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The Integration of ICT and Language: An Empirical Study on the Language Learning of Low-Skilled Immigrants in Japan

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ABSTRACT

As Japan's reliance on low-skilled migrant workers increase, improving their Japanese language proficiency has become essential for both social inclusion and occupational advancement. To support this, the Japanese government has introduced 23 ICT-based language learning tools intended to facilitate migrants' linguistic development. However, the accessibility, effectiveness, and cultural relevance of these tools for diverse migrant populations remain insufficiently examined. This study adopts a qualitative research design, integrating document analysis with semi-structured interviews involving 15 low-skilled migrants who have used or are familiar with these ICT tools, which combined approach offers a nuanced evaluation of the tools' strengths and limitations. The findings indicate that while the tools provide useful support in basic vocabulary acquisition, grammar practice, and test preparation, they frequently lack advanced language content, interactive oral components, and training in context-specific communication. Interviewees reported a gap between the learning content and their practical communication needs in everyday and workplace settings, limiting the tools' applicability. Although most tools offer flexibility in terms of scheduling and affordability, they often fail to deliver engaging, immersive, and culturally responsive learning experiences. In conclusion, the ICT-based tools hold potential in reducing structural barriers to language learning. However, improvements in interactive design, advanced-level instruction, and cultural adaptation are necessary to ensure their effectiveness in fostering meaningful linguistic competence and supporting migrants' broader integration into Japanese society.

Keywords: Information and Communication Technology (ICT); Japan; Immigrants; Language Learning; Integration

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ARTICLE INFO

Received: 21 July 2025 | Revised: 2 August 2025 | Accepted: 5 August 2025 | Published Online: 18 September 2025

DOI: <https://doi.org/10.30564/fls.v7i9.11162>

CITATION

Hou, Y.J., Hung, S.L., Fung, K.K., et al., 2025. The Integration of ICT and Language: An Empirical Study on the Language Learning of Low-Skilled Immigrants in Japan. *Forum for Linguistic Studies*. 7(9): 1058–1077. DOI: <https://doi.org/10.30564/fls.v7i9.11162>

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1. Introduction

Information and communication technologies (ICTs) have accelerated social development and enhanced the efficiency of daily activities Selwyn, N^[1–3]. ICTs have been increasingly adopted across critical areas, such as business, healthcare, finance, agriculture, education, and public administration to deliver more efficient and high-quality services^[2–4].

Migration to European Union countries has risen steadily since the early 2000s, with a notable surge in the mid-2010s driven by geopolitical crises^[4,5]. In this context, ICTs have played an increasingly prominent role in supporting migration governance and policy implementation^[3]. According to David, R., S. Melissa, A. J. Carlos, C. G. Stephanie and C. M. I. Clara^[6], ICT-enhanced communication channels have significantly facilitated the socio-economic integration of immigrants in the Netherlands. Moreover, Collin, S. and T. Karsenti^[7] revealed that Western countries have developed ICT-based tools to help immigrants acquire the host country's language, thereby promoting more effective cultural and social integration.

As a developed industrial country in Asia, Japan has attracted millions of immigrants from developing countries seeking to improve their living conditions^[8–11]. According to the *International Migration Outlook 2019*, Japan admitted approximately 218,000 temporary or seasonal labor migrants and trainees through its Technical Intern Training Program in 2017, with most new arrivals coming from China, Vietnam and the Philippines^[10–13]. Therefore, the Japanese government amended the Immigration Control and Refugee Recognition Act in 2019, introducing two new visa categories aimed at expanding the intake of low-skilled migrants to address domestic labor shortages^[9,13–15]. The new categories, “Specified Skilled Worker (i)” and “(ii)” visas cover 14 occupational sectors, including construction, manufacturing, caregiving, food services, and agriculture, and are expected to accommodate up to 345,000 immigrants between 2019 and 2023^[12,16].

The Japanese Language Proficiency Test (JLPT) consists of five levels, from N1 (the highest proficiency level) to N5 (the lowest proficiency level)^[12]. To obtain a Specified Skilled Worker Visa, applicants are required to pass the JLPT at level N4 or above and complete a field-specific skills assessment. The visa permits a maximum stay of five years

and may be renewed annually, semi-annually, or quarterly, depending on individual circumstances^[8,9,12,17].

Despite the Japanese government's emphasis on language integration, many migrant workers face significant challenges in accessing adequate educational resources and financial support for Japanese language learning^[15,16]. Although employers are responsible for providing Japanese language instruction to migrant workers^[12], many small- and medium-sized enterprises fail to implement this policy due to the associated financial burden^[18,19]. Moreover, limited disposable income prevents many migrant workers from affording language education^[19]. The linguistic complexity of Japanese also demands considerable time and effort, making it particularly difficult for them to balance language acquisition with personal and professional responsibilities. In addition, Oishi, N.^[9] pointed out that the teaching quality of most language courses remains suboptimal. Collectively, these interrelated barriers hinder the linguistic integration of migrant workers.

For immigrants intending to settle in Japan long-term, mastering the Japanese language is essential, as it forms the foundation for both social integration and career advancement^[15–17]. However, most low-skilled migrant workers have limited access to high-quality Japanese language education resources^[9,18,19].

A report published in June 2020 by the Agency for Cultural Affairs emphasized the importance of promoting linguistic integration for immigrants and introduced 24 ICT systems developed through collaborations between private IT companies and public institutions^[14,20,21]. Those emerging ICT tools aim to expand Japanese language learning opportunities and support linguistic integration among foreign residents. Nevertheless, the actual impact of these ICT tools on the linguistic integration of migrant workers remains underexplored.

This study adopts a qualitative approach to evaluate the role of ICT-based language support systems, aiming to assess their potential in helping low-skilled migrant workers overcome language-related barriers. Specifically, it examines: (1) how these tools are applied and utilized in the Japanese language learning process of low-skilled workers; and (2) how effective these ICT tools are in facilitating communication and cultural adaptation within Japanese society from the perspective of migrant workers.

2. Literature Review

2.1. Low-Skilled Jobs

Low-skilled workers are typically defined as individuals who have not completed high school and possess limited formal qualifications or vocational skills^[22]. The Organization for Economic Co-operation and Development (OECD)^[23] recommends that governments prioritize the assessments of individual skill levels when admitting migrant workers. According to the OECD^[24], approximately 88 million migrants in developed countries do not participate in higher education.

Notably, even highly educated migrants may be categorized as low-skilled if employed in occupations that do not require advanced qualifications^[25,26]. The complex and expensive process of foreign credential recognition often compels highly skilled immigrants to accept low-skilled positions as a temporary means of subsistence^[27]. In fields such as law, medicine, and engineering, immigrants must obtain additional professional certifications to meet local standards, typically involving lengthy and demanding procedures^[28]. In Japan, immigrant workers face similar challenges. Applicants must pass both skills and Japanese language examinations, sign employment contracts, draft support plans, and obtain permission to change their residence status^[12]. In addition, foreign applicants must secure a visa through a Japanese embassy abroad and obtain a Certificate of Eligibility before entering the country^[9,12].

2.2. The Linguistic Integration of Migrants

Linguistic integration is a reciprocal process, emphasizing immigrants' acquisition of the host country's language to enable the exercise of mutual rights and responsibilities within the host society^[29]. It is a crucial element of broader social integration, which entails immigrants' active participation in the social, economic, and cultural dimensions of their new country^[30,31]. However, language functions not merely as a tool of communication but also as a marker of identity, social belonging, and power dynamics. Language integration extends beyond language acquisition or testing; it constitutes a broader social integration process^[32,33]. Language barriers frequently result in social exclusion and exacerbate existing inequalities^[34].

In recent years, the Japanese government has implemented various language integration measures aimed at facilitating the social inclusion of low-skilled migrant workers. For instance, the enactment of the Act on the Promotion of Japanese Language Education seeks to expand language learning opportunities for foreign residents, thereby supporting their adaptation to Japanese society^[35–37]. Additionally, the government has promoted the development of multilingual ICT-based learning resources to address the diverse linguistic and cultural needs of immigrant learners^[14,20,21].

Previous studies have explored migrant integration in Japan from various perspectives. For instance, research on linguistic integration has highlighted immigrants' perceptions of Japan's language policies and the manifestation of cultural differences in daily life^[38]. Despite efforts to promote diversity, Japan's immigrants still risk becoming a marginalized or "invisible" group, excluded from full economic participation^[39]. These inequalities may further constrain labor market diversity and exacerbate existing workforce shortages, highlighting the urgent need for cohesive and inclusive integration policies^[40]. Research also shows that many foreign migrants in Japan tend to settle in ethnically concentrated communities. Immigrants from low-income countries or those with cultural backgrounds significantly different from Japan tend to experience lower levels of integration into Japanese society^[41]. These findings underscore the limitations of current Japanese immigration policies in promoting inclusive and effective integration processes.

2.3. ICTs and the Linguistic and Cultural Integration of Migrants

As a multilateral communication platform, ICTs facilitate knowledge sharing, professional development, and experience exchange. It plays a vital role in promoting the socio-economic integration of migrants^[42–44]. Besides, ICT supports second-language acquisition. For instance, the ESOL (English for Speakers of Other Languages) program offers migrants diverse opportunities to improve their language skills through digital learning platforms^[44,45]. ICT tools are widely employed to support migrant language learning across many countries. In the UK, Canada, Australia, the US, and EU member states, governments and institutions provide online courses, mobile applications, and multilingual platforms to support migrants in learning local languages

both pre- and post-arrival^[46–49].

