was focused on bilingualism as a cognitive skill developed over time, whereas the focus of HL interventions is on health knowledge, behaviors, and empowerment.

Sociolinguistic context was reported if the articles included

TABLE 1: Characteristics of Linguistic Reporting in 53 HL Studies

LINGUISTIC FEATURES OF STUDY PARTICIPANTS			
Feature	**Data**	**#**	**%**
Characteristics of the Interventions			
PROFICIENCY: Do I know the language proficiency of the participants?	Not Reported = 0 Subjective Assessment = 1 Objective Assessment = 2 Both Subjective and Objective = 3	20 28 1 4	37.7% 52.8% 1.9% 7.5%
HOME LANGUAGE USAGE: Do I know which language(s) are spoken at home?	Not Reported = 0 Categorical (What languages are used) = 1 Gradient (Proportionality of language use) = 2	32 20 1	60.4% 37.7% 1.9%
SCHOOL LANGUAGE: Do I know what the language of instruction is?[1]	Not Reported = 0 Reported = 1	5 48	9.4% 90.6%
LANGUAGE HISTORY: Do I know the order and age in which bilinguals learned their languages?	Not Reported = 0 Reported = 1	53 0	100% 0%
SOCIOLINGUISTIC CONTEXT: Do I know about the general status and usage of languages in the study population?	Not Reported = 0 Reported = 1	24 29	45.3% 54.7%
OVERALL SCORING: Based on the combined scores of all features	0-2 3-5 6-8	25 26 2	47.2% 49.1% 3.8%

1 We expanded on the data for this feature by noting whether the language of instruction included one or multiple named languages, translations (generally), or translations into one or more named languages.

some indication about how languages were valued in the larger society (both the home and target languages). This could include statements about national language policies or practices as well as the size of diasporic populations, but any report had to be explicitly stated and not implied through general knowledge. Reports on the language context (the status and use of the language in the larger society) were lacking for almost half of the studies. Generally, there were more studies conducted in the United States and Australia and many of the unreported sociolinguistic contexts came from these two countries; although Canada, Spain, Sweden, and Taiwan also had studies that did not report on societal language use.

Besides looking at these factors independently, we also created an overall score for language reporting. The interventions that included the fewest language details were mostly professional development interventions that targeted health care professionals. Those who included the most language details include Soto Mas et al. (2018) and Lauzon and Farabakhsh (2017). These articles connected HL promotion to the use of language in different contexts and leaned into language as a vehicle for understanding.

Educational Approaches

The coded data for pedagogical approaches to HL interventions is outlined in Table 2.

Authors reported on the adult learning theories underpinning their HL interventions less than half of the time. This aligns with the findings from the systematic review of HL interventions by Walters et al. (2020), where 12 of the 22 studies included theoretical underpinnings. As they argue "in a field which is striving to develop an evidence basis, theory allows for the systematic development, comparison and refinement of interventions

TABLE 2: Characteristics of Pedagogical Reporting in 53 HL Studies

PEDAGOGICAL CHARACTERISTICS OF INTERVENTIONS			
Feature	**Data**	**#**	**%**
Characteristics of the Interventions			
ADULT LEARNING: Do I know what theories about adult learning inform the intervention design?	Not Reported = 0	27	50.9%
	Reported = 1	26	49.1%
LANGUAGE LEARNING THEORIES: Do I know what theories about language learning inform the intervention design?	Not Reported = 0	43	81.1%
	Reported = 1	10	18.9%
SCAFFOLDING: Do I know the extent of scaffolding principles included in the intervention design?	Not Reported = 0	8	15.1%
	Evidence of Principles = 1	28	52.8%
	Evidence Plus Rationale = 2	17	32.1%
COMMUNICATIVE COMPETENCE: Do I know if the intervention design reflects skills that promote communicative competence?	Not Reported = 0	17	32.1%
	Reported = 1	36	67.9%
ASSESSMENT: Do I know whether there was a feedback loop where assessment outcomes were shared with participants?	Not Reported = 0	29	54.7%
	Reported = 1	24	45.3%
CULTURAL SENSITIVITY: Do I know if the intervention was structured in a culturally sensitive way?	Not Reported = 0	1	1.9%
	Reported Cultural Adaptation = 1	4	7.5%
	Reported Linguistic Adaptation = 2	7	13.2%
	Reported Cultural and Linguistic Adaptation = 3	41	77.4%
OVERALL SCORING: Based on the combined scores of all features	0-3	6	11.3%
	4-6	27	50.9%
	7-9	20	37.7%

and is something that should be encouraged" (p. 14). They further argue that those interventions designed in line with theory have the potential to be more robust, effective, and applicable.

