

Digital Textbooks as Mediating Cultural Tools: A Sociocultural Study of Seoul's Transnational Educational Initiative

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Abstract

In 2025, the Seoul Metropolitan Office of Education introduced the “International Educational Exchange Activation Project,” providing over 140,000 Korean-language e-books and audiobooks to twenty-six overseas Korean Education Centers. While this project substantially broadens access to Korean language and cultural resources abroad, the long-term impacts on heritage learners and international students engaging with these digital materials remain insufficiently examined. Without recognizing how these resources mediate social and cultural learning, stakeholders risk limiting learners' ability to fully engage, acquire language skills, and develop global competencies. By applying Vygotsky's Sociocultural Theory, this study conceptualizes digital textbooks and e-books as mediating cultural tools that scaffold development within socially and culturally embedded contexts. The research employs a qualitative case study of policy structures and institutional practices, tracing how digital resources circulate from Seoul's producers to overseas education centers and learners in diaspora and international communities. The focus is on structural and symbolic dynamics rather than individual usage patterns, emphasizing the distinctive role of a municipal authority in leading educational exchange, as opposed to conventional state-led or institution-based models. This study explores how digital mediation may support heritage language retention and equitable access cultural knowledge. This study further investigates whether such initiatives can strengthen learners' identities and provide international students with opportunities for cultural and linguistic engagement. More broadly, the Seoul case examines whether municipal-level digital initiatives can operate transnationally, offering a replicable model of public education that promotes global citizenship, intercultural understanding, and educational collaboration under SDG 4 on inclusive and equitable quality education.

Keywords: digital mediation, heritage language learning, paradiplomacy, transnational educational exchange

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Introduction

The commitment to inclusive and equitable quality education under Sustainable Development Goal 4 has widened the meaning of educational access. Providing a place in school is no longer sufficient when learners remain unable to participate meaningfully because of geographical distance, language, cultural disconnection, or unequal access to educational resources. Education also shapes how people understand their social worlds and maintain relationships with the communities and cultures to which they belong. Educational development increasingly concerns the conditions that allow learners to participate in learning over time and across different social settings (United Nations, 2015).

This broader understanding developed through earlier international education agendas. The Education for All movement and the Dakar Framework highlighted the learning needs of children, young people, and adults, while the Sustainable Development Goals placed stronger emphasis on equity, inclusion, quality, and lifelong learning (UNESCO, 2000; United Nations, 2015). The existence of educational resources does not necessarily mean that learners can use them in meaningful ways. They may remain distant from the linguistic and cultural environments of the people they are intended to serve, particularly for heritage language learners and international students whose learning crosses national, linguistic, and cultural boundaries.

Digital technology has altered some of the conditions under which educational access can be organized. Information and communication technology can connect learners with materials, institutions, teachers, and educational networks beyond conventional classrooms. International development research has consequently treated ICT as a means of extending educational opportunities across geographic and social barriers (Asian Development Bank, 2003; UNESCO Institute for Statistics, 2009; World Bank Group, 2003). Yet technological availability does not guarantee educational inclusion. Digital resources remain dependent on the institutional and cultural contexts in which learners encounter and use them.

This issue is particularly relevant to heritage language education. Heritage learners often engage with languages that hold personal and cultural significance but are not dominant in the societies where they live. Across generations, contact with such languages may decline, affecting relationships among language, cultural knowledge, family memory, and identity. Heritage language learning is therefore closely connected with social affiliation and participation in multilingual and cultural communities rather than grammatical proficiency alone (He, 2010; Valdés, 2001). This makes digital textbooks, electronic books, and audiobooks relevant to the social and cultural settings in which learners encounter them.

A recent initiative in Seoul provides a useful case. In 2025, the Seoul Metropolitan Office of Education introduced the International Educational Exchange Activation Project and provided approximately 140,000 Korean digital reading resources, including electronic books and audiobooks, through twenty six overseas Korean Education Centers. Developed amid growing overseas demand for Korean language and cultural education, the initiative expanded access to Korean language materials through the Seoul Digital Library platform (Choi, 2025; Oh, 2025). Rather than relying primarily on physical distribution, the project connects municipal digital infrastructure with overseas educational institutions and enables Korean language resources to circulate across national borders.

The scale of the initiative is notable, but the number of resources alone does not explain their educational significance. Access to an electronic book or audiobook does not show how learners engage with language, develop relationships with cultural content, or continue using resources over time. The institutional setting through which materials are introduced and accessed may be equally important. This study therefore examines how digital reading resources may operate as mediating cultural tools within transnational educational settings.

