Why Digital Transformation Is Needed in Minority Language Education

The Case of Hungary from the Perspective of Language Charter

*Balázs Szabolcs Gerencsér**

Abstract

This paper examines why digital transformation is essential for the future of minority language education, with a particular focus on Hungary and the European Charter for Regional or Minority Languages. As digital technologies become increasingly embedded in everyday life, they offer both a necessary and strategic opportunity to support linguistic diversity – especially in contexts where minority languages face institutional neglect, teacher shortages, and assimilation. The paper argues that digitalization can help bridge educational gaps by providing flexible, inclusive, and modern pedagogical tools, including digital content and online platforms tailored to minority needs. However, the Charter's monitoring largely overlooks the digital sphere in education, focusing instead on media. In Hungary, although legal frameworks support minority language education, implementation remains uneven, and digital technologies are underutilized. The COVID-19 pandemic accelerated digital education, revealing infrastructural and pedagogical shortcomings, particularly affecting disadvantaged groups. Despite improvements, such as broadband expansion and e-learning platforms, minority language content and teachers' digital skills remain insufficient. The paper concludes that while digital tools can greatly enhance language transmission and access, they must be integrated within long-term strategies, complemented with financial and methodological support, and sensitivity to community needs. Crucially, education must maintain its human core – digital solutions should complement, not replace, personal interaction, which remains vital in both learning and identity formation. Thus, digital transformation is not just a technical upgrade but a culturally and socially grounded imperative in sustaining Hungary's minority languages.

Keywords: minority language education, digital transformation, Language Charter (ECRML), education policy, linguistic diversity

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∗   Balázs Szabolcs Gerencsér: associate professor of law, director of Ereky Public Law Research Center, Pázmány Péter Catholic University, Budapest, gerencser.balazs@jak.ppke.hu

Balázs Szabolcs Gerencsér

1. Digitalization Is No Longer a Desire, but a Necessity

In an era of rapid technological development, digital transformation has become a key driver of innovation in many sectors, including education. Digital tools, platforms and pedagogies have a direct impact on minority language education, which in most countries faces challenges such as teacher shortages, declining speaker populations and institutional marginalization.[1] In Hungary, where linguistic diversity is shaped by historical, political and social dynamics, digital transformation offers both an opportunity and a necessity for the revitalization and sustainability of minority languages.

The European Charter for Regional or Minority Languages (hereinafter: Language Charter or Charter), adopted by the Council of Europe in 1992, provides a legal and political framework for the protection and promotion of linguistic diversity in the signatory states. Hungary, as one of the first parties to the Charter, has also committed itself to ensuring the rights of minority language speakers, *inter alia* in the field of education under Article 8 of the Language Charter. It is a constant question whether the digital environment offers a real alternative to overcome structural barriers through digital content development, interactive educational experiences tailored to minority language needs or even support for educational administration.

This paper examines whether the monitoring mechanism of the Language Charter, which is considered the most comprehensive European instrument for minority language education,[2] applies to the digital transformation of education in Hungary, and what phenomena and tools exist that could be further exploited to promote the preservation of minority languages and the development of education. In addition to pedagogical methods of education, digital tools can also serve the preservation of minority languages, either through institutional support for the education system, or through support for legislation or policy-making. It argues that digital transformation can bridge educational gaps, improve language accessibility and strengthen the transmission of minority languages to future generations, but it is important to leave room for human relations, as education is fundamentally based on the personal relationship between teacher and student. Through a critical examination of the efforts and challenges in Hungary, this

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1 Mark Warschauer, *Technology and Social Inclusion: Rethinking the Digital Divide,* The MIT Press, Cambridge-London, 2003, p. 12.

2 Alexey Kozhemyakov, 'The European Charter for Regional or Minority Languages: Ten Years of Protecting and Promoting Linguistic and Cultural Diversity', *Museum International,* Vol. 60, Issue 3, 2008, pp. 26–36.