Fewer articles addressed language learning theories than addressed adult learning theories, possibly because of its more narrow application in the field of HL. Language learning theories are relevant to migrant HL interventions but not to HL interventions that focus on the majority-language-speaking public. Because only a portion of the HL literature focuses on language learning (i.e., those targeting migrant populations), it appears the relevant theories from applied linguistics have not been integrated into the discipline as broadly.

Overall, scaffolding was well reported with only eight articles not reporting any scaffolding. There were 17 articles that further provided a rationale for why scaffolding was used. We might assume that scaffolding would be discussed and rationalized in formal and non-formal learning, where learning was an explicit goal of the intervention and not incidental. However, reporting on the scaffolding of interventions was more often reported in informal learning; all informal interventions discussed scaffolding, compared to most formal learning (Supplement D, Table 2).

Similarly to how adult learning theories were more reported than language learning theories, scaffolding was more reported than communicative competence. Even the formal learning interventions only reported on communicative competence in eight out of 11 articles. All of the interventions that included adult educators had evidence of improving communicative competence and incorporating scaffolding.

Learner-centered assessment principles outline a feedback loop where assessment outcomes and results are shared, but less than half reported on this feature. Assessments used for student progress and program accountability often leave out the kinds of knowledge and skill acquisition that learners use outside of the classroom (Condelli & Spruck Wrigley, 2006; Reder, 2015). Including a feedback loop is important when using standardized assessments that may not be well aligned with what is taught or learned in the intervention.

All but one of the articles reported cultural sensitivity in the form of linguistic or cultural adaptation. Although Tay et al. (2019) did not mention cultural sensitivity directly, the teachers were of a refugee background, so through the design of the intervention culture was addressed. The regular reporting on cultural sensitivity may be a factor of the national policies which guide HL interventions because they explicitly state that cultural sensitivity and adaptations should be part of HL interventions (Brach, 2024; Council of Europe, 2023).

Cultural sensitivity is different from scaffolding and communicative competence. For example, Lauzon and Farbakhash (2017), a formal multisectoral intervention including ESL instructors, viewed language acquisition as best taught contextually, in this case through improving parental HL. While they provided translations as needed, they also aimed to teach participants communicative skills to independently promote their own health through a language learning lens. Compare this to Farokhi et al. (2018), who used presentations and materials that were translated to participants' native language, revealing a linguistic adaptation. However, the intervention providers narrowly focused on oral HL and did not build on participants' communicative competence beyond this.

Similar to the linguistic findings, we created an overall score for pedagogical reporting. Those who included the most pedagogical details included Sarkar et al. (2019) and Lauzon and Farabakhsh (2017). These are both formal interventions where the authors emphasize how HL interventions can be developed to target language learners and to advance adult education through traditional pedagogical methods and a HL context.

When we analyzed whether the formal, non-formal, and informal learning approaches differ in reporting based on the features, we noticed the following: All learning approaches were about equally split between reporting and not reporting on adult learning theories. However, authors of studies on formal learning approaches did slightly better at reporting on language learning theories (Supplement D, Table 2). Only one did not reference any theories, indicating the disciplinary knowledge of pedagogical theories adult educators bring to HL interventions.

Discussion

In this scoping review, we sought to understand how

migrant HL is promoted in educational interventions and what the linguistic and educational underpinnings are. We relied on academic papers and the descriptions of the interventions that were published in order to understand how researchers situated their work. While these descriptions may not be comprehensive, they were nevertheless illuminating and allowed us to derive numerous recommendations for educators and researchers.

We found that the most basic information about how researchers label the target group or identify the health topics that are most pressing to a community rely on numerous contextual factors (for more, see Harsch et al., in press). This diversity of target populations is similarly reflected in the health topics and learning approaches (formal, non-formal, informal). The multitude of health topics included in the study resonate with Rima Rudd's study circle (2005) and are also visible in other reviews on migrant's HL (Fox et al., 2022; Harsch, 2024; Harsch & Bittlingmayer, 2024)). The various labels that are used as identifiers makes it difficult to generalize the target populations and limits the transferability of the interventions. Researchers and educators should be aware of labeling that reduces the complexity of the target group to one or two adjectives and refrain from using deficit-oriented identifiers that ignore their assets. A translingual approach is useful here, where a unitary view of the full communicative system – including all the languages, gestures, and other meaning-making – informs the description of multilingual individuals (Canagarajah, 2013; Wei & Garcia, 2022).

The large number of non-formal and informal learning approaches demonstrates how important just-in-time learning is (Reder, 2015). Published studies on migrant HL interventions are happening in more than traditional classrooms – they happen in community spaces, clinics, and through online or other media. Similarly, interventions are led by more than just teachers: They include clinicians, community members, and university students. This heterogeneity is a strength for the local context, and for the learners who may lack the time and access to formal learning opportunities.