Vygotsky's sociocultural theory provides the main theoretical lens. Learning is understood as situated within social and historical contexts, with cultural tools playing an important role in human development (Vygotsky, 1978). Language, signs, books, and other symbolic resources shape how people participate in learning and interpret their environments. Later sociocultural scholarship further emphasizes relationships among tools, institutions, social interaction, and cultural context (Lantolf & Thorne, 2006; Wertsch, 1991). This perspective allows digital textbooks, electronic books, and audiobooks to be examined as resources whose educational meanings emerge through the settings and relationships in which they are used.

The case also raises questions of governance. International cultural and educational exchange is often examined through national governments or large institutions, yet the Seoul initiative involves a municipal education authority using locally developed digital infrastructure within an international educational network. The Seoul Metropolitan Office of Education remains a local public authority, while its electronic resources are made available through overseas Korean Education Centers. The project therefore provides an opportunity to examine how subnational educational actors participate in transnational exchange and how public resources developed for local use acquire wider international functions.

This study examines the 2025 initiative as a qualitative case of municipal digital education and institutional circulation. The analysis follows the relationship among Seoul as the source of policy and content, the digital platform, overseas Korean Education Centers, and learners in local educational environments. It considers both the structural conditions enabling circulation and the symbolic meanings associated with language, cultural memory, identity, and linguistic engagement.

Heritage language research has emphasized the relationship between language, cultural identity, and social affiliation, while educational technology research has highlighted access and digital infrastructure. The Seoul case adds a governance dimension by examining how a municipal authority connects public digital resources with overseas educational institutions. This intersection of language, technology, and governance provides a basis for examining digital education as institutional and cultural mediation and for considering its relevance to SDG 4.

Methodology

This study uses a qualitative case study design to examine the Seoul Metropolitan Office of Education's International Educational Exchange Activation Project as a municipal form of digital and transnational educational exchange. The analysis focuses on the institutional relationships through which digital resources are organized and circulated among municipal policy, digital infrastructure, overseas Korean Education Centers, and intended learners. The case is treated as a bounded policy and institutional setting operating across national borders (Yin, 2018).

The case boundary centers on the 2025 initiative led by the Seoul Metropolitan Office of Education. Seoul provides the policy direction and access to digital content, while the institutional boundary extends to the digital library and platform infrastructure, participating overseas Korean Education Centers, and the diaspora and international learners identified in relevant documents. These connections show how a locally developed public education resource acquires a transnational function.

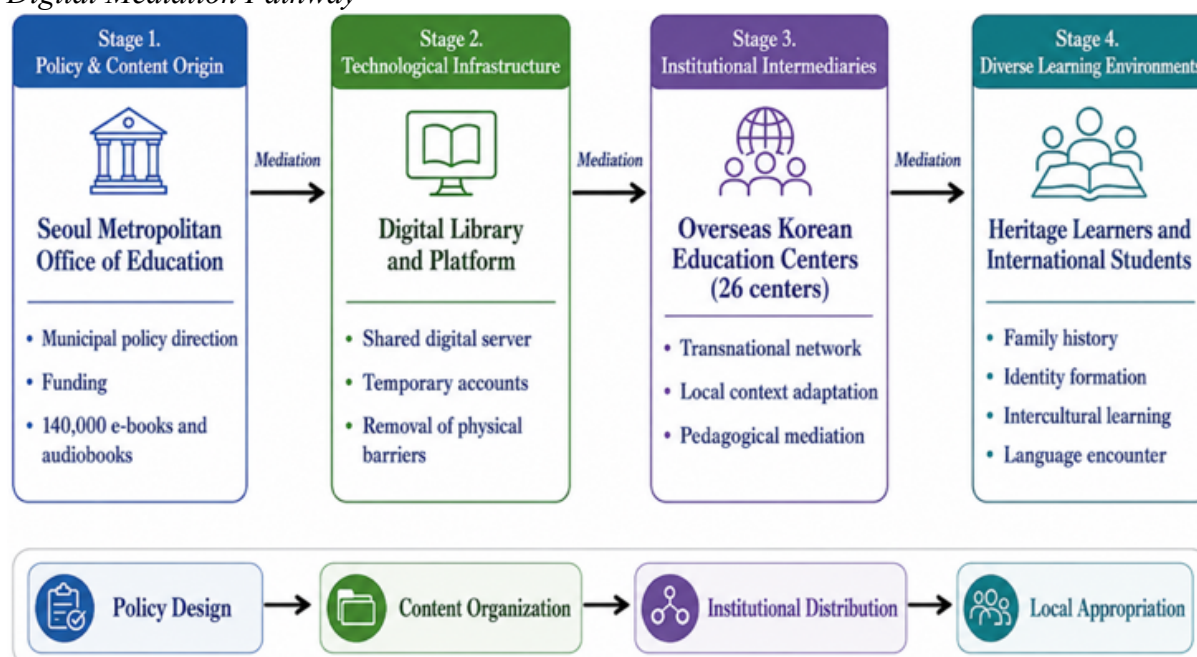
The document corpus focuses on materials surrounding the 2025 initiative, with selected 2024 documents included to establish its institutional foundations. These materials address international education networks, cooperation with overseas Korean Education Centers, digital library services, Korean language education, and international educational exchange. The empirical material consists primarily of policy plans, press releases, program descriptions, public reports, digital library information, and institutional materials issued by the Seoul Metropolitan Office of Education and affiliated services. Documents concerning cooperation with overseas Korean Education Centers were included when they provided evidence of digital educational exchange, institutional networking, or resource circulation. These documents were treated as institutional records revealing policy purposes, organizational priorities, and meanings assigned to the initiative (Bowen, 2009).