ICT tools offer flexible, accessible learning environments, particularly appealing to younger users, which support integration in three key areas. First, ICT enhances social interaction by enabling real-time communication between learners and instructors through email, chat, and video conferencing. These tools allow teachers to monitor progress, deliver timely feedback, and tailor instruction to individual needs^[50].

Second, ICT significantly strengthens core language competencies. Interactive platforms—including mobile apps, videos, and audio resources—aid learners in developing listening, pronunciation, grammar, vocabulary, and writing skills. Some tools, such as Duolingo and language-focused YouTube channels, offer real-time feedback and task-based learning that enhance fluency and engagement^[51–55]. Evidence from Canada and Sweden shows that such digital interventions improve test scores and communication confidence among immigrants^[49,56].

Third, ICT promotes cultural integration by enabling migrants to engage virtually in local social life. Through online lectures, cultural programs, and digital literature, learners gain exposure to host-country norms, values, and traditions, fostering sociolinguistic awareness and intercultural adaptability^[50,57,58]. For example, migrants in Europe and North America have benefited from platforms such as eTwinning and Erasmus+, which combine language training with intercultural exchange^[59].

While the role of ICT in promoting linguistic and cultural integration is well established in Western contexts, its application in Japan, particularly among low-skilled migrants, remains insufficiently studied^[60–62]. Considering Japan's linguistic structure and socio-cultural norms, further research is needed to evaluate how effectively ICT tools address the integration needs of migrants within the Japanese context.

2.4. Low-Skilled Migration Policy in Japan

The Technical Intern Training Program (TITP), introduced by the Japanese government in 1993, was designed in response to strict restrictions on the entry of unskilled and low-skilled workers^[63,64].

According to Suzuki^[65], Japan officially denies the need for “low-cost and poor-quality” labor. The govern-

ment adopts a conservative stance on long-term immigration and deliberately avoids using the term “immigration” in policy terms^[9,63]. While the TITP is officially framed as a skills training initiative, scholars argue that it primarily functions to alleviate labor shortages in agriculture and manufacturing^[9]. Critics argue that the program reinforces the low-skilled label and often undervalues interns' actual competencies. In practice, it serves as a de facto channel for the importation of low-skilled labor^[9,63]. Civil society organizations have condemned the program for widespread violations of migrant workers' rights^[66].

Japan currently hosts around 300,000 technical interns, underscoring its significant dependence on low-skilled migrant labor^[9,12,17]. Although no formal Japanese language proficiency level is required, technical interns are generally expected to undergo short-term language training both before and after arrival in Japan^[8,9,12,17]. These programs typically last no more than five months and are often constrained by limited continuity and inadequate resources, such as the shortage of qualified teachers and the high turnover rate of Japanese language teachers^[67,68].

Although Japan's 2005 Multicultural Coexistence Plan aimed to enhance immigrant integration through local government involvement^[69], its implementation has been hindered by limited funding, weak legal enforcement, and insufficient public support^[9].

In 2018, Japan revised its immigration policy by introducing two new visa categories: “Specified Skilled Worker No.1” (SSW-1) and “Specified Skilled Worker No.2” (SSW-2)^[9]. SSW-1 visa holders receive a five-year work permit upon passing basic language and skills assessments. Those who demonstrate advanced skills and higher-level Japanese proficiency may apply for SSW-2 status, which allows for long-term or permanent employment^[70]. The 2018 policy also introduced stricter language proficiency requirements, mandating that SSW-1 applicants pass the Japanese Language Proficiency Test (JLPT) at the N4 level. This level measures basic comprehension and the ability to navigate simple social and workplace situations but remains insufficient for complex communication or specialized tasks^[9,12].

According to the 2015 Immigrant Integration Policy Index (MIPEX), Japan scored 21 out of 100 on the education indicator, ranking 27th globally. By 2020, this score improved to 47 but remained below the MIPEX average

of 49, indicating that Japan's immigrant education policies still lag most OECD countries^[71,72]. Overall, these conditions suggest that Japan's institutional framework remains inadequate to effectively support the integration of new immigrants, especially those arriving through low-skilled labor programs.

3. Methodology

3.1. Research Questions

Research on immigrant language integration has predominantly focused on Western contexts, while qualitative studies exploring the role of ICT in other developed Asian countries, such as Japan, remain limited and warrant further investigation^[60,61]. Although ICT tools have the potential to support the language integration of immigrants in Japan, a notable gap remains in research assessing the implementation and effectiveness of government-recommended ICT applications for low-skilled migrants in this context.

Accordingly, this study evaluates 23 language learning

ICT tools based on three key criteria: their effectiveness in promoting social interaction with native Japanese residents (see **Table 1**), supporting language acquisition from intermediate (JLPT N3) to advanced levels (JLPT N2 to N1), and providing comprehensive language skill development, including listening, pronunciation, vocabulary, grammar, and writing. Additionally, the tools are assessed on their capacity to facilitate cultural adaptation and offer accessible, affordable learning support^[7,9]. The central research question guiding this analysis is: How do ICT tools contribute to the linguistic integration of low-skilled migrant workers in Japan?

Additionally, this study addresses two sub-questions related to how ICT tools facilitate language acquisition among low-skilled migrants:

- (1) How are these ICT tools used and how do they interact within the Japanese language learning process of low-skilled workers?
- (2) How effective is ICT in enhancing communication and cultural adaptation within Japanese society from the perspective of these low-skilled migrants?

Table 1. The Japanese Foreigners language learning ICT tools – By Japanese Agency for Cultural Affairs.

No.	Name	Link
1	ALC Online Japanese School:	https://nihongo.alc.co.jp/en
2	AOJ (Attain Online Japanese)	https://www.attainj.co.jp/attain-online-japanese/jp/
3	Basic Japanese for Communication アスク Ask Publishing	https://www.ask-books.com/jp/tsunagu/
4	e-Learning for Japanese (University of Tsukuba)	https://e-nihongo.tsukuba.ac.jp/
5	“Erin’s Challenge! I Can Speak Japanese”	https://www.erin.jpf.go.jp/
6	“ひろがる” Hirogaru	https://hirogaru-nihongo.jp/en/
7	Japanese in Anime & Manga	http://anime-manga.jp/
8	Japanese Learning for Care workers “Nihongo de Care-Navi”	https://aft.kaigo-nihongo.jp/rpv/default.aspx?k=zdqskJ%2b11FdmiQMOKzZj3g%3d%3d
9	Japanese Teaching Materials Hiroba	https://hiroba.jitco.or.jp/categories/index/1
10	JF Japanese e-Learning ‘Minato’	https://minato-jf.jp/
11	JPLANG (TUFS)	https://jplang.tufs.ac.jp/
12	Marugoto Plus (MARUGOTO+)	https://marugotoweb.jp/en/
13	News Web Easy (NHK News Web Easy) NHK	https://www3.nhk.or.jp/news/easy/
14	Nico Project	https://www.nihongo-kodomo.net/en/about
15	Nihongo de Care-navi	https://eng.nihongodecarenavi.jp/eng/index.php
16	Nihongo e-na	https://nihongo-e-na.com/eng/
17	NIHONGONOMORI (YouTube)	https://www.youtube.com/channel/UCVx6RFaEAg46xfAsD2zz16w
18	Shinjuku Japanese Language Institute, SNG	https://www.sng.ac.jp/
19	Super Japanese	https://nihongo.incul.com/
20	Talk in Japan (Attain Online Japanese)	https://www.youtube.com/c/TalkInJapan/playlists
21	Toyota Japanese e-Learning	http://www.toyota-j.com/e-learning/
22	Weekly News in Simple Japanese	https://www3.nhk.or.jp/nhkworld/en/learnjapanese/audionews/
23	Yoshida Institute Learning Hiragana	http://yosida.com/en/hiragana.html

3.2. Research Design

This study employs a qualitative research design, incorporating a mixed approach combining document analysis

with semi-structured interviews. This design facilitates the in-depth investigation of both ICT tools and immigrant users' experiences within the Japanese sociocultural context^[73,74]. The aim is not to achieve statistical representativeness but to

provide analytical depth and thematic insight into how ICTs shape language learning opportunities and barriers.

Frey, B. B.^[75] defined document analysis as a qualitative research tool that uses systematic procedures to analyze documents in response to specific research questions, providing researchers with new insights through the interpretation of data^[75,76]. This study applies qualitative document analysis to the 23 digital language learning tools recommended by the Japanese government. The unit of analysis consisted of each learning activity or task embedded within the tools. Content was categorized into seven thematic dimensions: (1) modes of human communication, (2) language exam support, (3) language competencies, (4) types of online learning, (5) types of cultural integration support, (6) learning support, and (7) the cost of the learning tools. Coding was conducted manually with repeated cross-checking to enhance reliability.

In addition to document analysis, the study includes 15 semi-structured interviews with low-skilled migrant learners currently participating in ICT-supported Japanese language programs. These interviews aimed to capture the learners' subjective experiences, perceptions of tool effectiveness, and the socio-cultural challenges they face in language learning. This combination of methods not only provides structural insights into the design of ICT tools but also offers an empirical understanding of their practical application.

3.3. Sampling

The sample for this study includes 23 websites, each representing a specific project. While there are a variety of ICT tools available for foreigners to learn Japanese, the focus of this study is limited to those recommended by the Japan Agency for Cultural Affairs (JACA) in 2019. JACA introduces 24 ICT tools, but this study excludes the "Distance Learning Course for People Returning from China" because it mainly serves long-term Japanese expatriates living in China, rather than low-skilled migrant workers, the main target group for Japanese language learning. Therefore, this

study focuses on the analysis of the remaining 23 systems, which are specifically designed for migrant workers to learn Japanese. The purpose of this classification framework is to comprehensively assess the functionality and characteristics of the language learning tools offered by various websites.