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research contributes to the wider discourse on digital inclusion, language rights and sustainable education policies for multilingual societies.

2. What Does the Language Charter's Monitoring System Say about the Digital Environment for Education?

In 2012, Sarah McMonagle, looking back at 11 years of monitoring reports of the Language Charter, noted that the 'internet' is gaining an increasingly important place in the Charter's monitoring process.[3] In her quantitative study, she shows that in the 65 evaluation reports she has processed over the first twelve to thirteen years of the Charter, the internet is emerging as the most directly accessible form of the digital environment for an increasing number of countries as well as articles of the Charter each year.

It is also worth noting that according to the Telecommunication Development Sector (ITU-D) survey cited by McMonagle, the number of internet users in the world is growing steeply year on year.[4] While in 2008, the 10th anniversary of the entry into force of the Language Charter, 25% of the world's population used the internet, in 2018 it became 48% and in 2024 68%, that is 5.5 billion people. The growth in internet access and use is also accompanied by an explosion in technology, which nowadays, in addition to information and communication technologies (hereinafter: ICT), is also seeing the emergence of disruptive technologies such as big data, blockchain, 3D printing and artificial intelligence.[5]

When reviewing the documents related to the implementation of the Language Charter in Hungary, *i.e.,* mainly the country reports and the evaluation reports, there are few direct references to digital technology, internet use, ICT or digitalization in the context of the promotion of minority languages.

The above findings, *i.e.,* the general increase in references to the internet and the negligible reference to digitalization in the Hungarian reports, seem to contradict each other, but it is clear from the monitoring documents and other analyses of the Council of Europe that digital technologies are usually

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3   Sarah McMonagle, 'The European Charter for Regional or Minority Languages: Still Relevant in the Information Age?', *Journal on Ethnopolitics and Minority Issues in Europe,* Vol 11, Issue 2, 2012, p. 8.

4   *See* at https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx.

5   Adam Greenfield, *Radical Technologies: The Design of Everyday Life,* Verso, 2017, p. 300.

not associated with education (Article 8), but primarily with the media (Article 11).[6]

Thus, there seem to be valuable perspectives in the relationship between the Language Charter and new media. The Council of Europe report underlines that the Charter was created in an era dominated by traditional media forms. The emergence of new technologies, including the internet and social media, has significantly changed the media landscape, with implications for the use and promotion of regional or minority languages. The report stresses the need to adapt the implementation of the Charter to these technological developments so that minority languages can be effectively promoted in the digital age.[7] Indeed, these tools, used among others by children are also involved in education as we will see in the fourth chapter.

The EU has also carried out studies on the link between linguistic diversity and the internet. The study evaluating linguistic diversity online concludes that the internet presents challenges but also opportunities for minority and lesser-used languages. The development of language technology for all European languages is essential to prevent social exclusion and to exploit the potential of digital platforms to preserve and promote languages.[8]

The EU also published its Digital Decade 2024 country report for Hungary, which paints a digital landscape for Hungary, according to which 58.9% of the Hungarian population has at least basic digital skills, slightly above the EU average.[9] However, the share of ICT professionals in employment is below the EU average, suggesting that more efforts are needed to develop digital skills. Although the report does not specifically address nationalities (*i.e.,* recognized minorities in Hungary) or minority languages, developing digital skills can facilitate the creation and distribution of digital content in these languages.

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6   Elin Haf Gruffydd Jones & Jarmo Lainio (eds.), *New technologies, new social media and the European Charter for Regional or Minority Languages,* Council of Europe, 2019, pp. 38–43.

7   Id. p. 19.

8   Dick Holdsworth (ed.), *Linguistic Diversity on the Internet: Assessment of the Contribution of Machine Translation,* European Bureau for Lesser Used Languages, European Parliament, Brussels, 2000. PE 289.662 /Fin.St p. 24.

9   European Commission's Hungary 2024 Digital Decade Country Report, at https://digital-strategy.ec.europa.eu/en/factpages/hungary-2024-digital-decade-country-report.