Table 1
Document Corpus and Analytical Role in the Study

Source	Year	Document Type	Institutional Context	Analytical Use
Seoul Metropolitan Office of Education	2024	Policy plan	International education and digital policy	Policy trajectory and municipal governance
Seoul Metropolitan Office of Education	2024	Official press release	Cooperation with Korean Education Center in France	Local adaptation and institutional networking
Seoul Metropolitan Office of Education related reporting	2025	Program announcement	Digital resource provision to overseas centers	Scale and circulation pathway
Oh	2025	News report	Electronic library access and distribution structure	Platform access and implementation
Seo	2025	News report	Public representation of the initiative	Language and cultural framing
Choi	2025	News report	Overseas access to Korean digital resources	Public visibility and transnational reach

The 2024 Seoul education policy plan was examined to identify the policy environment in which the initiative developed, particularly references to international education infrastructure, overseas Korean Education Centers, global competence, digital library services, and online educational resources. Materials concerning cooperation with the Korean Education Center in France were also included because they demonstrate how Seoul connected Korean language education, digital technology, institutional networking, and international exchange before the 2025 project (Seoul Metropolitan Office of Education, 2024a, 2024b).

Figure 1
Digital Mediation Pathway



Public reporting from established news organizations supplemented the official record by providing information on the reported scale of the initiative, participating overseas Korean Education Centers, the available electronic books and audiobooks, and the rationale for expanding access to Korean language resources abroad. Claims about the project's structure and scope were checked against official materials whenever possible. News reports were used primarily to reconstruct public presentation of the initiative rather than to establish learner outcomes (Choi, 2025; Oh, 2025).

Documents were selected purposively according to their relevance to the research questions. Materials were retained when they addressed the initiative directly or documented its institutional setting, including international Korean language education, cooperation with overseas Korean Education Centers, digital library services, municipal international education policy, platform-based distribution, and public educational exchange. Documents were also included when they identified participating actors, policy objectives, resource circulation, intended learners, or the cultural and educational significance assigned to the initiative. Repetitive materials without substantive information were removed, as were unattributed sources, personal social media content, commercial materials, and unsupported commentary.

The unit of analysis was a meaningful passage addressing one or more elements of the research problem, including policy purpose, institutional responsibility, technological mediation, resource circulation, intended users, educational access, cultural meaning, and expected outcomes. Passages were interpreted within their institutional context rather than separated from the purpose and audience of the original document.

The analysis combined qualitative document analysis with thematic coding. Documents were read repeatedly, with initial codes recorded alongside information on source, institution, publication date, intended audience, and relationship to the initiative. Codes were revised as patterns emerged, with related codes combined and analytically distinct ones separated. Coding moved iteratively between the documents and emerging themes, drawing on the thematic

analysis approach described by Braun and Clarke and the coding practices outlined by Saldaña (Braun & Clarke, 2006; Saldaña, 2021).

The analysis combined qualitative document analysis with thematic coding. The documents were read Vygotsky's sociocultural theory informed the analysis from the beginning. Coding focused on cultural tools, mediation, social and historical context, institutional support, and scaffolding. A passage was coded as mediation when it described how a resource, platform, institution, or educational practice connected learners with language or cultural content. Digital materials were treated as cultural tools when institutional texts positioned them as resources through which learners could encounter language, stories, voices, cultural knowledge, or educational practices. References to organizational access, guidance, continuity, and structured distribution were examined as forms of institutional scaffolding (Vygotsky, 1978; Wertsch, 1991).