Participants were selected through purposive sampling to capture diverse experiences in ICT-based Japanese language learning. The inclusion criteria were:

- (1) foreign-born migrants currently or previously using Japanese language ICT tools recommended by the government or publicly accessible platforms.
- (2) having a minimum of one year of residency in Japan; and
- (3) possessing at least JLPT N3-level proficiency to ensure participants could reflect meaningfully on their learning experiences. The exclusion criteria included migrants not engaged with any form of ICT language learning tools or those residing in Japan for less than one year.

All 15 interviewees had participated in online Japanese learning courses or ICT-related tools at different periods in their migration experience. This approach provided access to individuals offering rich, firsthand insights into the use and limitations of ICT tools for Japanese language learning.

The final sample consisted of 15 participants selected through purposive sampling, with sample size determined by theoretical saturation. All participants had 3 to 9 years of residence in Japan and demonstrated intermediate-to-advanced Japanese proficiency (JLPT N2 to N1), ensuring relevance to the research focus on ICT-based language learning experiences.

The final sample consisted of *fifteen* participants: two Filipino females, six Chinese males, and seven Chinese women, with 3 to 9 years of residence in Japan and Japanese proficiency ranging from JLPT N2 to N1 (see **Table 2**). Informed consent was obtained from all participants.

Table 2. Participants' demographic characteristics (N = 15).

Characteristics	n (%) or Mean ± SD (Range)
Sex	
Male	7(46.7)
Female	8(53.3)
Age (years)	33.7 ± 3.6 (29–40)

Table 2. *Cont.*

Characteristics	n (%) or Mean $\pm$ SD (Range)
Nationality	
China	13(86.7)
Philippines	2(13.3)
Occupation	
Technical intern	7 (46.7)
Accountant	3 (20.0)
Company sales	4 (26.7)
Nursing	1 (6.7)
Length of Residency in Japan	7.1 $\pm$ 1.8 (4–10) years
Japanese Proficiency Level	
N1	8 (53.3)
N2	7 (46.7)

3.4. Data Collection

This study employed a multi-step data collection process combining web-based search, document search, and semi-structured interviews. Relevant ICT-based Japanese language learning tools were identified through a Google search engine. Since the research team members were proficient in both English and Japanese, the study was able to evaluate the websites in Japanese. The characteristics of each platform were documented in Excel based on a pre-defined coding scheme adapted from Collin, S. and T. Karsenti^[7] (see **Table 3**). Deactivated or inaccessible sites were recorded as “Undetermined.”

In addition, semi-structured interviews were conducted by the author in participants’ preferred languages, with interpretation provided when necessary. Each interview lasted 15–30 minutes, and all were audio-recorded, transcribed, and anonymized. The interview questions were guided by a semi-structured protocol (see **Appendix A**).

3.5. Data Analysis

The document analysis of the selected ICT tools followed a four-stage process: coding, classification, interpretation, and thematic synthesis^[75]. In the initial stage,

open reading was conducted to identify features aligned with the seven core evaluation criteria proposed by Collin and Karsenti^[7]. A structured coding scheme was then developed based on these criteria and refined through iterative re-examination to ensure both adequacy and comprehensiveness^[76]. In this study, items marked as ‘undetermined’ refer to cases where the platform lacked publicly available information or where the classification could not be determined due to ambiguous or overlapping features. This was done to ensure coding integrity and avoid speculative categorization. The final coding framework, including main codes and subcodes, is presented in **Table 3**. This coding process enabled a systematic organization of the data and provided a robust analytical foundation for addressing the study’s research questions.

Besides, semi-structured interview data were analyzed using Braun and Clark’s^[77] six-phase framework for thematic analysis. After the interview and transcribing, the coding themes from the interview were subsequently compared with the findings from the document analysis to generate more nuanced and empirically grounded interpretations. This triangulation approach enhances the analytical depth and strengthens the validity of the study’s conclusions regarding the influence of ICT language integration among migrant learners in Japan.

Table 3. Codebook of the Japanese learning ICT tools.

Code	Sub-Code	Reference
Language Exam Support	Level N4 or Upper-level Japanese	Cabinet Office (2018)
Human Communication	Text chat Internet phone	Kluze et al., (2009)

Table 3. Cont.

Code	Sub-Code	Reference
Language Competencies	Grammar Listening Vocabulary Reading Writing Speaking	Kluze et al. (2009)
Type of Online Learning	100% online Partially online	Collin and Karsenti (2012)
The Cost of the Learning Tools	Free Partially Charging Charging	Oishi (2019); Kajimoto (2019)
Type of Cultural integration support	Japanese Culture Daily life Food Travel Etiquette	Algan et al., (2012); Esser, (2006); Favell, (2003)
Learning Support	Video Audio Games Online Course Online Exercise E-books Social Media Platforms Cultural Exchange Forums Manga Blogs and Vlogs Online Articles	Collin and Karsenti (2012); Purushotma et al., (2009)

4. Findings

4.1. Support for Level N4 or Upper-Level Japanese Language Examination

The Japanese Language Proficiency Test (JLPT) has become a key requirement for foreign workers seeking to obtain or extend residency in Japan^[8,9,12]. This requirement has stimulated the development of ICT-based platforms specifically designed to support JLPT preparation.

Among the 23 ICT tools reviewed, about 39%, including *ALC Online Japanese School*, *MARUGOTO+*, and *Shinjuku Japanese Language Institute* explicitly provide structured content targeting JLPT N4 and above (see **Figure 1**). These tools assist learners by offering level-specific content, interactive modules, and simulated testing experiences, which are particularly beneficial for visa-related exam preparation.

However, over half of the tools do not specify target proficiency levels, making it difficult for users to assess whether the content aligns with their exam preparation needs.

While some tools incorporate multimedia features, such as YouTube videos or gamified modules, which can enhance vocabulary, listening, and grammar skills, they often lack structured, exam-focused training. For instance, platforms such as *NIHONGONOMORI* and *JF Japanese e-Learning “Minato”* utilize interactive videos and offer multi-level learning paths. Nevertheless, advanced or specialized JLPT N4 and above training is typically available only through paid services.

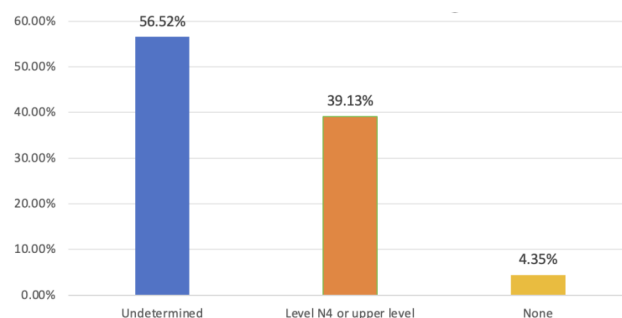


Figure 1. The distribution of Japanese language proficiency test support.

Original interview excerpts indicate that participants perceive government–recommended ICT tools as primarily suited for beginners, offering only rudimentary language skills sufficient for simple conversations. For example, one participant remarked that these tools provide limited utility beyond basic communication, while others noted a disconnect between the tool content and practical, real–life language use. Such perceptions highlight a significant mismatch between learners’ objectives, particularly preparation for formal language proficiency examinations, and the predominantly simplified content of many ICT platforms. Such as:

A6: *“I used them, but they’re mostly designed for beginners... providing just enough content for simple conversations.”*

A9: *“I tried them before... but they don’t truly apply to real–life situations.”*

A13: *“I don’t find these tools useful for my daily life...”*

Although these tools support general language learning, their restricted depth and scope at intermediate and advanced proficiency levels constrain their effectiveness for rigorous JLPT preparation, especially for low–skilled migrants who face formal certification requirements. This gap underscores the need for more tailored and comprehensive ICT language learning solutions to better address the specific linguistic demands of this population.

4.2. Human Communication

Effective human communication is fundamental to second language acquisition^[78].

In Japan, low–skilled migrant workers often have few opportunities to converse with native speakers due to demanding work schedules, hindering their oral language development^[79]. Although ICT–based tools hold promises in addressing these limitations, a critical shortcoming lies in their limited support for real–time spoken interaction. As shown in **Figure 2**, among the 23 Japanese language ICT tools analyzed, only three platforms (11.54%) offer voice call functions, five (19.23%) provide text chat options, and the remaining 15 (57.69%) lack any specified interactive language features. This indicates that despite the abundance of language learning platforms, tools offering authentic or quasi–immersive communicative environments are still lim-

ited.

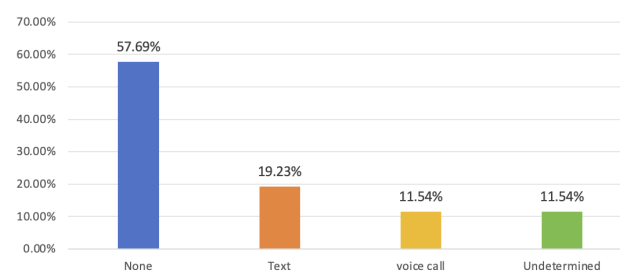


Figure 2. The distribution of Japanese language learning ICT tools support types.