3. The Legal Framework of Minority Language Education

Today's Hungarian minority education system is based on three main legal sources: constitutional rules (the Fundamental Law of Hungary), the rules of the National Minorities Act,[10] and the rules of the National Public Education Act.[11] Its international framework is defined first and foremost by the Language Charter, to which Hungary has been a state party from the very beginning.

3.1. The Constitutional Rules

Constitutional rules, especially during the turbulent period of the 20th century in the Central European region, which was marked by world wars and successive dictatorships, became important as a guarantee and framework.[12] In Hungary, as in other Central European states, the constitution (Fundamental Law) lays down the framework for minority rights.[13]

The Hungarian Fundamental Law, which entered into force in 2012, essentially maintains the previous regulation, but makes necessary clarifications. The National Avowal (preamble) states that "the national minorities living with us form part of the Hungarian political community and are constituent parts of the State.", *i.e.,* minorities are equal members of the political nation. In addition to this political declaration, it also states that "we commit ourselves to promoting and safeguarding our heritage, our unique language, Hungarian culture and the languages and cultures of national minorities living in Hungary, along with all man-made and natural assets of the Carpathian Basin."

Article XXIX of the Fundamental Law contains the normative rules on national minority rights. It now states with legal force that nationalities are "constituent parts of the State" and have the right to use their mother tongue

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10 Act CLXXIX of 2011 on the Rights of Nationalities.

11 Act CXC of 2011 on National Public Education (hereinafter: NPE).

12 Constitutional rules can be as decisive as the constitutions of the provinces. For example, Fedinec cites the constitution of the Province of Vojvodina as the framework for minority education. Csilla Fedinec, 'A kisebbségi magyar oktatásügy helyzete Közép-Európában, *in* Nándor Bárdi *et al.* (eds.), *Kisebbségi magyar közösségek a 20. században,* Gondolat–MTA Kisebbségkutató Intézet, Budapest, 2008. pp. 284–289.

13 Norbert Tóth & Balázs Vizi, 'The Legal Framework for the Protection of Minorities and Experiences in Law Application in States Neighboring Hungary: A Guide on Minority Rights to the Carpathian Basin', *Minority Review,* Vol. 9, Issue 1, 2024, pp. 10–12.

and to preserve and cultivate their culture. In this way, it adds the recognition and protection of nationalities to the scope of fundamental values, while preserving constitutional traditions.[14] The Fundamental Law continues to uphold a specific nationality (minority) status that goes beyond general human and civil rights.

The new constitutional arrangements retain the ombudsman's control over the implementation of nationalities' rights, as well as institutional protection. The only change in this respect is the restructuring of the ombudsman system: under Article 30(3), the deputies of the Commissioner for Fundamental Rights "shall protect the interests of future generations and the rights of national minorities living in Hungary." This way, the erstwhile Commissioner responsible for national minorities has been downgraded in their position to deputy, without the opportunity to act alone in submitting petitions to the Constitutional Court or producing reports.

Since the main field of study of this paper is education, it should be mentioned here that in addition to the above-mentioned Deputy Commissioner for Nationalities, as an institution of parliamentary control, the office of Commissioner for Educational Rights was created in 2000, which is a governmental ombudsman institution specialized in educational law issues.[15]

3.2. The Law on the Rights of Nationalities

Act CLXXIX of 2011 on the Rights of National Minorities is the fourth minority law in Hungary. The National Minorities Act defines the concept of "minority" in the first section, which uses conceptual elements that are identical to those of the previous Act: *(i)* centuries-old nationality, *(ii)* ethnic group, *(iii)* numerical minority, *(iv)* distinguished from the majority population by their language, culture and traditions, *(v)* they demonstrate a collective sense of identity, *(vi)* their purpose is to express and protect the interests of their historically established communities. The definition is close to the one used by the UN rapporteur, Francesco Capotorti, which takes into account both measurable, objective and subjective factors when defining minorities.[16] This may have been a conscious choice of the Hungarian

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14 Ferenc Horkay Hörcher, 'The National Avowal', *in* Lóránt Csink *et al.* (eds.), *The Basic law of Hungary – a First Commentary,* Clarus, Dublin, 2012, p. 39.