The analysis remained grounded in institutional evidence. Electronic books and audiobooks were not assumed to produce learning simply because they were digitally available. Instead, attention focused on how materials entered the platform, how overseas education centers were positioned within distribution, how learners were represented, and what educational meanings were attached to the resources. This reading is consistent with the sociocultural view that tools acquire significance through mediated activity within particular social and institutional settings (Lantolf & Thorne, 2006; Wertsch, 1991).

Two broad analytical patterns emerged. The first concerned the structural conditions enabling circulation, including municipal policy design, digital infrastructure, institutional distribution, coordination across sites, access, international networking, and educational equity. These codes traced how materials moved through technological and institutional channels and the roles assigned to Seoul, the digital platform, overseas Korean Education Centers, and local educational settings.

The second concerned symbolic meanings attached to the resources, including heritage framing, cultural memory, language identity, belonging, shared narratives, linguistic engagement, voice, listening, and cultural connection. These themes emerged from passages connecting the materials with cultural continuity, identity, international understanding, and relationships between overseas learners and Korea.

Theoretical and open coding were used together. Vygotsky's concepts provided an initial interpretive lens, while additional codes were introduced when documents revealed institutional relationships or policy dynamics not fully captured by the framework. Emerging codes were compared across sources and retained when they explained recurring patterns or significant features of the case.

The structural and symbolic dimensions were then examined together. Structural analysis traced how access was organized through policy, technology, and institutions, while symbolic analysis examined how resources were connected to heritage, cultural memory, identity, and linguistic engagement. This combined approach informed the digital mediation pathway, which traces movement from Seoul as the source of policy direction and content, through the digital platform and overseas Korean Education Centers, to learners in diaspora and international settings.

The three research questions organized the coded material. Evidence concerning movement, distribution, access, and institutional connections informed the analysis of circulation. Infrastructure, coordination, heritage framing, memory, identity, and linguistic engagement informed the analysis of structural and symbolic dynamics. Materials concerning municipal authority and international educational exchange informed the analysis of how the case relates to nation-centered models of cultural diplomacy.

Credibility was strengthened through comparison across official policy documents, institutional descriptions, platform materials, and reputable public reporting. A source matrix recorded the basis of major interpretations and compared similar claims across documents. Coding definitions and analytic notes were revised throughout the process to maintain a traceable connection between documentary evidence and findings (Lincoln & Guba, 1985).

Claims about educational access, cultural engagement, and learner development were interpreted according to the available evidence. Distribution and institutional availability support findings about access and resource circulation, while references to identity, language development, belonging, and cultural engagement are treated as institutional meanings and educational possibilities where direct learner evidence is unavailable. All materials were publicly available, and no human participants or personally identifiable data were included.

Results and Findings

The 2025 initiative emerged from Seoul's earlier development of international education activities and digital public infrastructure. Municipal policy, the Seoul Metropolitan Office of Education electronic library, overseas Korean Education Centers, and learners abroad appear as connected elements of an institutional arrangement through which a local public education infrastructure was extended into an international network.

The policy background is visible in the Seoul Metropolitan Office of Education's 2024 agenda, which linked international educational exchange with preparation for a globally connected future and digital education. Cooperation with institutions abroad was already developing before the 2025 electronic library initiative, placing the later project within an established policy direction (Seoul Metropolitan Office of Education, 2024a).

The cooperation with the Korean Education Center in France illustrates this development. In April 2024, the Seoul Metropolitan Office of Education and the center organized training for fourteen teachers working in French schools where Korean was taught. The program responded to local needs in Korean language pedagogy and educational information technology and included Korean language and cultural education, digital activities, teacher networking, and institutional visits (Seoul Metropolitan Office of Education, 2024b). The digital component was adapted to the French technological environment (Seoul Metropolitan Office of Education, 2024b). This earlier collaboration shows that the relationship between Seoul and overseas Korean Education Centers already connected Korean language education with local educational needs, teacher networks, cultural content, and technology.

In 2025, approximately 140,000 Korean language electronic books and audiobooks were made available through twenty-six overseas Korean Education Centers, including around 9,000 items intended for children and young people. Contemporary reporting described the initiative as the first program in which a metropolitan or provincial education office in South Korea supported

overseas Korean Education Centers with access to an electronic book service (Oh, 2025; Seo, 2025).