This is why building standardization into HL interventions through the incorporation of theories and standards of practice with common phrasing is so important. Our data show that teaching and learning practices (scaffolding, communicative competence, cultural sensitivity) are more reported on than theories (adult learning and language learning theories). Also, general theories and practices (adult learning theories, scaffolding, cultural sensitivity) are more reported on than those focused on language (language learning theories and communicative competence). And yet, HL interventions for migrants necessarily incorporate adult learning and language learning, so the theoretical framework that underpins the interventions are critical for advancing the epistemological direction of the field. Language teachers and adult educators know these theories and their relation to practice, but they can be almost "taken for granted" when it comes to writing articles with so many other important features to describe.

There were three – in our view – crucial limitations and challenges we faced in this study: context, data, and heterogeneity. *Context* variation was a complicating factor because the articles we drew from were not defined by national borders. Policies that regulate migration, education, and access to health care vary depending on the destination and existing laws and regulations in the country of resettlement, and articles do not often outline these contextual factors. For example, countries who resettle refugees will have various regulations when it comes to evaluation of the claims for asylum including which countries they will accept refugees from,[1] support services upon arrival including refugee-specific services related to language education and other services such as national health care access, and HL policies that intersect education and health care. Thus, comparing the effectiveness of published HL interventions may hide important factors of the local systems that are in place and that strongly influence the success of the program as well.

Another challenge for any scoping review is that our data – the published accounts of migrant HL interventions – cannot fully represent the scope of the

2 This is important because it dictates who is allowed to be a legal immigrant in a country and what types of support (both educational and health) they will be offered. For those fleeing situations not recognized by a host country as valid for asylum or refugee status, they will be forced to the social periphery and lack the meager resources offered to migrants who have entered a country through established and recognized ways.

work, the background context, or the knowledge of the providers as related to theoretical or practical matters. The expectations of the field and journal, limitations on article length, and prioritizing other aspects of the findings all limit what can be included in a publication. For example, Martin et al.'s (2018) article is one of the shortest in our corpus and lacked some of the linguistic and pedagogical details of the migrant HL intervention likely because it was so short. In this case, any information that could be inferred (such as the language of instruction) was unreported. This is not an evaluation of the effectiveness of the interventions, but rather an analysis of how the interventions are reported on.

Lastly, distinguishing between the different categories (health topic, educational approach) was not often easy because of the incredible heterogeneity of the interventions. We made decisions based on language used by the authors and discussed many categories at length. For example, Han et al. (2008) described an intervention addressing breast cancer prevention but also included elements of health systems navigation, making it difficult to categorize in terms of health topic. Despite these limitations, we found many insights relevant to adult educators and researchers developing, implementing, and reporting on HL interventions for migrant communities.

Recommendations

We recommend the following improvements to the planning and reporting of HL interventions with migrants:

- Describe the sociolinguistic context of the intervention and relevant policies or practices that address HL.
- Identify the theories of learning (including language learning) that informed the intervention. Connect the theories to the practices and demonstrate how best practices (such as scaffolding and communicative competence) are integrated into the intervention.
- When describing who was the target of the intervention, include details about language background (languages spoken and proficiency, home language use, and where possible the ages of when the languages were learned). Avoid labels that perpetuate monolingually biased views of migrant populations.
- Tie learning outcomes to the target population in ways that affirm their assets and the situated HL practices they engage in daily. Use assessment tools that account for this practice effect (Reder, 2012).
- Support greater interchange between applied inguists, health care professionals, and educators to improve the impact of HL reporting.

Conclusion

It is important to try to build an understanding of the needs of migrant populations in different locations because the various forms of migration, along with their legal, economic and social statuses, constraints, and opportunities, affect migrants' health to varying degrees (IOM, 2015). Forced migration, caused by war, climate change, or persecution, has an impact on health at all stages of migration, as well as at individual, social, and political levels, the result of which may be a need for particular health interventions that are sensitive to the backgrounds of the migrant populations. Adult educators are well-positioned to provide HL interventions because their focus is not on simply providing translation or translators, but on teaching students the skills needed to overcome language barriers, a defining characteristic of poor HL.

A more in-depth understanding of interventions to promote migrant HL globally will enable practitioners and policymakers to make better decisions about which interventions to choose and support. It can also aid in the creation and revision of existing policies through inclusion of best practices beyond cultural sensitivity (theoretical grounding, scaffolding, communicative competence, assessments of HL and fluency, etc.). Finally, this detailed analysis of the practice of reporting on linguistic and pedagogical approaches will allow researchers to reflect on their practices and eventually set new standards for reporting on migrant studies that are relevant for practitioners, which allows for greater replication of the interventions as it provides relevant information to make informed decisions.

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