15 The Education Ombudsman was created by the Public Education Act in 1999. Its operation is still based on the current NPE, Section 77(7) and (8).

16 Francesco Capotorti, *Study on The Rights of Persons Belonging to Ethnic, Religious and Linguistic Minorities,* Special Rapporteur of the Sub-Commission on Prevention of Dis-

legislator of the time, when faced with the fact that a consensual definition of the concept of minority would be difficult and challenging to establish, both in the 1990s and in the 2000s, or in fact, the present decades.[17]

The National Minorities Act maintains the system of individual and collective rights and gives special emphasis to language rights. This strong emphasis is not accidental: in Hungary minorities have a primarily linguistic character.[18] The Act divides the areas of language use into several areas: *(i)* language used in the functioning of national minority self-government, *(ii)* language used in official administration, and *(iii)* language used in the community.

The media (both national and public) and education are arenas of community language use. These powers are particularly evident in the autonomies, which are given a high priority in the law. As Hungarian law is one of the few that recognize and support collective rights, it defines autonomy as a collective right. A further element of autonomy in the law is self-determination in the administration of *education,* culture and media. The notion of autonomy in the law has mixed elements of territorial and personal autonomy, as it is closely related to national self-government. However, taking into account the characteristic features of the nationalities located in diaspora, the personal element is more characteristic.

Personal autonomy was widely discussed in the literature in the 1990s. According to Heintze, the concept of personal autonomy applies to members of a particular group within a given state, regardless of their place of residence, and includes the right to preserve and develop the religious, linguistic and cultural character of the minority through institutions constituted by the minority without interference from central power.[19] Personal autonomy is granted primarily to ethnic, cultural, religious or linguistic mi-

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crimination and Protection of Minorities, United Nations, 1997, E/CN.4/Sub.2/384/Rev.1, para. 568.

17   Jelena Pejic, 'Minority Rights in International Law.' *Human Rights Quarterly* Vol. 19, Issue 3, 1997, p. 668.

18   The law recognizes 13 minorities, from which only the roma/gipsy population considered to be "ethnic", all other is considered to be "linguistic" communities. According to the Annex to the Act national minorities in Hungary are: Armenian, Bulgarian, Croatian, German, Greek, Polish, Roma, Romanian, Ruthenian, Serbian, Slovakian, Slovenian, Ukrainian.

19   Hans-Joachim Heintze, 'Autonomy and Protection of Minorities under International Law', *in* Günther Bachter (ed.), *Federalism against Ehtnicity?,* Verlag Rüegger, Zurich, 1997, p. 88.

norities.[20] Kovács presents three main arguments in favor of personal autonomy:[21] *(i)* it simplifies the drafting of the relevant legislative regulation, yet are easier to describe geographically; *(ii)* it provides a competent and legitimate partner *vis-à-vis* the central power; *(iii)* it simplifies the position of the elected national body *vis-à-vis* the central power, as both are "national in scope".

Minority autonomy is not the same as, but is linked to, the national system of minority self-government. These self-governments exercise powers that are primarily related to the cultural sphere. Chapter V of the law deals with the educational, cultural and media rights of national minorities. If we look at educational rights, the key to the regulation is Section 22(2), which states that the mother tongue of the national minorities in Hungary is a factor that binds the community together. This implies a regulatory attitude that if minorities are to be preserved, because they are an enrichment to the political nation, their identity must be supported, which in Hungary will primarily mean the support for preserving the minority vernacular.