The project addressed difficulties associated with distributing printed books across countries under limited budgets and growing demand. Instead, participating centers were connected to a subscription-based electronic library service already operated by Seoul. Users could receive temporary service accounts without completing the ordinary individual membership process, while the reported service provided access without usual limits on concurrent users or borrowed items (Oh, 2025).

The institutional innovation lay in extending an existing public system. Infrastructure developed within the municipal education system acquired an additional function when overseas Korean Education Centers entered its distribution network. The shift from printed materials to shared digital access altered both the scale of distribution and the organizational requirements for maintaining it.

The circulation runs from municipal policy and content in Seoul through the electronic platform and overseas Korean Education Centers to local learning environments. Seoul provides policy direction and access to the collection, the digital library extends its geographical reach, and overseas centers connect the service with learners in different linguistic, institutional, and educational contexts.

A shared platform creates continuity across dispersed sites. Participating centers can draw from the same collection without maintaining equivalent physical libraries, while temporary accounts reduce administrative barriers to access (Oh, 2025). At the same time, the 2024 France program demonstrates that shared infrastructure does not eliminate local differences. The training content responded to needs expressed in France, and digital activities were adapted to its technological environment (Seoul Metropolitan Office of Education, 2024b). The project therefore combines common resources with local adaptation.

The distribution model also changes the geographical reach of municipal educational infrastructure. Seoul is a subnational public authority whose primary responsibilities concern education within the city, yet its publicly maintained resources are now used through institutions outside South Korea. This international function emerged through cooperation with overseas Korean Education Centers and policy relationships established before 2025 (Seoul Metropolitan Office of Education, 2024a, 2024b).

This pattern reflects research on the international activities of cities and subnational governments through policy networks, institutional partnerships, and cultural and educational initiatives (Acuto, 2013; Tavares, 2016). The Seoul case illustrates how transnational educational activity can emerge through interaction among multiple levels of public institutions rather than through national actors alone.

The resources also carry symbolic significance. The initiative responded to overseas demand for Korean language learning and was intended for overseas Koreans and other students abroad. Electronic books and audiobooks are presented as resources for Korean language education and cultural access rather than simply as a large digital catalogue (Seo, 2025).

Heritage language scholarship helps explain why this context matters. Heritage language learning involves social affiliation and cultural experience as well as linguistic competence (He,

2010). Although the Seoul documents do not classify the entire collection as heritage material, its circulation through institutions serving overseas Korean communities creates conditions in which some resources may acquire a heritage-related role. Their meaning is shaped partly by the institutional settings and learners for whom they are made available.

Vygotsky's concept of mediation offers a way to understand this relationship. Cultural tools participate in learning through the social activities and meanings surrounding their use (Vygotsky, 1978). The electronic books and audiobooks pass through a public platform and educational institutions before reaching learners, distinguishing them from digital files circulating without an identifiable educational context.

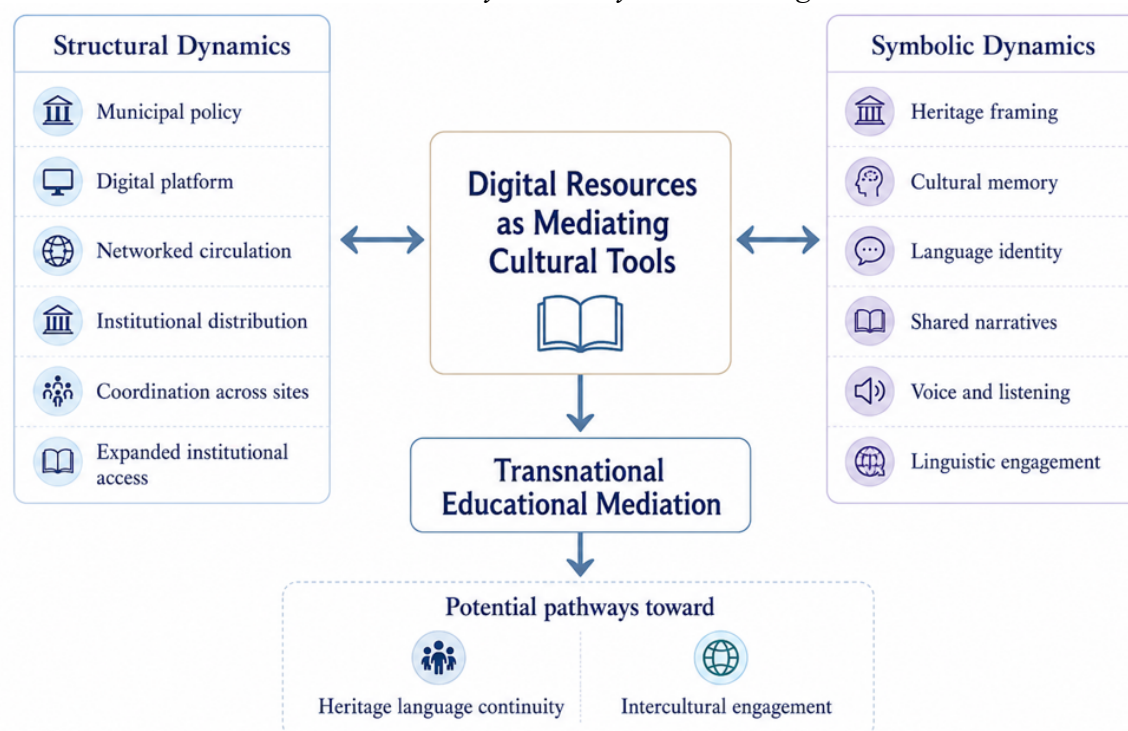
Overseas Korean Education Centers are central to this process. They connect the digital collection with locally situated educational communities and provide an institutional context through which resources can enter language learning and cultural participation (Wertsch, 1991).