Most platforms featuring voice call capabilities are primarily designed to meet professional language requirements. For example, some platforms such as *ALC Online Japanese School* and *Shinjuku Japanese Language Institute* explicitly indicate the use of Skype or Zoom for real–time instruction, allowing direct interaction with instructors. These systems often integrate both text and voice communication to simulate professional discourse, enabling learners to receive immediate feedback in structured instructional settings^[50]. Primarily targeting intermediate to advanced learners, these platforms offer structured models that provide immediate feedback to prepare users for routine workplace communication.

Several other platforms that lack voice functionality compensate by providing diverse virtual social spaces through text–based chat. For example, *ALC Online Japanese School*, *“Erin’s Challenge! I Can Speak Japanese”*, *JF Japanese e–Learning “Minato”*, *JPLANG (TUFS)*, and *Shinjuku Japanese Language Institute* incorporate text chat features that help build virtual learner communities, thereby promoting experience–sharing and cross–cultural interaction. Interviewees confirmed that these interaction features, when available, were among the most helpful aspects of the ICT tools.

A11: *“I like the chance to speak with real people, even use ICT tools... it helps reinforce and apply what I’ve learned.”*

A15: *“Even just chatting with fellow learners online makes the experience feel less isolating.”*

Overall, while ICT tools support human communication, most platforms lack integrated voice functions, significantly limiting opportunities for authentic spoken interaction. Despite clear user demand, this dimension remains underdeveloped.

4.3. The Different Language Competence Support

Figure 3 illustrates that among the 23 ICT language learning tools analyzed, vocabulary receives the highest level of support (22.89%), primarily focusing on kanji (Chinese characters), hiragana, and katakana. Listening (20.48%) and speaking (18.07%) follow as moderately supported areas, whereas grammar (12.05%) and writing (8.43%) receive the least emphasis.

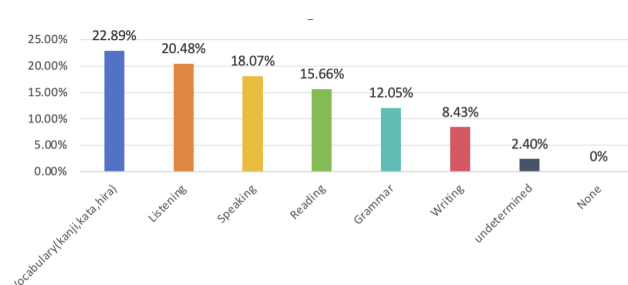


Figure 3. The distribution of language competence support.

The emphasis on vocabulary and listening reflects their foundational significance in both Japanese language proficiency tests and practical communication for immigrants. Nearly all comprehensive platforms integrate training in these domains, underscoring their central importance in language acquisition. The “speaking” category includes a range of communicative activities, such as monologic tasks (e.g., self-introductions), dialogic exercises (e.g., question-response sequences), and semi-scripted role-plays, as evidenced by the instructional materials.

Some ICT platforms, such as *News Web Easy* and *Japanese Learning for Care workers*, concentrate on professional vocabulary and specialized language skills. In contrast, initiatives targeting children, such as the *Nico Project*, emphasize foundational vocabulary and listening comprehension, often incorporating interactive or gamified elements. Platforms that focus on cultural contexts, such as *Hirogaru* and *Japan in Anime & Manga*, emphasize culturally embedded learning pathways. Although these tools may not comprehensively address all language domains, they enrich the learning experience through cultural integration, enhancing both learner engagement and pragmatic understanding. Additionally, some platforms, like *Nihongo e-na*, aggregate diverse language resources but lack clarity regarding the specific language skills they support, indicating a need

for clearer classification and guidance in Japanese language learning materials.

Some tools, such as *NIHONGONOMORI*, utilize YouTube video tutorials, leveraging modern technology and the widespread reach of social media to enhance the flexibility and accessibility of Japanese learning.

Interviewees highlighted the flexibility and learner engagement afforded by such tools:

A1 remarked, “YouTube has played a significant role in my spoken Japanese learning....”

While A9 noted, “I remember my friend and I enjoyed learning vocabulary through Japanese anime.”

Overall, these tools offer diverse learning options and approaches catering to learners from beginner to advanced levels and spanning children to adults, illustrating the depth and variety within the online Japanese learning landscape. By aligning instruction with learners’ practical, cultural, and professional contexts, these ICT tools enhance motivation and relevance, crucial factors for sustained learning and effective real-world language application. However, certain skills such as grammar and writing remain comparatively underemphasized.

4.4. The distribution of online learning models

In this study, fully online learning predominates, accounting for 91.30% of the platforms analyzed (21 out of 23 ICT tools).

Some of these courses are delivered via video conferencing software such as Zoom, enabling immigrants to participate in interactive learning on their devices. Two platforms, *Basic Japanese for Communication* and *Japanese Teaching Materials Hiroba*, employ a blended learning approach, integrating online resources with physical textbooks or printed materials, representing the remaining 8.70%. This model provides greater flexibility and accommodates diverse learner preferences and individual needs. Notably, *Basic Japanese for Communication* restricts some online content to users who purchase specific textbooks, which may pose financial barriers and reduce accessibility (see **Figure 4**).

Further analysis found that many tools, such as *ALC Online Japanese School*, *MARUGOTO+*, and *JF Japanese e-Learning “Minato”*, highlight mobile compatibility with smartphones and tablets. This indicates a growing emphasis on the convenience of mobile learning, which allows users to

study anytime and anywhere without the constraints of physical classrooms. Additionally, online platforms minimize reliance on printed materials, thereby reducing logistical and financial burdens on learners.

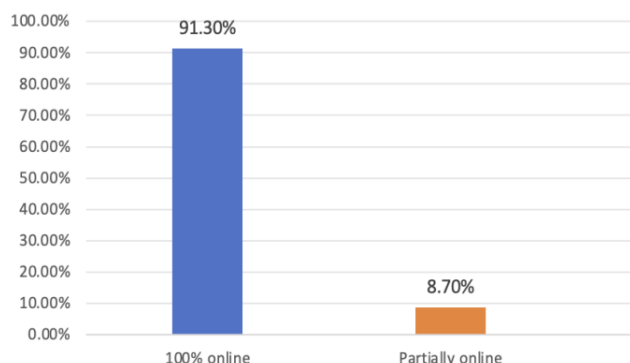


Figure 4. The distribution of online learning ICT tools models.

Interviewee A12 expressed concerns that offline language classes are often led by people from the original country and may lack a cross-cultural learning environment, limiting opportunities for authentic language interaction. Furthermore, such courses were seen as time-consuming:

A12: “*You can study online... the offline classes last only 40 minutes, so there’s no need to attend them in person. Most language schools in Japan are attended by Filipino or Chinese students, and after class, they mostly talk to people from their own country. So, in the end, they are still using their native language, and the learning impact is quite limited.*”

Overall, these ICT tools provide low-skilled migrant workers with accessible, user-friendly learning resources, enhance flexibility in time management, and demonstrate the growing diversity and adaptability of online Japanese language education.

4.5. The Cost of the ICT Tools

Most ICT-based Japanese language learning tools (approximately 65%) are freely accessible, thereby significantly reducing entry barriers for learners (see **Figure 5**). Notable examples include *Erin’s Challenge*, *News Web Easy*, and *NIHONGONOMORI*, all of which provide extensive free learning materials. In addition to freely accessible platforms, eight tools employ a fee-based model, incorporating both partially and fully paid structures. For instance, platforms such as *MARUGOTO+* and *JF Japanese e-Learning “Mi-*

nato” follow a hybrid pricing model, offering basic content free of charge while requiring payment for advanced courses.

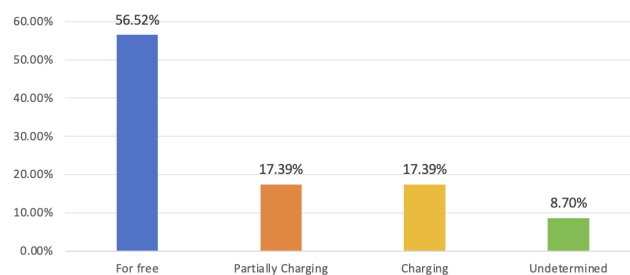


Figure 5. The cost distribution of the ICT tools.

More specialized platforms, such as the *Shinjuku Japanese Language Institute* and *Super Japanese*, typically require full payment. This reflects the financial requirements associated with delivering structured, high-quality instruction, particularly in advanced or instructor-led settings. Additionally, some platforms, such as *Toyota Japanese e-Learning*, function as internal corporate training tools and are not publicly accessible.

Learners with limited financial resources may rely on free tools and lack the depth and pedagogical rigor necessary for achieving advanced language proficiency. In contrast, the existence of paid courses often corresponds to the demand for more comprehensive, structured, and high-quality instruction, which generally requires financial investment. This may lead to disparities in learning outcomes, with learners unable to afford paid content facing restricted access to more effective educational resources. Thus, although ICT tools contribute to the democratization of basic language learning, ensuring equitable outcomes across socio-economic groups remain a persistent challenge. Furthermore, platforms offering non-traditional language learning content, such as those focused on Japanese culture and travel (e.g., *Hirogaru*), often provide free resources. This may be due to the suitability of such content for peer interaction and community-based learning, which requires less formal instructional support.

Interview data reveal the various economic challenges immigrants face in accessing language learning opportunities. As several interviewees noted, the financial burden associated with attending offline language schools contributes to a relatively high overall cost of language learning. However, the government-recommended language learning tools are free of charge but often perceived as overly simplistic.

A1: “*Although government websites are free, the*

content is too simple...Some parts are even less useful than what you find in travel guidebooks... But at least they're flexible; I can access them anytime and anywhere."