Education, as the most important framework for the transmission of identity, is therefore given a prominent place in the law and the state therefore supports the use of the minority language in education, whether the school is state, minority or otherwise maintained, the costs of which are borne by the state.[22] In accordance with Article 8 of the Language Charter, Hungarian legislation also distinguishes between three types of national minority education: mother tongue education, in which education is provided entirely in the minority language and Hungarian is merely taught as a separate subject; bilingual education, in which a substantial part of education is provided in the minority language and Hungarian in parallel; and language teaching education, in which education is provided in Hungarian but the minority language and culture are taught as separate subjects. These educational models (with minor changes) have existed in Hungarian legislation since the beginning of the 20th century.[23]

The law gives priority to the fulfillment of public duties, *i.e.,* it does not tie minority education to a specific type of institution. It allows for this in

20 Ruth Lapidoth, *Autonomy – Flexible solutions to ethnic conflicts,* Institute of Peace Press, Washington DC., 1997, p. 37.
21 Péter Kovács, *Nemzetközi jog és kisebbségvédelem,* Osiris, Budapest, 1996, p. 184.
22 National Minorities Act, Section 22(2).
23 Sándor Balogh (editor-in-chief), *A magyar állam és a nemzetiségek. A magyarországi nemzetiségi kérdés történetének jogforrásai 1848–1993,* Napvilág, Budapest, 2002, p. 9. These minority education models were first regulated by the Ministerial Decree on Religion and Public Education No. 110478-VIII.a. in 1923.

the case of all forms of institutions and, in accordance with local possibilities and needs, education in the national minority language may be provided in national minority kindergartens, schools, classes or groups.[24]

And the provision of training and further training for teachers of the mother tongue of national minorities is a state responsibility by law. Within the framework of this task, the state also supports the employment of trained minority teachers as well as native language teachers as visiting teachers in Hungary.[25]

3.3. The National Public Education Act

Act CXC of 2011 on National Public Education (hereinafter: NPE) provides the complete set of rules for the Hungarian public education system, which also contains provisions on national minority education. The preamble of the Act already states that national minority education is closely linked to the realization of the human right to education. By establishing types of institutions and articulating rights and obligations, the Public Education Act creates the legal and institutional framework for the transmission of the national language and culture and thus for the strengthening of national identity.

According to Section 2 of the NPE, public education institutions are primarily maintained by the state. In exceptional cases, the national minority self-government, a religious legal person, a religious association[26] or any other person or organization may establish and maintain an educational institution within the framework of the Act, if it has acquired the right to do so.[27] Local governments may establish and maintain only kindergartens.

Non-state operators, *i.e.,* minority self-governments, churches, religious associations and other foundations and businesses, may establish and oper-

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24 National Minorities Act, Section 22(4).
25 Id. Section 23(4).
26 In Hungary, the parliament recognizes churches by law. All other religious associations and are registered by the courts in a similar way as associations.
27 Before 2012, local authorities were the main providers of education and health services. By then, however, significant funding difficulties had arisen, and the financial capacity of local authorities had been overstretched. In addition, there was tension between the government's responsibility for education and the municipalities' ability to use their independence to implement the law to make decisions that went against the government's wishes. The 2012 reform therefore opted for centralization and gave municipalities powers in development policy decisions instead of education and health.

ate schools if they meet quality assurance requirements. Minority education is provided by law in the form of kindergartens, primary schools, colleges, gymnasiums, vocational gymnasiums, and from 2020 the category of "additional national minority language schools" has been created specifically for the purpose of teaching minority language and ethnic studies as extracurricular subject.[28] However, the establishment (and reorganization) of all of these is always subject to consultation with the national minority self-government (minorities) concerned.[29]

In March 2025, according to the Education Office's information database,[30] of the 5,686 educational institutions operating in Hungary, 108 are run by minority self-governments, of which 30 are run by national minority self-governments and 78 by municipal minority self-governments.