Audiobooks add another form of linguistic contact. Written resources provide vocabulary, narrative, and textual forms, while audio exposes learners to pronunciation, rhythm, voice, and intonation. For learners with limited opportunities to hear Korean in everyday environments, this expands the ways in which the language can be encountered.

The shared collection creates a common pool of Korean language content across geographically distant learning sites, although learners may select and interpret materials differently. Heritage language research connects language practices with cultural understanding and identity, while research on Korean heritage speakers similarly identifies relationships among language proficiency, cultural experience, and engagement with heritage communities (He, 2010; Park, 2024).

For diaspora and heritage learners, resources may connect with language, family history, or community life. International learners may encounter the same infrastructure as a point of contact with Korean language and culture. These forms of engagement differ, but both fall within the intended reach of the initiative, which explicitly refers to overseas Koreans and students abroad (Seo, 2025).

The documents bring structural and symbolic processes into the same institutional space. The platform provides access, while educational contexts shape its meaning. Korean language and cultural content carries symbolic value, but requires institutional channels through which geographically dispersed learners can encounter it. In this case, municipal policy, digital infrastructure, overseas education institutions, and local learning environments form the conditions of mediation.

Figure 2*Interaction Between Structural and Symbolic Dynamics in Digital Mediation*

The digital mediation pathway begins with policy decisions and content in Seoul, moves through the electronic platform and overseas Korean Education Centers, and reaches learners within particular linguistic and cultural circumstances. The circulation of a digital resource thus involves institutional decisions at multiple points before it becomes part of a local learning environment.

The case also suggests a broader understanding of digital legacy. Cultural and linguistic memory is not transferred unchanged from Seoul to overseas learners. Materials move through institutions and are encountered in new social settings, where their meanings may be shaped by the platform, educational context, and learner's relationship with the language. Digital legacy here refers to the mediated availability of cultural and linguistic resources for renewed use across locations.

These patterns clarify how resources travel from Seoul to learners abroad. Municipal policy and digital infrastructure make circulation possible, while overseas institutions organize where and through whom resources are accessed. Networked access provides structural conditions, while Korean language and cultural content enters settings already associated with language learning and cultural exchange. Digital resources can thus function as mediating cultural tools through institutional and social relationships.

The governance pattern extends the case beyond digital education. A resource maintained by a municipal education authority has entered an international network through partnerships with overseas educational institutions. National institutions remain part of the system, but the municipality contributes its own policy capacity and public infrastructure. The case adds an educational dimension to research on subnational international activity by showing how local public resources can acquire transnational functions through institutional cooperation (Acuto, 2013; Tavares, 2016).

Implications & Conclusion

The Seoul case draws attention to a dimension of digital education that is often overlooked when policy discussion focuses on the number of resources provided. The significance of the initiative lies in the institutional pathway created around those resources. A municipal electronic library developed within Seoul now reaches learners abroad through overseas Korean Education Centers. The case shows how digital resources can become part of educational settings through public infrastructure and institutional relationships operating across geographical distance.