A2: *"I think offline courses still cost money, even if it's not too much."*

A5: *"Language schools aren't extremely expensive, but it's still a significant cost... Online courses work better for me, as they're cheaper and more flexible... and I can study anytime, anywhere."*

This study finds that although many ICT tools are freely accessible, access to more structured or advanced content often requires financial payment. Low-skilled immigrants who cannot afford paid programs often depend on free educational resources to support their basic language development. However, such resources are often too rudimentary to meet the complex needs of more advanced language learning.

4.6. Cultural Integration Support

Cultural integration encompasses a wide range of elements, including customs, traditions, language, and religion. For immigrants, developing a sense of belonging in the host society is essential, and effective cultural integration plays a crucial role in facilitating broader integration^[32,33,80].

As shown in **Figure 6**, most ICT tools support some form of cultural integration. Only two tools (3.39%) lack such features, suggesting that cultural content is a common component across many platforms. Among the different types of cultural content, Japanese culture was the most frequently featured, appearing in 32.20% of the tools. The second most common category was daily life scenarios, accounting for 30.51%, highlighting the practical relevance of content rooted in daily experiences. In addition to mainstream themes, 13.56% of the tools included content on etiquette, 10.17% focused on food, and 8.47% addressed tourism. Notably, etiquette comprises a relatively high proportion of cultural content, underscoring the emphasis on teaching learners how to use Japanese appropriately in various social contexts. Given the significance of etiquette in Japanese social interactions, such content is likely intended to help foreign learners navigate the social environment and avoid cultural conflicts. In contrast, content related to food and tourism is less frequently featured.

Platforms such as *MARUGOTO+* and *Shinjuku Japanese Language Institute* provide not only language in-

struction but also comprehensive cultural education, including content on Japanese customs, daily life, food, travel, and etiquette. This holistic approach supports a deeper understanding of the cultural context underlying the language, facilitating more meaningful and effective learning.

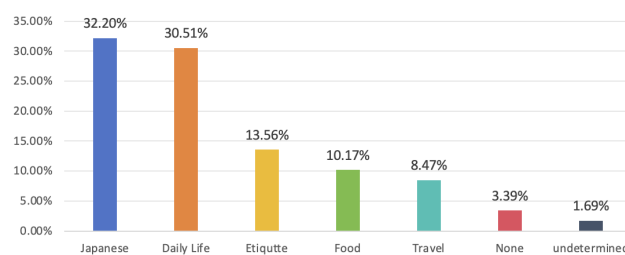


Figure 6. The distribution of cultural integration support.

Certain platforms specialize in specific cultural themes. For example, *Nihongo de Care-Navi* targets everyday communication in healthcare settings, while *Super Japanese* emphasizes business language and etiquette. Platforms like *Erin's Challenge* and *JPLANG* provide interactive, situational learning experiences that simulate daily conversations and cultural scenarios, thereby fostering both linguistic competence and cultural awareness. *Erin's Challenge* includes scenarios like describing symptoms to a doctor, while *JPLANG* offers practical dialogues such as borrowing a book from the library. These ICT tools offer migrants rich, context-specific examples reflecting real-life language use.

Interview data emphasize that adapting to Japanese social habits represents a crucial dimension of integration beyond language acquisition, involving a gradual internalization process through observation and practice in daily work and life.

A4: *"Japan is a country that places great emphasis on maintaining interpersonal distance. People are expected to keep some physical and emotional distance from one another... These characteristics are clearly reflected in the ICT tools recommended by the Japanese government."*

A6: *"Another aspect is adapting to everyday habits in Japan, like garbage sorting. These are things one gradually learns to follow... I learned this from news programs when I first arrived in Japan."*

A7: *"In Japan, etiquette and courtesy are taken very seriously... Nearly all online platforms emphasize this aspect."*

A10: *"Etiquette is something that must be learned*

in Japan, and polite language is very important in life... Basically, all apps or platforms will be involved."

A13: *"The Japanese place a high value on etiquette and personal space. When interacting with Japanese friends, we maintain a certain distance, unlike in our culture, where people are more physically expressive. For example, it's rare to see them casually pat each other's shoulders or hug. These behaviors are often portrayed in Japanese dramas and films."*

Overall, most ICT tools introduce key aspects of Japanese culture, such as daily life, food, travel, and etiquette, providing migrants with essential cultural knowledge. These platforms support low-skilled migrant integration into Japanese society by embedding cultural education into language instruction.

4.7. Learning Support Methods in Japanese Language Integration

ICT tools support both cultural and linguistic integration by offering various learning formats, including videos (23.94%), audio materials (19.72%), online courses (15.49%), and interactive exercises (11.27%). These multi-modal resources are designed to simulate real-life communication contexts (see **Figure 7**).

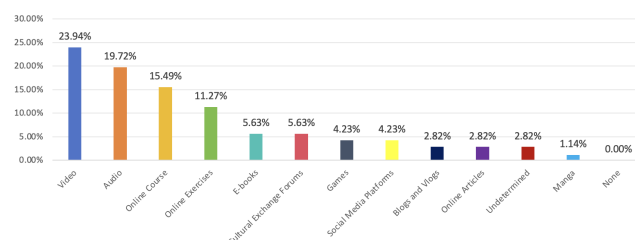


Figure 7. The distribution of linguistic integration.

JF Japan's e-learning "Minato" uses anime and manga as mediums for language instruction, while *NIHON-GONOMORI* explores Japanese culture and etiquette through YouTube videos. *Talk in Japan* shows daily life and cultural contexts through video content. It provides guidance on practical matters such as navigating public transportation, ordering food in restaurants, identifying popular travel destinations, and determining optimal travel seasons in Japan. The *MARUGOTO+* not only shares information about Japanese culture and daily life but also the lives and cultures of immigrants, promoting two-way cultural understanding and

integration. *Hirogaru* introduces traditional Japanese culinary practices, such as how to appreciate local cuisine, and offers practical advice like purchasing fresh seafood from morning markets.

Many learners tend to use informal learning media such as videos, comics and music, which have been widely accepted, especially among young people or beginners. Platforms such as *NIHON-GO NO MORI* (YouTube), *JF Minato* (teaching anime and comics), and the *Nico project* (gamified learning for children) are favored. Meanwhile, interactive games (such as *NINJA KANJI GAME*) have also been applied in specific learning scenarios to enhance vocabulary memory and learning interest, which makes vocabulary learning more efficient and fun. Some specific websites (such as *Japanese Learning for Care workers*) provide language learning resources for specific occupations, facilitating learners' quicker application of language knowledge to practical work.

Additionally, *News Web Easy* and *Weekly News in Simple Japanese* offer simplified Japanese news with kana annotations to reduce reading difficulty and facilitate language input on current social affairs for non-native speakers. This approach helps learners understand current events and daily life in Japan, conveying cultural knowledge indirectly but effectively.

Although some tools incorporate social media, forums, and blogs, such as *Talk in Japan* and various YouTube channels, to enhance interaction and real-time feedback by providing platforms for engagement with peers and native speakers, their overall adoption remains low. Social media accounts for only 4.23%, with blogs even less frequently used, suggesting that digital interpersonal interaction among learners remains minimal.

Moreover, most platforms lack explicit instruction in writing and structural grammar, leading to a learning trajectory that overemphasizes oral skills and overlooks key components of comprehensive language proficiency recognized by mainstream assessment frameworks.

Respondents also shared their perspectives on the types of support most effective for learning Japanese.

A3: *"I know people who enjoy Japanese anime and dramas and listen to Japanese music. They tend to learn the language quickly. Some reach N1 proficiency within a year, though it may take others two to two and a half years. But for those who are genuinely engaged, their Japanese*

improves rapidly.”

A8: *“I have always been a big fan of anime, and it feels like it has significantly helped my learning.”*

A14: *“I think it’s important to try a variety of methods, as each target has different aspects of language training. Online courses...in particular, provide structured and systematic instruction.”*

This study shows that most ICT tools motivate low-skilled workers by providing self-correcting activities, varied learning support, and opportunities to simulate real-world scenarios. Although self-directed learning demands a high level of autonomy, the scaffolding embedded in ICT tools enhances learners’ capacity to achieve their language acquisition goals more efficiently.

5. Discussion

This study explores the role of ICT language learning tools recommended by the Japanese government in supporting low-skilled immigrants’ Japanese language acquisition, highlighting both their potential and limitations in promoting linguistic integration through digital platforms. Participants identified several critical shortcomings.

First, many government-recommended free platforms provide content that is overly simplistic, rendering them inadequate for preparing learners for standardized language proficiency tests such as the JLPT N4 or higher. In the absence of level-specific instructional modules, these platforms lack the capacity to deliver targeted support for test preparation. Furthermore, participants noted that many ICT tools lack features for oral interaction, thereby limiting learners’ opportunities to develop practical speaking skills essential for daily communication and workplace integration. Without such features, ICT tools risk becoming disconnected from the real-world communicative demands faced by immigrant learners^[53,54,81].

However, participants generally acknowledged several advantages of ICT tools in language learning, particularly in terms of temporal flexibility, access to introductory-level resources, and the integration of cultural supplementary content. Some respondents noted that ICT tools have mitigated the challenges they previously encountered in language learning. For instance, low-skilled immigrants often work long hours and irregular shifts, making it difficult to attend offline

language classes scheduled at fixed times.