3.4. The Mother Tongue as a Community-bonding Factor; Assimilation and Loss of Minority Languages

However stable the institutional framework for minority language education may be, the country reports submitted under the Language Charter show that minority education faces significant problems.[31] The continuing assimilation of national minorities results in less use of their minority language and, consequently, less choice of minority-language educational institutions. Teacher training is similarly problematic, with few people applying to teach a language considered to be of lower prestige.[32]

The question is whether the resolute action constantly encouraged by the Language Charter's Committee of Experts is enough to preserve minority languages and identities. What else can the state do when identity is always the result of an individual and personal choice? Digitalization is considered to be an important tool for improving education, helping to foster innovation and create a supportive learning environment.[33] In the following, I will

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28 NPE, Section 16/A.
29 NPE, Sections 50(10) and 83(4).
30 *See* at https://dari.oktatas.hu/.
31 Hungary has so far submitted 8 country reports which are available on the website of the Language Charter Secretariat, at https://www.coe.int/en/web/european-charter-regional-or-minority-languages/reports-and-recommendations.
32 *See* the Eighth Periodic Report presented in 2024. MIN-LANG(2024)PR3.
33 Olatunbosun, Bartholomew Joseph *et al.,* 'Digital transformation in education: Strategies for effective implementation', *World Journal of Advanced Research and Reviews,* Vol. 23, Issue 2, 2024, pp. 2785–2799.

explore the possibility of digital support as a substitute for traditional economic, methodological and institutional support tools.

4. Hungarian Digital Education During and After COVID

The rise of digital technology in education around the world has led to significant changes over the recent decade. Hungary has also taken several strategic steps in the field of digital education in the past years. The Digital Education Strategy (hereinafter: DOS) adopted in 2016 aims to promote the digitalization of education. One of the main goals of the DOS is to develop digital competences among both students and teachers, and to improve the digital infrastructure in educational institutions.

As a result of the 2020 COVID-19 pandemic, the Hungarian education system was also forced to make a rapid transition to digital education. This shift highlighted both the strengths and weaknesses of the education system. According to a survey by the State Audit Office of Hungary in 2021, the internet coverage of schools has improved in recent years, but not all families have the right technical background for digital education. This has been a particular problem for disadvantaged pupils, including Roma pupils, and the lack of technical equipment at home has widened educational inequalities. The government is seeking to bridge this gap by providing broadband internet access in education and free laptops for pupils who need them from 2022 onwards.[34]

The State Audit Office's investigation highlights that the Hungarian public education system has shown a quick ability to adapt to the exceptional situation. One advantage is the universal availability of broadband internet access, which has enabled the basic infrastructure for digital education to operate nationwide. This has also put lagging regions on the path to development. During the COVID epidemic, the majority of schools were able to provide some form of digital education, with around 95 % of pupils participating in distance learning. A significant effort was made by both teachers and students to learn this new form of education, which helped to ensure a rapid transition.[35]

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34 According to government figures, between 2022 and 2024, the Government provided a total of 450,000 IT devices.

35 Béla Czifra (ed.), *A digitális oktatás tapasztalatainak értékelése.* Állami Számvevőszék, Budapest, 2021, p. 36.

In addition, there was a challenge in that there were significant differences in teachers' digital competences and methodological skills, which affected the effectiveness of teaching. In addition, the availability, quality and structuring of digital learning materials were not uniform; the use of the National Public Education Portal[36] was not widespread. The fragmentation of online educational platforms, *i.e.,* the mixed use of platforms provided by the state or available on the market, and the lack of a unified educational administration imposed additional burdens on teachers and students alike. The report also found that during COVID, around 5% of pupils were completely excluded from digital education, which put them at risk.[37] The study showed that, although digital education has been rapidly implemented in technical terms, the quality, inclusiveness and sustainability of education are strongly dependent on the development of the pedagogical and organizational context. Experience shows that a complex, long-term digital strategy for public education is needed, integrating the areas of equipment, teacher training, curriculum development and administration.

In the years since the outbreak of the coronavirus, there has been a steady stream of digital developments, both in terms of the availability of digital learning materials and the modular development of the administrative framework (KRÉTA).[38] The framework now provides administrative support, a framework for communication between teachers, students and parents, and a framework for accessing online learning materials.