This finding extends a sociocultural understanding of mediation beyond the relationship between learners and individual tools. Electronic books and audiobooks acquire educational significance through the contexts in which they circulate and are encountered. The pathway connecting the municipal authority, digital platform, overseas education centers, and local learning environments shapes how these resources can function as cultural tools (Vygotsky, 1978; Wertsch, 1991). The 140,000 electronic books and audiobooks are significant in scale, but the more distinctive feature of the initiative is the public network that makes them available across multiple overseas settings.

For educational technology policy, the case suggests that content provision is only one part of digital inclusion. A large digital collection can expand available resources, yet meaningful use depends on institutional support, local educational practice, and learners' ability to engage with the materials. Digital access may reduce barriers created by physical distance and the distribution of printed resources, while inequalities in devices, connectivity, institutional support, and learning opportunities may persist (UNESCO, 2023). The Seoul initiative illustrates how an existing public digital service can be extended internationally while retaining the institutional relationships necessary for its use.

The initiative also has implications for heritage language education. Heritage language learning is often connected with family history, cultural affiliation, and geographically dispersed communities (He, 2010; Valdés, 2001). Access to Korean-language reading and audio materials can provide additional opportunities for contact with the language among learners living outside Korea. The inclusion of both electronic books and audiobooks broadens the forms of linguistic engagement, combining sustained contact with written language with exposure to pronunciation, rhythm, and voice. The overseas education centers are important because they place these resources within institutions already involved in Korean language education and cultural exchange.

The same infrastructure can serve learners with different relationships to Korean language and culture. Heritage learners may approach the collection through family or community connections, whereas international learners may encounter Korean as a new linguistic and cultural environment. The initiative does not need to reduce these experiences to a single category of learner. By providing a shared institutional network, it creates opportunities for different forms of engagement with language and culture. Such access does not automatically produce intercultural understanding, but it can provide materials through which learners encounter perspectives beyond their immediate environments and potentially develop forms of global competence (OECD, 2018).

The initiative also relates to Sustainable Development Goal 4 through its expansion of educational opportunity. SDG 4 emphasizes inclusive and equitable quality education as well

as global citizenship and appreciation of cultural diversity (United Nations, 2015). Extending a public digital collection beyond Seoul demonstrates how locally developed educational infrastructure can serve learners outside its original territorial setting. The implications for equity, however, depend on the conditions under which learners and institutions can actually participate.

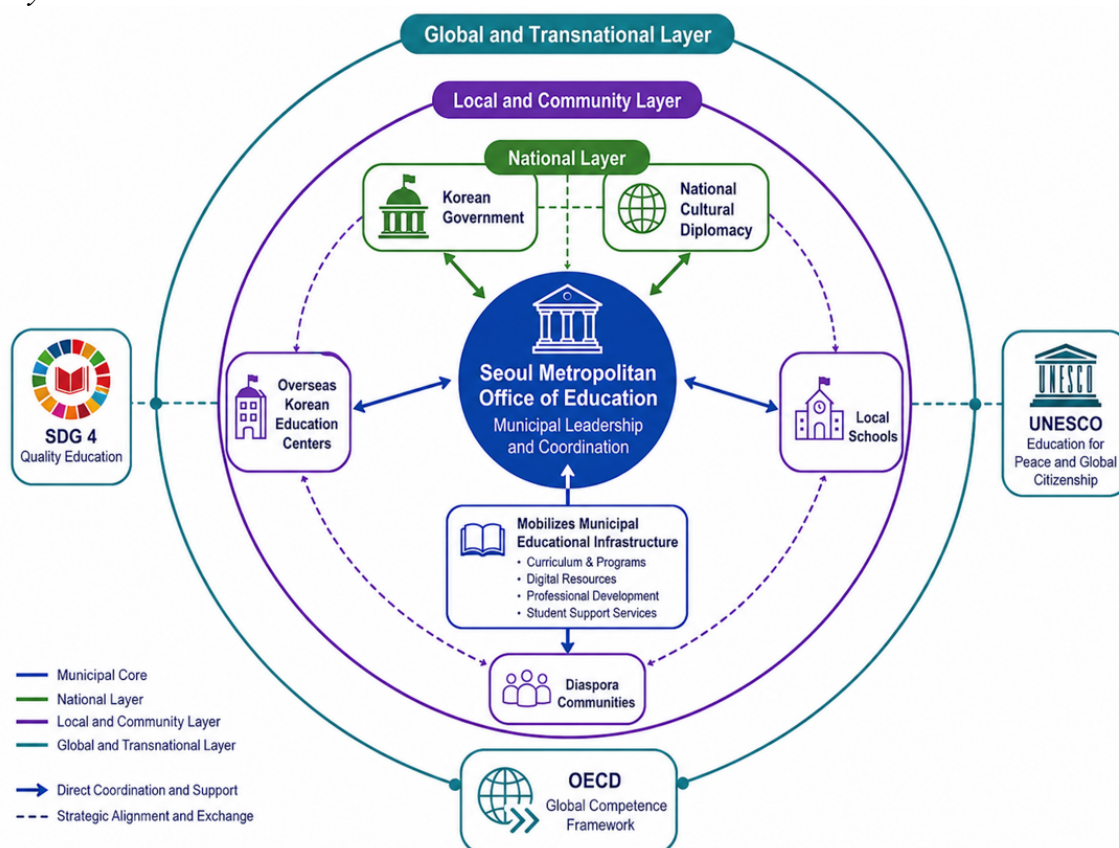
This point has practical implications for future implementation. A shared digital platform can provide continuity across overseas centers and reduce the need to reproduce physical collections at each location. Local institutions, however, remain responsible for responding to differences in learners' linguistic backgrounds and educational needs. Seoul's earlier cooperation with the Korean Education Center in France suggests the value of combining shared resources with adaptation to local educational and technological conditions. Replication by other municipalities would similarly depend on existing infrastructure, institutional capacity, and international partnerships rather than simply reproducing the same digital library model.