ICT tools that offer time flexibility and mobile accessibility enable learners to study during their free time, thereby enhancing both the sustainability and accessibility of language learning. Moreover, self-directed learning on ICT platforms allows learners to repeatedly practice listening and vocabulary skills through engaging video content, which helps foster confidence and reduce anxiety during face-to-face interactions. These findings are consistent with Hsiao and Dillahun^[81], who argue that technology plays a pivotal role in helping immigrants access social support systems and adapt to new environments, particularly by enhancing communication skills and promoting a sense of psychological security.

Meanwhile, language proficiency tests have long served as a critical gateway for obtaining legal immigration status and facilitating social integration, particularly in professional advancement. These proficiency levels have become formal prerequisites for visa renewals and access to certain professions^[8,9]. This aligns with Korteweg’s^[82] observation that “language learning is both a process of skill development and identity negotiation”. Language functions not only as a practical skill but also as a medium through which immigrants seek social recognition and a sense of belonging. However, the tendency of existing platforms to emphasize written skills while neglecting oral communication undermines the social integration function of language education. Although language tests represent institutionalized gateways within legal migration frameworks, the lack of adequate support resources contributes to a widening gap between formal integration policies and the lived realities of immigrant life. As Schinkel^[83] argued, a frequent disconnect exists between “official integration” and the lived experience of “practical integration” as encountered by immigrants.

In summary, while the 23 ICT tools recommended by the Japanese government have made meaningful contributions to language acquisition and cultural adaptation, their overall design requires further refinement to meet the practical needs of immigrants, especially in the areas of exam preparation, real-world communication, and holistic social integration.

Limitations and Future Research

This study presents several limitations that should be acknowledged. First, due to its qualitative nature, the research process is inherently interpretive and may be influenced by interviewees and the researchers’ perspectives, particularly

during coding and thematic analysis. Although measures such as code cross-validation and data triangulation were employed to enhance analytical rigor, a certain degree of interpretive subjectivity remains unavoidable. Second, the findings are predominantly descriptive. The emphasis on in-depth qualitative description limits the generalizability of findings beyond the specific sample and research context. Furthermore, this study acknowledges demographic limitations in the sampling. Although purposive sampling was used to capture diverse perspectives, the sample lacks balance in gender and national representation, with an underrepresentation of male participants and non-Chinese-speaking immigrant groups.

Future research would benefit from recruiting a more demographically representative sample and employing larger-scale quantitative or mixed-methods designs to improve the breadth, depth, and comparative validity of findings. Also, longitudinal approaches could be adopted in future studies to more systematically evaluate the long-term impacts of ICT tools on language acquisition among low-skilled migrant learners from diverse backgrounds.

6. Conclusion

This study examined 23 ICT-based Japanese language learning tools recommended by the Agency for Cultural Affairs in Japan, employing a mixed-methods approach that integrated document analysis and semi-structured interviews. The findings highlight the multifaceted role of these tools in facilitating language integration among low-skilled migrant workers, particularly in three key domains: the development of core linguistic competencies, support for cultural adaptation, and the enhancement of social interaction.

The ICT tools analyzed exhibit considerable diversity in content and delivery formats, including text-based materials, voice-enabled interactions, and multimedia resources. These tools cater to the linguistic needs of migrants by improving listening, pronunciation, and writing skills, areas especially pertinent to occupational mobility within skilled labor sectors. Their online and mobile-compatible formats offer flexibility, enabling learners with irregular working hours to engage in self-paced study in varied settings.

Moreover, several platforms embed cultural elements, ranging from etiquette and daily life practices to food and so-

cial customs, thus promoting both linguistic proficiency and cultural literacy. The availability of free tools further lowers the threshold for language learning and enhances accessibility for economically constrained learners. However, the analysis also reveals limitations that many government-endorsed platforms provide only elementary-level content and lack sufficient depth or pedagogical scaffolding to support advanced language acquisition or standardized test preparation.

This research offers a novel perspective on the role of ICT in language integration, addressing a gap in the literature concerning low-skilled migrant workers in Japan. It provides empirical insights into the benefits and limitations of current ICT-based language learning tools, which contributes to the low-skilled migrant workers' insights and practical strategies for enhancing the language integration of this population.

Author Contributions

Conceptualization, H.Y.J.; methodology, H.Y.J.; validation, H.S.L.; formal analysis, H.Y.J. and S.X.Y.; investigation, H.Y.J.; resources, H.Y.J.; data curation, H.Y.J. and F.K.K.; writing—original draft preparation, H.Y.J. and F.K.K.; writing—review and editing, H.Y.J. and S.X.Y.; visualization, H.S.L. and F.K.K.; supervision, H.S.L. and F.K.K.; project administration, H.Y.J. and F.K.K. All authors have read and approved the final manuscript.

Funding

This work received no external funding.

Institutional Review Board Statement

The study was conducted in accordance with the Declaration of Helsinki.

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Data Availability Statement

To protect participant confidentiality, the complete research data cannot be publicly archived. Identified excerpts

may be made available upon formal request to the corresponding author, contingent on express written consent from the interviewed individuals.

Acknowledgments

The authors gratefully acknowledge the support of the Hong Kong Baptist University for providing access to essential materials, including online materials, books and articles

related to linguistic work. Their assistance with the literary corpus was invaluable to the development of this study. The authors also wish to thank the anonymous reviewers for their constructive feedback, which contributed to the refinement of this article.

Conflicts of Interest

The authors declare no conflict of interest.

Appendix A

Linguistic Integration of Japanese Migrant Low-skilled Workers: An Empirical Analysis of ICT Learning Tools —Qualitative Research Guideline

Research statement

You have the right to withdraw from this study at any time without consequence. If you choose to withdraw, all collected data associated with your participation will be permanently deleted and will not be used in the research analysis.

Interviewees Background

Sex:	☐ Female	☐ Male
Age:	_____	
Nationality:	_____	
Occupation:	_____	
Length of Residency in Japan	_____	
Japanese Language Level:	☐ N4	☐ N3 ☐ N2 ☐ N1

Questions:

Eight open-ended questions are included in a semi-structured interview protocol for interviewees.

Sections	Questions
Introduction	- Did you use any language learning tools or websites recommended by the Japanese government when preparing to live in Japan? which ones? - How has learning Japanese through these websites affected your integration into Japanese society?
Questions	- What challenges have you experienced in daily communication with native speakers? How do you think ICT tools could/difficulties to help with that? - When preparing for Japanese language proficiency tests (e.g., JLPT), which parts do you find most challenging? and do you think ICTs had sufficient support? if not, why? - Given that ICTs are almost in an online learning mode, what do you think of different learning modes and their cost and effectiveness? - Which language skills do you think ICTs focus on more (grammar, listening, speaking, reading, writing)? Any limitations to this pattern? - What cultural or social aspects of life in Japan have been most difficult to adapt to? How do ICTs help you to integrate?
Reflection	Overall, do you have any reflections on ICT platforms in helping your lived experience as an immigrant? And what is the crucial limitation that hinder your lived experience you would like to raise for these ICT tools