One of these is the Foreign Language Preparation Module, which also allows the use of artificial intelligence in language learning.[39] However, the service is currently only available in English and German, so it can only be used for national education by the German community, who are the largest linguistic minority in Hungary.

Digital hardware and software tools have been present in Hungarian mother tongue education for years. Sejtes notes that digital tools are used in education, but their real pedagogical integration – especially in humanities subjects such as Hungarian language and literature – still poses many chal-

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36 *See* at https://www.nkp.hu/.
37 Czifra 2021, p. 5.
38 Core System for Public Education Registration and Studies (Köznevelési Regisztrációs és Tanulmányi Alaprendszer) abbreviated as KRÉTA, which means "chalk" in English. In March 2025, the KRÉTA system includes 38 modules supporting administration, curricula and teaching methods.
39 Foreign Language Preparation Module (IFM), at https://tudasbazis.ekreta.hu/pages/viewpage.action?pageId=71697082.

lenges.[40] Tools such as interactive whiteboards, student tablets, apps or so-cial media can support the development of language competencies, deepening reading and comprehension skills, and expanding vocabulary through conscious pedagogical planning and integration into the curriculum.[41] However, this requires a change in teacher and learner attitudes, as the teacher is not only a knowledge broker, but also a mentor, a facilitator who guides and supports the learning process and makes learners active and collaborative participants in learning.[42]

If we accept that digital technology can be demonstrably used in the teaching of the majority language of the country,[43] then it is just a step further to properly apply it to minority languages. The use of technology in minority language education, just as in the case of the majority language, is needed both in administration and in preparing teaching materials, which also require the development of teachers' and students' competencies.

5. Conclusions

The use of digital tools in minority education poses additional specific challenges. The creation of digital teaching materials in the mother tongue, the development of digital competencies of teachers and the provision of appropriate infrastructure are all areas that require further continuous development. In order to address these challenges, targeted methodological and financial support for national minority educational institutions is necessary, just like the continuous training of teachers and the development of digital teaching materials in the respective minority language.

The Language Charter's Expert Committee continuously encourages the proactive involvement of the state in national language education. This proactivity, however, not only varies from state to state, but also requires different approaches and tools for each minority group. The precise content must always be adapted to the society, which presupposes a high degree of sensitivity and information on the part of policy-making. We have seen above

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40   Györgyi Zs. Sejtes, 'Anyanyelvi nevelés digitális eszközökkel', *Anyanyelv-pedagógia,* Vol. 16, Issue 1, 2023, p. 62.
41   Id. pp. 67–71.
42   Gergő Fegyverneki, 'Új szerepben a magyartanár: digitáliskultúra-azonos pedagógia elméletben és gyakorlatban', *in* János Ollé (ed.), *Oktatás-Informatikai Konferencia Tanulmánykötet,* Budapest, 2014, pp. 274–288.
43   Gyöngyvér Molnár, 'Learning and Instruction: How to Use Technology to Enhance Students' Learning Efficacy', *Journal of Intelligence,* Vol. 12, Issue 7, 2024, p. 64.

that digital technology can now support both the administration of education and pedagogical methods. The real question remains: will minority language speaking children take up minority education, will they enroll in such schools? Does their language have 'value', 'prestige', *i.e.,* are they able to use their mother tongue in the labor market, in their own environment, in their official relations?

Overall, the digital landscape of minority education in Hungary is mixed. While significant progress has been made in the development of infrastructure and digital competences, we have not yet reached the end of the road, and there are still challenges to be faced in a number of areas. In the future, particular attention should be paid to improving access to digital education for disadvantaged and minority pupils, developing teachers' digital competences and ensuring opportunities for mother tongue training.

However, alongside the widespread use of digital tools, it is also necessary to develop *personal relationships* and skills. Schools are not only about knowledge transfer, but also about socialization and inclusion. In terms of minority education, education therefore serves two purposes: the preservation and transmission of minority identity, and the social integration and peaceful coexistence between ethnic groups.

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