The case also contributes to discussions of cities and subnational actors in international exchange. The Seoul Metropolitan Office of Education has not replaced national institutions; overseas Korean Education Centers remain central to the distribution pathway. Rather, the case demonstrates how a municipal education authority can use its own public infrastructure within an international institutional network. A service originally developed for local education can thus acquire a transnational function through cooperation across institutional levels, reflecting broader patterns of subnational participation in international networks (Acuto, 2013; Tavares, 2016).

This has implications for how cultural diplomacy is understood. Educational exchange can create cultural relationships through access to language, reading, and sustained engagement with cultural materials, even when the initiative originates in a municipal education system rather than a national diplomatic program. The Seoul case shows how local educational policy can contribute to transnational cultural exchange without functioning as a substitute for national diplomacy.

The concept of digital legacy developed in this study follows from this movement across institutions and locations. Digital legacy is not simply cultural material stored online. In this case, Korean-language resources remain available for renewed use because public infrastructure allows them to circulate into new educational environments. Their meanings may change as they are encountered by heritage learners, international students, teachers, and institutions in different contexts. Cultural transmission through digital infrastructure is therefore a process of circulation and reinterpretation shaped by both technology and institutional relationships.

The structural and symbolic dimensions of the case are closely connected. The digital platform and institutional network make circulation possible, while the linguistic and cultural content gives that circulation educational significance. A culturally meaningful collection has limited reach without a system of access, while an efficient platform has limited educational value if its resources remain disconnected from the settings in which learners use them. The Seoul initiative demonstrates how these dimensions can operate together within a transnational public education network.

Figure 3*Layered Governance Network in Seoul's Transnational Educational Initiative*

Evaluation of similar initiatives should consequently extend beyond the number of titles, accounts, or participating centers. These measures demonstrate reach but reveal little about what happens after access is created. Future research should examine how resources are incorporated into teaching and how learners engage with them over time. Direct research with learners and educators could assess whether continued access contributes to sustained language use, cultural engagement, identity formation, or intercultural learning. The documentary nature of the present study limits its conclusions to policy structures, institutional arrangements, and the educational possibilities represented in public materials.

The contribution of the Seoul case lies in bringing digital education, heritage language learning, and municipal governance into the same empirical setting. Digital education appears here as a question of public infrastructure and circulation; heritage language education highlights language and cultural connection; and municipal governance explains how a local public authority can participate in international educational networks. Together, these dimensions reveal a form of transnational public education in which resources developed at the city level move through institutional cooperation across borders.

The distinctive feature of the initiative is not electronic books or audiobooks themselves. Its distinctive feature is the connection between an existing municipal resource and overseas educational institutions as part of a continuing public initiative. Technology enables the movement of resources, while the institutional arrangement gives that movement continuity and educational direction. The Seoul Metropolitan Office of Education case demonstrates how public digital infrastructure can acquire a function beyond the territory in which it was created,

providing heritage and international learners with new opportunities to encounter Korean language and cultural materials.

The case offers a concrete model for understanding digital education as a form of transnational public exchange. It also shows how municipal education policy can participate in international educational collaboration through the circulation of publicly developed resources. Digital infrastructure can carry cultural and linguistic legacies across borders, but its educational significance depends on the institutions and learning environments through which those resources are encountered.

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