References

- [1] Selwyn, N., 2003. Apart from technology: understanding people's non-use of information and communication technologies in everyday life. *Technology in Society*. 25(1), 99–116. DOI: [https://doi.org/10.1016/S0160-791X\(02\)00062-3](https://doi.org/10.1016/S0160-791X(02)00062-3)
- [2] Kurniawati, M.A., 2022. Analysis of the impact of information communication technology on economic growth: empirical evidence from Asian countries. *Journal of Asian Business and Economic Studies*. 29(1), 2–18. DOI: <https://doi.org/10.1108/JABES-07-2020-0082>
- [3] Şanlıer Yüksel, İ., 2022. Empowering experiences of digitally mediated flows of information for connected migrants on the move. *Journal of Ethnic and Migration Studies*. 48(8), 1838–1855. DOI: <https://doi.org/10.1080/1369183X.2020.1796264>
- [4] WHO, 2020. Operational framework for primary health care: Transforming vision into action. Available from: <https://www.who.int/publications/i/item/9789240017832> (cited 20 May 2024).
- [5] Dorn, D., Zweimüller, J., 2021. Migration and Labor Market Integration in Europe. *Journal of Economic Perspectives*. 35(2), 49–76. DOI: <https://doi.org/10.1257/jep.35.2.49>
- [6] Stephanie, C., Carlos, J.A., David, R., et al., 2015. ICT for the employability and integration of immigrants in the european union: A qualitative analysis of a survey in bulgaria, the netherlands and spain. Publications Office of the European Union. DOI: <https://doi.org/10.2791/48198>
- [7] Collin, S., Karsenti, T., 2012. Facilitating Linguistic Integration of Immigrants: An Overview of ICT Tools. *Issues in Informing Science and Information Technology*. 9, 243–251. DOI: <https://doi.org/10.28945/1619>
- [8] Liu-Farrer, G., Shire, K., 2023. Who are the fittest? The question of skills in national employment systems in an age of global labour mobility. In: Liu-Farrer, G., Yeoh, B.S.A., Bass, M. (eds.). *The Question of Skill in Cross-Border Labour Mobilities*, 1st ed. Routledge: London, UK. pp. 69–86. DOI: <https://doi.org/10.4324/9781003374367-5>
- [9] Oishi, N., 2021. Skilled or unskilled?: The reconfiguration of migration policies in Japan. *Journal of Ethnic and Migration Studies*. 47(10), 2252–2269. DOI: <https://doi.org/10.1080/1369183X.2020.1731984>
- [10] Liu-Farrer, G., 2009. Educationally Channeled International Labor Mobility: Contemporary Student Migration from China to Japan. *International Migration Review*. 43(1), 178–204. DOI: <https://doi.org/10.1111/j.1747-7379.2008.01152.x>
- [11] Mukhopadhyay, U., 2021. Differential Education Subsidy Policy and Wage Inequality Between Skilled, Semi-skilled and Unskilled Labour: A General Equilibrium Approach. *Review of Development and Change*. 26(1), 40–62. DOI: <https://doi.org/10.1177/09722661211003186>
- [12] MOFA, 2019. Specified skilled worker. Available from: <https://www.mofa.go.jp/mofaj/ca/fna/ssw/us/index.html> (cited 16 September 2023).
- [13] Doerr, N.M., 2020. *The Global Education Effect and Japan: Constructing New Borders and Identification Practices*, 1st ed. Routledge: New York, NY, USA. DOI: <https://doi.org/10.4324/9780429292064>
- [14] Takizawa, S., 2021. Japan's Immigration Policy 2015–2020: Implications for Human Security of Immigrant Workers and Refugees. 10 (2021), 51–78. DOI: https://doi.org/10.34517/jahss.10.2_51
- [15] Min, L., 2019. Unfolding japan's new immigration reform. *Yearbook Class of 2019: The United States and Japan in Global Context* (2019). The Edwin O. Reischauer Center for East Asian Studies: Washington, DC, USA. pp.159–79.
- [16] Kwon, D., 2020. Rethinking International Student Migration in Japan: Imagined Global Jinzai in the Absence of Immigration and Cosmetic Internationalization of Higher Education [Doctoral Dissertation]. Doshisha University: Kyoto, Japan. pp.106–188.
- [17] Shrestha, T., 2024. Infrastructural casualties: educational intermediaries and casualization of Nepali student workforce in Japan. *Applied Mobilities*. 9(4), 277–300. DOI: <https://doi.org/10.1080/23800127.2023.2294526>
- [18] Kajimoto, T. Japanese firms resist hiring foreign workers under new immigration law-poll. Reuters, 2019. <https://www.reuters.com/article/economy/japanese-firms-resist-hiring-foreign-workers-under-new-immigration-law-reuters-idUSKCN1SS32A/>.
- [19] Kubota, R., Takeda, Y., 2021. Language - in - Education Policies in Japan Versus Transnational Workers' Voices: Two Faces of Neoliberal Communication Competence. *TESOL Quarterly*. 55(2), 458–485. DOI: <https://doi.org/10.1002/tesq.613>
- [20] Iwamoto, H., 2022. The unexplored potential of foreign workers in japan's travel and tourism industries. In: Endoh, T. (eds.). *Open Borders, Open Society? Immigration and Social Integration in Japan*, 1st ed. Verlag Barbara Budrich: Leverkusen/Germany. DOI: <https://doi.org/10.2307/j.ctv2k88t1c.8>
- [21] McGinnity, F., Enright, S., Quinn, E., et al., 2020. Monitoring report on integration 2020. Economic and Social Research Institute (ESRI). DOI: <https://doi.org/10.26504/bkmnext403>
- [22] Edzes, A., Hamersma, M., Venhorst, V., et al., 2015. Labour market performance and school careers of low educated graduates. *Letters in Spatial and Resource Sciences*. 8(3), 267–289. DOI: <https://doi.org/10.1007/s12076-015-0141-7>
- [23] OECD, 2008. *Management of Low-Skilled Labour Mi-*

- gration In: OECD. (eds.). International Migration Outlook 2008. Available from: https://www.oecd.org/en/publications/international-migration-outlook-2008_migr_outlook-2008-en.html (cited 12 December 2024).
- [24] OECD, 2013. International migration outlook 2013. OECD Publishing: Paris, France. https://www.oecd.org/en/publications/international-migration-outlook-2013_9789264201308-en.html (cited 12 December 2024).
- [25] Kay, R., Boswell, C., Kyambi, S., 2018. Choices ahead: Approaches to lower skilled labour migration after Brexit. Centre on Constitutional Change.
- [26] Kuptsch, C., Martin, P., 2011. Low-Skilled Labour Migration. In: Betts, A. (eds.). Global Migration Governance. Oxford University Press: Oxford, UK. pp. 34–59. DOI: <https://doi.org/10.1093/acprof:oso/9780199600458.003.0002>
- [27] Kahanec, M., Zimmermann, K.F., 2011. High-Skilled Immigration Policy in Europe. SSRN Electronic Journal. DOI: <https://doi.org/10.2139/ssrn.1767902>
- [28] McHugh, M., M. Morawski., 2017. Unlocking Skills: Successful initiatives for integrating foreign-trained immigrant professionals. Migration Policy Institute.
- [29] Bianco, R., Ortiz Cobo, M., 2019. The Linguistic Integration of Refugees in Italy. Social Sciences. 8(10), 284. DOI: <https://doi.org/10.3390/socsci8100284>
- [30] Easlick, K., 2022. Language as a resource: public sector discourse on the role of regional minority and community languages in integration and employment. Current Issues in Language Planning. 23(1), 1–20. DOI: <https://doi.org/10.1080/14664208.2021.1897381>
- [31] Figueiredo, S., 2023. The effect of mobile - assisted learning in real language attainment: A systematic review. Journal of Computer Assisted Learning. 39(4), 1083–1102. DOI: <https://doi.org/10.1111/jcal.12811>
- [32] Favell, A., 2003. INTEGRATION NATIONS: THE NATION-STATE AND RESEARCH ON IMMIGRANTS IN WESTERN EUROPE, In: Brochmann, G. (eds.). Comparative Social Research. Emerald Group Publishing Limited: Bingley, UK. pp. 13–42. DOI: [https://doi.org/10.1016/S0195-6310\(03\)22001-9](https://doi.org/10.1016/S0195-6310(03)22001-9)
- [33] Esser, H., 2006. Migration, language and integration. In: AKI-Forschungsbilanz, Vol. 4. WZB (Office for Intercultural Conflicts and Societal Integration): Berlin, German.
- [34] Amelina, A., 2021. Theorizing large-scale societal relations through the conceptual lens of cross-border assemblages. Current Sociology. 69(3), 352–371. DOI: <https://doi.org/10.1177/0011392120931145>
- [35] Toshihiro, M., 2020. Can japan embrace multiculturalism? Available from: <https://www.nippon.com/en/in-depth/d00534/can-japan-embrace-multiculturalism.html> (cited 18 June 2025).
- [36] Jodoin, J.J., 2020. Promoting language education for sustainable development: a program effects case study in Japanese higher education. International Journal of Sustainability in Higher Education. 21(4), 779–798. DOI: <https://doi.org/10.1108/IJSHE-09-2019-0258>
- [37] Kusunoki, R., Hashimoto, K., 2022. Is ‘Easy Japanese’ a Language Option? Local Responses to the Increasing Foreign Resident Population from Southeast Asia. Asian Studies Review. 46(4), 613–630. DOI: <https://doi.org/10.1080/10357823.2022.2075322>
- [38] Nambu, S., 2024. Linguistic landscape of immigrants in Japan: a case study of Japanese Brazilian communities. Journal of Multilingual and Multicultural Development. 45(5), 1616–1632. DOI: <https://doi.org/10.1080/01434632.2021.2006200>
- [39] Adilgazinova, A., Balakayeva, L., Gubaidullina, M., 2024. Migrant Issues in Contemporary Japan. Two Homelands. (59). DOI: <https://doi.org/10.3986/2024.1.06>
- [40] David, C., 2016. Migration and integration patterns of new immigrants in japan: Diverse structures of inequality, In: Chiavacci, D., Hommerich, C. (eds.). Social Inequality in Post-Growth Japan: Transformation during Economic and Demographic Stagnation. Routledge: New York, NY, USA. pp. 233–249.
- [41] Murayama, K., Nagayasu, J., 2021. Toward Coexistence of Immigrants and Local People in Japan: Implications from Spatial Assimilation Theory. Sustainability. 13(7), 3849. DOI: <https://doi.org/10.3390/su13073849>
- [42] Maya-Jariego, I., Cruz, P., Molina, J.L., et al., 2009. ICT for integration, social inclusion and economic participation of immigrants and ethnic minorities: Case studies from Spain. Institute for Prospective Technological Studies (IPTS), European Commission, Joint Research Center. EUR 51774. Available from: website (cited 25 May 2025).
- [43] Alam, K., Imran, S., 2015. The digital divide and social inclusion among refugee migrants: A case in regional Australia. Information Technology & People. 28(2), 344–365. DOI: <https://doi.org/10.1108/ITP-04-2014-0083>
- [44] Ekoh, P.C., Iwuagwu, A.O., George, E.O., et al., 2023. Forced migration-induced diminished social networks and support, and its impact on the emotional wellbeing of older refugees in Western countries: A scoping review. Archives of Gerontology and Geriatrics. 105, 104839. DOI: <https://doi.org/10.1016/j.archger.2022.104839>
- [45] Hulford-Wood, L., 2024. In the learner’s hands: Using mobile phones to extend learning beyond the formal ESOL classroom [Doctoral Dissertation]. The University of Sunderland: Sunderland, UK. pp.134–154.
- [46] Borkert, M., Cingolani, P., Viviana, P., 2009. The state of the art of research in the eu on the uptake and use of ict by immigrants and ethnic minorities (iem). Siviglia: European Commission, Joint Research Centre, Insti-

- tute for Prospective Technological Studies. Available from: <https://publications.jrc.ec.europa.eu/repository/handle/JRC53398>
- [47] Spratt, M., 2015. What English Language Teachers Need to Know Volume III: Designing Curriculum. *ELT Journal*. 69(2), 208–211. DOI: <https://doi.org/10.1093/elt/ccv002>
- [48] Gaved, M., Peasgood, A., 2017. Fitting in Versus Learning: A Challenge for Migrants Learning Languages Using Smartphones. *Journal of Interactive Media in Education*. 2017(1), 1. DOI: <https://doi.org/10.5334/jime.436>
- [49] Neisary, S., 2024. Digital equity in canada: A mixed methodological study of digital access, digital use and digital empowerment for immigrants, youth and young newcomer english language learners. [Doctoral Dissertation]. University of Ottawa: Ottawa, OTT, Canada. pp.38-77.
- [50] Kluzer, S., Ferrari, A., Centeno, C., 2009. ICT for Learning the Host Country's Language by Adult Migrants in the EU – Workshop Conclusions. JRC Technical Note No. 57387. Seville: JRC Institute for Prospective Technological Studies, European Commission. Available from: <https://delfiproject.wordpress.com/wp-content/uploads/2011/04/jrc57387.pdf?utm> (cited 17 June 2025).
- [51] Alkamel, M.A.A., Chouthaiwale, S.S., 2018. The Use of ICT Tools in English Language Teaching and Learning: A Literature Review. *Veda's journal of english language and literature-JOELL*. 5 (2018), 29–33. Available from: <https://joell.in/wp-content/uploads/2018/04/29-33-THE-USE-OF-ICT-TOOLS-IN-ENGLISH-LANGUAGE.pdf?utm> (cited 28 June 2025).
- [52] Rofi'i, A., W. Siska, W., Yunus, N., et al., 2024. Information and Communication Technology (ICT) Integration in the Teaching of English: A Systematic Review. *International Journal of Teaching and Learning*. 2(3), 782–794. Available from: <https://injournal.org/index.php/12/article/view/111> (cited 1 June 2025).
- [53] Ahmad, Mazlina, Rashid, R.A., Mansor, N.R., et al., 2021. The Impact of Integrating ICT in Malay Foreign Language Teaching and Learning. *Journal of Physics: Conference Series*. 1793(1), 012070. DOI: <https://doi.org/10.1088/1742-6596/1793/1/012070>
- [54] Ouyang, Z., Jiang, Y., Liu, H., 2024. The Effects of Duolingo, an AI-Integrated Technology, on EFL Learners' Willingness to Communicate and Engagement in Online Classes. *The International Review of Research in Open and Distributed Learning*. 25(3), 97–115. DOI: <https://doi.org/10.19173/irrodl.v25i3.7677>
- [55] Wahyudin, W. "The use of english native speaker youtube videos in improving students' speaking abilities: An interactive learning approach." *International Journal of English Language and Pedagogy* 2 (2024): 77–86.
- [56] Bradley, L., Berbyuk Lindström, N., Sofkova Hashemi, S., 2017. Integration and Language Learning of Newly Arrived Migrants Using Mobile Technology. *Journal of Interactive Media in Education*. 2017(1), 3. DOI: <https://doi.org/10.5334/jime.434>
- [57] Çakıcı, D., 2016. The Use of ICT in Teaching English as a Foreign Language. *Participatory Educational Research*. 4 (2), 73–77. Available from: <https://dergipark.org.tr/en/pub/per/issue/47596/601260?utm> (cited 15 July 2024).
- [58] Dixon, L.Q., Wu, S., 2014. Home language and literacy practices among immigrant second-language learners. *Language Teaching*. 47(4), 414–449. DOI: <https://doi.org/10.1017/S0261444814000160>
- [59] Council of the European Union, 2020. A comprehensive approach to the teaching and learning of languages. *European Journal of Language Policy*. 12(1), 109–121. DOI: <https://doi.org/10.3828/ejlp.2020.6>
- [60] Chen, X., Frennert, S., Östlund, B., 2022. The Use of Information and Communication Technology Among Older Immigrants in Need of Home Care: a Systematic Literature Review. *Ageing International*. 47(2), 238–264. DOI: <https://doi.org/10.1007/s12126-021-09417-x>
- [61] Sigona, N., Kato, J., Kuznetsova, I., 2021. Migration infrastructures and the production of migrants' irregularity in Japan and the United Kingdom. *Comparative Migration Studies*. 9(1), 31. DOI: <https://doi.org/10.1186/s40878-021-00242-4>
- [62] Zhan, S., Zhou, M., 2020. Precarious Talent: highly skilled Chinese and Indian immigrants in Singapore. *Ethnic and Racial Studies*. 43(9), 1654–1672. DOI: <https://doi.org/10.1080/01419870.2019.1648847>
- [63] Miyazaki, R., 2019. Migrant care workers and care-migration policies: a comparison between Italy and Japan. *Asia Europe Journal*. 17(2), 161–177. DOI: <https://doi.org/10.1007/s10308-018-0528-3>
- [64] Gentile, E., 2019. *Skilled Labor Mobility and Migration: Challenges and Opportunities for the ASEAN Economic Community*. Edward Elgar Publishing : Cheltenham, UK.
- [65] Suzuki, E., 2009. Irregular Stayers Working in Japan: Are They Undesirable Foreign Workers?. Akashi Shoten: Tokyo, Japan (in Japanese).
- [66] Ogawa, R., 2017. Intersectionality and differentiated citizenship: migrant care workers in Japan. *Asia Pacific Journal of Social Work and Development*. 27(3–4), 187–194. DOI: <https://doi.org/10.1080/02185385.2017.1406821>
- [67] Watanabe, K., 2022. *Migrant Trainees and Social Inclusion: A Study of Construction and Electronics Companies in Japan* [Master Thesis]. Chulalongkorn University: Bangkok, Thailand.
- [68] Tokunaga, T., 2018. Possibilities and constraints of immigrant students in the Japanese educational sys-

- tem. Available from: <https://unesdoc.unesco.org/ark:/48223/pf0000266211> (cited 15 July 2024).
- [69] Aiden, H.S., 2011. Creating the “Multicultural Co-existence” Society: Central and Local Government Policies towards Foreign Residents in Japan. *Social Science Japan Journal*. 14(2), 213–231. DOI: <https://doi.org/10.1093/ssjj/jyr014>
- [70] Cabinet Office, 2018. The guidelines for operating the specified skilled worker visa scheme. Available form: https://www5.cao.go.jp/keizai-shimon/kaigi/minutes/2018/0220/shiryo_04.pdf (in Japanese) (cited 15 July 2024).
- [71] Migration Policy Group., 2015. Migrant integration policy index 2015. Available from: <http://www.mipex.eu/> (cited 19 June 2024).
- [72] Migration Policy Group., 2020. Migrant integration policy index 2020. Available from: <https://mipex.eu/japan> (cited 1 January 2024).
- [73] Aneas, M.A., Paz Sandín, M., 2009. Intercultural and Cross-Cultural Communication Research: Some Reflections about Culture and Qualitative Methods. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*. Vol 10, No 1 (2009): Qualitative Research on Intercultural Communication. DOI: <https://doi.org/10.17169/FQS-10.1.1251>
- [74] Taylor, B.C., Trujillo, N., 2001. Qualitative Research Methods In: Jablin, F., Putnam, L. (eds.). *The New Handbook of Organizational Communication*. SAGE Publications: Thousand Oaks CA, USA. pp.161. DOI: <https://dx.doi.org/10.4135/9781412986243>
- [75] Frey, B.B., 2018. *The SAGE Encyclopedia of Educational Research, Measurement, and Evaluation*. SAGE Publications: Thousand Oaks CA, USA. DOI: <https://doi.org/10.4135/9781506326139>
- [76] Zeegers, M., Barron. M., 2015. Milestone moments in getting your phd in qualitative research. Chandos Publishing: Oxford, UK. DOI: <https://doi.org/10.1016/C2014-0-02299-X>
- [77] Braun, V., Clarke, V., 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*. 3(2), 77–101. DOI: <https://doi.org/10.1191/1478088706qp063oa>
- [78] Lantolf, J.P., 2000. Second language learning as a mediated process. *Language Teaching*. 33(2), 79–96. DOI: <https://doi.org/10.1017/S0261444800015329>
- [79] Slatyer, H., S. Forget, M., 2019. Digital translation: Its potential and limitations for informal language learning. In: Dressman, M., Sadler, R.W. (eds.). *The Handbook of Informal Language Learning*, 1st ed. Wiley: Hoboken, NJ, USA. DOI: <https://doi.org/10.1002/9781119472384>
- [80] Algan, Y., Bisin, A., Verdier, T., 2012. Introduction: Perspectives on Cultural Integration of Immigrants. In Algan, Y., Bisin, A., Manning, A., et al. (Eds.), *Cultural Integration of Immigrants in Europe*. Oxford University PressOxford, pp. 1–48. DOI: <https://doi.org/10.1093/acprof:oso/9780199660094.003.0001>
- [81] Hsiao, J.C.-Y., Dillahun, T.R., 2018. Technology to Support Immigrant Access to Social Capital and Adaptation to a New Country. *Proceedings of the ACM on Human-Computer Interaction*. 2(CSCW), 1–21. DOI: <https://doi.org/10.1145/3274339>
- [82] Korteweg, A.C., 2017. The failures of ‘immigrant integration’: The gendered racialized production of non-belonging. *Migration Studies*. 5(3), 428–444. DOI: <https://doi.org/10.1093/migration/mnx025>
- [83] Schinkel, W., 2018. Against ‘immigrant integration’: for an end to neocolonial knowledge production. *Comparative Migration Studies*. 6(1), 31. DOI: <https://doi.org/10.1186/s40878-018-0095-1>